



**GOVERNMENT OF ROMANIA**

***NATIONAL DEVELOPMENT PLAN  
2007-2013***



**DECEMBER 2005**

# SUMMARY

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## INTRODUCTION

Against the background of Romania's EU accession in 2007, the country's national development policies will become increasingly connected to the European Community policies, objectives, principles and regulations, with a view to ensure a "European" type of social-economic development and to rapidly bridging the gaps between Romania and the European Union.

The latest statistical data provided by the European Commission shows that over the past years Romania has managed to accelerate the process of change and in 2004 the gross domestic product per capita, using reference value expressed in purchase power standard, accounted for 28.8% of the EU-15 average and 31.1% of the EU-25 average, as compared to 23% and 25.2% respectively in 2000. However, Romania still lags behind all new member states, and the gap to be bridged is still significant.

**The National Development Plan (NDP)** is the fundamental tool that Romania will use in order to diminish the social and economic development disparities with the EU as soon as possible. The NDP is a specific concept of the European Cohesion Policy and it represents the *multi-annual strategic planning and financial programming document*. *The NDP is developed in broad partnership, and it will be used to guide and boost Romania's social-economic development in line with EU Cohesion Policy.*

It is very important to highlight the specific character of the National Development Plan 2007-2013. The plan is not a substitute for the National Economic Development Strategy; it is an essential component of this strategy. As defined by the cohesion policy, the NDP is **a tool that sets public development investment priorities**. The NDP is aimed at establishing the main directions for earmarking public funds for investments with a significant impact on the social and economic development, from internal (state budget, local budgets, etc.) or external sources ( structural and cohesion funds, EU funds for rural development and fisheries, etc.), with a view to bridging the development gap between Romania and the EU countries and to doing away with internal disparities ( urban – rural, region X as compared to the national average, etc.). In fact, the NDP does not include aspects concerning legislative regulations, institutional building or structural reform. All these are covered by other programmatic documents, such as the Economic Pre-accession Program or the future National Reform Program.

Starting from the technical discussions with the European Commission under Chapter 21, „Regional policy and the coordination of structural instruments the drafting of the NDP 2007-2013 started in 2004 from the assumption that the document would mainly focus on **priorities and objectives compatible with the intervention fields of the structural and cohesion funds**. This approach is justified both by the fact that the NDP sets the general grounds for accessing structural and cohesion funds, and that after 2007 Romania's development policy will have to get in line with the EU development priorities and to focus on measures that stimulate sustainable economic and social development at European level.

Against the background of the EU cohesion policy reform for 2007-2013 and the subsequent modification of the regulations on structural and cohesion fund management, the NDP is the document that will be the foundation of the *National Strategic Reference Framework for 2007– 2013 (NSRF)*<sup>1</sup>, which is actually the strategy agreed upon together with the European Union for the use of structural instruments.

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<sup>1</sup> According to the future acquis with regard to the Structural Funds and the Cohesion Fund, the Community Support Framework will be replaced by the National Strategic Reference Framework (NSRF), a programming document defining the structural funds' strategic directions of action for each member state and which is negotiated with the European Commission. The Operational Programs which implement these funds are defined within the NSRF.

The connection with the European development priorities is very important to stress. During the 2007–2013 reference period, Romania will have to align its policies with both the EU cohesion policy and the priorities of the Lisbon Agenda, and will have to bring its own policies contribution to attain these objectives. Mention should be made that the European Commission's proposals concerning the management of structural funds in the 2007 – 2013 time frame also reflects a significant reorientation towards supporting the efforts aimed at achieving the Lisbon and Gothenburg objectives, namely *increased competitiveness, full employment and sustainable environmental protection*. The development strategy 2007–2013 is based on the same objectives, in an attempt to bridge the gaps between Romania and the EU as fast as possible, making use of methods promoted at European level that will benefit from a sustained EU financial support.

As for the NDP strategy, taking into account the overall objective to bridge development gaps and starting from a thorough analysis of the current social–economic situation, **six national development priorities** have been set up, which bring together a multitude of priority domains and sub-domains:

- Increasing economic competitiveness and developing an economy based on knowledge;
- Developing and modernizing transport infrastructure;
- Protecting and improving the quality of the environment;
- Developing human resources, promoting employment and social inclusion and strengthening administrative capacity;
- Developing rural economy and increasing productivity in the farming sector;
- Diminishing development disparities between country regions.

This set of priorities ensures continuity of the objectives set in the 2004-2006 NDP and was agreed in principle by the European Commission. Moreover, part of the negotiations carried out under Chapter 21, "Regional policy and the coordination of structural instruments" (closed on September 23<sup>rd</sup>, 2004), the Romanian authorities and the European Commission established the future operational programs under which structural and cohesions funds will be managed, taking into account the domains covered by the above mentioned priorities (except for agriculture, rural development and fisheries, which will be funded from distinct EU funds).

The strategy of NDP 2007–2013 is structured by the 6 national development priorities. This limited number of priorities allows a concentration of available resources and the implementation of those objectives and measures that most powerfully impact on the diminishing of internal and external disparities. Mention should be made, though, that within these set priorities, there are many specific domains/ intervention sectors that are approached, such as education, health-care, energy, IT&C, prevention of natural risks, etc.

The definitions of strategic objectives that contribute to reaching national development priorities includes both elements of sectoral policies and regional development policy, including the National Sustainable Development Strategy 'Horizon 2005' and, on the other hand, the European strategic guidelines and the specific requirements concerning access to post-accession community funds.

The NDP strategy will be funded from multiple sources. As mentioned earlier, NDP 2007 – 2013 will direct and prioritise public development investments, setting the general directions for the allocation of public funds for investments which will have significant impact on economic and social development, from internal sources (state budget, local budgets, etc.) or external funds (EU structural instruments, EU structural type of funds for agriculture, rural development and fisheries, external loans etc.). The financial planning of the NDP, which focused on the drawing of a realistic overall picture of funding sources that should be used in 2007–2013 for an increased convergence towards the EU, revealed a global estimated sum of approximately 58.7 billion Euros, of which 43% are the contribution of the EU.

During the negotiations on Chapter 21, 'Regional policy and the coordination of structural instruments', **Romania pledged to finalize the NDP by having it approved by the government in December 2005.**

In order to meet this significant commitment, the Ministry of Public Finance, as coordinator of the NDP drafting process and of the preparation for the management of Structural and Cohesion Funds (in line with GD No. 497/2004), has worked with the ministries, institutions and social and economic partners to draft the NDP in line with the requirements imposed by relevant national and EU regulations and with the working agenda agreed upon together with the European Commission.

Firstly, GD No. 1115/2004 regarding the drafting in partnership of the NDP was approved. The Decision established the principles for the development of the NDP, the roles of the various institutions involved in the process and the means of inter/institutional cooperation and partner consultations. To that end, the Inter-institutional Committee for the elaboration of the NDP, the national consultative partnership structure and seven working groups were set up.

The final draft NDP reflects the intense activities carried out between May 2004 – December 2005 by several institutions and organisations involved in drafting the document, under supervision and coordination by the Ministry of Public Finance, and the consultations organised at national, regional and local level.

**The NDP 2007–2013 is intended to accurately reflect Romania's stringent development priorities, at national, regional and local level, and proposes support for these priorities through concentrated public investment, allocated by means of programs and projects. The implementation of the development strategy, by means of an effective use of both internal and external funds, will assist Romania to become, by 2013, a competitive, dynamic and prosperous country that is successfully integrated into the EU and on a fast and sustainable development trend.**

# I. ANALYSIS OF CURRENT SITUATION

## 1. SOCIAL AND ECONOMIC SITUATION

### 1.1. Geographical overview



Yellow = EU-15; Blue = NMS-10; Violet = Countries under way to accession Pink Candidate countries

Source: [www.eurunion.org](http://www.eurunion.org)

Romania is located in Europe's geographical centre, equidistant from the Atlantic coast and from the Ural Mountains. In fact, parallel 45° latitude North and meridian 25° longitude East cross each other near the country's capital city, Bucharest.

Set both inside and outside the Carpathian arc and having 1,075kms of the River Danube within or as part of its borders, Romania has 245 kms of Black Sea coastline and is bounded to the Northeast by Ukraine, to the East by the Republic of Moldova, to the South by Bulgaria, to the South-West by Serbia and Montenegro and by Hungary on the West.

Following the 5<sup>th</sup> enlargement in the EU history in 2004, Romania lies at the EU outer border (the border with Hungary). This geographical location is important for the inter-connection and/or integration of the European transport, energy, and telecommunications network and of the research area with those of the neighbouring countries (the Russian Federation, Ukraine, Belarus, Moldova and the Balkan and Mediterranean states) which are included in the new neighbouring policy<sup>2</sup> of the European Union. This role will be increasing important after Romania's accession to the EU, as the country's North, East and Southwest borders will become the EU outer borders.

<sup>2</sup>Com(2003) 104, „Wider Europe – Neighbourhood: A New Framework for Relations with our Eastern and Southern Neighbours”, 11.03.2003, pg.13

The major topography features are represented by large plain areas, with highly fertile soils, and by large hilly and mountainous areas, which are crossed by numerous rivers whose valleys have led to excellent means of communications.

The climate is transitional temperate-continental, with oceanic influences to the West, Mediterranean to the Southwest and excessively continental to the Northeast. The multi-annual average temperature depends on the latitude: 8<sup>o</sup> C in the North and 11<sup>o</sup> C in the South, and on the altitude: with values ranging from -2.5<sup>o</sup> C in mountainous areas (Vârful Omu in the Bucegi Mountains) and 11.6<sup>o</sup> C in plain areas (town of Zimnicea in Southern Romania – Teleorman County). Annual precipitations decrease in intensity from the West to the East, i.e. from 600 mm to 500 mm in Câmpia Română (Romanian Plain) and below 400 mm in Dobrogea, reaching 1,000-1,400 mm in mountainous areas.

Romania's mineral resources are varied and include oil, natural gas, coal, ferrous and non-ferrous ores, gold, silver and bauxite deposits, salt and mineral water springs (over 2,000).

Romania's main cities are Bucharest, Iași, Constanța, Timișoara, Cluj-Napoca, Brașov, Craiova, Galați, Ploiești and Brăila.

Romania's access to the Black Sea is through two maritime ports located at Constanța and Mangalia, whilst the River Danube provides 17 commercial ports at Moldova Nouă, Orșova, Drobeta-Turnu Severin, Calafat, Corabia, Turnu Măgurele, Zimnicea, Giurgiu, Oltenița, Călărași, Cernavodă, Hârșova, Măcin, Brăila, Galați, Tulcea, and Sulina.

The country's main International Airport is the "Henri Coandă" Airport in Bucharest; there are in addition 15 airports in the main cities.

Romania is a medium-sized country within Europe (ranked 11<sup>th</sup>), with a surface of 238,391 km<sup>2</sup>, out of which 87% (207,372 km<sup>2</sup>) is rural and 13% urban (31,018 km<sup>2</sup>).

On July 1<sup>st</sup>, 2005, the country's population was 21,623,849 inhabitants, - 5% of the EU-25 population.

On July 1<sup>st</sup>, 2005, the average population density was of 90.7 inhabitants/km<sup>2</sup>, with significant differences from 1 to 8.1 between the rural population (47 inhabitants/km<sup>2</sup>) and urban (383 inhabitants/km<sup>2</sup>).

According to statistics, in 2004, Romania produced 1.5% of the EU-25 GDP. The same year<sup>3</sup>, in Romania, the GDP per inhabitant was of 7,000 PPS. This was 3.5 lower than the EU-15 average and 3.2 lower than the EU-25 average.

#### Romania's GDP percentage\* as compared to the EU states

- % -

	2003	2004
EU-25 GDP	1.4	1.5
EU-15 GDP	1.5	1.6
NMS-10 GDP	16.5	17.2

\*in billion PPS

In 2004 GDP per inhabitant reached 31.1% of the EU-25 average. Romania meets the eligibility criteria for the Objective on the "Intervention convergence of structural funds", an objective which targets the less developed regions in the EU, i.e. those that have a GDP per inhabitant lower than 75% of the EU average.

<sup>3</sup> Provisional data. Source: New Cronos – Eurostat database

**Comparative indexes**  
Romania – European Union

No	INDEXES	MEASURING UNIT	YEAR	ROMANIA	EU - 15	EU - 25
1	Population (July 1 <sup>st</sup> )	thousands of persons	2004	21,673.3	379,353 <sup>1)</sup>	453,788 <sup>1)</sup>
2	Surface	km <sup>2</sup>	2004	238,391	3,234,568 <sup>1)</sup>	3,973,452 <sup>1)</sup>
3	Population density	inhabitants/km <sup>2</sup>	2004	90.9	117.3 <sup>1)</sup>	114.2 <sup>1)</sup>
4	Population evolution	%	2004/2003	-0.3	+0.8 <sup>1)</sup>	+0.5 <sup>1)</sup>
5	Population structure per age group:	%	2004	100.0	100.0 <sup>2)</sup>	-
	- 0-14 years	%	2004	16,1	16.9	-
	- 15-64 years	%	2004	69.4	67.0	-
	- 65 years and more	%	2004	14.5	16.1	-
6	GDP	Bn PPS	2004	152.6 <sup>P</sup>	9,401.9 <sup>P</sup>	10,370.8 <sup>P</sup>
7	GDP/inhabitant	PPS /inhabitant	2004	7,000.0 <sup>P</sup>	24,400.0 <sup>P</sup>	22,500.0 <sup>P</sup>
8	GDP/inhabitant (PPS)	%as compared to EU-25 average	2004	31.1 <sup>P</sup>	108.1 <sup>P</sup>	100.0
9	GDP growth rate	%	2004/2003	8.3	2.3	2.4
10	Investments (gross creation of fix assets)	% in GDP	2004	22.3 <sup>P</sup>	19.3 <sup>1)</sup>	-
11	Structure of active population:	%	2004	100.0	100.0 <sup>6)</sup>	100.0 <sup>6)</sup>
	- agriculture <sup>3)</sup>	%	2004	31.6	3.8	5.0
	- industry <sup>4)</sup>	%	2004	31.2	27.0	27.8
	- services <sup>5)</sup>	%	2004	37.2	69.2	67.2
12	Rate of unemployment ILO	%	2003	7.0	8.0	9.0
13	Rate of child mortality	‰	2004	16.8	4.5 <sup>1)</sup>	4.8 <sup>1)</sup>
14	Average lifespan					
	- male	Years	2004	67.7	75.8 <sup>1)</sup>	74.8 <sup>1)</sup>
	- female	years	2004	75.1	81.6 <sup>1)</sup>	81.1 <sup>1)</sup>
15	Education level of people aged between 25-64	% in total population aged between 5-64	2004	100.0	100.0 <sup>6)</sup>	-
	- low	% in total population aged between 25-64	2004	28.5	34.1	31.3
	- medium	% in total population aged between 25-64	2004	60.9	42.9	46.8
	- high	% in total population aged between 25-64	2004	10.6	23.0	21.9
16	Rate of inflation	%	2004	11.9	2.0	2.1

Note : 1) 2002; 2) 2000; 3) including forestry and fish breeding; 4) including the energy and construction sector; 5) includes the rest of the branches; 6) Eurostat – “New Cronos” database – data related to the 2<sup>nd</sup> quarter of 2004; <sup>P</sup> – provisional data;

Source: National Institute of Statistics – “Study on household labour force”, 2003; EUROSTAT – “2002 Yearbook”; European Commission – “Unity, diversity, solidarity for Europe and its inhabitants and territory”, 2001; EUROSTAT – “Key data on candidate countries”, no. 129/2001; EUROSTAT - "The Enlarged European Union", 2004; EUROSTAT - "New Cronos" database.

## Administrative and regional structure

Romania has 314 towns of which 103 are municipalities and 2,827 communes (at January 1<sup>st</sup>, 2005). Municipalities, towns and communes are grouped into 41 counties that, together with the country's capital, Bucharest, correspond to the NUTS III<sup>4</sup> statistics level.

More than half of Romania's 314 towns (66%) have a population of less than 20,000 inhabitants and they generally depend on a single economic activity, notably industrial. 25 municipalities have a population of over 100,000 inhabitants.

In order to meet the basic objectives of the regional development policy in Romania, in 1998, Act no. 151 allowed for the creation of 8 development regions, through the voluntary association of the counties – currently corresponding to the NUTS II statistics level, according to the system used in EU countries. As compared to communes, towns, municipalities and counties, the development regions are not administrative-territorial units and do not have legal status. The institutional framework, the objectives, competencies and specific instruments of the regional development policy in Romania were revised in 2004, within the context of the negotiations on Chapter 21 "Regional policy and coordination of structural instruments", following the approval of Act no. 315/2004 concerning the regional development in Romania.

### Romania's counties and development regions



<sup>4</sup> NUTS – Statistics Norms on Territorial Units

### Romania's administrative and regional structure

NUTS I	NUTS II Development region	NUTS III Counties	TOTAL SURFACE on Dec. 31 <sup>st</sup> , 2003 (km <sup>2</sup> )	POPULATION on July 1 <sup>st</sup> 2004 (no. of people)
<b>ROMANIA</b>			<b>238,391</b>	<b>21.673.328</b>
	<b>1. Northeast region</b>		<b>36,850</b>	<b>3.738.601</b>
		Bacău	6,621	722,961
		Botoşani	4,986	459,195
		Iaşi	5,476	821,621
		Neamţ	5,896	570,367
		Suceava	8,554	705,202
		Vaslui	5,318	459,255
	<b>2. Southeast region</b>		<b>35,762</b>	<b>2,850,318</b>
		Brăila	4,766	371,749
	Buzău	6,103	495,878	
	Constanţa	7,071	713,825	
	Galaţi	4,466	621,161	
	Tulcea	8,499	253,419	
	Vrancea	4,857	394,286	
<b>3. South region - Muntenia</b>			<b>34,453</b>	<b>3,342,042</b>
	Argeş	6,826	647,437	
	Călăraşi	5,088	318,588	
	Dâmboviţa	4,054	538,126	
	Giurgiu	3,526	288,018	
	Ialomiţa	4,453	293,102	
	Prahova	4,716	829,026	
	Teleorman	5,790	427,745	
<b>4. Southwest region - Oltenia</b>			<b>29,212</b>	<b>2,317,636</b>
	Dolj	7,414	720,554	
	Gorj	5,602	386,097	
	Mehedinţi	4,933	305,901	
	Olt	5,498	488,176	
	Vâlcea	5,765	416,908	
<b>5. West Romania region</b>			<b>32,033</b>	<b>1,939,514</b>
	Arad	7,754	460,466	
	Caraş-Severin	8,520	332,688	
	Hunedoara	7,063	484,767	
	Timiş	8,697	661,593	
<b>6. Northwest region</b>			<b>34,160</b>	<b>2,738,461</b>
	Bihor	7,544	596,961	
	Bistriţa-Năsăud	5,355	318,558	
	Cluj	6,674	686,825	
	Maramureş	6,304	516,562	
	Satu Mare	4,418	371,759	
	Sălaj	3,864	247,796	
<b>7. Centre region</b>			<b>34,100</b>	<b>2,539,160</b>
	Alba	6,242	382,971	
	Braşov	5,363	596,140	
	Covasna	3,710	223,878	
	Harghita	6,639	328,547	
	Mureş	6,714	584,089	
	Sibiu	5,432	423,535	
<b>8. Bucharest-Ilfov region</b>			<b>1,821</b>	<b>2,207,596</b>
	Ilfov	1,583	280,037	
	Municipiul Bucureşti	238	1,927,559	

Source: National Institute of Statistics

## 1.2. Demographic situation

### 1.2.1. Demographic characteristics

Romania's population has been experiencing a slow and continuous decrease since the beginning of the 1990s. The 2002 census showed the total population was 21.7 million people, compared to 22.8 million people following the 1992 census. During the period 1999-2005<sup>5</sup>, the total population decreased from 22.5 million to 21.7 million. The demographic decrease of the past few years has been determined both by the negative natural growth and by the negative balance of foreign migration.

From the point of view of the population, Romania is part of the world's medium countries category. Compared to the EU-25, Romania's population represents about 5% and amongst the EU's ten new member states, Romania is the second after Poland. While in the enlarged EU- 27), it will rank the 7<sup>th</sup> after Germany (82.5 million people on January 1<sup>st</sup>, 2004), Great Britain (59.7 million people), France (59.9 million people), Italy (57.9 million people), Spain (42.3 million people) and Poland (38.2 million people).

The demographic changes that have taken place during the past 5 years is a direct result of the specific evolutions that Romania's population has experienced since 1989 and this is noticeably reflected on the current situation within Romanian society.

Given a serious decrease in the birth rate (from 13.6 infants per 1,000 inhabitants in 1990, to 10.0‰ in 2004) and a significant increase in the death rate (from 10.6 deaths per 1,000 people in 1990, to 11.9‰ in 2004), the natural growth of the population has strikingly decreased from 2.9‰ in 1990 to -2.5‰ in 1996. This deficit lessened until 1999, reaching -1.4 per 1,000 people, but subsequently a further decline has been recorded, -2.5 per 1,000 people in 2003 and -1.9‰ in 2004.

Despite its increase as compared to the period 1989-1991, *the average life expectancy* continues to be low when compared with other European countries. During 2002-2004, the average life expectancy in Romania was of 71.32 years, with significant male-female differences, following the growth of the male mortality (67.7 years for the male population and 75.06 years for the female population). As a comparison, the EU-15 average life expectancy is of more than 75 years for men and 80 for women. In addition, there are differences between the urban and rural average life expectancy, following the increasing discrepancies between the two living environments (70.34 years for the rural environment, as compared to 72.15 for the urban areas).

#### Average lifespan per sexes and environments

- years -

Period	Total	Male	Female	Difference(F-M)	Urban	Rural
1989-1991	69.76	66.59	73.05	6.46	70.39	68.88
1999-2001	71.19	67.69	74.84	7.15	71.94	70.20
2000-2002	71.18	67.61	74.90	7.29	72.02	70.08
2001-2003	71.01	67.42	74.78	7.36	71.81	70.08
2002-2004	71.32	67.74	75.06	7.32	72.15	70.34

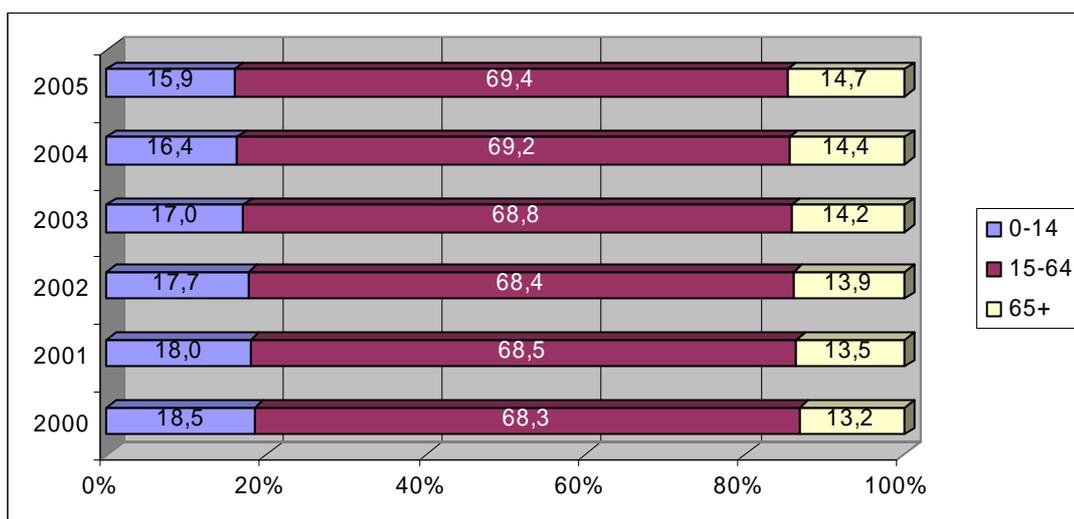
Source: National Institute of Statistics

*The population structure per age groups* has seen significant changes, first and foremost following the continuous decrease of the birth rate, beginning with the 1990s. The age pyramid for Romania's populations for the period 1990-2005 shows a slow, but continuous aging process of the population.

<sup>5</sup> Beginning with 2002, the data were set on the basis of March 2002 Population and Housing Census

Under these circumstances, there is an increase of the “pressure” of the aging population on the potentially active adult population, including on important societal systems (health, social security, social security budget), with implications for the economic and social policy. The population aged less than 15 years is continuously decreasing, reaching 15.9% in 2005 as compared to 19.5% in 1999, whilst the population aged 65 and more increased from 13.0% to 14.7%.

**Population structure per main age groups,  
for the period 2000–2005 (January 1st)**



Source: National Institute of Statistics

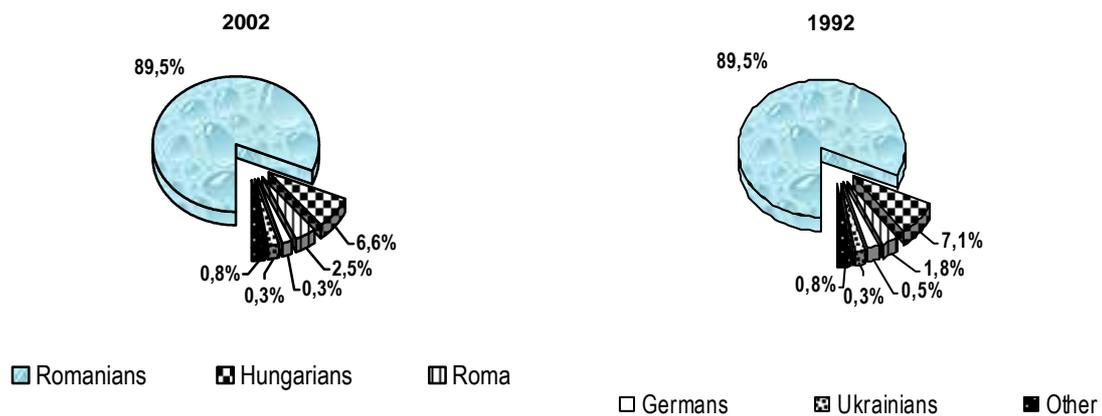
The percentage of the population aged 65 and more in Romania, 14.7% in 2005, represents less than the EU-25 average of 16.3%, whilst the youth population, of 15.9%, is approximately equal to the EU-25 average of 16.6%, which means that the demographic aging process is more prominent at the EU level, as compared to Romania. Under these circumstances, the demographic “pressure” created both by the young and the old (potentially inactive people) over the adults (potentially active people) is of 44 young and old people per 100 working people, with a slight decreasing tendency due to the decrease of the pressure of the young population, following the decrease of the birth rate.

### 1.2.2. Ethnic minorities

Ethnic minorities represent about 10.5% of Romania’s population. The largest minority group are Hungarians, with 1.4 million people which accounts for 6.6% of the country’s population, according to the data of the last census (2002). This shows a slight decline when compared to the 1992 census, which shows this minority group accounted for 7.1% of the country’s population, even though the absolute decline under the circumstances of the general decrease of the population is insignificant.

The Roma population totalled 535,140 people at the 2002 census (2.5% of the population), representing the ethnic minority with the most prominent positive dynamics since 1990. In 1992, the Roma population represented only 1.8% of the total population, while in absolute terms the difference as compared to 2002 is of more than 100,000 people (410,580 people of Roma origin at the 1992 census).

## Ethnic structure of the population following the 1992 and 2002 censuses



Source: National Institute of Statistics

### 1.2.3. Population density and localities demographic characteristics

Being a medium-sized country, with a surface of 238.391 km<sup>2</sup> and a population of 21,658,528 inhabitants in 2005, the average population density in Romania is of 91.0 inhabitants/km<sup>2</sup>, (3-4 times) lower than in Germany, Great Britain or the Netherlands, (5-6 times) greater than in Finland and Sweden and close to Greece and Spain.

Demography and changes in industrial policies have influenced the population mobility and its spatial distribution. At the county level, the population density records show significant variations. For example in many industrialized counties prior to 1990 (Prahova, Dâmbovița, Iași, Galați), population density were significantly above the country's average (130-180 inhabitants/km<sup>2</sup>). Following restructuring rural/urban migration has occurred and followed the employment opportunities.

There are also differences between regions as far as the population density is concerned. Excluding Bucharest-Ilfov Region, which has 1,213.5 inhabitants/km<sup>2</sup> – following the capital city's urban agglomeration—the highest density is in the Northeast Region (101.4 inhabitants/km<sup>2</sup>), the region with the highest demographic dynamics in the country, whilst the lowest density is in the West region (60.4 inhabitants/km<sup>2</sup>), the region with the highest population decrease and with mountainous relief covering a large part of its surface.

Between the census in 1992 and 2002 the country's urban population was maintained at 52.7%. This is set against an annual decline of - 0.8%, for the rural areas. Across the total population the average decrease was of only - 0.2%; thus the differences between the percentages shows that Romania is currently witnessing an urbanization process.

Romania's urbanization process is also related to the territorial profile except for the Bucharest-Ilfov Region, the most urbanized regions are West and Central with an urban population of over 60%. On the other hand, the eastern part of the country (Northeast Region) and the entire southern part (South Region – Muntenia and South West Oltenia) are still dominated by the rural population, as these are areas with extensive plains favouring agricultural activities.

After decades when the number of inhabitants in urban areas recorded a significant growth, after 1990 the urban population has recorded a continuous decrease in all development regions. The main cause for the decrease of the urban population was migration, both toward the rural areas and abroad. This was brought about by the economic decline, following which a large number of people left the towns

where they were unemployed. In parallel, other demographic phenomena add to the decrease of the urban population (e.g. the negative natural growth), but their extent was much less significant.

The border opening and the population's free access abroad have affected some towns in Transylvania and Banat, which have an important German population. Their massive emigration was less obvious at the level of large towns in the areas in question, but highly significant in some small and medium towns.

The demographic aging phenomenon is more noticeable in the rural than in the urban areas. On January 1<sup>st</sup> 2005, almost 19% of the rural population was aged over 65, the largest percentage of which is represented by women. The average age of the rural population is 39.4 years, 1.7 years higher than the urban one (37.7 years). In the urban areas, the average age of the female population is 2.4 years higher than the one of the male population; for the rural areas, it is 3.3 years higher than the one of the male population.

The demographic evolutions of the past year have marked the decrease of the population in urban centres with more than 300,000 inhabitants, thus emphasizing even more the discrepancy between the capital and the top-ranked centres within Romania's localities network, according to the National Territory Management Plan, Section 4 – Localities Network. Under these circumstances, within the regional context, the Romanian urban system is confronted with the phenomenon of excessive atrophy of the capital city and with the significant decrease of the population in the country's other cities, which should be important nuclei for the functioning and sustenance of the national localities network. This decrease results in the decrease of their role and function in the territory, thus leading to the weakening of the development potential in the entire area of influence.

With its almost 2 million inhabitants, Bucharest is ranked the 6<sup>th</sup> among the European metropolises and has the most numerous population among the largest cities in Eastern Europe, which accounts for the preferential attraction of investments and for the consolidation of its role as the country's economic metropolis.

#### 1.2.4. Migration

In addition to the negative natural growth, the current structures of the Romanian population have also been influenced by the changes in migration flows, especially the migration of several important categories of Romania's population (highly skilled and trained population).

**Foreign migration** was one of the factors of the numerical decrease of the population, thus generating a significant negative balance. After the outburst of the foreign migration flow of 1990, the number of emigrants has gradually decreased. In 2004 recorded figures show 13,082 people left the country - this is 7 times less than in 1990.

#### Main indicators of the foreign migration

	1990	2001	2002	2003	2004
Balance of foreign migration					
- number (thousands)	-86.8	0.4	-1.6	-7.4	-10.1
- per 1,000 inhabitants	-3.7	0.02	-0.07	-0.34	-0.47
Male (per 1,000 inhabitants)	-3.5	0.03	-0.03	-0.25	-0.31
Female (per 1,000 inhabitants)	-4.0	0.01	-0.12	-0.42	-0.62
Emigrants					
- number (thousands)	96.9	9.9	8.2	10.7	13.1
- per 1,000 inhabitants	4.20	0.44	0.37	0.49	0.60

Source: National Institute of Statistics

The lifting of visa requirements in the Schengen area on January 1<sup>st</sup>, 2002, resulted in a reversal of the trend and increased the number of emigrants. The temporary migration of the labour force abroad is estimated to be higher than the official data (about 1.7 million<sup>6</sup> in 2003).

Until 1999, the main destination countries for Romanian emigrants were Germany (almost half of the total of emigrants), Hungary (11%), and the US (9%), the most massive migrations taking place in 1990, especially to Germany. Since 1999, following a high decrease of the migration flow towards Germany and Hungary, there has been a change in the permanent emigration structure per destination countries, especially to Canada, Italy and the United States. If in 2003, most emigrants chose the US as a destination, 2004 marks the orientation of the migration to countries in Western Europe. About 15% of the total emigrants head towards North America, mainly due to the less restrictive procedures for the residence permit.

The phenomenon of the definite foreign migration of the beginning of the 1990s is currently replaced by a temporary foreign migration, without changing residences, due to an economic motivation.

The continuous increase of the foreign migration of the highly skilled and trained population is a matter of great concern. Romania is being more and more confronted with the so-called phenomenon of the figures “brain drain”, more than a quarter of the emigrant labour force being highly educated.

#### Emigrants per level of education, for the period 1999-2004

Year	Total	Education				
		University	Post-High school	Professional Technical	Elementary and secondary	Other
1999	12,594	2,450	3,316	570	2,645	3,613
2000	14,753	3,384	4,740	749	2,389	3,491
2001	9,921	2,688	2,940	608	1,496	2,189
2002	8,154	2,187	3,435	290	1,495	747
2003	10,673	2,753	4,941	171	1,761	1,047
2004	13,082	3,491	6,407	198	2,282	704

Source: National Institute of Statistics

In addition, the most represented professional categories within the emigrating labour force are engineers, architects, economists, technicians and workers, despite the fact that these callings are highly sought on the Romanian labour market as well, but against incomparable payment levels.

#### Domestic migration<sup>7</sup>

The country's general economic decline, especially the industrial one, has generated a new type of migration: from urban to rural areas, a type unknown in Western Europe countries. If, in 1990, the rural-urban migration flow was at its highest following the elimination of restrictions on residence permits in certain towns, after this date, the direction of the population's migration flow has gradually changed. The evolution of urban unemployment, the welfare increase in large towns, and the restitution of agricultural lands under Act no. 18/1991 were among the main factors leading to the increase of the percentage of those who left from urban areas towards rural ones. The domestic migration increased in the period 1999-2004, from 275.7 thousand people to 369.9 thousand people, whilst migration flows recorded a negative balance in the urban area and a positive one in the rural one. In 2004, the migration rate per

<sup>6</sup> Estimates of the International Office for Migration, e.g. in Italy, in 2003, more than 100,000 Romanian workers were recorded, having official working permits

<sup>7</sup> Domestic migration is due to the address changes within the country boundaries. Address changes within the same locality, from one street to another or from one village to another within the same commune are not included.

age groups was higher for the women in the population segment aged between 20 and 34, the most mobile people being those in the 25-29 age groups (1.5%). The balance on address changes recorded negative values for the rural population aged between 25 and 34. Address changes due to work and family issues continued to predominate as far as young age groups were concerned. The migration of the population aged 60 and more, which is less mobile, recorded low percentages, with higher values concerning the urban-rural flow as compared to the rural-urban one.

Domestic migration flows play an important role in the configuration of regional demographic typologies. The decrease of long-distance migration in favour of the short-distance one, experiencing a continuous increase, resulted in the "same county migration" significantly surpassing the "inter-county migration".

**International migration** raised certain particularities caused by the specificity of regional economic evolutions. In 2004, the highest migratory dynamics was seen in the Northeast Region, the most populated one, the Southwest Region-Oltenia, within the context of the attraction of dismissed labour force in the Valea Jiului mining area, and in the Bucharest-Ilfov Region, whose dynamics is determined by the existence of the capital, characterize by increased migration flows. West and Centre Regions are the only ones except for the Bucharest-Ilfov one that recorded, in 2004, a positive balance of the migration flow. The phenomenon can be explained by the increasingly greater attraction of these regions following the direct vicinity or closeness to an EU member state (Hungary) and the development of urban centres, under European influence. The mostly negative balance in the other development regions is yet further proof of foreign migration. The highest increase of the migration balance was recorded in the Bucharest region (6,987 people in 2004).

### Address changes, per regions, for the period 2000-2004

-rate per 1,000 inhabitants-

Region	2000		2001		2002		2003		2004	
	Departed	Arrived								
North-East	11.7	11.3	12.7	11.8	14.6	13.6	14.7	13.5	16.3	14.9
South-East	10.7	10.6	12.6	12.4	15.1	14.9	15.1	14.6	16.6	16.4
South Muntenia	10.0	10.6	11.9	11.0	14.0	13.7	14.5	13.8	16.5	16.0
South-West Oltenia	12.6	12.8	13.5	13.2	15.6	15.4	15.5	14.7	17.9	17.6
West	11.5	12.4	12.2	13.9	13.6	14.8	14.4	16.0	16.3	17.6
North-West	9.1	8.7	10.2	9.4	12.6	12.1	12.8	12.2	14.7	14.4
Centre	10.5	10.5	11.6	12.0	13.8	14.0	14.1	14.2	15.5	15.5
Bucharest-Ilfov	11.7	11.0	17.9	20.6	19.2	21.2	22.5	26.4	24.2	27.4

Source: National Institute of Statistics

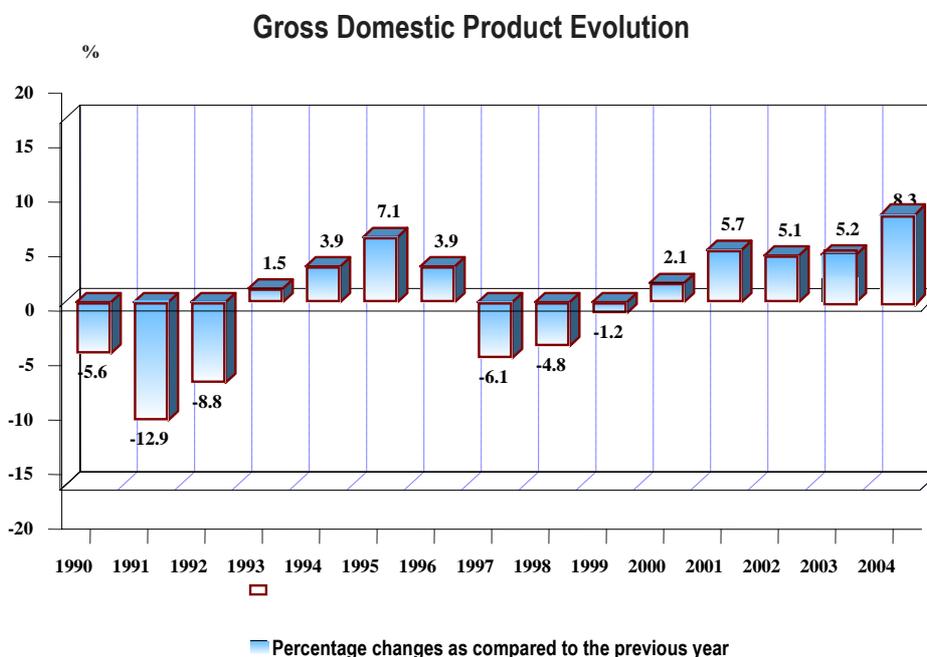
## 1.3. Macroeconomic situation

### 1.3.1. Gross Domestic Product

During the past years, the Romanian Government has implemented macroeconomic policies aimed at supporting the economic growth. A disciplined fiscal policy that added to a strict monetary policy, supported by a significant progress of economic reforms, has led to the improvement of the business environment and functioning of the Romanian economy. These factors have resulted in a gradual increase of the GDP, accompanied by the considerable decrease in the inflation and have been underpinned by the maintenance of fiscal and current accounts deficits within sustainable limits.

Romania is currently in its 6<sup>th</sup> year of continuous economic growth and annual rates of about 5%, starting with 2001, thus ensuring the gradual reduction of the differences as compared to the EU states. If, in 2000,

the real GDP growth was of only 1.8%, during the period 2001-2004, the average increase rate was of 6.1%, in 2004 being registered a significant economic growth of 8.3%. In addition, domestic and foreign disequilibria were also maintained during the first semester of 2005: the main economic growth factor continued to be the household consumption, and generally imports were needed to meet the increased demand.



Source: National Prognosis Commission, based on data from the National Institute of Statistics

The GDP/inhabitant indicator also recorded a positive evolution, increasing from €1,795.3 in 2000 to €2,718.3 in 2004. Expressed through the purchase standard, the GDP/inhabitant reached the level of 7,000 SPP in 2004 (accounting for 28.8% of the EU-15 average and 31.1% of the EU-25 average), increasing as compared to the 2000 level, when it reached 5,000 SPP (accounting, at that time, for 23.1% of the EU-15 average).

### Gross Domestic Product use

- percentage changes as compared to the previous year -

	2000	2001	2002	2003	2004	Average rate 2000-2004 (%)
Domestic demand, of which:	4.3	8.4	3.9	7.4	10.2	6.8
- Individual consumption of the population	0.2	6.8	4.8	7.2	10.8	5.9
- Collective consumption of the public administration	20.5	-0.2	6.0	4.6	4.6	6.9
- Gross creation of fixed assets	5.5	10.1	8.2	9.1	10.1	8.6
- Stocks modification	2.2	1.6	-1.6	0.1	0.1	-
Net exports	-2.3	-3.1	0.9	-2.7	-2.8	-
- Goods and services exports	23.4	12.1	17.5	11.4	14.1	15.6
- Goods and services imports	27.1	18.4	12.0	16.4	17.8	18.3
<b>Gross Domestic Product</b>	<b>2.1</b>	<b>5.7</b>	<b>5.1</b>	<b>5.2</b>	<b>8.3</b>	<b>5.3</b>

Source: National Prognosis Commission, based on data from the National Institute of Statistics

For the entire period, **the domestic demand** represented the main determinant for growth, registering an average annual increase rate of 6.8%. In 2004, it increased in real terms by 10.2%, as a consequence of both the increase of the individual consumption of the population – which consolidated its rate by 3.6% compared to 2003 (10.8%), as well as the increase of the gross creation of fixed assets (10.1%). An

important factor of growth for the domestic demand was represented in 2004 by the reductions of the income and corporate taxes, by the introduction of the single tax rate of 16%. During the entire period, the gross creation of fixed assets was the most dynamic component of the domestic demand, with an annual growth rate of 8.6%.

**The net export** had in general a negative contribution to the GDP increase, determined by the increased imports of goods and services, on average by 18.3% - due to the increased dependence of the Romanian economy on the imports of energy and raw materials, and the exports increase by 15.6% on average.

The contributions of various usage components to the GDP increase in real terms show an improvement in the economic structure and a policy of satisfying the domestic demand mainly through the internal production and usage of the imports in order to compensate the deficits.

During 2000-2004, the increasing **aggregated demand** was satisfied by the internal offer at a level of approximately 70%. The analysis of the gross domestic product on branches shows the increased share of the industrial and construction activities, but also of the service sector.

### Evolution of gross added value (GAV) per branches

- Annual percentage changes -

	2000	2001	2002	2003	2004	Average rate 2000-2004 (%)
Gross added value, Of which:	2.2	6.7	5.1	4.9	8.2	5.4
Industry	5.9	4.4	5.1	4.4	6.2	5.2
Agriculture	-18.1	28.0	-6.7	5.0	22.2	4.7
Constructions	6.3	11.1	7.6	7.0	9.0	8.2
Services	5.5	3.6	7.1	5.3	6.1	5.5
<b>Gross Domestic Product</b>	<b>2.1</b>	<b>5.7</b>	<b>5.1</b>	<b>5.2</b>	<b>8.3</b>	<b>5.3</b>

Source: National Prognosis Commission, based on data from the National Institute of Statistics

As compared to the evolution recorded until 2000, mainly characterized by the considerable decrease of the industry percentage and by the increase of the contributions of the services aspect, for the period 2000-2004, the GAV increase rates in agriculture and constructions lead to the increase of the percentage of these branches within the GDP. Thus, the GAV percentage in agriculture increased from 11.1% in 2000 to 13% in 2004 (significantly contributing to the economic growth – 2.6% in 2004), whilst the one in constructions increased from 4.9% to 6.1%.

### Structure of GDP per branches

- % -

	2000	2001	2002	2003*	2004**
Gross added value, of which:					
Industry	27.3	27.7	28.1	27.3	27.0
Agriculture	11.1	13.3	11.4	11.7	13.0
Constructions	4.9	5.3	5.8	6.0	6.1
Services	46.3	44.5	45.3	44.7	44.1
Other components	10.4	9.2	9.4	10.3	9.8
<b>Gross Domestic Product</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

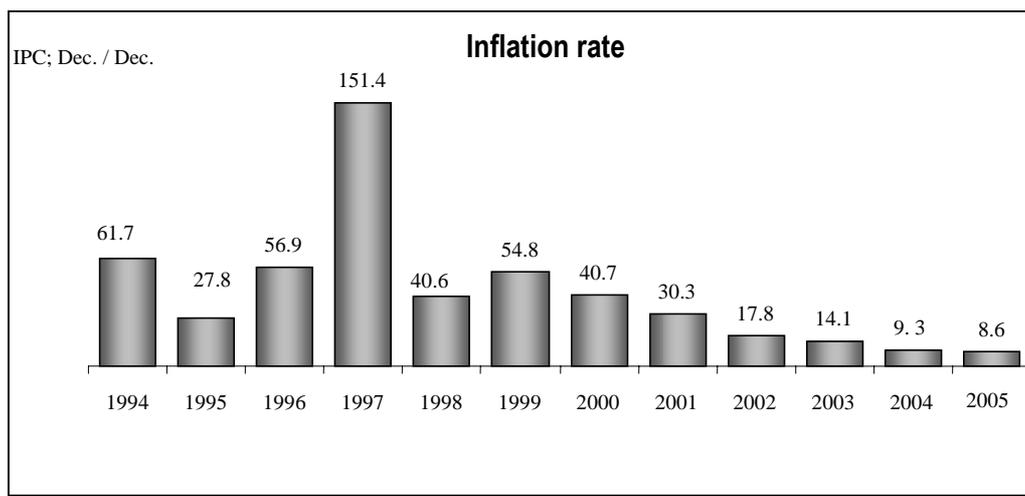
\* Semi-definite data. \*\* Provisional data

Source: National Prognosis Commission, based on data from the National Institute of Statistics

For the period 2000-2004, the role of the **private sector** in the economy continued to increase, having, in 2004, a percentage of 70.8% within the GDP. Within the GAV in agriculture and constructions, its percentage is of more than 90% (99.2%, and 109.7% respectively). For industry and services, this percentage is of 84.8%, and of 67.8%, respectively.

### 1.3.2. Inflation

After 1997, following the last phase of price liberalization, the inflation rate reached 151.4%, but starting with 2000, Romania has experienced a sustained disinflation process, the increase rate of consumption prices decreasing from 40.7% in 2000 to 14.1% in 2003, 9.3% in 2004, and being in a continuous decrease to 8.6% in December 2005.

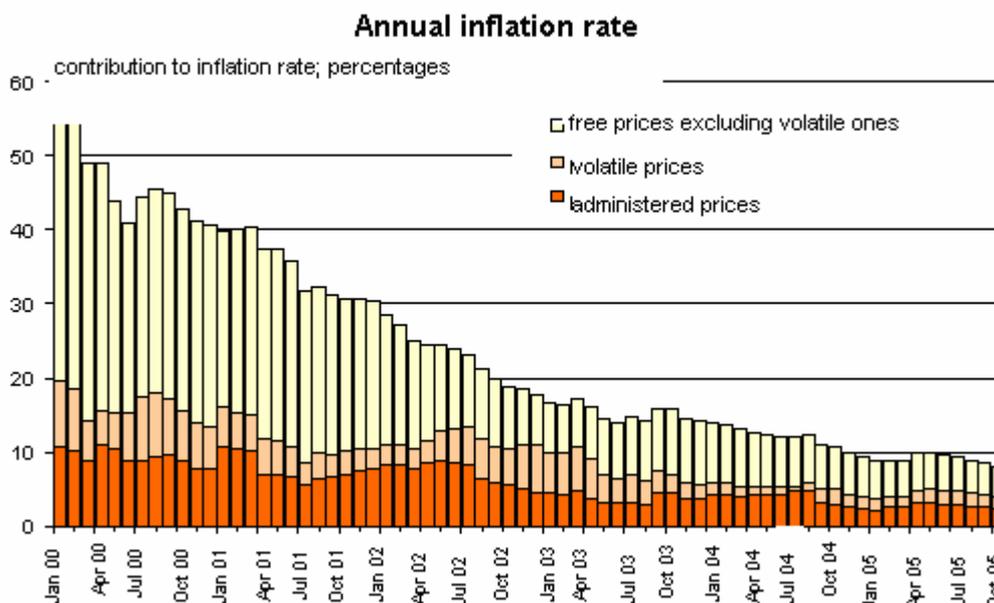


Source: National Institute of Statistics

Despite the disinflation trend of the past few years, Romania continues to have the highest inflation rate among the EU member states and candidate countries, after Turkey.

The price increase for the analyzed period resulted from a number of internal and external factors. Among the most important ones, there are: the increased prices of the imported raw materials (oil, natural gas, wheat) which had a direct effects on some consumption prices (energy, fuels, transport), the acceleration of the increase rate of the average unit costs for industry, the result, in 2005, of the calendar for the change of the excises status as agreed with the European Union, and the shocks on the agricultural market, due to unfavourable weather conditions.

In addition, inflationary pressures lead to the adjustment of administered prices whose annual growth rate was constantly over the inflation rate, marking an accelerating trend in 2005: 9.9% in December 2004, 14.8% in May 2005 and decreasing to 10% in October 2005); the percentage of this type of goods and services in the daily consumption products increased from 9% in 1997 to almost 23% in 2004. Within these, the highest influence belongs to the electric and thermal energy and natural gas, representing about 50%; the corrections applied to energy prices will continue on a periodical basis, in such a way as to ensure cost recovery and, in the case of natural gas, the alignment of the price related to the domestic production to the import one, until 2007.



Source: National Institute of Statistics, calculi by the National Bank of Romania

From the point of view of the demand, the rapid consumption growth – an effect of the increase of the population’s available revenues and of the expansion of banking and non-banking financing supply – created a permissive environment to dissolve the tensions accumulated at the cost level into prices.

The inflationist potential of the demand surplus was partially attenuated by the consumers’ orientation towards imports at advantageous prices, against the nominal appreciation of the national currency and the favourable trend of foreign prices of non-energetic products. The intensification of the competition on the retail sector, following the expansion of large commercial operators and the increased exposure of the productive sector to foreign competition pressures also contributed to an increased rate of consumption prices.

Note is to be taken of the fact that the 2004 objective of reducing the inflation rate (December /December) to the level of a single figure was reached.

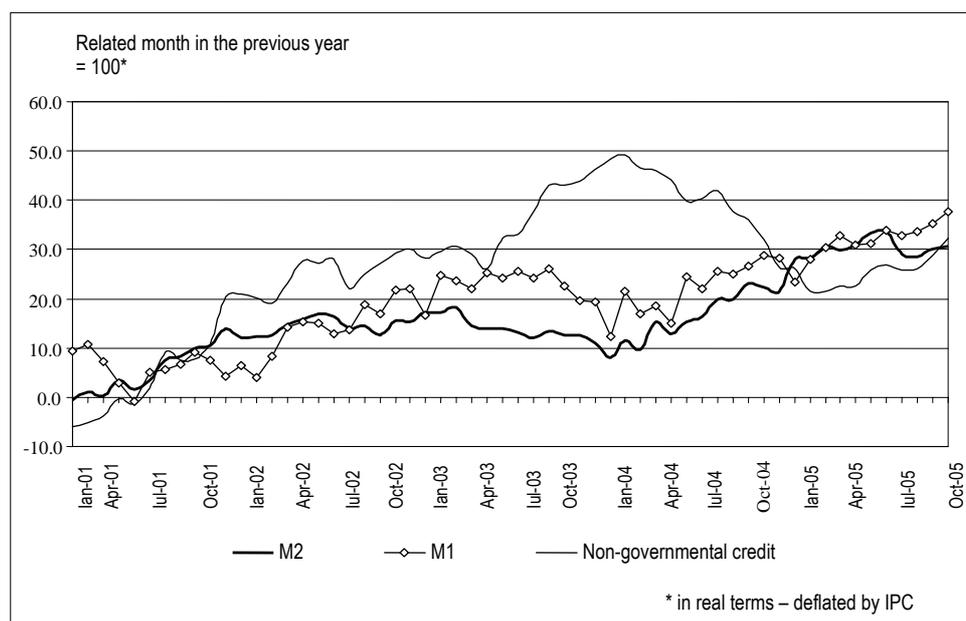
### 1.3.3. Monetary and exchange rates policy

Monetary evolutions and the modifications in the lei exchange rate for the past four years reflected Romania’s progress in respect to the macroeconomic and financial stabilization, as well as to the economic structural and behavioural changes.

Thus, after a long period of restriction on the bank intermediaries and demonetization of the economic system – due both to the previous inconsistency of the economic reform and to the side effects of certain restructuring processes, during the past four years the economy entered a process – although only at a slow rate – of rebuilding and increased financial deepening. The liquidity in the economy (M2) increased in real terms at an average annual rate of 16.8%, its percentage within the GDP increasing from 23% in 2000 to 27% in 2004.

## Monetary mass, restrained monetary mass and non-governmental credit

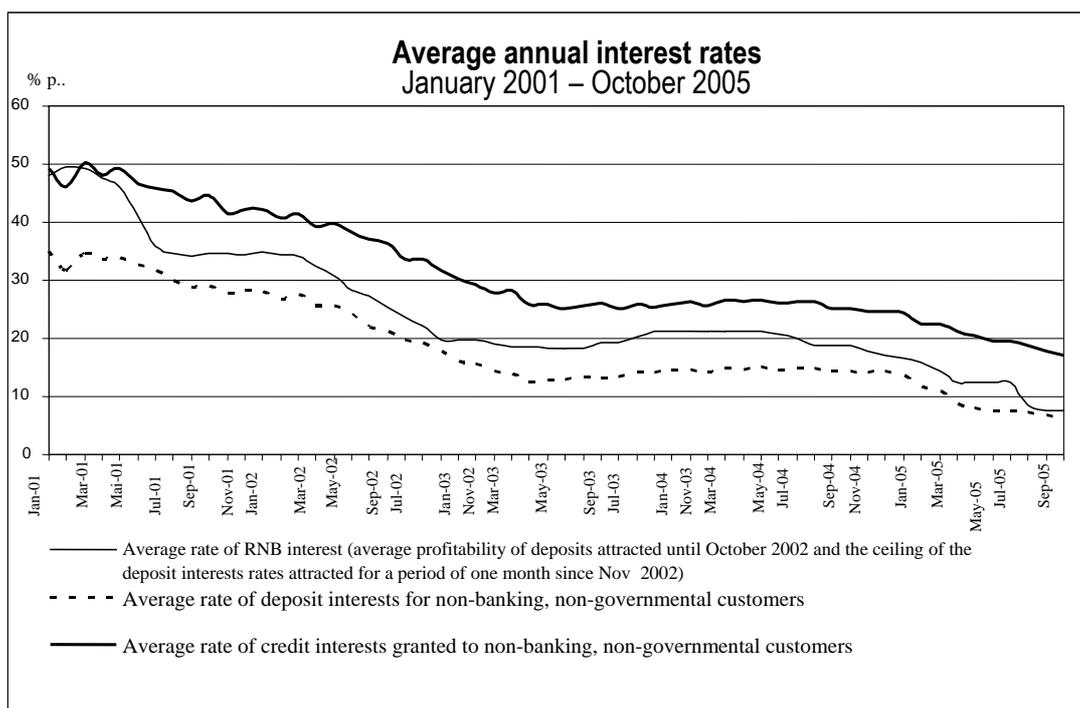
January 2001 – October 2005



Source: National Bank of Romania

For the period 2001-2004, the monetary increase was alternatively induced by the accumulation of net foreign assets by the banking system (mainly by the central bank) and by the non-governmental credit which, in 2003, represented almost the only source of monetary creation. Increasing in real terms at an average annual rate of 31%, the non-governmental credit augmented its percentage within the GDP from 9.3% in 2000 to 17.5% in 2004. In 2005, the non-governmental credit became again the main determinant of the monetary mass increase; its annual increase rate was accelerated, reaching 32.2% in October 2005. Despite the constantly growing trend of the two indicators representative of the financial depth, the level they reach continues to be below the similar values in the EU-15 economies and even below those reported by the new EU member states.

Even though they were advantageous from the point of view of the reduction of this difference, the unprecedented acceleration of the increase rate of the non-governmental credit in 2003 (+ 48.5% in real terms), especially of the one granted to the population, and the comeback on an ascending trend of this rate in 2005 brought about risks, both concerning the insurance of the disinflation sustainability and the maintenance of the financial stability. The spectacular increase of the credit in 2003 and then the resuming of its relatively quick expansion in 2005 were sustained by both loan supply and demand. In order to halt the risky credit increase rate, for the second half of 2003, the central bank turned to the consolidation of the interest rate policy. In addition, in order to increase the efficiency of its influence on the crediting process, the National Bank of Romania associated its monetary policy to safe measures, aiming at mainly the credits granted to the population.



Source: National Bank of Romania

In this context, in 2004, the increased speed of the credit granted to the non-governmental sector slowed down, especially its lei component, whilst savings in the national currency were reinforced. Following these favourable evolutions and the progressive deceleration of the inflation, the National Bank of Romania (NBR) proceeded to the gradual relaxation of the interest rate policy and to adjusting, in November 2004, the status of the exchange rate, i.e. the reduction of the control degree practiced by the central bank in this respect.

The effect of the credit moderation against the economy cash flow was more than counter-balanced in 2004 by the impact of the increase of the central bank's foreign net assets, justified by the revenue generated from privatization, but especially by the NBR freeze on an important part of short-term capital entries together with the NBR's net foreign currency purchases reaching a record amount.

The 2005 comeback of the non-governmental credit increase rate on an excessively climbing curve was catalyzed, on the one hand, by the relatively quick relaxation of the interest rate policy – as a reaction of the constraint of the increase of speculating capital entries – and, on the other hand, by the intensification of the action of the factors favourable to the increase of the foreign currency denominated credit, its annual increase rate continuing to consistently surpass the one of the lei component. Both the intensification of foreign capital entries and the increase of foreign currency financing demand were caused by the persistence of the couple formed by the high difference of interest rates as compared to international markets and the nominal appreciation trend of the leu as compared to the euro. In its turn, this persistence was intensified by the joined effect of the expectations to continue the monetary policy behaviour consistent with the specific macroeconomic context and with the *inflation targeting*<sup>8</sup> strategy and of the development of an important liberalization phase of the capital mobility<sup>9</sup>.

In the short term, it is estimated that the process of re-monetization and financial deepening of the economy will progress and even accelerate, given the reinforcement of the positive macroeconomic

<sup>8</sup> In August 2005, the NBR officially adopted the *inflation targeting* strategy

<sup>9</sup> In April 2005, non-residents' access to limited deposits in the national currency was liberalized

performances of the past years and the speeding of structural reforms. A decisive role within this context will be held by the monetary policy that will concentrate on guaranteeing the sustainable deceleration of the inflation, within the context of the use of the analytical framework specific for the inflation targeting strategy, as well as of the mix of preventive and administrative measures, recently implemented by the central bank. It is estimated that the inflation targeting strategy will continue to be supported by the real terms appreciation of the leu as compared to the euro, which will take place in accordance with the improvement of the economic fundamentals. The role of the interest rate policy will be reconsidered and consolidated; the increase of the cash flow quality control will also contribute to this; in the same time, the monetary policy interest rate will increase the efficiency of the inflationist estimates. In addition, this variable will be adjusted in such a way as to assure<sup>10</sup> the elimination of the demand surplus by the end of 2006, by maintaining an appropriate development rate of the crediting process by stimulating the saving process.

During 2007-2013, a large part of the delays on banking intermediating activities and on the economy financial deepening will be gradually eliminated. The coordination of the leu exchange rate to the ERM II and the initiation of the testing phase for the sustainability of the price stability and the exchange rate are estimated to be carried out within the timeframe 2010-2011, as the process depends on the progresses made regarding the real convergence and if successful it could lead to the adoption of the euro currency during the timeframe 2012-2014.

In accordance with Act no. 348/2004 concerning the **denomination of the national currency**, on July 1<sup>st</sup> 2005, Romania's national currency, the leu, was denominated; thus, 10,000 ROL in circulation at that time were changed into 1 RON. The NBR put into circulation the new coins and banknotes from July 1<sup>st</sup>, 2005.

The NBR believes that the gradual disinflation strategy was and continues to be the appropriate one, whilst inflation targeting is the appropriate medium-term monetary policy framework for Romania.

#### **1.3.4. Public finance**

For the period 2000-2004, the public finance reinforcement strategy, focused on their sustainability and stability, can be characterized through several essential elements:

- The improvement of public expenditure management, the use of public finance being based on clearly defined objectives, identified between the programs elaborated by the main credit coordinators;
- The increase of the fiscal transparency through the elimination or inclusion in the state budget of special funds and revenues retained, within the extra-budgetary system, by several public institutions;
- The creation of new rules and principles within the budgetary policy, aiming at the budget construction and carrying-out procedures, multi-annual budget programming and the coordination of the entire budgetary effort necessary to the development of the main credit coordinators' activity.

Within this framework, budgetary expenditures played an active role in supporting the investment process, with direct implications on the economic growth.

Even though budgetary deficits, calculated in accordance with ESA 95, were relatively high during the period 1999-2000 (4.5% and 4.4%, respectively, of the GDP), following the non-performing credit influence within the banking system, taken over to the public debts, their trend has subsequently had an

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<sup>10</sup> The efficiency of the monetary policy and of the monetary policy interest rate are based on the implementation of the austere mix of macroeconomic policies, made up of the fiscal and revenue policies

ascending evolution, essentially contributing to the inflation reduction and to the increase of the domestic non-governmental credit.

At the same time, though, the percentage of the budgetary expenditure and revenues within the GDP has continuously decreased, with a slight improvement since 2003. It is estimated that this evolutionary trend will also continue in 2006, following the continuation of the fiscal relaxation policy.

In addition, the macroeconomic stability, the constant improvement of the country rating and the continuous decrease in the inflation have lead to the decrease of expenditures with the interests related to the public debt, thus allowing for the orientation of public funds towards other sectors.

### Revenue, expenditure and budgetary deficit percentages within the GDP

- % of the GDP -

Indicators	1999	2000	2001	2002	2003	2004	2005 <sup>1</sup>	2006 <sup>1</sup>
Budgetary revenues	35,4	34,0	32,4	31,4	33,1	32,05	33,35	32,9
Budgetary expenditures	39,8	38,4	35,9	33,4	35,1	33,5	33,7	33,6
Of which: interests	5,4	3,8	3,2	2,2	1,6	1,4	1,2	1,1
Budgetary deficits	-4,5	-4,4	-3,5	-2,0	-2,0	-1,5	-0,4	-0,7

<sup>1)</sup> estimates

Source: Ministry of Public Finance; the data are calculated in accordance with the ESA 95 methodology.

The budget policy is focused on the continuation and reinforcement of the progresses made so far, concerning both budget programming and carrying-out and the sustainability of public finance in their entirety.

Within this context, the main coordinates of the budget policy are aimed at the following objectives:

- Maintenance of the economic growth rate and support of the disinflation process;;
- Support of the convergence process of the Romanian economy with the European economies; increase of public expenditure transparency;
- Increase of the absorption capacity of community funds

Budget revenues have a slight decreasing tendency, but they will be maintained over the limit of 32% of the GDP, an evolution marked by a relative stability of the fiscal system, generated by the application of the Fiscal Code, starting with January 1<sup>st</sup> 2004, by the introduction of the 16% flat rate starting with 2005, by the continuous adaptation of fiscal regulations to the EU legislation and by the increase of the revenue gathering degree. The fiscal relaxation policy will continue through the reduction by two percentages of the social insurance contributions, for the period 2006-2008. Nevertheless, in order to ensure the necessary amounts within the perspective of the accession to the EU, certain measures will be taken in order to increase budget revenues, by extending the taxing basis.

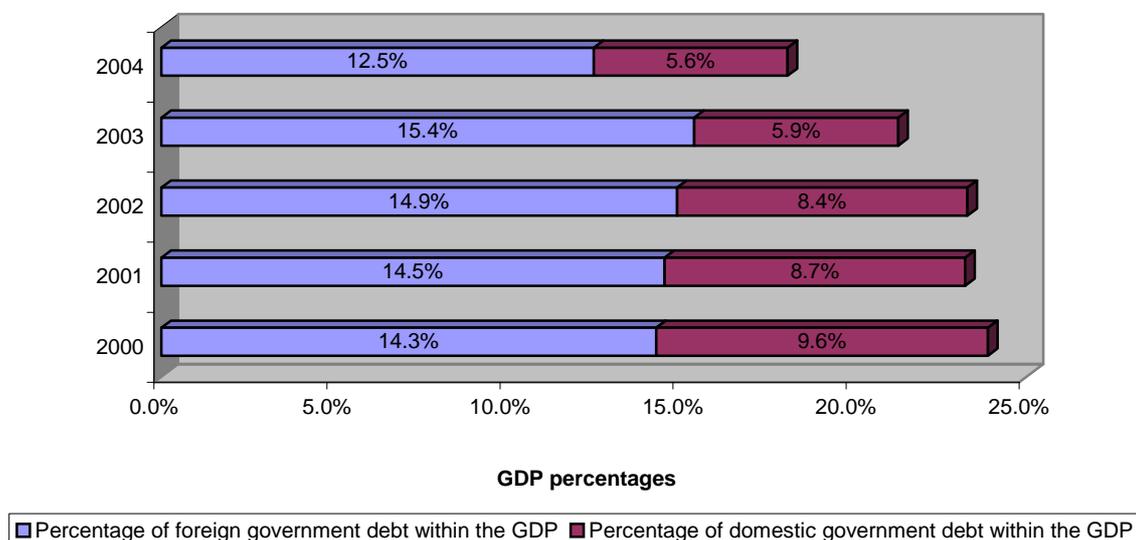
Budget expenditures, as a percentage within the GDP, will experience only a slight growth for the period 2005-2007, given the macroeconomic constraints that impose a diminished budget deficit, as the reform measures of the public administration and the reduction of social insurance costs.

The government debt (calculated in accordance with the ESA 95) gradually decreased as a percentage within the GDP, from 23.9% in 2000, to 18.1% in 2004, as Romania has a low debt level as compared to a some of new EU member states, such as Poland (43.6%), Slovakia (42.5%), Hungary (57.4%), Malta (75.9%) and considerably below the limit set by the Maastricht Treaty of 60% of the GDP.

The domestic government debt decreased by 42% as a percentage within the GDP for the period 2000-2004, following the use of privatization revenues and the recovery of non-performance bank liabilities for recovery, while the percentage of the foreign government debt within the GDP slightly increased by 1.1%

until 2003; in 2004 it decreased to 12.5% of the GDP, an evolution favoured both by the low financing needs of the budget deficit and by the increasingly reduced costs of foreign financing of the budget deficit following the continuous improvement of the sovereign rating for Romania.

### Romania's government debt within the GDP for the period 2000 - 2004



Source: Ministry of Public Finance

The percentage of the government debt within the GDP will slightly decrease for the period 2005 - 2008, remaining below the level of 20% of the GDP. Part of the government debt represented by foreign credits contracted by ministries with the state's guarantee will slightly diminish because, starting from 2005, state guarantees are no longer issued for these credits, and the difference between the domestic and the foreign debts will change as the domestic capital market extends and as the budget deficit is financed out of domestic sources. The risk of potential obligations will diminish following the gradual elimination of the state guarantee facility of foreign credits contracted by companies.

### Percentage of government debt and budget expenditure with interests within the GDP for the period 2005-2008

Indicators	2005	2006	2007	2008
Government debt	17.1	15.1	14.6	14.6
Budget expenditure with interests	1.2	1.1	1.0	1.0

- % of the GDP -

Note: the indicators of the government debt were calculated by the Ministry of Public Finance, in accordance with the ESA 95

A risk element that burdens budget expenditures with the government debt is induced by the state guarantees related to foreign credits contracted by companies with mostly state or private capital. The rate of failure (calculated as the ratio between budget payments for companies and the total service related to state guaranteed foreign credits) decreased from 40.6% in 2000 to 12.6% in 2004.

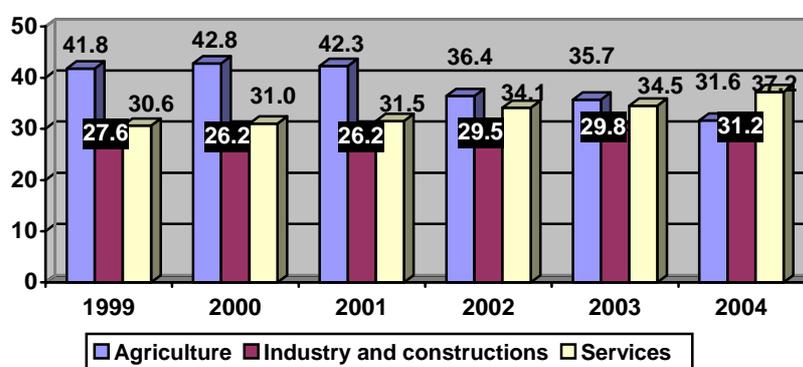
### 1.3.5. Occupation and wage earnings

During the period 1999 - 2004<sup>11</sup>, Romania's working population decreased by 1,618 million people, i.e. by 15%. The exception was in construction, real estate transactions and rental and the services providing enterprise support, health and social insurance, trade, public administration and defence, hotels and restaurants.

For the period 1999-2004, **the percentage of the working population:**

- *Decreased in agriculture* by 10.2%, continuing to be about 6.3 times higher than the EU-25 average. Thus, if the percentage of the working population in agriculture was, in Romania, of 31.6% in 2004, as compared to 5% in the EU-25 and 3.8% in the EU-15;
- *Increased in the following areas: services*, by 6.6%, the level of 37.2%, recorded in Romania in 2004, remaining, nevertheless, almost twice lower than the EU-15 average (69.2%), and than the EU-25 average (67.2%); *industry and constructions*, by 3.6% (31.2%). In the EU-25, the percentage of the working population is of 27.8%, while in the EU-15 it is of 27%.

**Structure of working population per fields of activity**

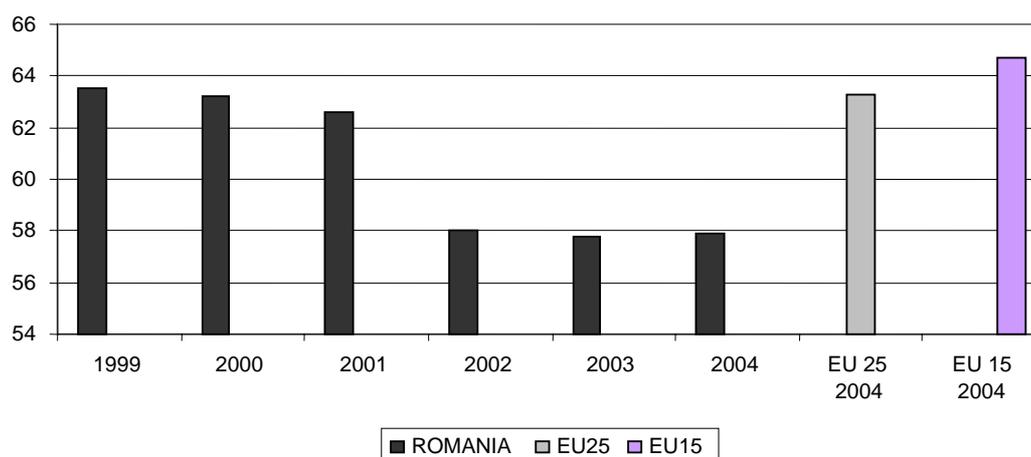


Source: National Institute of Statistics; the data for 2002 and 2004 were extended based on the results of the March 2002 Population and Housing Census

In Romania, in 2004, **the occupation rate of the population aged between 15 and 64** was of 57.9%, as compared to 63.3% in the EU-25 and 64.7% in the EU-15.

<sup>11</sup> Data source: National Institute of Statistics, Study on the household labour force (AMIGO); the data for 2002 and 2003 were estimated based on the results of the March 2002 Population and Housing Census and are not comparable to the series of data from previous years.

### Occupation rate of the working population (15-64 years) (%)



As for the occupation rate of the working population (15-64 years) per development regions, the highest rates were recorded in 2004 in the Southwest Region – Oltenia (59.9%) and the Northeast Region (62.4%), while the lowest ones were in the Centre Region (53.9%) and Southeast one (54.7%).

The ILO unemployment rate recorded, in the period 1999-2004, a slightly increasing evolution (from 6.8% in 1999 to 8.0% in 2004); nevertheless, the level of this indicator is below the EU-25 average (9.0%) and of the EU-15 one (8.0%).

For the period 1999-2004, the index of the real wage earnings increased by 21.3.

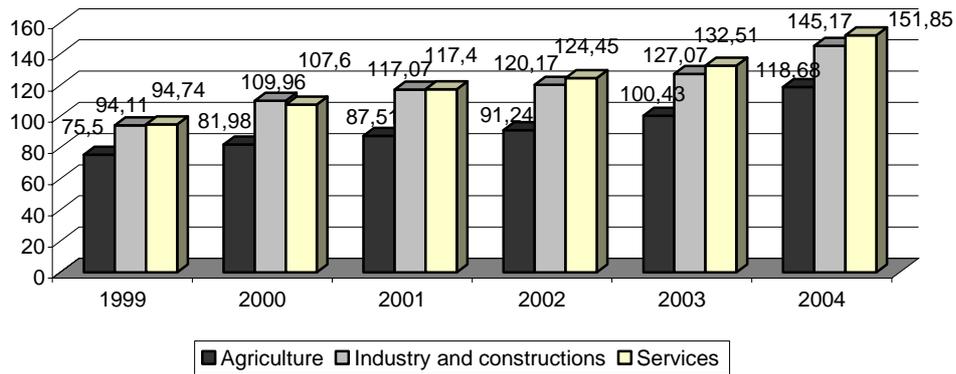
### Real wage earning index

	1999	2000	2001	2002	2003	2004
Real wage earning index 1990=100	57.0	59.4	62.4	63.9	70.8	78.3

Source: National Institute of Statistics, Romania's Statistical Yearbook, 2005

The average wage earning, in euros/person, increased in 2004 as compared to 1999 by €54 (€58.0%, respectively). The most important evolutions are recorded for the areas: financial intermediaries (a €140 increase), postal and telecommunications services (a €97 increase), public administration (a €77 increase), transport and storage (a €68 increase).

### Net monthly nominal wage earning, per activities of the national economy (€/person)



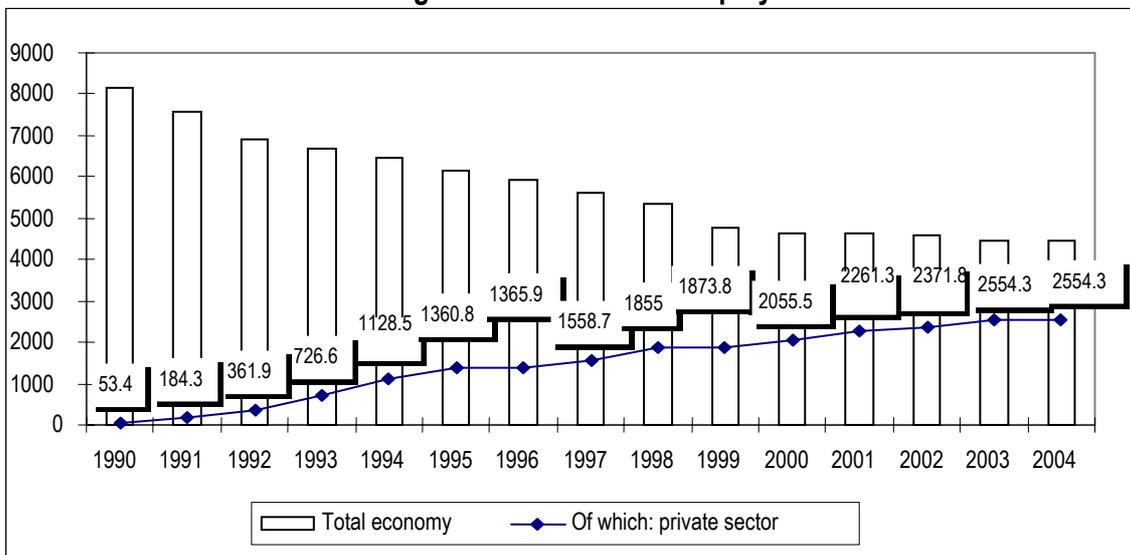
Source: National Institute of Statistics, Study on the cost of labour force within enterprises  
 Note: Provisional data for the year 2004

The economic activities with the highest wage earnings are: financial intermediaries (2.61 times above the average), postal and telecommunications services (1.71 times above the average), public administration (1.41 times above the average). At the opposite end there are the economic activities for which wage incomes are below the economy average: hotels and restaurants (68.7% of the average), trade (73.3%), agriculture (74.5%), health and social services (87%), forestry, forestry exploitation and hunting economy (98.4%).

**The minimum gross basic wage per country** increased from 450,000 lei in 1999 to 3,100,000 lei (€86) in 2005, representing an increase of 6.9 times; starting with 1<sup>st</sup> of January 2006, its value will increase to 3,300,000 lei (€90). At the same date, in the EU-15, the minimum wage per economy reached the lowest levels in Portugal – €437/month, Spain – €599, Greece - €668, while at the opposite end there are Ireland – €1,293/month and Luxembourg – €1,467. Among the new members, the best position is held by Malta, with €563, followed by the Czech Republic - €239, Hungary - €229, Poland - €207, Estonia - €172, Slovakia - €169, Lithuania - €159, Latvia - €116. In Bulgaria, the minimum wage is of €77, while in Turkey it reaches €240.

The low wage level is determined by the low productivity during the transition, with slightly significant progresses only for the past two-three years (the gross wage reaching almost €240 by the end of (€86) 2004).

### Average annual number of employees



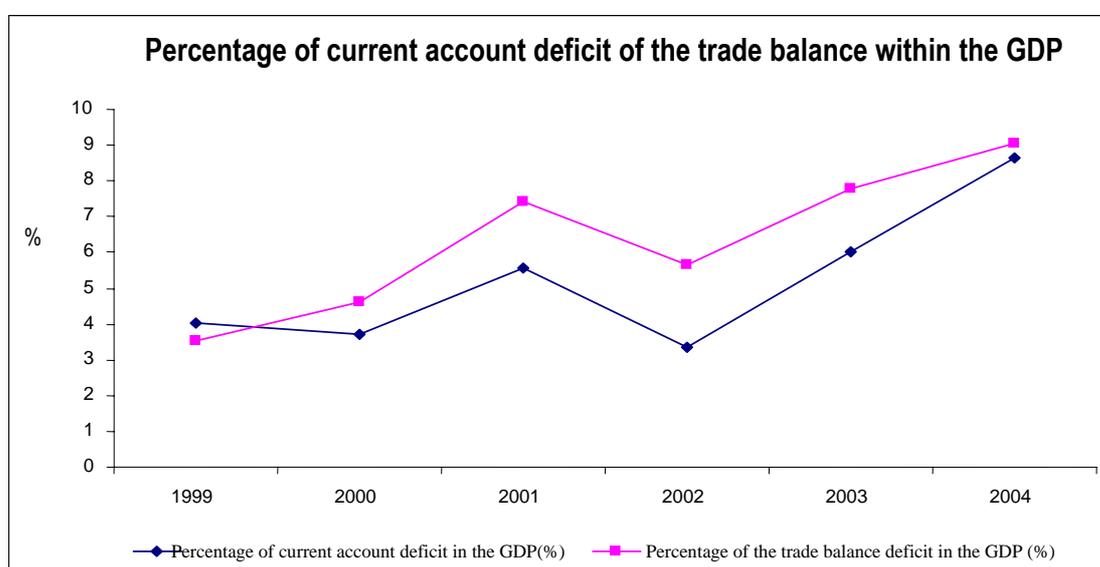
Source: National Institute of Statistics, Study on the cost of labour force within enterprises

The regional analysis shows that the labour force employed by SMEs is concentrated in the Bucharest-Ifov Region, as well as in the Northwest and West Regions. As for the labour force in SMEs per 1,000 inhabitants, in the Bucharest-Ifov Region, it reaches 112 per 1,000 inhabitants, followed by the West Region (118 per 1,000 inhabitants) and the Centre Region (109 per 1,000 inhabitants).

The evolution of the **labour productivity** (GDP against the purchase power/employed person parity) recorded a positive trend, but despite this, in 2004, the productivity of the Romanian activity accounted only for 35.3% of the EU-25 productivity, which proves the necessity to find appropriate levers in order to improve the values of this indicator.

### 1.3.6. Current account

The current account deficit recorded a slight deterioration in 2004, reaching €5.1 billion, accounting for 8.7% of the GDP, given the depth of the trade deficit, following the doubling of the annual import increase rate.



Source: National Bank of Romania

During the analyzed period, the structure of the current account deficit changes, i.e. the percentage of the trade balance deficit and the revenue balance, increased. The negative effect of the two components on the current account was attenuated by the ascending evolution of current transfers.

### Current account for the period 1999-2004 (€ million)

	1999	2000	2001	2002	2003	2004
Current account balance	-1,355	-1,494	-2,488	-1,623	-3,060	-5,099
Assets	-1,187	-1,867	-3,323	-2,752	-3,955	-5,323
Services	-370	-260	-129	5	62	-213
Revenues	-388	-304	-315	-488	-1,195	-2,535
Current transfers	590	937	1279	1,612	2,028	2,972

Source: National Bank of Romania

### 1.3.7. Foreign trade

For the period 1999-2004, the foreign trade amount increased by more than 152%, i.e. from a cumulated amount (export and import) of about €17.9 billion in 1999 to €45.2 billion in 2004. This

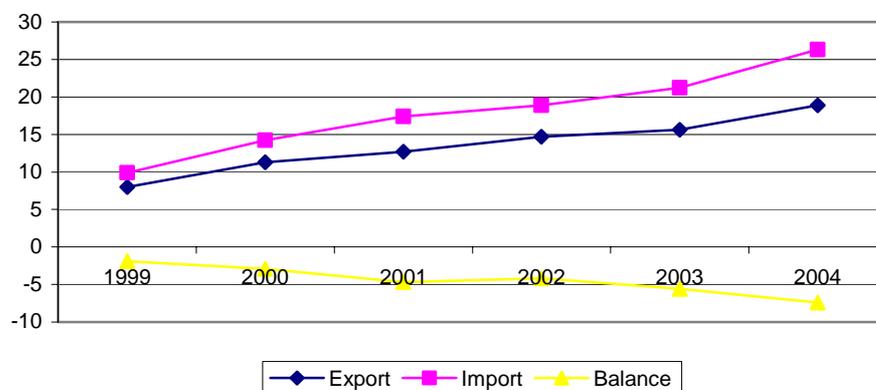
evolution is due to the de-monopolization of foreign trade activities, the increase of economic competitiveness, including via the increase of foreign investments, as well as to the increasingly liberalized trade, as a result of both multi-lateral negotiations and especially of the free trade agreements signed with other countries, a special place within this being held by the Association Agreement with the European Union.

Nevertheless, as compared to the EU member states and even to the new EU members states, the amount of Romanian foreign trade remains low ( for comparison in 2004, the foreign trade in Czech Republic was of €107.5 billion, Hungary's €93.1 billion, while Poland's was of over €130 billion).

The degree of opening of the Romanian economy has shown significant increases from 51.2% in 1999 to 73.3% in 2004, given the decrease of tariff protectionism and the intensification of Romania's integration within the world economic circuit.

### Evolution of trade exchanges for the period 1999-2004

- € billion-



Source: National Institute of Statistics

During the analyzed period (1999-2004), the foreign trade recorded an ascending evolution. Exports increased from €8 billion in 1999 to €18.9 billion in 2004, the percentage increase being of almost 136.3%, while imports increased from €9.9 billion in 1999 to €26.3 billion in 2004, the percentage increase being of more than 165.7%.

The intensification of the trade deficit for the period 1999-2004 contributed to the decrease of the coverage degree of imports through exports (FOB-FOB), from 87.1% in 1999 to 78.1% in 2004.

For the period 2001–2004, the evolution of the foreign trade was subject to the combined influence of a series of internal and external factors, among which: the economy rejuvenation which favoured the increase in exports and imports , agricultural years that were not favourable following the effects of the prolonged draught, the continuous dependence of the increase of the industrial production from imports, especially energy and additional ones, the significant slowness of the world economic growth and the postponement of the re-launch in the Euro zone, the maintenance at a high level of the prices of several energy resources, the blockage of trade flows with some politically sensitive areas, the reversal of the parity ratio between the euro and the US dollar, as well as the evolution of the exchange rate of the national currency as compared to the euro.

The significant **export** growth for this period had the following characteristics:

- The concentration of the exports on a relatively small number of products. It is important to state that in 2004, four groups of products accounted for 74.9% of the exports total, i.e. light industry products (29.8%), machine constructions (24.5%), metallurgical products (15.4%) and wooden products (5.2%);
- The tendency of the structural improvement of exports. In 2004, as compared to 1999, there was an increase of 7.3% of the percentage of the machine industry products within the total of Romania's exports (the contribution of this group of products to the increase of the exports absolute value was of €3.3 billion in 2004 as compared to 1999), while the increase of the exports of chemical and plastic masses industry products was of 1.8%.
- The steadier orientation of exports towards European countries, reaching 84% of the total of Romania's exports in 1999 to 87.7% in 2004. At the same time, exports to other areas decreased, i.e. America and especially Africa – the Middle East (from 11.9% of the total of exports in 1999 to 2.9% in 2003).

A significant development was recorded in the private sector, whose percentage in the total of exports increased from 65.6% in 1999 to 68.8% in 2004, and in the total of imports from 72.1% to 74.7%, in the same period.

Even though there was an increase in exports, there is a significant difference between Romania and some new EU members in this respect. In 2003, the amount of Romania's exports was about 4 times less than Poland's, 2.5 times less than Hungary's and 2.6 times less than the Czech Republic's, the differences being much bigger as compared to the EU-15 member states.

**Imports** recorded an increase of about 164% in 2004 as compared to 1999. The accentuated dynamics was recorded by the import of machine construction industry, due to the modernization efforts of the economy and of revamping of the industry, including via the attraction of investment goods promoted by the entrance of foreign capital.

The imports increase is mainly due to the necessity to sustain the economic growth, as well as to several contextual and climate factors (the increase of the world oil, natural gas and energetic coal price, the hydro-energetic decline caused by drought and, consequently, additional crude oil imports, unfavourable agricultural years, etc.). Another important factor for the recent evolution of the imports is represented by the increase in the demand for long-term use goods, encouraged by the expansion of the consumption credit.

The evolution of the imports raises the following characteristics:

- The concentration of the imports on a relatively small number of groups of products, four of them accounting, in 2004, for 73% of the total of imports (products of the machine construction industry 34.9%, light industry products 19.5%, mineral products 13.4%, metals and metal products 8.4%).
- The highest quota in the good imports is held by the machine construction industry products, most of them being capital assets for investments; the percentage of this group increased by 5% in 2004 as compared to 1999, while the percentage of textile and leather products decreased by 6.7%; on the other hand, the percentage of mineral products increased by 1.5%.
- The main geographical area of origin of imports is represented by Europe, whose percentage in the total of imports is of 82.1% in 2004. The European Union held, in 2004, a percentage of 55.4% of the total, of which the most important import sources are Italy (17.2%), Germany (14.9%) and France (7.1%). Note is to be taken, within our country's imports, of the Russian Federation which,

with 6.8 % of the total, is ranked the 4<sup>th</sup> among the top import suppliers of Romania; this is mainly due to the oil and natural gas deliveries. The imports from the other three main geographical regions - America, Asia-Oceania and Africa - the Middle East – recorded import decreases.

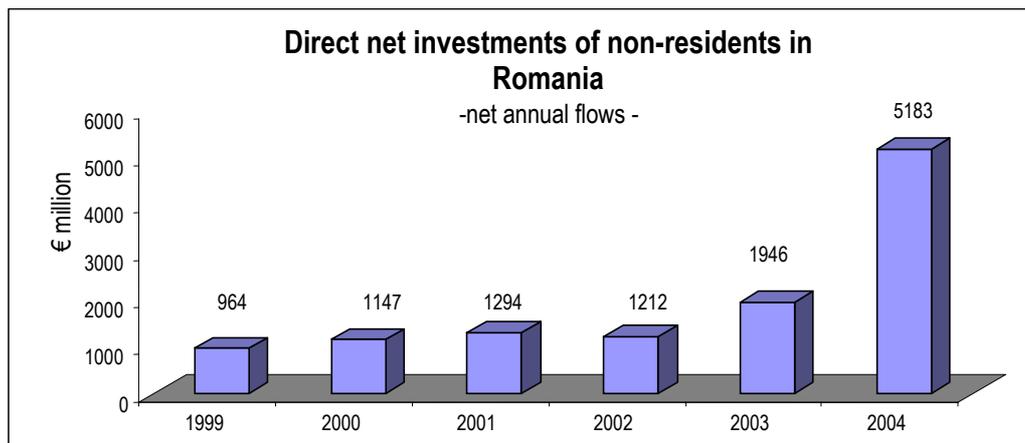
**The trade balance** permanently recorded deficits for the period 1999-2004, with values ranging from a minimum of €1.9 billion and a maximum of €7.4 billion in 2004, following the increase of the dependency of the Romanian economy on import raw material and energy, as well as the significant increase of machine and machinery imports that benefited, almost for the entire period, from certain fiscal and customs facilities, including those related to the promotion of foreign investments.

The trade balance deficit for 2004, of about €7.4 billion, was mainly due to the negative balance for several groups of products, such as: machine industry products (€-3.4 billion), chemical and plastic industry products (€-2.2 billion), mineral products (€-2.1 billion), agricultural products (€-1.1 billion) and others, a balance that is compensated, to a certain extent, by the surplus recorded for light industry products (€+1.3 billion), and common metals and metal products (€+0.7 billion).

### 1.3.8. Foreign investments

#### *Direct investments*

For the period 1999-2004, the net direct investments of non-residents in Romania totalled €10,772 million, the net annual flows reaching a higher dynamics as compared to previous years.



Source: National Bank of Romania

The annual average of net direct foreign investments on non-residents in Romania for the past six years was of €1,958 million, as compared to €478.6 million, the annual average for the period 1991-1998. At the end of 2004, the net foreign investment balance of non-residents in Romania was of €15 billion, being the highest level recorded among Eastern European countries.

2004 marked an absolute record concerning the attracted foreign capital, i.e. €5,183 million, this performance ranking Romania the first among Southeast European countries and the second in Central and Eastern Europe, after Poland, above Hungary and the Czech Republic. During the period January-September 2005, the net direct investments of non-residents in Romania amounted to €2,740 million, lower by 29.5% as compared to the first nine months of 2004, of which about 73% represented capital participations and nature contributions to the share capital. This contribution was also added to by the finalization of the land restitution process that supports the development of green field-type projects, the solution of the legal issues related to the utilities network, the development of industrial parks, the elaboration of policies by the local authorities with a view to attracting and encouraging foreign

investments, and by the development of the domestic capital as a significant element in the attraction of new investments through the intensification of the economic relations.

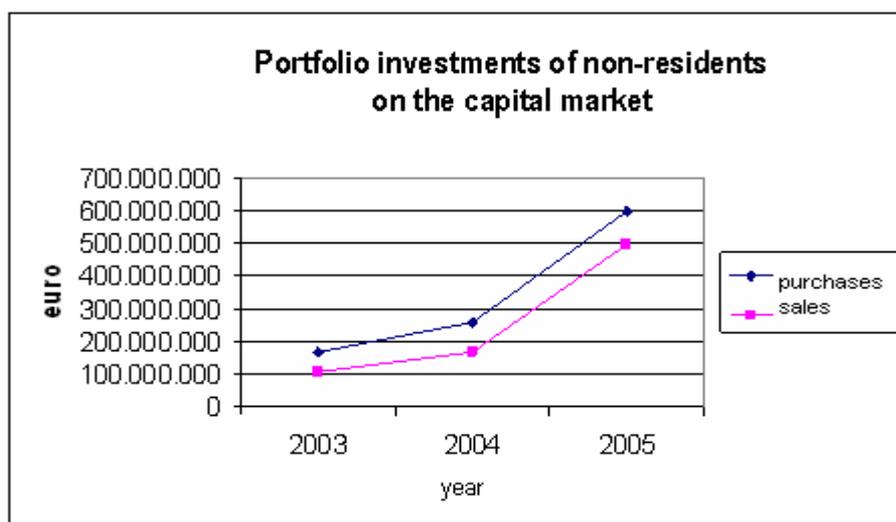
The main economic activities that attracted direct foreign investments to Romania were: the processing industry (by 45.7%), trade (14.5%), financial intermediaries and insurances (11.4%), postal and telecommunications services (10.6%), services (5.6%), constructions (1.1%) and other activities (1.7%). The main investing countries at the end of 2004 are: the Netherlands (16.3% of the total of direct foreign investments), Austria (15.7%), France (10.3%), the Dutch Antilles (8.8%), Germany (8.6%), Greece (8.2%), Italy (4.8%), the US (4.3%), Cyprus (4 %), and Switzerland (3%).

By accession to the EU, Romania will increase its degree of attractiveness as a destination country for direct foreign investments, both for the ones by companies in EU member states and for the ones coming in from countries that are not part of the EU.

### *Portfolio investments*

The evolution of buying and selling operations on the capital market (cumulated on the Bucharest Stock Exchange and on the Rasdaq Electronic Exchange) for the period 2003 – 2005 recorded a positive trend, reaching in October 2005 the amount of RON2,132.6 million (€5.9 million), for purchases, and RON 1,301.8 million (€3.6 million), for sales.

During the period 2003-2005, the amount of purchases surpassed the sales, thus indicating the investors' trust in the positive evolution of the Romanian capital market. This trust is also confirmed by the positive difference between capital inputs and outputs on non-residents' accounts opened for intermediaries.



Source: National Commission of Stocks and Shares

In 2004, the capital market attracted investors from the US (25%), Luxembourg and Cyprus (about 10%), Sweden (8%), Greece (about 7%), Austria and Great Britain (each with about 6%); those that sold part of their portfolio ownership in 2004 were non-residents from Cyprus, the transactional amount reaching 51% of the total sales transactions this year.

From the point of view of fields of activity, in 2004 there were transactions in the following areas: financial intermediaries (40% of purchases, 29% of sales), oil processing industry (14% of purchases, 18% of sales), hydrocarbons extraction (13% of purchases, 12% of sales).

### 1.3.10 Macroeconomic perspectives for the period 2007-2013

The prognosis regarding the economic development for the period 2007-2013 is based on the hypothesis that the economic growth rates of Romania's main trade partners will not record major declines and that there will not be strong negative shocks of the international economic environment. It is estimated that the EU accession in 2007 will accelerate Romania's social and economic development. The domestic capital and labour force potential will support a continuous and sustainable increase, in parallel with the world trends, i.e. globalization, development of IT&C technologies and environment protection.

Under these circumstances, the macroeconomic projections estimate that the GDP will increase on average by 5.5%, with the possibility of recording above the average rates at the beginning of the period, with a view to reducing the economic and social differences between Romania and EU member states. The economic growth will be based on the domestic demand, especially on investments supported by both government finances and out of the EU structural funds allotted for this period.

The GDP in euros, 2004 prices, will increase from €66 billion to €96 billion, i.e. by about 46%, respectively. The GDP per inhabitant will increase from €3,060, 2004 prices, to €4,580, i.e. by about 50%, respectively.

#### GDP per elements of use

2004 = 100	2006	2013	- percentage changes -
			Average rate 2007-2013 (%)
Domestic demand, out of which:	17.5	76.3	6.0
- Individual consumption of the population	17.1	62.6	4.8
- Collective consumption of the public administration	5.6	25.8	2.5
- <i>Gross creation of fixed assets</i>	23.0	143.2	10.2
<i>Goods and services exports</i>	19.3	125.1	9.5
Goods and services imports	31.6	151.7	9.7
<b>Gross Domestic Product</b>	<b>12.0</b>	<b>63.1</b>	<b>5.5</b>

The economic growth for the following years will be sustained by the domestic demand; the net export will generally have a negative contribution, but at a lower level as compared to previous years (between 0.6% and 1.5%).

It is estimated that the investments will record a significant growth that would contribute to the modernization of the economy and infrastructure, in parallel with the environment protection. It is estimated that the increase will be sustained by stronger direct foreign investment flows and by the easy access to domestic and foreign financing, together with a high absorption level of European funds. Thus, it is estimated that the gross creation of fixed assets will increase by an average annual rate of about 10%. Under these circumstances, the investment rate will increase from 23.6% of the GDP in 2006 to 31%.

The individual consumption of the population will diminish its increase after 2007 at an annual average rate of about 4.8%, lower than the one of the real wage, allowing for the tilting of the balance towards savings and investments. In addition, the collective consumption of the public administration will record a moderated average of 2.5%.

Foreign trade is expected to continue to develop at a sustainable rate that is higher to the GDP growth. It is expected that, within the context of Romania's membership of the EU, the geographical orientation of trade flows will lead to the reinforcement of the position of EU member states, as Romania's main

trade partners. Goods and services exports will increase, on average, by about 9.5% annually, while goods and services imports will increase by 9.7%, which will negatively influence the trade balance.

From the point of view of the supply, it is estimated that there will be higher increase rates as compared to the GDP in constructions and services.

### GDP per Sectors

2004=100	- percentage changes -		
	2006	2013	Average rate 2007-2013 (%)
Industry	9.6	53.0	4.9
Agriculture	-0.5	13.1	1.9
Construction	20.1	128.2	9.6
Services	15.0	72.8	6.0
<b>Gross Domestic Product</b>	<b>12.0</b>	<b>63.1</b>	<b>5.5</b>

It is estimated that the current account deficit as a GDP percentage will be between sustainable limits. The integration into the EU will create the solid basis in order to ensure the sustainability of the current account deficit, both through the important percentage of the direct foreign investment influxes, and by the use of the funds derived from EU transfers.

For the period 2007-2013, the maintenance of an inflation (measured by means of the consumption price index) within the limits of 2-3% is an important objective within the context of meeting the Maastricht criterion of nominal convergence. The disinflation process in Romania must benefit from a strong record, so that, starting with 2009, the price increases are constantly below or around the limit of 3%. This aim is possible to achieve if strict financial discipline is maintained to eliminate financial arrears, to modernise the activities within the utility companies that will continue to hold monopoly positions, and to maintain restrictive policies of the revenues and a tight monetary policy that ensures the inflation targeting objective.

From the point of view of human resources, the sustained economic growth will be accompanied by an increase of the number of employees, given the work productivity increase.

### Labour force

	2004	2007	2008	2009	2010	2011	2012	2013
	<i>- percentage changes as compared to the previous year -</i>							
Economically active (seeking work) population	1,4	-0,1	-0,1	0,2	0,1	0,0	-0,1	-0,1
Working population	0,2	0,2	0,1	0,3	1,0	0,3	0,2	0,1
Employees	4,8	0,6	0,3	0,2	0,2	0,3	0,3	0,3
	<i>- % -</i>							
Participation rate	63,2	63,5	63,6	63,7	64,0	64,2	64,4	64,6
Occupation rate	57,9	58,5	58,6	58,9	59,6	60,0	60,3	60,6
ILO Unemployment rate	8,0	7,6	7,4	7,3	6,6	6,3	6,1	6,0

<sup>1)</sup> working population (15-64 years)

Source: National Commission of Prognosis

The evolution of the labour resources is an important factor that was taken into account within the estimated projections, considering a globalized labour market. Romania's population will continue to decrease following the aging process, as the birth rate continues to be unsatisfactory. The total active population will decrease, following the decrease in the population aged more than 65 years, but the

active population aged between 15 and 64 years will increase, the participation rate reaching about 65% in 2013.

Romania's entrance on the unique European labour force market will account for labour force flows generating labour resources. It is estimated that Romania will have a relatively balanced position within this process, i.e. it will be able to provide new employment opportunities to incoming flows, but it will also be able to officially provide skilled labour force. Thus, it is estimated that the total working population (seeking work) will only record a slight increase during the period. The working population (aged between 15 and 64) will increase, in such a way that the occupation rate reaches about 61% in 2013.

In addition, it is estimated that there will be an increase in the number of employees by about 150,000, especially in the services sector, which is expected to increase its contribution to the economic growth.

The unemployment rate (according to the ILO) will continuously decrease, reaching an estimate of 6%, given the structural unemployment affecting the regional differences.

## 2. THE PRODUCTIVE SECTOR

### 2.1. Competitiveness factors

Sustainable economic growth and the enhancement of the living standards are driven by the development of the economic competitiveness within the context of global challenges (economy globalisation, opening of international markets, fast technological changes), which the Romanian economy should turn into opportunities. It is therefore important to review the competitiveness factors and identify the problems Romania is confronted with, in order to find the best solutions and assess the future economic potential of the country.

The identification of the factors underlying the competitiveness of Romania has been the basis for a thorough analysis of the economy, business environment, material and human resources, costs, required investments and innovation process of the country.

A world wide survey on the international competitiveness carried out by the World Economic Forum (WEF) in 2005 has placed Romania on the 67<sup>th</sup> position out of the 117 surveyed countries, behind the new EU member states and the other candidate countries: Bulgaria (58<sup>th</sup>) and Turkey (66<sup>th</sup>). The competitiveness was assessed against three factors: *technology, institutional framework and macroeconomic environment*, starting from the idea that a high living standard cannot be maintained in the long run without technology, only based on the accumulation of capital, that the institutions are responsible for ensuring the property right, the observance of the contracts, the effectiveness and transparency of governmental expenditures, whereas the monetary and fiscal policies and the stability of the financial institutions play a major role in ensuring long-term development. The Report on Global Competitiveness of the WORLD ECONOMIC FORUM, 2003 and 2004, placed Romania on the 55<sup>th</sup> position in terms of technology, 58<sup>th</sup> in terms of the macroeconomic environment and 67<sup>th</sup> in terms of public institutions, out of the 80 surveyed countries.

Over the past five years, Romania has recorded a high **macroeconomic stability** which is crucial for the country's sustainable development and is marked by a sustained GDP growth driven mainly by investments and exports and less by consumption. The consistent growth of the share of the private sector in the GDP, which accounted for 70% in 2004 compared to 63.7% in 1999, is a positive development which proves the structural changes that have taken place in Romania.

Despite the considerable progress achieved over the past years, Romania is still lagging behind the European competitors in terms of economic development; this is proven by the GDP level per recorded purchasing power parity (PPP), which represents about 50% of the GDP of the new EU member states, and approximately 40% of the less developed members of the EU (Greece, Portugal). Moreover, the GDP per capita (related to the purchasing power parity standard), which was about one third of the EU25 average in 2004, illustrates the substantial gap between Romania and the EU.

The **labour productivity** (GDP per purchasing power parity/employed person) has recorded a positive upwards trend; however, despite this positive development, the productivity of the Romanian economy in 2004 was only 35.3% of the level recorded in the EU25, which justifies the need to find the proper levers to improve the value of this indicator.

### Labour productivity (GDP per PPP/employed person)

	2000	2001	2002	2003	2004
<b>EU 25</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
EU 15	106.5	106.2	105.9	105.8	105.3
<b>Romania</b>	<b>27.9</b>	<b>29.7</b>	<b>32.0</b>	<b>33.1</b>	<b>35.3</b>

Source: Eurostat, 2005

During 2000–2003, the labour productivity in the industry increased by 11.6% per year on an average, the growth rate being much higher than in many other countries in the region.

### Industry labour productivity indicators in Central and Eastern European countries

	2000	2001	2002	2003	2000-2003 Average
The Czech Republic	110.6	105.0	106.4	108.9	107.7
Estonia	117.6	115.3	110.3	111.1	113.5
Hungary	116.6	105.3	105.3	108.8	108.9
Latvia	105.0	106.7	105.8	105.1	105.7
Poland	114.3	105.4	107.6	112.0	109.8
<b>Romania</b>	<b>113.8</b>	<b>106.9</b>	<b>113.7</b>	<b>112.1</b>	<b>111.6</b>
Slovenia	108.4	103.5	105.6	98.0	103.7
Slovakia	111.6	108.6	103.0	113.6	109.1

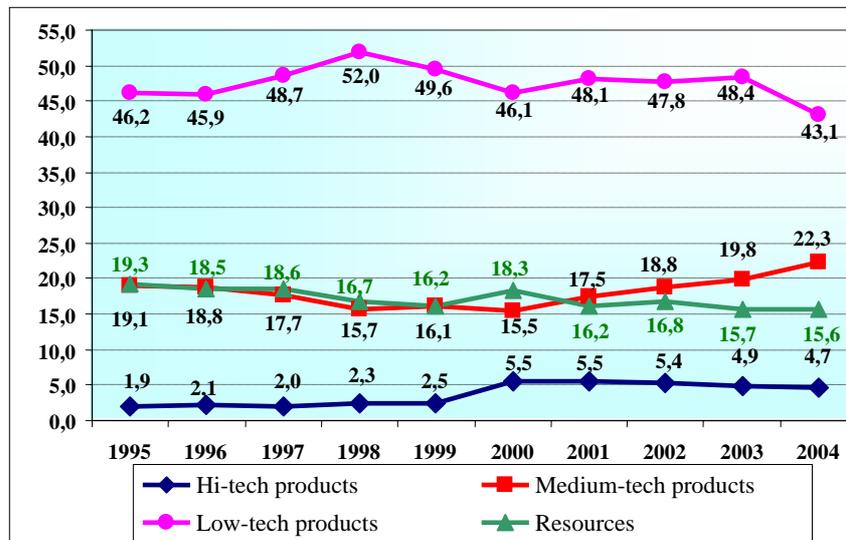
Source: CANSTAT 4/2003

Although this indicator has recorded a positive evolution throughout this time span, which continued further in 2004 (11.9%), for most of the economic activities Romania is still lagging behind the EU average, and behind some countries Eastern Europe. The productivity growth depends not only on technological development, but also on enhancing the quality of the products and their marketing and on the application of the research results and other sources which lead to higher value added products.

In the past years, the economic growth has been driven by exports and investments. In the period 2000 – 2004, Romania's exports had a highly positive evolution, but were mainly based on low value added products. The largest export volumes were recorded in the textile industry, characterised predominantly by the inward processing method, followed by the steel industry which manufactures mainly inferior steels rather than special steels. However, it should be noted that significant progress has been achieved with regard to the exports resulting from the equipment, radio, television and communications, automotive, electric appliances and transportation means industries (mainly motor vehicles), which are characterised by high value added products. Thus, at the end of 2004, the Romanian exports could be structured as follows: products of the automotive industry, including electric appliances (24.4%), textiles and textile items (22.3%), basic metals and others alike (15.4%), chemicals and plastics (7.8%), mineral products (7.2%), footwear and leather items (6.5%), furniture (5.8%), wood, cellulose and paper (5.2%), food (3.1%), miscellaneous products (2.3%).

The increased competitiveness of the Romanian production, recorded as of 2004, has been reflected by a change in the export structure of industrial products. Thus, the export of low-tech products and resources has decreased, while the export of medium-tech products has increased significantly. Although in 2004 the exports of high-tech products recorded a considerable increase, no particular changes occurred in the following year.

## Evolution of the exports of industrial products by type of technology as related to the overall exports



Source: Ministry of Economy and Trade

In terms of imports, the share of high-tech and medium-tech products is almost equal to the share of low-tech products, which proves that technology is mainly imported into Romania, being developed locally only to a limited extent; in addition, even when it is available, domestic innovation is hard to promote and transfer to the producing companies.

The large import volumes over the past years, which resulted in negative trade balances, were mainly due to the imports of cars and industrial equipment intended for the modernisation of the industrial facilities and the implementation of new investments, which required to a large extent technology imports from the highly industrialised countries rather than the production of new technologies domestically. As a conclusion, we could say that exported Romanian products are cost-competitive and their competitiveness is not due to innovation.

**Cheap labour** is the main source of the competitive advantage, which will decrease gradually as Romania joins the EU; therefore, it will be necessary to encourage domestic research and innovation, which will result in the decrease of the imports of technologies and equipment and the increase of the gross added value of the products, both domestically and internationally. According to Eurostat, the minimal national salary in Romania was 86 Euros on the 1<sup>st</sup> of July 2005, slightly higher than in Bulgaria (77 Euros), but far lower than in the new EU member states (Malta – 563 Euros, the Czech Republic - 239 Euros, Hungary - 229 Euros, Poland - 207 Euros etc.).

**Investments** are a major driver of economic development. Foreign direct investments can bring about a substantial increase in productivity due not only to the transfer of technologies but also to the transfer of best practices. Recently, there has been an increase of the volume of foreign direct investments (FDIs) in Romania, the FDI inflow amounting to EUR 4,098 million (according to the payment balance of the Central Bank of Romania), which accounts for a 111% growth compared to 2003. Thus, Romania has managed to reduce the gap and started to compete with Central and Eastern European countries with a good performance in attracting FDIs.

### FDI inflows in Central and Eastern Europe - 2004

Country	Foreign investments (mil. EURO)
Poland	4,892
<b>Romania</b>	<b>4,098</b>
The Czech Republic	3,596
Hungary	3,365
Bulgaria	2,114
Slovakia	890
Croatia	865
Slovenia	422

Source: The Central Banks

The amount of the share capital subscribed by foreign capital companies increased by 136% in 2004 (EUR 2230.9 million), compared to 2003, when it reached EUR 944.3 million. The interest of foreign partners in Romania as a destination for foreign direct investments also resulted in a 54% growth of the number of foreign capital companies registered in 2004 compared to 2003, most of them in the industrial sector (58.7%).

The focus on the industrial sector is due to the advantages offered by Romania for this field (low land price compared to the other countries in the region, cheap and skilled labour force, production facilities, tradition). On the other hand, the FDI growth was slowed down to a large extent by the development level of the transportation, communication and power infrastructures, which are not up to the European standards and do not provide the best conditions for the economic activity of the country.

The **existence of a stable and predictable business environment** is another growth driver for foreign and domestic investments. An Action Plan has been developed in order to remove the administrative barriers from the business environment, whose implementation resulted in the simplification of the legislative and administrative procedures related to the establishment and development of businesses on competitive bases, as well as in the streamlining of the authorisation and approval processes.

Romania has taken major steps in removing the administrative and bureaucratic barriers, in simplifying and regulating business start-up procedures. In 2003, the registration of a limited-liability company consisted of 6 procedures, lasted 27 days and cost about 220 USD, which placed Romania above the average of candidate countries and new EU member states.

At the end of 2003, the institutional framework of the **competition and state aid policy** of Romania was restructured by the unification of the two existing institutions into one single institution, the Competition Council. In addition, a new framework legislation on competition and state aid was adopted with a view to harmonising the national laws with the relevant community regulations and ensuring a fair competition environment.

The **transport infrastructure** of Romania has developed consistently, yet failing to reach the standards of a competitive European economy. Thus, the number of operational public roads and railways is below the EU average. There are only 4 international airports, the Henri Coanda Airport in Bucharest being the largest, accounting for almost 79% of the international passenger and freight air transport. The 35 Romanian ports (3 maritime ports, 6 maritime-fluvial ports and 26 fluvial ports) have about 49,000 m of ship mooring constructions, 18% of which are more than 50 years old and need refurbishment.

The ongoing and sustained expansion of the **information technology and communications** market (ITC) is a major factor which drives the development of the information infrastructure and the growth of the economic competitiveness. According to the EITO (European Information Technology Observatory)

survey, Romania has one of the best dynamics in the region. However, the overall ITC expenditures as a percentage of the GDP only reached 1.34% in 2004, much below the EU15 average (3%).

The privatisation of the communications market on 1<sup>st</sup> of January 2003 and the breaking of the monopoly held by Romtelecom on the fixed telephone market resulted in an increase of the number of network and electronic communication service providers. The penetration rate of mobile telephone (per 100 inhabitants) also recorded an average growth of 50% per year in the period 2000 – 2004, remaining however below the EU25 rate (83%).

In what the PC endowments and penetration rate is concerned, the evolution has been positive, being marked by an annual average growth rate of the sales volume exceeding 50%; however, the penetration rate (12 PCs/100 inhabitants at the end of 2004) remains below the EU15 average (approximately 40 PCs/100 inhabitants). The number of Internet users/100 inhabitants increased in the period 1999-2003 by 60% on an yearly average, the Internet penetration rate remaining however low, especially in the rural areas, where the access price is higher. The lowering of the Internet access costs, the increased competition among Internet providers and the strengthening of the Internet culture are comparative advantages for the economic evolution of the country and are related to the upwards trend of the software industry.

Since 2001, the development of the information society in Romania has been fostered by the establishment of the legal framework supporting the development of e-government and e-business applications. Since 2003, the banks have developed software applications aimed at promoting electronic payments, which has resulted in a higher utilisation rate of banking cards.

As a result of this positive evolution of the information technology sector, in its Global Report on the Information Technology 2004-2005, which measures a country's readiness to participate in and benefit from IT development, the World Economic Forum placed Romania 53<sup>rd</sup> out of 104 countries, which is better than in 2003, when Romania held the 61<sup>st</sup> position among 102 countries.

The development of the **power sector**, a basic infrastructure of the national economy, provides for the power requirement of the country and supplies surpluses on the export markets, due to its inter-connections to the European power grids. As regards the development of the power market, Romania has outperformed many of the candidate countries. At the beginning of 2005, the opening rate of the Romanian power market was 82.3%, which resulted in a higher number of eligible consumers, some of them shifting to a new supplier as a first reaction to the functioning of the market principles. The privatisation of the natural gas market has continued by the increase of the opening rate to 50% as of the 1<sup>st</sup> of January 2005. In addition, major steps have been taken in the privatisation of the power sector (the privatisation of SNP Petrom, two gas distribution networks and four electricity and thermal power distributions networks, other privatisation procedures being underway).

In order to stimulate the use of renewable resources, the authorities have issued a legislative package encouraging the support schemes of the "compulsory quota" type and the development of the green certificates market. The compulsory quotas are in fact annual percentages of the gross national electricity consumption, calculated progressively from 2005 until 2010, when a national target of 33% should be reached, representing the share of electricity generated from renewable resources in the overall national energy consumption; in this regards, the first green certificates have been traded recently.

The further **privatisation of state enterprises** aims at strengthening the financial discipline and at removing arrears, refurbishing the enterprises, reducing the production costs and enhancing the professional qualification of the employees. This is the reason why the privatisation process has been accelerated over the past years, most of the processing industry being already privatised.

In Romania, the **research, development and innovation activity (RDI)** is based on a valuable tradition, currently covering more than 50 specific scientific and technological areas and maintaining rather stable annual performances and outputs. R&D activities are still largely carried out by the public sector (over 60%). In 2003, there were 3.13 Romanian researchers for 1000 employed persons, twice less than in the EU15. The competitiveness of the sector may also be enhanced by the large number of researchers in technical and engineering sciences. Unfortunately, the low salaries, the improper material resources and the opportunities offered by the research programmes implemented in other countries have led to the progressive lowering of the number of researchers.

The main problems of the sector are: the under-financing from public money (0.4% of the GDP in 2004); the outdated research and development infrastructure (there is a gap of 5-10 years between the existing infrastructure and the current standards); the lack of adaptation to the competitive market conditions; the lower number of researchers and the increase of their average age. Another major problem is related to the poor link between research and economy and the relatively low capacity to capitalise on the research outcomes. The economic operators' interest in research, development and innovation activities is still low, as the funds attracted in 2003 from economic operators in order to co-finance the various projects in the field represented only 35% of the overall budget of the National Research, Development and Innovation Plan (NRDIP).

In the development of the technology and innovation transfer infrastructure, the first steps have been taken by the establishment of technology transfer, information technology centres, innovative business incubators, connection offices with the industry, scientific and technological parks and excellence centres, the results being yet unsatisfactory.

**The quality of the training and the acquisition of new skills on the labour market** are becoming increasingly important as competitiveness drivers. In terms of the education, there has been a permanent increase in the number of the population 25 to 64 years old having at least secondary and higher education, from 67.9% in 1999 to 70.5% in 2003; this rate is even higher than in many other European countries. Unfortunately, the percentage of people with completed higher education, although higher (from 8.7% in 1999 to 9.6% in 2003), is much lower than in developed countries: USA 27.7%, France 16.4%, Germany 15%, UK 15.4% (the White Paper on Employment – DTI/UK-2003). In what the ongoing education and training are concerned, the training offer tends to focus on building general skills (computer literacy, foreign languages, accounting etc.) rather than on developing specific skills.

**The SME sector** is a dynamic one, with a high capacity to adjust to the market requirements, which has resulted in the creation of new jobs and has absorbed a lot of labour force laid off by the other economic sectors. At the end of 2004, the SME sector of Romania had 403,000 active private SMEs and recorded a significant growth compared to 2004; the number of SME employees was 2,349,725, 10% more than at the end of the previous year. Considering that many SMEs are newly established, we may say that Romania has developed a rich entrepreneurial spirit, which needs however further economic education and knowledge of the market potential, especially in the area of services. At the end of 2004, half of the total number of employees worked in SMEs. In terms of the business area of the SMEs, there was an increase in the number of SMEs active in the industrial sector, from 12.7% in 2000 to 13.6% in 2004, whereas the number of companies dealing exclusively in trade activities diminished from 64.1% in 2000 to 53.2% in 2000 and 47.4% in 2004 (source: National Statistics Institute and the National Report of the SME sector in Romania, edition 2005, published by ANIMMC – the National Authority for SMEs and Cooperatives). Considering that many SMEs are newly established, we may say that Romania has developed a rich entrepreneurial spirit, which needs however further economic education and knowledge of the market potential, especially in the area of services.

Obviously, the competitiveness of the economy is also driven by the **quality of the products and services**, defined as a set of characteristics that a product/process/service needs to have in order to satisfy expressed and implicit needs. At the national level, the efforts have been directed towards transposing the European legislation into the domestic laws and ensuring the proper conditions for their implementation, in line with the community requirements. In addition, the legislative framework has been improved by the adoption of laws regarding the assessment of product compliance and the institutional infrastructure has been built in the main areas: national standardisation, metrology, laboratory accreditation and certification and inspection bodies. The adoption of more than 80% of the European standards is a plus, but there are still many European standards which have been adopted by the “confirmation” method, a simple and cheap approach which has led to an improper implementation in certain areas.

The implementation of the European standards and the establishment of an effective, competent, transparent hence reliable assessment system for product compliance have a major contribution to facilitating the access of Romanian products to the single market, while providing opportunities for the Romanian business environment to improve its position internationally, based on technical performance.

## **2.2. The processing industry**

The concept of industrial policy is aimed at improving competitiveness by fostering the performance of companies, while laying the focus on the horizontal policies which have an impact on the industry sectors as a whole: innovation, new technologies and processing facilities; professional skills; professional education and training; business management.

Industrial services are currently under-represented and there is no record of their profile and quality. The industrial restructuring process has a major outsourcing component of the activities which are not directly related to manufacturing, such as transportation, security, supply, IT maintenance etc. The development of quality industrial services aimed at increasing product competitiveness is highly necessary both because it can generate knowledge related to the quality level of the manufacturing processes and products compared to the international level, and because it stimulates the implementation of the best practices in all industrial areas; in addition, the service sector is a large job generator.

The transformation of the Romanian economy and the orientation towards sustainable development, with the ultimate goal of EU accession, require the development of the productive sector and the systematic approach to the link between the product competitiveness growth and the mitigation of the negative environmental effects. The implementation of the environmental legislation in the processing industry is only at the beginning due to the rather recent adoption of the specific environmental legislation; however, the industry is increasingly concerned with manufacturing products in compliance with the latest EU environmental regulations.

The current situation of the global economy has a major impact on the industrial production in Central and Eastern Europe. Production is going down in Poland and Hungary and records a slight growth in the Czech Republic only. The reason for that is the ongoing challenge of the foreign investments, the specific macroeconomic framework of the area, the factors which may influence competitiveness (innovation, science and technology, human capital, labour market, business competition framework).

During the centralised management of the economy, all Central and Eastern European countries were highly concerned with the production of industrial machinery (Bulgaria, Romania, the Czech Republic, Slovakia, Hungary, Slovenia and Poland). The development of the heavy industry was one of the top

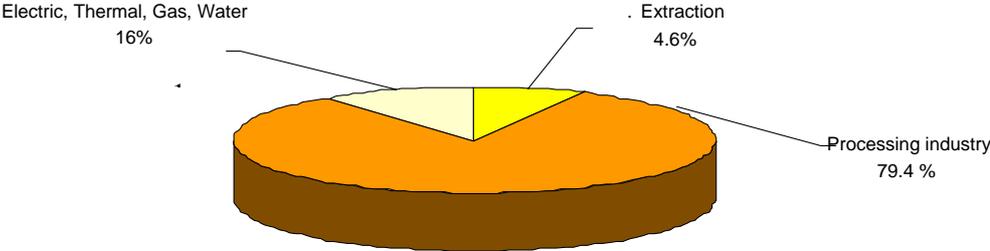
priorities of planned economies. Highly dependant upon the economic cycles, the sector went through a period of deep transformation and recession after 1989.

In the period 1990–2004, because of the restructuring process determined by the new economic conditions, the production facilities from Romania went through major transformations, having considerable impacts, like the downsizing of the production of certain goods (e.g. buses, mini-buses, TV sets, military equipment) and the closing down of processing facilities in certain manufacturing sectors.

One of the major drivers of the industrial development of Romania was the dynamic growth of the road transportation industry, with an average annual growth of the industrial production of 13.75% in the period 1999-2004, as well as of other transportation means (mainly ships), with an average annual growth of the industrial production of 7.5% in the same period.

**In 2004, the industry** accounted for 27% of the GDP, 98% of Romania’s exports (FOB) and a high employment capacity (at the end of 2004, 23.10% of the employed population worked in the industry).

**Industrial production structure in 2004**



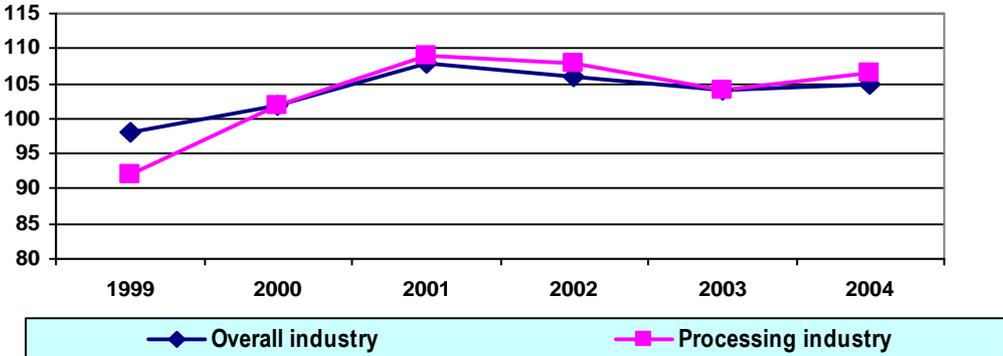
Source: National Statistics Institute

In the period 2001–2003, the industrial production recorded continuous growths, i.e. 8.4% in 2001, 6% in 2002, 3.2% in 2003 and 5.3 in 2004, or 5.92% on an average.

The processing industry was the driver of the overall growth of industrial production, with an average growth of 8.7% in the period 2001–2004.

**Evolution of the processing industry vs. the overall industry**

- percentage change compared to the previous year (%) -



Source: National Statistics Institute

**The processing industry** is the main component of the Romanian industry, accounting in 2004 for 83.14% of the industrial volume and employing 85.43% of the overall staff working in the industry.

The production volume of the processing industry decreased dramatically in the period 1990–1992, then grew between 1993 and 1996, and plummeted in the period 1997–2000 as a result of structural changes: Liberalisation of the domestic market by the elimination of customs duties with the EU and CEFTA countries, harmonisation of the domestic legislation in the industrial area with the EU requirements and privatisation of the processing industry. After the decline of the production volume in 1999, by about 3.2%, the trend in the period 2000-2004 was positive, mainly due to the adoption of a coherent package of industrial policies, the implementation of investment projects at the national level (U2-Cernavodă), the launching of a far-reaching re-industrialisation and regional development programme and the improvement of the business environment.

**The gross value added (GVA)** of the industry increased from 30.9% of the industrial production in 2000 to 35.1% in 2004. The share of the GVA of the processing industry in the overall industry increased from 68.3% in 2000 to 79% in 2004.

The basic sectors of the processing industry are the following: metallurgy (27%), consumer goods (26%), chemicals (20%), machinery constructions (11%) and electronics – electrotechnics (4%).

The most dynamic branches which recorded significant growths, above the average of the processing industry, are: equipment, radio TV, communications (an average annual growth of 30.5% in the period 1999-2004), timber and wood product processing (16%), road transportation means (13.5%), other transportation means (7.5%), chemical industry (7%).

On the opposite pole, the branches of the processing industry with a negative growth were: apparatuses, medical, optical and photographic industry (average annual decrease of 17.55% in the period 1999-2004), metallurgy (13.5%), oil processing, coking (7%), machinery and equipment (6%), textiles (3%).

The industrial **exports** (FOB) followed the same trend as the industrial production. A major driver of the exports was the volume of FDI inflows in the consumer goods sector.

**The imports** were rather significant and were mainly due to the temporary imports of materials intended for inward processing, complementary imports and imports for Greenfield investments.

**The average number of employees** in the processing industry (based on data provided by the Chamber of Trade and Industry of Romania and Bucharest) decreased continuously in the period 1999-2003, from 1,628 thousand people in 1999 to 1,511 thousand in 2003 and 1,491.2 thousand in 2004. Compared to the time frame 1990–1999, the decrease in headcount was slowed down due to industrial growth.

#### Sectors with significant headcount downsizing

- thousand people -

Sector	1999	2000	2001	2002	2003	2004
Metallurgy	194	163	168	146	144	138
Transportation means industry	146	132	126	121	110	102
Chemical industry	142	128	122	108	108	106
Machinery and equipment industry	182	150	144	149	135	133

Source: National Statistics Institute

The headcount reduction in the above-mentioned sectors was due to the restructuring of enterprises, the outsourcing of related activities, the refurbishment of the production facilities and the performing management imposed by multinational companies.

On the other hand, in the textile, footwear, clothing, electrical machines and appliances industries, the number of the staff remained at the level of 1999.

**The structure of active enterprises by number of employees** has changed due to the higher number of active small and medium-sized enterprises, as a result of the restructuring of the large sectors and the facilities offered to the SME sector.

In 2004, there were 1,370 large enterprises in the industry, with 1,114,902 employees, and 55,029 SMEs, with 831,582 employees. The turnover of SMEs accounted for 30.7% of the overall industry turnover in 2004, compared to 27.7% in 2001.

**The investments in the industry** diminished from 44.3% of the overall industry investments in 1999, to 40.1% in 2004. The processing industry was the main beneficiary of the investments, attracting 65% of the overall industry investments on an average.

The volume of FDIs in the industry increased from 5,958 mil. Euros in 1999 to 9,383 mil. Euros in 2004. The processing industry attracted 34.2% of the overall FDIs, mainly in metallurgy (8.1%), machinery constructions (7%), wood industry (5.7%), chemicals (5.4%) and light industry (3.3%). The investments were intended for the modernisation of the traditional enterprises of the Romanian industry and the building of Greenfield facilities. The main areas which benefited from FDIs of the Greenfield type are: tires, auto parts, telecommunication equipment, wood processing and building materials.

However, the multinational companies operating in Romania do not tend to sub-contract with domestic companies with an poor management and professional skills, low product quality and technologies. As a result, multinational companies generally import most of the component and only resort to national suppliers to a limited extent, thus limiting the benefits at the national level. Major efforts have been made to integrate such components in the Romanian manufacturing system, thus increasing the value added and the number of Romanian suppliers, by improving/observing the delivery deadline and the quality, as well as by establishing company clusters based on various forms of agreements between suppliers and customers. On the other hand, the number of suppliers for the automotive and electrical engineering industries has increased as many of the subcontractors of the multinational companies have relocated their production to Romania and have concluded various forms of partnerships with domestic producers.

The main characteristic of the products developed by these companies is their high value added, especially when it comes to the services of multinational companies (research and development, software development, marketing, financial services, education etc.) which are expected to develop even further. The structural transformation of the economy is an ongoing process and it is expected that the development of higher value added activities will be accelerated and that the value added content per product unit will go up. Many FDIs are attracted to Romania because of the low labour costs; however, it is expected that the low value added production could relocate to other countries as costs rise.

In addition, the investments of product integrator multinational companies have started to generate company clusters in various sectors of the processing industry. The industries which have proven to

have the highest potential are: auto parts, wood and textiles – industries which are characterised by a direct relationship between the supplier and the beneficiary in the production chain.

The restructuring process of unviable production units branches or companies, which don't have any development potential these could include mining of construction materials, armament production or ship building and repair will continue. Many companies in these sectors could have a viability potential but their poor capitalisation and large development capital is required.

**The labour productivity in the industry** has recorded an upwards trend due both to the decrease of the number of employed staff and to the investments made in the modernisation of the production flows and a better labour organisation, based on a more performing management. In the period 1999–2004, the labour productivity increased 1.26 times. Despite this growth, the productivity level of the processing industry is about 4.5 times lower than the EU average.

The increase of the labour productivity requires staff training programmes at all levels, on priority areas such as: modern manufacturing techniques, ongoing improvement of manufacturing processes, enforcement of quality and environmental standards, energy efficiency, marketing, IT use and distance contracting methods, which are specific to the processing industry. In addition, because of the ageing of the labour force, it is necessary to implement programmes to foster and stimulate the employment of adult labour force, as well as to take the necessary measures to retain it at the workplace.

Along with the increase of the industry productivity, there has been an improvement in the energy consumptions due to the installation of meters at the level of the production flows and the modernisation of these flows. The full privatisation of the energy market and the alignment to the global prices will lead to the adoption of specific measures aimed at enhancing productivity while reducing energy consumptions to offset the impact upon the product costs.

**70% of the textile and clothing industry** is based on the inward processing system, which is a special situation. Some of the main characteristics of this sector are: share in the GDP (2.2%), share in the industrial production (8.8%), productivity in the overall production (6,300 Euro/capita/year), share in the exports (25.5%) and imports (15.9%). The share of the raw materials and semi-finished products intended for inward processing diminished from 74.8% in 1999 to 69.1% in 2004. The productivity level of this sector represents about 50% of the productivity level of the overall processing industry.

**The innovation in the processing industry** is supported by the own research activities of the companies and 44 specialised institutes which, in 2004, had 6,669 employees in the following sectors: electro-techniques, electronics, fine mechanics, consumer goods, chemicals, metallurgy, machinery constructions.

In the future evolution of the industrial sector, a major role is played by the harmonisation of the national legislation with the directives on the “Free movement of goods” and their implementation, especially with regard to the principles of the New Approach and Global Approach, as well as with the product directives under the “Environmental Protection” chapter. The use of the technical standards for industrial production, in particular the harmonised standards, should be encouraged. The key documents in the process are the European Association Agreement and the Protocol to the Europe Agreements on Conformity Assessment and Acceptance of Industrial Products (PECA). The manufacturing of compliant, certified, branded and safe products is a major concern of the regulated industrial sectors.

The adaptation of the products and production processes to the new legislative principles imposed by the harmonised legislation, as well as the development of the quality infrastructure required to assess

conformity is a comprehensive process which requires a special attention, as the regulated sectors, especially those included in the 'New Approach', are well represented in the Romanian industry: e.g. industrial machinery, equipment under pressure and portable equipment, low voltage and electromagnetic compatibility equipment, gas fuel consumer devices, hot water boilers, toys etc. The industries regulated by the 'Old Approach' directives are equally represented, especially in chemicals-petrochemicals, wood, glassware etc.

In conclusion, the following provide real advantages to the processing industry, which offers real opportunities for the structural adjustment process to ensure the increased competitiveness:

- The industry uses skilled low-cost labour force, whose productivity is however impacted accordingly;
- It targets a domestic market with a high absorption potential;
- It uses to a large extent domestic natural resources (oil, natural gas, wood, ferrous and non-ferrous ores);
- It incorporates the semi-fab industry (ferrous and non-ferrous laminated products, lye, plastics);
- It operates in an area favourable to commercial flows, which will change as a result to EU accession.

### **Key issues**

- Low level of investments in company refurbishment and computerisation;
- Low foreign investments, need to increase FDI the production and services sectors;
- Low number of highly skilled workers and need to adapt the workers with medium skills to performing manufacturing methods;
- Under-use of the research and development potential, lack of involvement of the intellectual capital in company research
- Low government support consisting of incentive programmes and schemes (facilities) for the industry with a view to ensuring the enforcement of the legislation harmonised with the EU requirements and the integration of environmental issues in the manufacturing processes;
- Significant demand for imports because of the non-integration of parts manufacturing in Romanian companies;
- Dependence on the development of the European and global economy;
- Low degree of implementation of the harmonised regulations and limited application of the harmonised technical standards, limited development and modernisation of the testing base at the institutional level and within the enterprises;;
- Problems related to the promotion of the corporate image and the development of branding and marketing tools in all the industrial sectors having a high potential.

### *Development of industrial parks*

The Romanian state has adopted a policy aimed at supporting business growth and economic development. To stimulate demand it has adopted a policy of establishing industrial parks, this will aid on employment creation and mitigate the effects of restructuring of large enterprises and lead to a reduction in unemployment rates. This policy will also encouraged as part of a wider set of measures increased numbers of jobs in SMEs and improved levels of investment.

This policy also is intended to link to development of industrial parks to brown land sites that have fallen into disuse through closure of industrial 'giants' and reductions in the defence industry where sites were within centralised state ownership. In this way, a first step towards decentralisation has been taken, the property right over the available assets being transferred to the local/county public authorities capable of

managing local interests. Considering the low quality of the infrastructure and the sites that were not eligible/suitable for privatisation will be drawn into this policy.

These industrial parks should be located in strategically important industrial areas in the proximity of cities with high economic growth potential and good transportation infrastructure connectivity and thus have the potential to attract the industry from the centre towards the outskirts. Such sites, built even with greenfield investments, have been developed by the local or county authorities, the private sector and as part of public-private partnerships.

The legal framework on industrial parks was completed in the period 2000 – 2002 by the adoption of Governmental Ordinance no. 65/2001 on the establishment and functioning of industrial parks, approved by Law no. 490/2002, which resulted in the development of the first industrial park projects at the local level (in Bucharest and South Region 3 – Muntenia).

This type of business opportunity can be developed by any duly established entity. The Government provides the financial support only to those projects which meet the requirements laid out by Government Ordinance no. 65/2001 (such financial support consists in granting facilities like additional deductions from the taxable profit, in the amount of 20% of the investments in buildings or building rehabilitation, internal infrastructure and connections to the public utility network; tax exemptions for buildings or related constructions; exemptions from the charges levied for the change in the destination of a plot of land or the taking of a plot of land from the agricultural circuit).

The free organisation of industrial parks is preferred by the investors even outside the framework established by GO no.65/2001, in the case they have not applied for the fiscal facilities set forth by the law. 32 such industrial parks had been established by the 1<sup>st</sup> of December 2005, all of them meeting the requirements of GO 65/2001, as follows:

- A minister's order was issued to regulate the status of 26 industrial parks;
- 6 industrial parks were established by Governmental Decisions in specific situations – existing industrial platforms having the necessary infrastructure, which was however not used because of the industrial restructuring processes of the past 15 years;
- the legal procedure for the granting of the status of industrial parks to 2 such industrial parks is ongoing;
- 2 applications for the granting of the status of industrial parks are underway being examined for 2 such industrial parks.

The analysis of the 32 industrial parks regulated by GO no. 65/2001 highlights a series of characteristics of these business infrastructures:

- in terms of property deed over the land, there are 10 private industrial parks, 19 whose land belongs to the local public authorities and 3 which are the result of a public private partnership;
- in terms of the arranged land area (industrial constructions, utilities, roads etc.), less than half of the 32 industrial parks have such setups, the total arranged area being 550.41 ha, out of 1323.35 ha.

### Regional distribution of industrial parks

Development region	Total no. of industrial parks	Total area of industrial parks ha	Unarranged areas (Greenfield) ha	Industrial areas (Brownfield) Ha
1- North East	2	22.38	-	22.38
2- South East	3	121.8	-	121.8
3- South Muntenia	9	493.3	254.07	239.23
4- South West	1	10.46	10.46	-
5- West	1	19.3	19.3	-
6- North West	3	88.19	88.19	-
7- Centre	11	534.85	400.92	133.93
8- Bucharest	2	33.07	-	33.07
<b>Total</b>	<b>32</b>	<b>1323.35</b>	<b>772.94</b>	<b>550.41</b>

Source: Ministry of Administration and Interior

In general, operational industrial parks have attracted about 300 economic operators, which have created 8,714 new jobs.

### 2.3. The SMEs sector

SMEs are predominant in the Romanian economy, as well as in the other European countries, representing more than 98% of the total number of enterprises and having a substantial contribution to the GDP and the creation of jobs.

#### Number of active SMEs by size

Company size	1999	2000	2001	2002	2003	2004
Micro	294,597(90.2%)	279,893(88.5%)	280,448(87.9%)	285,207(87.7%)	313,485(87.9%)	358,242(89%)
Small	25,987(8.0%)	29,417(9.3%)	31,249(9.8%)	32,010(9.84%)	34,883(9.8%)	36,080(8%)
Medium	6,102(1.8%)	6,864(2.17%)	7,455(2.3%)	7,989(2.45%)	8,342(2.3%)	8,674(2%)
Total	326,686(100%)	316,174(100%)	319,152(100%)	325,206(100%)	356,710(100%)	402,996(100%)

Source: Ministry of Public Finance and National Statistics Institute

In 2004, there were almost 403,000 active SMEs, which translates into a 24% growth compared to 1999 and 13% increase compared to 2003, the highest growth rate recorded on a year-to-year basis during the reference period. The data available for the period 1999-2004 show a slightly fluctuating evolution, by categories of size.

#### Number of active private SMEs by sector of activity

Sector	1999	2000	2001	2002	2003	2004
Agriculture	10,055	9,494	8,929	10,011	10,430	11,390
Industry	39,457	40,252	41,609	45,586	50,117	54,657
Construction	10,956	11,705	13,990	16,312	20,378	25,115
Services	266,218	254,723	254,625	253,297	275,785	311,834
Total	326,686	316,174	319,152	325,206	356,710	402,996

Source: Ministry of Public Finance and National Statistics Institute

All the sectors record positive demographic values, the most dynamic growths registered in 2004 being in constructions – 23.2%, services – 13.1% and agriculture – about 9%. This outstanding evolution of the *constructions* sector results from several factors: the expansion of the urban and residential infrastructure as a result of the development of the real estate sector, industrial and road infrastructure works (motorway construction, road rehabilitation and water supply in the rural areas etc., benefiting from EU support and governmental programmes), works in the power sector, the development of the store chains, developments in the social and cultural areas, the local tradition and expertise in constructions.

The increased SME involvement in the *industrial sector* proves that this sector is going through a development process which has multiple implications, as the SMEs active in the industrial sector are large companies, with complex organisational and production processes, which requires performing infrastructures, skilled staff and market stability.

The SMEs conducting their business in the *service area* are more flexible, most of them being micro-enterprises with trade activities and acting as market intermediaries. They are characterised by a higher degree of volatility (the setting-up/closing-down process is much faster and they are restructured or change their business very fast).

The distribution of enterprises by categories of services and by sector reflects the different dynamics of SMEs compared to other companies. The number of SMEs is higher especially in fields like: other services, transportation, tourism, while decreasing in trade activities.

#### SME growth indicators by service sub-sectors

Year	Trade	Tourism	Transportation	Other services
2000	100	100	100	100
2004	94	174	201	263

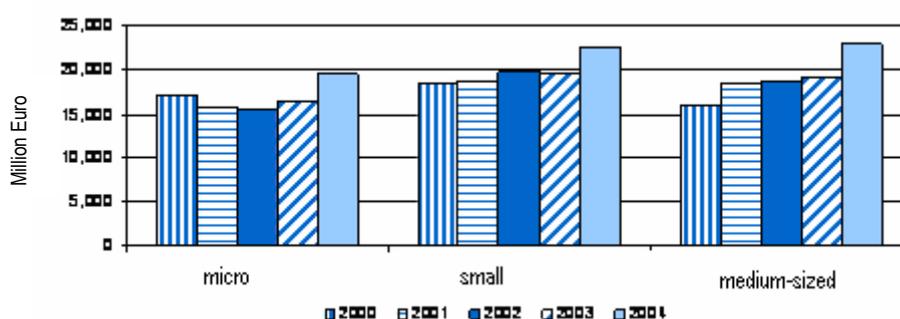
Source: Ministry of Finance and National Statistics Institute, own calculations of ANIMMC

By definition, SMEs are connected to the local market and their number correlated with the number of inhabitants is an indicator of the size of this market. The number of SMEs for 1000 inhabitants in 2004, by development regions, varies between 41 in the Bucharest-Ilfov region and 12 in the North-East region. In North-West and in the Centre, there were 20 SMEs for 1000 inhabitants, 19 in the West region, 17 in the South-West and 13 in the South.

The highest growth rate of the number of SMEs for 1000 inhabitants was recorded in the Bucharest – Ilfov region (45% compared to 2000), followed by the West region, where the increase was of 25% compared to 2000. The growth was much slower in North-East and South-West Oltenia. The differences arise from the different population density rates in these regions. If we don't consider the Bucharest-Ilfov region, which has 1,214 inhabitants /km<sup>2</sup>, the largest population density is recorded in the North-East region (about 102 inhabitants /km<sup>2</sup>), where the demographic growth is rather high, whereas the smallest population density is recorded in the West region (61 inhabitants /km<sup>2</sup>), which is going through a demographic decline.

The 'balance sheet' data for 2004 indicate a total **turnover** of the SME sector in the amount of EUR 65,055 million (current prices), of which EUR 19,498 million are recorded by micro-enterprises, EUR 22,524 million by small enterprises and EUR 23,033 million by medium-sized enterprises. The afore-mentioned turnover recorded by the SME sector relates to the period 2000-2004 and is calculated by size categories and main sectors of activity. Medium-sized enterprises had the largest contribution to the turnover, i.e. 35.4%, being followed by small enterprises – 34.6% and micro-enterprises – 30% of the overall SME turnover.

### Evolution of the SME turnover by size categories, between 2000 and 2004



The turnover growth rate by size categories was quite important. In 2004, the highest growth rate (17.6%), above the rate of the previous years, was recorded by small enterprises, mainly due to the strengthening of the fiscal stability.

In 2004, the SME turnover reached EUR 45,028 million in the area of services, EUR 13,835 million in the industry, EUR 4,758 million in constructions and EUR 1,435 million in the agriculture. Services are the most important sector in terms of turnover, which is three times higher than in the industrial sector, almost ten times higher than in constructions and over thirty times higher than in the agriculture. All the relevant economic sectors recorded constant growths throughout the period under consideration. The constructions sector increased by 19.4%, above the average of the SME sector. The other sectors recorded average growth rates.

One of the major **profitability** indicators is the ratio between the net profit and the turnover, meaning the percentage of the turnover which represents the net profit.

### Ratio between net profit and turnover, by size categories

	2001	2002	2003	2004
<b>Micro</b>	2.3	4.4	5.4	8.6
<b>Small</b>	3	2.3	2.9	3
<b>Medium</b>	2.7	2.2	3.2	2.6
<b>Total</b>	<b>2.7</b>	<b>3.0</b>	<b>4.1</b>	<b>4.7</b>

Source: Ministry of Finance and National Statistics Institute, own calculations of ANIMMC

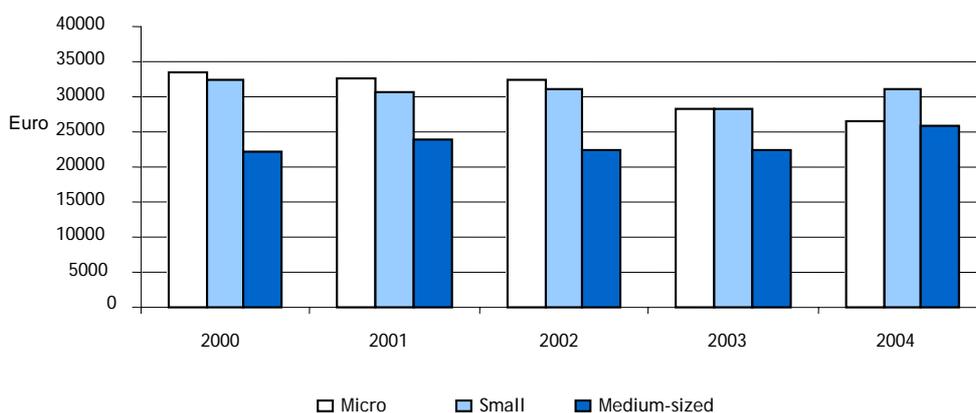
In 2004, micro-enterprises were capable of generating higher net profit/turnover ratios, being followed by small companies, while medium-sized companies were the least profitable in relative terms. The evolution of profitability in time indicates the following: micro-enterprises are the most dynamic category, with an annual ratio above the average of the overall SME sector and above the values recorded by the other categories of enterprises; however, in the latter case, the ratio was much more consistent compared to micro-enterprises, which seem to have benefited from better circumstances in 2004.

The statistic data of 2004 indicate that the constructions sector generated the highest net profit/turnover ratios (6.6%), being closely followed by the service sector (4.8%) and the industry (3.8%), while agriculture came last, with 3.1% (below the average of the overall SME sector).

In 2004, **productivity** reached EUR 26,592/employee in the case of micro-enterprises, 30,984 in the case of small enterprises and 25,894 in the case of medium-sized companies; thus, the average of the overall SME sector amounted to EUR 27,823.

The highest productivity rate in Romania was recorded by small enterprises, with 11.3%, much above the SME sector average. It should be noted that the situation is reversed in the EU countries, where the highest productivity is recorded by medium-sized companies, which account for levels that are twice the rates of micro-enterprises (European Commission, 2003). Nevertheless, micro-enterprises, just like medium-sized enterprises, continue to have high productivity levels, despite their downwards evolution in terms of this indicator in 2000. Small enterprises have had a fluctuating evolution, but recorded the highest productivity level of all sectors in 2004.

### Labour productivity, by size categories, expressed in EUR/employee



Source: Ministry of Public Finance and National Statistics Institute

An analysis by sectors shows that the productivity of SMEs active in the service area in 2004 was EUR 36,863/employee, EUR 17,303/employee in the industry, EUR 18,964/employee in constructions and EUR 18,445/employee in the agriculture.

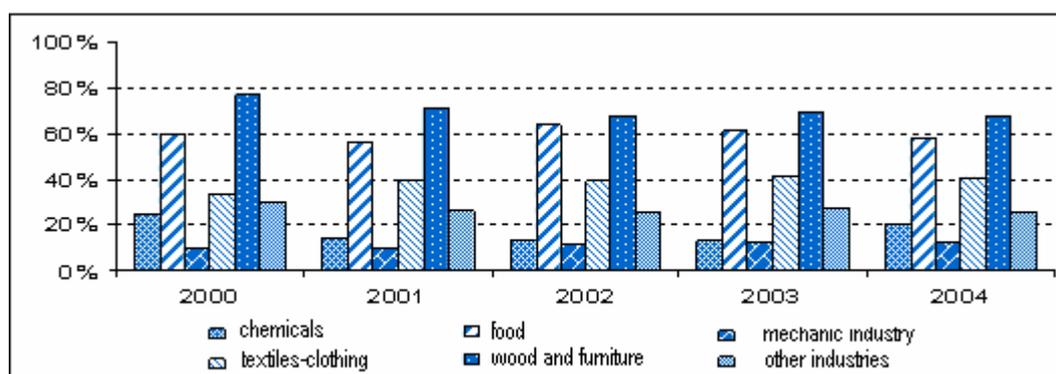
The service sector has the highest productivity, exceeding the other sectors by almost 50%. Although the productivity of the service sector was not much different from the previous year (only 2.8% growth), the general upwards trend of the labour productivity in the SME sector was also due to the significant share of services in the overall sector. The performance of the construction sector was maintained above the industry performance. In addition, as 2004 was one of the best agricultural years of the last decade, the SMEs active in the agriculture sector recorded a higher productivity, reaching a level similar to the constructions sector.

In 2004, the **exports** of the SME sector amounted to EUR 6,754.8 million in value, while the **imports** reached EUR 13,203.7 million. As mentioned before, the trade balance deficit of the SME sector was greater than the overall deficit of the economy and especially than that of large enterprises.

In the processing industry, the overall trade balance and the trade balance by categories of SMEs improved significantly. The improvement of the trade balance of the processing industry indicates the SME focus on the international economy and proves their capacity to bring foreign currency in the Romanian economy.

In 2004, the total exports volume of the SMEs active in the processing industry amounted to EUR 4,259.4 million, which accounts for 63.1% of the overall exports of the SME sector.

## Evolution of SME participation in exports, by main industrial sectors



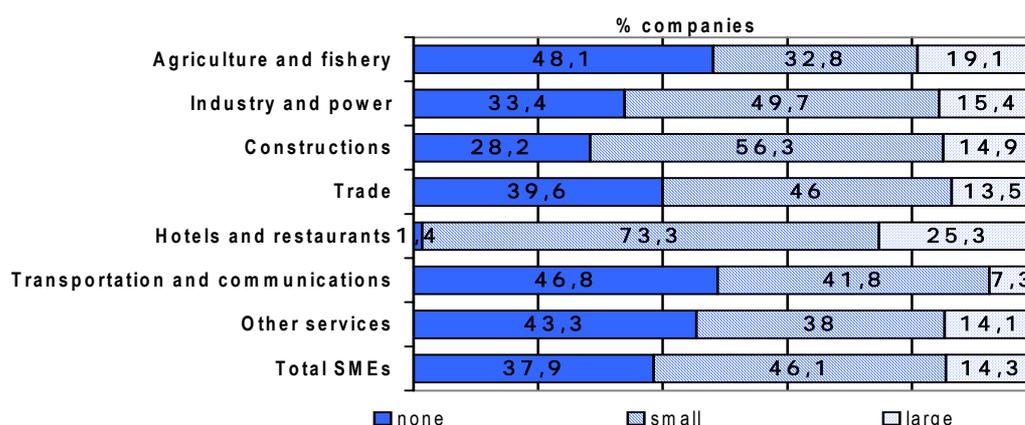
Source: National Customs Authority and National Statistics Institute

The contribution of the SMEs to the exports of the industrial sectors tends to become more stable, which shows that the above-indicated percentages are not the result of favourable or unfavourable circumstances but of the fact that SMEs maintain their export competitiveness in time. No major changes in the share of SMEs in the overall exports of their respective industrial sectors have occurred throughout the years.

In 2004, most SMEs made small **investments**. Thus, 46.1% of the SMEs declared having made small investments in 2004, while 14.3% of them made bigger investments. However, there are also a lot of SMEs (37.9%) which made no investments whatsoever last year.

The analysis by sectors of activity highlights the particular situation of the “Hotels and Restaurants” sector in terms of investments. The share of small investments made by “Hotels and Restaurants” is almost twice the overall average, i.e. 73.3%. In fact, this is the sector with the largest number of SMEs which made big investments (25.3%). In the “Transportation and telecommunications” sector, the volume of small investments accounts for more than 40%.

## SME investments by sectors and size categories



Source: ANIMMC, a survey on “The situation and needs of SMEs in 2004”

Micro-enterprises had the lowest contribution in terms of large investments (13.0%) and the highest share in terms of companies which made no investments whatsoever (39.4%). The number of medium-sized enterprises which made large investments increased to 35.1%, while the number of those which made no investments dropped to 19.7%.

Tangible assets make up the majority of the fixed assets, accounting for over 86% of the investment value of each size category. The share of tangible assets is similar in all the enterprise categories, accounting for 88.3% in the case of micro-enterprises and 90.4% in the case of small enterprises. Intangible assets have a marginal role in all SMEs, while financial assets represent 9.5% of the investments made by micro-enterprises, 8.3% in the case of small companies and 9.1% in the case of medium-sized companies, the values being rather similar.

In 2004, tangible assets by main sectors of activity were represented as follows: industry – 93.9%, constructions - 89%, services – 86.9%. Intangible assets are more relevant in the industry and services, i.e. 1.5%. Financial assets play an important role in services, i.e. 11.4%, and constructions, i.e. 9.9%, but are less relevant in the industry (4.6%) and the agriculture (4%).

The large share of tangible assets in the overall fixed assets of the SMEs is tightly related to the completed or ongoing investment structure; the investments are very much focused on business infrastructures, proving that SMEs are still confronted with problems related to the asset base required for them to carry out their business.

Romania lags behind other European countries in terms of **business innovation**. In the period 2000-2002, only 17% of the companies carried out successful innovative activities<sup>12</sup>. This percentage is much lower than in the EU15, where 44% of the companies were considered innovative in the period 1998-2000<sup>13</sup>. In exchange, large enterprises from Romania are close to this percentage (41%). However, only 13% of the enterprises with less than 49 employees (a major category) developed innovative activities.

#### Share of innovative enterprises, by sector and size categories

	Total	Small	Medium	Large
Processing industry	19%	15%	22%	44%
Energy, gas and water	16%	-	-	-
Services	13%	11%	20%	34%
Total	17%	13%	21%	41%

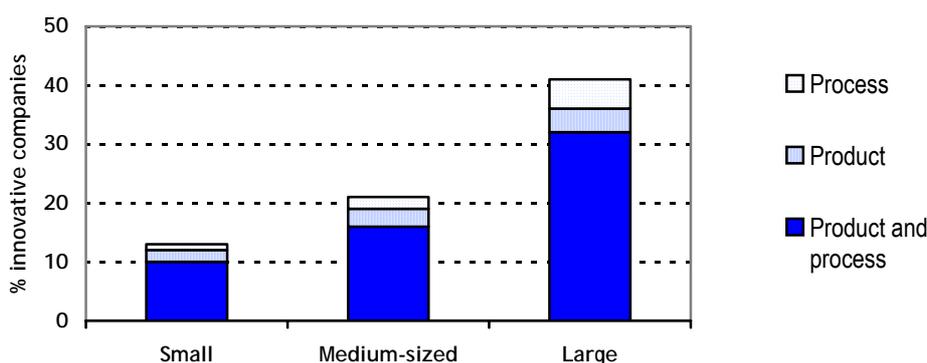
Source: National Statistics Institute, Innovation in the Industry and Services, 2000-2002

Most of the innovations (75%) relate to products and processes to an equal extent. According to a statistic survey on innovation, carried out by the National Statistics Institute by type of innovation, most technological innovations relate to the acquisition of new machinery and equipment (53% for all companies and 59% for small companies).

<sup>12</sup> The data are based on the survey on innovation in the industry and services in Romanian companies, carried out by the National Statistics Institute, for the following sectors: extractive industry, processing industry, electrical and thermal power, gas, water and services. Only companies with 10 or more employees were surveyed.

<sup>13</sup> These data are comparable, considering that the survey is based on the statistic survey on innovation carried out in the EU (CIS 3).

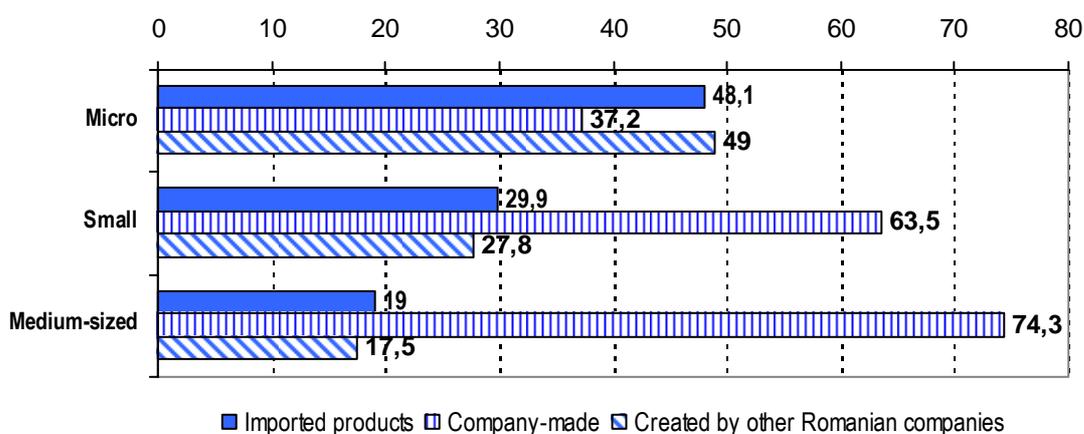
### Innovative companies, by size and type of innovation



Many innovative companies (47%) implemented changes which are not related to technology, in the sense that they changed the outer appearance of the products, their marketing policy, company organisation, strategies and management. Romanian SMEs are less inclined to make strategy or organisation changes and are more innovative when it comes to marketing or design activities.

Only 13% of the small enterprises and 21% of the medium-sized companies are innovative, and the share of SMEs cooperating with foreign companies is below 2% for small companies and 4.3% for medium-sized enterprises.

### Origin of new products and services, by size category

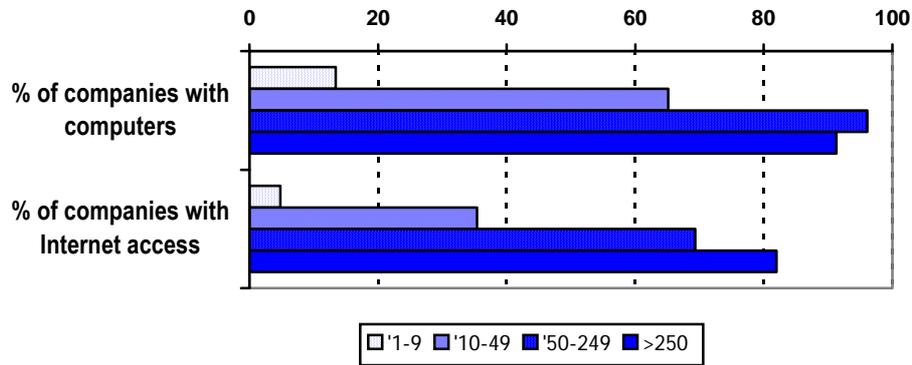


Source: National Statistics Institute, Innovation in the Industry and Services, 2000-2002

SMEs are less willing to adopt protection measures, both in the industrial sector and in the service area. In the case of the innovative companies that are active in the industrial sector, the official methods are the most frequent: registration of industrial designs, projects and trademarks. Less than 10% of the innovative SMEs from the industry applied for any type of protection, except for the registration of trademarks (in the case of medium-sized companies).

SMEs are less prepared to use the Information Technologies because of the shortage of infrastructure components (computers and Internet access). SMEs resort to promoting their own products and services through the Internet to a limited extent. The impact of ITC on sales, meaning the use of electronic commerce, is still insignificant.

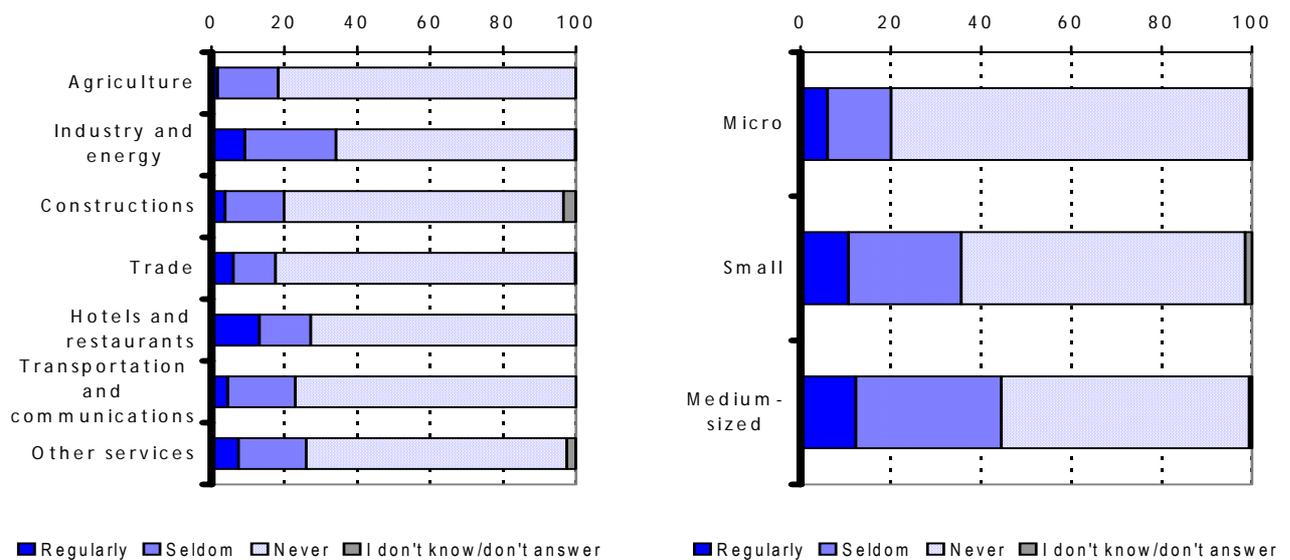
### ITC infrastructure, by size category



Source: National Statistics Institute, ITC Statistics, 2004

The demand for **business consultancy services** is still low in the SME sector of Romania, as indicated by the survey carried out by ANIMMC in 2005. The number of SMEs which have never resorted to business consultancy services is rather high (over 60%).

### Share of business consultancy services in the SME sector in 2004



Source: ANIMMC, Survey on "The situation and needs of SMEs in Romania"

There are no huge differences between sectors, although we may say that the production sector is the most advanced in terms of the use of consultancy services. SMEs mostly resort to professional training services and services which are related to the functional aspects of their respective business, such as finance, marketing, production and design. The number of companies which asked for consultancy related to standards and quality certifications is still low, except for the constructions sector, where the safety regulations are very restrictive.

The financial allocations of the SMEs for the procurement of business services have the following main characteristics:

- Micro-enterprises spent more than half of their budget for consultancy services such as fiscal, accounting, business planning and management counselling; IT services absorb 26% of the expenditures. Micro-enterprises allocated only 5% of their budget for the commissioning of surveys and market researches, while other companies allocated only 3% for such services.
- Small and medium-sized enterprises allocated most of their budget for IT services, as they tend to operate more sophisticated systems whose maintenance is outsourced.
- Expenditures related to recruitment services are higher for medium-sized enterprises, as their internal organisation is more structured and they tend to recruit their staff on the labour market instead of resorting to informal channels.

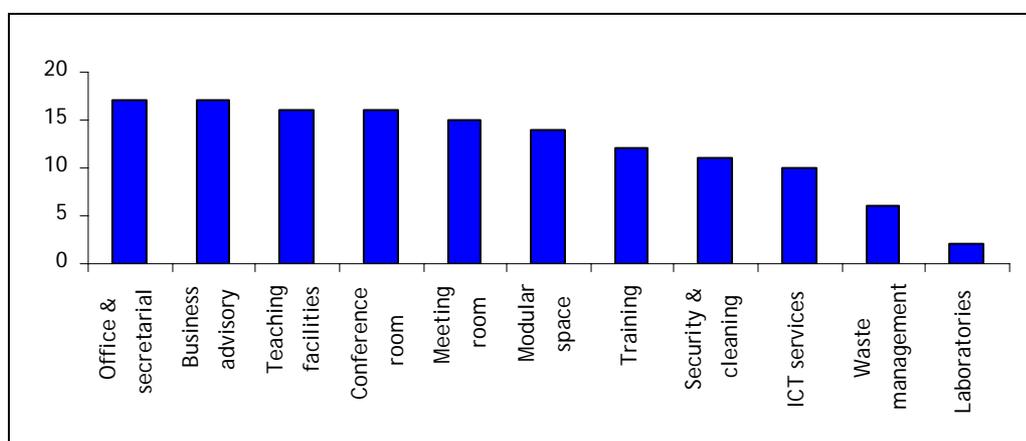
### SME statistics within business incubators

Number of incubators by number of companies supported in 2004			No. of SMEs benefiting from support; breakdown by sectors in 2004	
1 to 5	6 to 15	16 to 25	Industry	Services
3	6	8	60	159

Source: ANIMMC, Survey on business incubators and industrial and technological parks

In Romania, there are 21 **business incubators** located throughout the country. The incubators house on average 11 SMEs, which is below the EU average – 34 enterprises benefiting from support within each incubator. Most of the SMEs from the incubators conduct their business in the service and industrial sectors and there is no target sector on which the potential occupants of the incubators should have a clear focus.

### Types of services provided by business incubators in 2004



Source: ANIMMC, Survey on business incubators and industrial and technological parks

The objective of the business start-up support policy is to improve the performance of SMEs by meeting their operational needs. The intervention of the authorities has a double role: on the one hand, to solve the problem of the lack of competences and skills among the existing service providers and, on the other hand, to foster an SME culture oriented towards the use of consultancy and professional training services.

**Key issues:**

- Use of outdated technologies and equipment, low productivity and profitability rates
- Low SME competitiveness in the productive sector
- Limited innovation activities carried out by SMEs
- Limited links between the R&D and SME sectors.
- Need to simplify and stabilise the regulations having an impact on the SME sector and on the business environment;;
- Online services facilitating the access of SMEs to public information related to business start-up; limited relations with the public administration;
- Poor development of support services for SMEs, meeting the requirements of a competitive economy;
- Insufficiently developed entrepreneurial skills and insufficient means for SMEs to have access to external markets;
- Poor development of the entrepreneurial culture, which results in an insufficient absorption of specialised workforce in the productive sector.

**2.4. Scientific research, technological development and innovation**

The evolution of scientific research, technological development and innovation is marked by a series of major changes, mainly due to the political context of the forthcoming accession of Romania to the EU, as follows:

- The efforts of Romania to progressively align to the latest EU policy developments, in particular the strategy adopted by the European Council of Lisbon, 2000, which recognises the crucial role of scientific research and technological development for the increase of economic competitiveness, with the following main consequences:
  - The allocation of at least 3% of the GDP for R&D by 2010, of which at least 2% should come from the industrial sector;
  - The implementation of the Action Plan for the attainment of the 3% objective, as adopted by the European Commission in April 2003;
- The commitment regarding the participation in the EU Framework Programme for Research, Development and Innovation for the period 2002-2006 (FP6) and the implementation of the European Research Space;
- The commitments taken by Romania under the bilateral and international agreements and treaties on science and technology, including the accession conventions to relevant international bodies and organisations;
- The preparation process for accessing structural funds.

Recent national developments, which have an impacted on this area:

- the promotion and adoption of the specific legislative package;
- the introduction in 2003 of the financing instruments complementary to the National RDI Plan: the sectoral R&D plans, coordinated by the line ministries, the core R&D programmes of the relevant institutions, coordinated by the Ministry of Education and Research;

- the incorporation of the RDI field in the overall economic and social development strategies, at the sectoral and regional level.

### 2.4.1. R&D infrastructure

60% of the research and development activities are carried out by the public sector.

In 2003, there were 719 institutions and entities which conducted research and development activities, including universities, of which: 120 public institutions subordinated to the Ministry of Education and Research and other ministries, the Romanian Academy and the Academy of Agricultural and Forestry Sciences (of which 37 national research and development institutes), 86 higher education institutions, 25 non-profit private organisations and 488 business companies (of which 276 R&D entities and 212 economic operators whose object of activity also includes research and development).

The status of national R&D institutes was defined by GO no. 57/2002 approved by Law no. 324/2003, as a new stand alone organisation, specific to the R&D sector. National R&D institutes are R&D entities representative for a particular economic sector, having a scientific performance level which is assessed and accredited on a regular basis, and being coordinated by the relevant ministries.

In 2003, there were 39,985 persons involved in R&D activities, of whom 25,968 researchers. Among the researchers, about 9,200 are accredited researchers, while 8,400 are science PhDs. In 2003, the number of researchers for 1,000 employed persons was 3.13, compared to 5 in the EU15; however, the number of R&D employees and researchers recorded a slight increase compared to 2002.

The low salaries and the inappropriate material resources, in particular the lack of equipment or the outdated equipment, gradually led to the decrease of the number of researchers and the increase of the average age of the highly qualified staff involved in the R&D activity, so that the researchers who are up to 45 years old represent about 50% of the overall number of researchers.

Nevertheless, the human potential is high, as there are a lot of persons working for institutions dealing with R&D activities in all scientific and technological areas, in all the regions of the country; 53% of them are involved in technical and engineering sciences, which is a good starting point for meeting the requirements of the economic environment.

#### Number of R&D entities and researchers by scientific areas\* in 2003

Areas	No. of entities	No. of researchers
TOTAL, of which:	<b>719</b>	<b>25968</b>
Natural and exact sciences	85	4,403
Engineering and technological sciences	405	13,971
Medical sciences	66	2,268
Agricultural sciences	103	1,311
Social sciences	37	2,590
Humanistic sciences	23	1,425

Source: Statistic Yearbook of Romania, 2004, and NSI

Note: \*) The breakdown is based on the scientific area predominant in each entity which carried out R&D activities in 2003.

### Breakdown of R&D entities and staff by regions in 2003

	No. of entities	Share (%)	R&D staff (full-time)	Share (%)
<b>Total, of which:</b>	<b>719</b>	<b>100</b>	<b>33,077</b>	<b>100</b>
North-East Region	81	11	2,503	8
South-East Region	34	5	1,227	4
South Region	67	9	3,689	11
South-West Region	40	6	1,715	5
West Region	52	7	2,222	7
North-West Region	73	10	1,937	6
Central Region	80	11	2,850	9
Bucharest-Ifov Region	292	41	16,934	51

Source: Statistic Yearbook of Romania, 2004, and NSI

One of the policies of the recent years has been focused on the **development of the specific R&D infrastructure** with a view to reducing the huge gap between the Romanian institutions and the similar EU institutions in terms of research equipment and materials. This objective has been approached differently in different stages; the process started with an assessment of the existing human potential and its R&D performance level, as well as with an assessment of the prospects of the different scientific areas both nationally and internationally, in particular in view of the European accession:

- grants for “*research bases with multiple users*” within higher education institutions were allocated in the period 1998-2002; they were financed by the Reform Project of the higher education system and scientific university research (the World Bank). The project consisted in the establishment and development of 34 centres, laboratories and research bases within 15 higher education institutions across the country, in fields like natural and exact sciences (molecular biology, genetics, information technology), engineering and technological sciences (chemical engineering and material science, automotive, mech-electronics, tele-detection, electronic microscopy, electromagnetic compatibility, magnetic resonance, energy sources, constructions and seismic engineering), agricultural sciences (agronomy, horticulture, veterinary medicine), medical sciences (cardiology, surgery, oncology, radiotherapy, osteoporosis), social and humanistic sciences (business management for SMEs and quality management);
- in the period 2000-2004, the National Research, Development and Innovation Plan, the main competitive financing instrument in the field, included a specific component focused on the *development of scientific and technological excellence centres in priority areas* (including financial support for the procurement of equipment and devices). The fields in which excellence centres have been developed are the following: natural sciences (molecular epidemiology, biology and cellular pathology, genomics, geo-ecology of marine, delta and fluvial systems), exact sciences (physics, chemistry, mathematics, astronomy), engineering and technological sciences (micro-nanotechnologies, mech-electronics, materials and biomaterials, aerospace, electronics and optoelectronics, energy sources, automation, robotics, electro-technics, transportation vehicles, environmental protection and waste disposal), medical sciences (biomedicine, spatial applications in medicine, hematopathology, tissue transplants and skin grafts, peripheral neuropathies), agricultural sciences (forestry setups, pedology and agro-chemistry, pomiculture, fisheries, animal feeding), social and humanistic sciences (labour and social protection). The excellence centre programme involved highly performing research teams from about 30 R&D institutions. Five of the R&D organisations involved in the programme also take part in the excellence centre programme in candidate countries, as part of the RDI FP 5 of the EU;
- the “*excellence centres*” programme has been implemented since 2001; by this programme, the National Council for Scientific Research in the Higher Education System assesses and accredits the research centres from the higher education institutions, based on criteria of capability, competence

and scientific performance; until now, 29 excellence centres in science and technologies have been established.

## 2.4.2. Funding of RDI activities

In the period 1999-2003, the total R&D expenses allocated in one year, both in the public and private sectors, were rather stable, but did not exceed 0.40% of the GDP.

In addition, there is a downwards trend of the R&D expenses incurred by economic operators (from 0.2% of the GDP in 1999 down to 0.16% of the GDP in 2002), a slight increase being recorded in 2003 (0.18%). However, it should be mentioned that between 1999 and 2001 the funds allocated by the economic operators were higher than the public funds allocated for research and development, decreasing slightly in the following years; nevertheless, despite this slight decrease, they exceeded 45% of the overall expenses. On the other hand, the expenses allocated by the economic operators for R&D activities conducted by public R&D institutions were rather limited (between 15% in 2002 and 26% in 2001). The same conclusion can be drawn from the survey on innovation, which indicates that the expenses incurred by the economic operators in relation to their own research and development activities are higher than the expenses allocated for R&D activities carried out by specialised institutions.

### Total R&D expenses at country level and by regions

Total R&D expenses	1998	1999	2000	2001	2002	2003
% of the GDP	0.48	0.40	0.37	0.39	0.38	0.40
By regions * (%)	100	100	100	100	100	100
North-East Region	5.91	5.16	5.52	5.83	5.06	4.92
South-East Region	4.41	4.94	6.29	6.15	4.59	3.47
South Region	10.88	10.53	13.27	14.09	15.82	13.91
South-West Region	3.15	4.0	4.51	4.84	3.76	2.80
West Region	3.87	4.32	5.51	3.79	4.63	6.11
North-West Region	4.90	4.55	3.78	4.16	6.74	4.80
Central Region	9.50	9.57	7.81	6.05	6.70	6.66
Bucharest-Ilfov Region	57.39	56.93	53.31	55.09	52.70	57.33

Source: Statistic Yearbook of Romania, 2004; National Statistics Institute – processing of data extracted from R&D surveys

Note: \*) The regional R&D expenses are expressed as percentages of the overall R&D expenses (NSI processing)

A comparison with the situation in the European Union indicates a very low level of R&D expenses. The rate of 0.4% of the GDP is below the EU 15 (1.97% in 2003) and NSM-10 (0.83% in 2001).

### Share of R&D expenses incurred by economic operators in the overall R&D expenses

R&D expenses of economic operators	1999	2000	2001	2002	2003
% of total R&D expenses	50.21	48.96	47.60	41.57	45.39
% of turnover	0.12	0.10	0.11	0.09	0.10
By regions *					
North-East Region		0.11	0.09	0.07	0.08
South-East Region		0.11	0.12	0.07	0.05
South Region		0.30	0.36	0.37	0.32
South-West Region		0.13	0.14	0.08	0.06
West Region		0.11	0.11	0.08	0.13
North-West Region		0.05	0.05	0.04	0.07
Central Region		0.14	0.13	0.13	0.13
Bucharest-Ilfov Region		0.15	0.13	0.13	0.13

Source: Statistic Yearbook of Romania, 2003 (NSI data processing)

Note: \*) The regional R&D expenses in the enterprise sector are expressed as a percentage of the overall turnover of the region

It is important to mention how the National RDI Plan is funded. The funds coming from the economic operators continue to represent an important share of the overall Plan budget, i.e. about 30% on an average, but they are still insufficient to meet the real innovation requirements of the economy. The funds attracted from the economic operators as co-financing accounted for 28% of the Plan budget in 2001, 35% in 2002 and 30% in 2003.

Apart from the national funds (R&D funds devolved from the national budget, funds attracted from the economic operators etc.), the R&D sector also benefits from the financial advantages generated by the connection to the RDI system of the European Union, in particular the RDI Framework Programme and the Euratom Programme, as well as other RDI programmes implemented in the European space (NATO, EUREKA, COST etc.).

The foreign financing of R&D activities increased significantly in 1999-2002, but dropped in 2003.

### Foreign R&D expenses

Foreign R&D expenses	1999	2000	2001	2002	2003
% of the overall R&D expenses	2.46	4.90	8.20	7.0	5.5

Source: Statistic Yearbook of Romania, 2004

In terms of the R&D expense structure, a small part is allocated for investments, in particular the procurement of equipment and devices, i.e. 9.6% of the overall expenses in 2003.

In terms of the destination of the R&D expenses by socio-economic objectives (according to the Nomenclature for the analysis and comparison of scientific budgets and programmes), industrial production and technologies account for the highest share (about 42%), being followed by fundamental research – 14%, which means that there is a high demand for R&D activities focused on products, technologies and industrial equipment. It should be noted that the share of the R&D expenses in the overall public funds allocated for this objective reached only 24% in 2003.

### 2.4.3. Innovative enterprises

In Europe, 51% of the productive enterprises are technologically innovative.

The current situation of innovation in Romanian is depicted by a Survey called: „Romania – An assessment of the Lisbon Scorecard”, developed by the Romanian Economics Society in 2004, as follows:

- low costs rather than product and technology innovation remain the main source of competitiveness;
- most of the new technologies are imported or are the result of foreign direct investments rather than of local efforts;
- most of the enterprises focus on assembly activities and sub-contracting and do not make any progress in the production of their own brands.

The survey on innovation carried out by NSI in 2003 for the period 2000-2002, in compliance with the EUROSTAT methodology (CIS III), revealed the following findings, by country and development regions:

- innovative enterprises represent 17% of the active enterprises (about 40% of the total number of employees);
- the turnover of innovative enterprises represents 42% of the overall turnover of active enterprises.

The structure of innovative enterprises has the following main characteristics:

- in terms of size: 83.4% are SMEs (53.7% - small enterprises and 29.7% - medium-sized enterprises), and 16.6% of them are large enterprises;

- in terms of the main object of activity: 73% - industry and 27% - services (12% - trade, 10% - research and development, 4.7% - transportation and communications).

Innovation is financed from public funds (budgetary funds) to a very limited extent, only 10% of the innovative enterprises benefiting from such financing.

### Innovation in 2002

- Euro -

	Innovation expenses	Of which:				
		Intramural R&D expenses	Extramural R&D expenses	Procurement of equipment and devices	Procurement of licenses, patents etc.	Other expenses*
ROMANIA	782,736,679	173,490,829	19,348,195	418,332,059	51,282,360	120,280,879
North-East Region	61,481,178	12,072,198	728,917	39,527,978	2,685,283	6,466,803
South-East Region	69,451,450	15,792,189	385,197	48,011,589	1,131,511	4,130,964
South Region	88,310,505	24,110,561	3,561,595	47,726,042	1,389,396	11,522,912
South-West Region	56,999,971	12,557,108	1,436,726	36,171,693	2,987,908	3,846,535
West Region	35,911,409	8,008,935	431,312	16,131,079	691,180	10,648,903
North-West Region	73,379,246	11,232,247	864,447	40,194,821	1,769,828	19,317,902
Central Region	70,824,248	15,150,449	496,359	37,930,457	3,413,144	13,833,839
Bucharest-Ilfov Region	326,378,667	74,569,120	11,444,018	152,638,401	37,214,108	50,513,021

Source: NSI – innovation survey 2003

Note: The statistic data by development regions refer to incorporated legal entities, by location of registered headquarters. The number of enterprises with innovative activities relates to the period 2000-2002, in respect of which the innovation survey was carried out according to CIS III (EU). The surveyed sample included about 9,500 entities, out of a total number of 23,404 entities.

\*) staff training, marketing of the products (goods/services) resulting from innovation, design and other preparatory activities related to production/delivery

However, the level of innovation expenses is still very low, representing about 3% of the total turnover of innovative enterprises.

The breakdown of expenses by innovation sources is presented below:

- Research and development – about 24.5%, of which 22% - intramural expenses and 2.5% extramural expenses
- Procurement of equipment and devices – about 53.4%
- Procurement of licenses, patents etc. – about 6.6%
- Other expenses – about 15.5%

The following conclusions can be drawn:

- The main source of innovation of innovative enterprises is the import of technology and equipment rather than the own research and development activity;
- At the regional level, after the Bucharest-Ilfov region (which concentrates the largest potential of innovation capacities and resources), the next region with a strong development of the innovation activity is the South Region, whose innovation expenses account for 11% of the overall national expenses. At the opposite end, we find the West Region, with the lowest volume of innovation expenses (about 4.5%);
- The economic areas which attract most of the innovation expenses are: transportation and communications, electricity, thermal power, gas and water, food and beverage industry, furniture manufacturing and other industrial activities, metallurgy, extractive industry, machinery and equipment, road transportation means.

#### 2.4.4. Technology and innovation transfer infrastructure

The technology and innovation infrastructure is still underdeveloped, meaning that there are very few organisations specialising in the dissemination, transfer and capitalisation on the R&D outcomes.

The governmental policies on RDI focus on the development and strengthening of the technological and innovation transfer infrastructure, which is considered a major objective that can create the basis for the development of a favourable environment aimed at:

- stimulating partnerships between the economic operators and the research organisations;
- stimulating the demand for R&D and the own R&D activities of economic operators, mainly in the high-tech area;
- increasing the number of innovative companies in advanced technological areas, by supporting their establishment and development.

The number of such organisations has increased since 2003, following the adoption of Government Decision no. 406/2003 on the establishment, assessment and accreditation of technological transfer and innovation entities, i.e.: technological transfer centres, technological information centres, innovative business incubators, industry liaison offices. 26 such entities have been set up until now; they have all received a temporary authorisation and are functional.

In addition, major steps have been taken with regard to the establishment of scientific and technological parks, in order to stimulate the innovation based on the incorporation of the R&D outcomes and the development of partnerships between R&D entities, higher education institutions and industrial partners. The legal framework was established by GO no. 14/2002 on the establishment and functioning of scientific and technological parks, approved by Law no. 50/2003. Moreover, the National Programme “Development of the innovation and technological transfer infrastructure – INFRATECH” was developed as an instrument to provide financial and logistic support for the establishment and development of the institutions specialising in innovation and technological transfer infrastructures, as well as of scientific and technological parks. Until now, 7 scientific and technological parks (with a temporary authorisation) have been established in Galați, Brăila, Slobozia, Brașov, Bucharest, Timișoara and Iași. Only 3 of them are functional: Galați, Iași and Brașov.

#### Key issues

- Outdated research and development infrastructure;
- Poor link between research and economy;
- Insufficient resources for R&D entities to turn the outcomes of research into “turnkey” technological packages;
- Limited involvement of the economic operators in RDI activities and low capacity to absorb the R&D outcomes;
- Insufficiently developed and hardly viable innovation and technological transfer infrastructures and services;
- Insufficient financing of the RDI sector from public and private funds (of the economic operators);
- Reduction of the number of specialists and increase of the average age, as a result of the decreased attractiveness of the RDI sector (low salaries, lack of equipment etc.);
- Low scientific cooperation and technological integration capacity at the European and international level.

## 2.5. Information Technology and Communications

The main indicators of the information society in Romania recorded an upwards trend in the reference period 2000-2004, thus reflecting the mitigation of the gaps between our country and other countries in the region, as well as the higher maturity level of the ITC market.

According to the EITO Report (European Information Technology Observatory) drawn up in 2005, the ITC market of Romania recorded one of the highest growth rates in Central and Eastern Europe, i.e. 20.2% in 2004 compared to 2003, and an average annual growth rate in the reference period of 14%. However, this strong growth was partly due to the fact that the Romanian market is less mature, thus having a higher growth potential, as well as to other factors, such as the increase of the expenditures of the sector, the expansion of the consumer credits and the governmental subsidies for IT procurements.

### ITC market 2000-2004

Indicators						-mil. EUR-	
	2000	2001	2002	2003	2004	Growth rate 2004/2000	Average annual growth 2004/2000
Value of the ITC market	2,159	2,743	2672	3025	3637	68%	14%
Value of the IT market	358	553	553	648	789	120%	21%
Value of the telecom market	1,801	2,190	2118	2377	2848	58%	12%

Source: EITO (European Information Technology Observatory) 2003, 2004, 2005

In the time span 2000-2004, the total ITC expenses as a percentage of the GDP had a growing trend, recording however low values (in particular the IT expenses as a percentage of the GDP) compared to the EU 15 average.

### Share of ITC expenses in the GDP

Indicators	% of the GDP				
	2000	2001	2002	2003	2004
IT expenses in Romania	0.89	1.23	1.14	1.28	1.34
IT expenses in EU15	3.30	3.20	3.00	3.00	3.00
Telecom expenses in Romania	4.46	4.88	4.37	4.69	4.84
Telecom expenses in EU15	3.20	3.20	3.10	3.20	3.40

Source: Eurostat 2005, EITO 2005

#### 2.5.1. IT&C infrastructure

In the reference period, the **telecommunications** market recorded a sustained growth rate and an average annual rate over 12%. In 2004, the IDC report identified the public utilities, banking, government and telecommunications sectors (in this order) as the vertical markets which generated the most substantial investments in 2004.

With regard to **fixed telephone**, following the full privatisation of the electronic communications market of Romania in 2002, the number of active network and electronic communication service providers increased significantly. Thus, by the end of 2004, 2,500 companies were authorised to provide network or electronic communication services; 1337 of them were active on the electronic communications market and provided related services. At present, we can speak of true alternatives to the fixed telephone services provided by the former monopolistic provider. In June 2005, there were 64 alternative providers authorised to provide telephone services through fixed public networks, having 199,070 subscribers; it is important to mention that 49 of the alternative providers offer telephone services on the segment of international calls, which results in a lower price for such calls. As the competition increased on the fixed telephone market, the international calls segment recorded a 60% decrease in tariffs in 2003 compared to 2002. The lowering of the tariffs continues also due to the

measures taken by the National Communication Regulatory Authority (ANRC) to compel the operators to establish their tariffs depending on the costs.

The number of fixed lines is growing both in the residential and business environment, the growth rate of the total number of subscribers in the period 2000-2004 exceeding 14%. However, the penetration rate of the fixed telephone was 20.2 fixed phone lines/100 inhabitants in 2004, being lower than the EU25 average.

The segment of the telephone services provided through fixed public networks recorded an upwards trend in the timeframe 2000-2004. The digitalisation rate also increased by approximately 41%, reaching 77.15% in 2004 compared to 54.8% in 2000. The digitalisation rate is still limited, being even lower in rural areas.

#### Fixed telephone indicators in Romania

Indicators	2000	2001	2002	2003	2004	Growth rate 2004/2000	Average annual growth 2004/2000
No. of fixed telephone subscribers (mil.)	3,813	4,026	4,210	4,330	4,390	15%	3.59%
No. of fixed lines/100 inhabitants	17.7	18.8	19.4	20.00	19.70	14%	3.41%
Automation rate (%)	94.6	96.5	97.6	98.0	99.0	5%	1.14%
Digitalisation rate (%)	54.80	65.40	71.90	74.27	77.15	41%	8.93%

Source: ANRC, MCTI (Ministry of Communications and Information Technology)

According to the "Telecommunications Mirror" survey carried out by ANRC in 2003, the penetration rate of the fixed telephone varies between 9.02% in the county of Ilfov and 41.03% in Bucharest, which indicates the gap between the rural and urban areas; in addition, the Bucharest-Ilfov region has the highest density of fixed phone lines. The same survey shows that the largest number of settlements without any access to fixed telephone services is in the county of Vâlcea (development region South-West Oltenia) – there are 202 settlements in the county (out of 567) which are not covered by the fixed public network. The counties with the lowest number of settlements without access to fixed telephone services are Maramureş (1 settlement), Covasna (3 settlements) and Braşov (4 settlements).

The penetration rate of the **mobile telephone** (per 100 inhabitants) recorded an average growth of 50% per year in the period 2000-2004. Because of the general economic conditions, the penetration rate of the mobile telephone (47.12% in 2004), although higher than the penetration rate of the fixed telephone, is still below the EU25 average (83%), hence the still considerable growth potential.

There are currently four authorised mobile network providers, which use different technologies: GSM (Mobifon, Orange România), DCS (Cosmorom) and CDMA2000 (Telemobil). The first 3G services were launched in the spring of 2005, covering 14 localities for the time being. It is estimated that the development of the 3G mobile telephone, which offers the proper conditions for the provision of broadband services, will follow a trend at least equal to the one of the GSM mobile telephone.

#### Mobile telephone indicators in Romania

Indicators	2000	2001	2002	2003	2004	Growth rate 2004/2000	Average annual growth 2004/2000
No. of mobile telephone subscribers (mil.)	2.01	3.87	4.49	7.04	10.21	408%	50.13%
No. of mobile lines/200 inhabitants	8.96	17.2	20.7	32	47.12	426%	51.43%

Source: ANRC, MCTI

In 2004, there were over 4 million **cable television** subscribers countrywide, while the number of CATV network operators reached 475 service distributors and redistributors. Cable services are diversified, providing television, radio, telephone and Internet opportunities. However, there is a gap of 4 to 1 between the CATV penetration rate in the urban areas compared to rural areas.

As for the **information infrastructure**, (the PC endowment and penetration), we may note the same upwards evolution during the reference period and an annual average growth rate of 50% plus. Due to the launching of the *eEurope+ Action Plan*, the PC penetration rate increased in all EU countries (55 PCs /100 inhabitants in EU25); however, Romania still lags behind (12 PCs/100 inhabitants by the end of 2004), with an average annual growth rate of 37% in the timeframe 2000-2004.

A survey carried out in June 2003 to assess the implementation of the *eEurope+ Action Plan* indicates that 22% of the Romanian respondents have a computer at home, and only 7% of them have an Internet connection. The main growth drivers were: the lowering of the prices due to the fierce competition on the market, the local assemblage of a large number of computers and the introduction on a large scale of loans for the acquisition of consumer goods and computing technique, as well as the governmental subsidies for the acquisition of computers.

**Data transmissions and Internet access** are impacted by the lack of basic communications infrastructures, mainly in rural areas. Another reason for the limited penetration rate of the Internet is that in some situations, although there is a possibility to have an Internet connection in rural areas, the tariffs are much higher than in urban areas.

Most of the Internet access services are based on dial-up solutions both for households and small enterprises, while the access through cable TV networks becomes increasingly popular as a broadband Internet solution, which adds on top of the radio support services and leased and dedicated lines. However, the growth of dial-up connections is still limited because of the low number of personal computers. In terms of pricing, the tariffs for dial-up services are the lowest compared to EU countries, but remain prohibitive, given the purchasing power of the population.

#### Internet connection indicators in Romania

Indicators	2000	2001	2002	2003	2004	Growth rate 2004/2000	Average annual growth 2004/2000
No. of Internet users	800,000	1,000,000	2,200,000	4,150,000	5,200,000	550%	60%
No. of Internet users/100 inhabitants	3.6	4.5	10.14	19	24	564%	60.7%
Internet service providers	200	400	495	527	660	230%	34.7%
No. of Internet hosts/100 inhabitants	0.185	0.206	0.189	0.226	0.23	24%	5.6%
No. of domains.ro	16,639	30,000	45,000	57,500	68,000	308%	42%

Source: ITU, MCTI

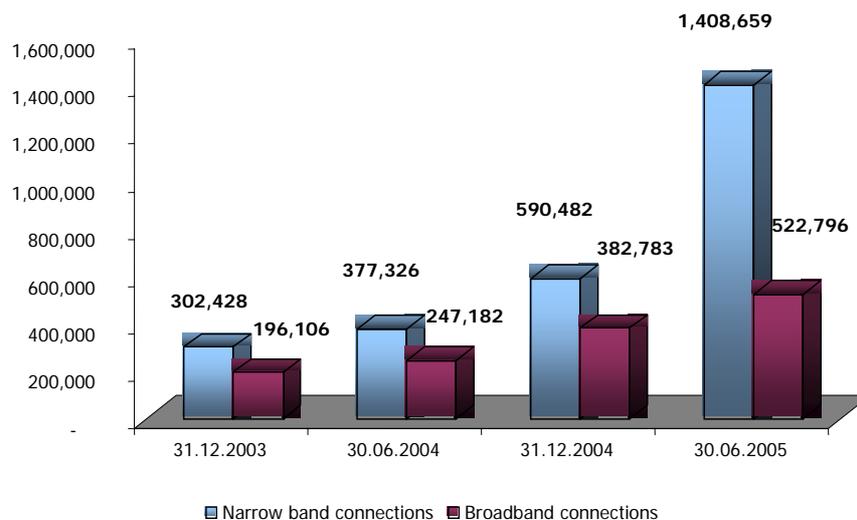
In Romania, the number of Internet users/100 inhabitants increased between 2000 and 2004 by 60% on a yearly average. In 2004, the household penetration rate of the Internet reached 12.2%, which was quite low compared to the EU25 average, i.e. 44%. The increase of the Internet utilisation rate is due to the lower access costs, the enhanced competition among Internet providers and the strengthening of the Internet culture.

Depending on the used band width, the **broadband access** recorded a significant growth rate at the end of 2004 (over 95%) compared to the narrow band Internet connections (up 90%). Thus, by the end

of 2004, the broadband Internet connections accounted for 39% of the overall Internet connections. The penetration rate at the end of 2004 was 1.7%, much below the EU15 average – 7.6% and the EU25 average – 6.5%.

Over the past years, Romania has attracted major investments in alternative infrastructures; thus, at the end of 2003, the country had almost 30,000 km of optic fibre (compared to 19,570 km in 2002 and 16,500 km in 2001). According to a national survey carried out in the business environment in 2004, 7.3% of the Internet users resorted to a dedicated optic fibre connection. The development potential is still high.

### Evolution of Internet connections, by band width, in the period 31.12.2003 - 30.06.2005



## 2.5.2. Information society services

The insufficient development of modern electronic services is the result of the limited utilisation rate, which is much below the European average; this proves that Romania does not have an electronic services market yet.

### e-government

Since 2001, measures have been taken to create the legislative framework and required support for the development of e-Government and e-Business applications. The national electronic system was awarded the “best digital content” rating in the e-Government section of the World Information Society Summit (2003), while the electronic public procurement system was labelled “best practice” in e-Government within the European e-Government Summit (2003).

In 2004, the number of citizens/enterprises which used the Internet to interact with public authorities was very low, i.e. 0.7%/12.4%.

*The national electronic system (NES) was launched in 2003 and is available on the Internet, at [www.e-guvernare.ro](http://www.e-guvernare.ro), which is a single point of access to public information and services and addresses both citizens and enterprises. The portal [www.e-guvernare.ro](http://www.e-guvernare.ro) allows for the free downloading of over 200 administrative forms and provides online electronic services to companies.*

*The electronic public procurement system (e-procurement) - [www.e-licitatie.ro](http://www.e-licitatie.ro), used by over 1,000 public institutions, enabled the completion of more than 530,000 transactions in the period March 2002 (when the system was launched) – November 2005; thus, the system users saved ROL 6,238.480 million since the*

system launch. The system will be expanded by the inclusion of new functionalities, like online invoicing, electronic signing of the procurement contracts and electronic payments.

*The electronic system for the issuance of international freight transport authorisation ([www.autorizatiiauto.ro](http://www.autorizatiiauto.ro)) was used as of June 2005 by approximately 3,800 carriers which authenticate in the system based on a digital certificate, their authorisations being issued electronically. Over 460,000 free authorisations have been issued so far, valid for 44 countries (destination, transit or third country authorisations).*

*The electronic system for the collection of statistic data (<http://e-statistica.insse.ro>) was launched in 2003 and helped carry out the first 4 statistic surveys.*

*The electronic system for the payment of local taxes and duties (e-tax) allows the citizens to obtain information about their debts to the local administration and pay them by electronic means (by Home, Mobile or Internet banking, ATM, POS). Three years after the introduction of the system, only 46 cities have implemented electronic payment systems, 17 others having functional information systems (while the payment systems are underway being developed).*

*The virtual payment desk – at the end of December 2005 a selection procedure was launched in order to select online card payment operators, with a view to commissioning the “Virtual Payment Desk” system. The project is aimed at improving the relationship between the citizens and the local and central public administration, by providing the opportunity for a fast payment of the debts to the state (taxes, duties, fines etc.).*

The activities aimed at ensuring security and limiting frauds committed by electronic means were supported by the following projects, launched in the first quarter of 2004:

- [www.efrauda.ro](http://www.efrauda.ro) – a portal where one can report the frauds committed in the area of the information society. It provides an easy-to-use reporting mechanism which warns all the authorities involved in managing electronic frauds at the same time, thus diminishing the time required to report such incidents;
- [www.ceris.ro](http://www.ceris.ro) – the incident expertise and response centre provides access to information regarding system and network security and assists the public institutions in enhancing the security of their information and communication networks.

## **e-learning**

In the past years, e-learning started to develop in Romania as well; at present, there are several functional applications, the most important of which is the Electronic Educational System project, carried out between 2001 and 2004.

As a result of this project, there are now 10.8 PCs for 100 pupils, 14.3 PCs for 100 high school students, while 610 high schools are connected to the Internet and already use the A.E.L. programme - Educational Assistant for Schools and High schools. Nonetheless, there are still huge gaps between the rural and urban areas. This project provides 530 digital classes, covering 40% of the school curriculum. The project also consisted in the training of the teaching staff; following the training sessions, the teachers have changed their attitude, from being reluctant to the use of technology to promoting computerisation.

This governmental project is supplemented by a series of private initiatives encouraging e-learning.

## **e-health**

Regarding the e-health programmes, it should be noted that the percentage of the population above the age of 16 using the Internet to search for health-related information reaches 2% in Romania compared to 4% in Central and Eastern European countries (December 2003). According to eEurope+, in December 2003, 16% of the general practitioners had access to the Internet in their medical unit, while 5% of them used to Internet in order to exchange patients' medical files. In addition, the physicians who used electronic patients' records accounted for 49.2% in Romania, compared to 59% in the new member states.

The Ministry of Communications and Information Technology launched a pilot project to develop a portal containing medical information. The system contains a database put together with the support of healthcare institutions, which contains titles and descriptions and provides information about medical services and resources that any citizen can have access to.

### **2.5.3. ITC in the business environment**

#### **e-Banking**

According to the eEurope+ 2003 survey, only 2% of the Romanian respondents use the Internet for e-Banking services and 1% for other financial services. 12% of the Romanian enterprises use the Internet for such services. However, there is a growing interest for such services, both due to the awareness raising campaigns carried out by the authorities and to the programmes implemented by the banks, which focus mainly on the retail segment.

In 2005, 35 electronic payment instruments were approved for 25 banks. In the second half of 2005, there were 66,000 users compared to 14,000 in the same period of 2003, when these payment instruments were introduced for the first time. The value of the transactions increased from about 6 bn. EURO in the second half of 2003 to 15 bn. EURO in the second semester of 2005.

#### **e-Commerce**

According to the eEurope+ 2003 survey, the percentage of Romanian Internet users who buy goods online (7%) is rather low compared to the NSM-10 average and the accession countries (12%), but higher than in Hungary, Bulgaria and Latvia.

Electronic commerce is still underdeveloped and the growth rate is still low, but there are indicators that the situation is about to change soon. In 2004, the share of e-commerce in the overall turnover was 1.3% in Romania compared to 2.1% in the EU25. The electronic commerce continues to grow in Romania, as there are currently 400 online shops, 15% of which accept online payments.

### **2.5.4. Software and hardware industry**

At the end of 2004, there were 9281 companies operating in the IT sector, compared to 8438 in 2003 and 3639 in 1999; Bucharest accounted for 70-75% of their total turnover. The software industry recorded a strong development, being one of the fastest growing in the region; this development was driven by the sale of software and services, which will also trigger the growth of the overall IT sector.

Since 2003, the growth of the sales volume on the domestic market has been faster than the growth of the IT product exports, while software sales have gained ground over hardware sales, as the customers are increasingly interested in complex projects. However, the software and service exports are still

predominant on the Romanian software market, accounting for 97% of all projects, which equals a reduced volume of license sales.

In 2005, the demand on the IT market was mainly generated by the banking sector and utility providers; it is expected that the public sector will have the greatest potential in the future, considering the forthcoming EU accession. Some of the most demanded solutions are the following: enterprise management solutions (ERP/EAS), document and content management solutions, security solutions and solutions dedicated to vertical industries (healthcare, banking, local administration, hotels and distribution). Consultancy, maintenance, audit, processing and call-centre solutions are also highly demanded in association to the formerly mentioned solutions.

The value added, which is the value newly created by Romanian companies, is the most important indicator of the sector development. Although it does not hold a major place in the total turnover (about 36%), the value added is growing and the profitability of the industry reaches around 10%.

### **Key issues**

- Low IT expenses as a percentage of the GDP and per capita, compared to the EU15 average and even the average of the new EU member states;
- Insufficient development of the Information Society infrastructures (hardware, software, communications);
- Limited Internet penetration rate and PC endowment (mainly in the pre-university educational system) compared to the EU15 average;
- Huge gap between the rural and urban areas and between regions in terms of the access to ITC infrastructures;
- Insufficient use of new information and communication technologies in the business environment
- Insufficient development of e-commerce and e-banking services;
- Low ITC penetration rate in the administration (e-government), education (e-learning), healthcare(e-health) systems.

## **2.6. Tourism**

### **2.6.1. Potential, accommodation capacity, tourist movement, occupancy**

Due to its geographical position, Romania has a great tourism potential, a wide variety of natural resources, distributed harmoniously across the country's territory, which provide different tourism opportunities: from the classical ones (mountains, seaside, spas and health resorts, cultural sites) to the latest tourism developments (rural tourism, ecotourism, adventure tourism).

Romania has a lot of unique competitive advantages:

- diversity of the relief forms and symmetrical relief layout, from the centre towards the borders (mountains, hills, sea and delta);
- presence of the lower stream of the Danube, the Delta and the Black Sea Coast;
- richness of mineral water resources (1/3 of the European mineral water resources);
- temperate continental climate with Mediterranean influences in the south-western part, with a unique flora and fauna;
- the largest area of virgin forests in Europe, with a natural composition and green pastures;
- rural areas which have preserved the cultural traditions and customs.

On the other hand, Romania inherited a large tourism accommodation capacity from the communist times, compared to other former communist Central and Eastern European countries with a tourism tradition, like the Czech Republic, Croatia, Poland and Hungary. Since the '60s, Romania has developed its tourism accommodation capacities, especially on the Black Sea Coast, the tourism policy focusing mainly on the development of an important technical and social infrastructure. However, the mass tourism led to the development of inferior accommodation units, so that the 1 or 2-star hotels account for about 72% of the accommodation facilities from the seaside.

After the '90s, the evolution of the main tourism indicators went through two different stages, both of them marked by an acute instability of the institutional framework in charge of developing tourism policies and strategies, which resulted in an imbalanced implementation of the medium and long-term development measures, programmes and projects.

**The period 1990-2000** was characterised by a reduced intensity of the privatisation process (only 55.3% of the accommodation facilities were privately-owned). The development of the tourism was mainly based on profits from other businesses reinvested in tourism. Although tourism was the top development priority of the governmental programmes until 2000, it was faced with a lack of governmental development facilities and subsidies and the under-sizing of the funds allocated to promote tourism. As a result, the Romanian tourism industry was characterised by major weaknesses, such as: poor capitalisation on and promotion of natural and anthropic tourism resources, especially specific ones, low share in the GDP and low currency cash-ins, poor quality of tourism services, loss of international tourism market segments from former communist countries and loss of large tour operators from the international market, diminution of the domestic market contribution, including as a result of the changes in family incomes, insufficient tourism promotion, which does not cover all the tourism resources and the demand.

**Since 2001**, the Romanian tourism has recorded a continuous growth, due to the almost integral privatisation of the tourism facilities (about 92% of the accommodation structures belonging to the state were privatised), the increase of the investments in the modernisation of the accommodation facilities and restaurants and the increase of the Greenfield investments. As a result, the completion of the privatisation led to a higher turnover in the tourism sector.

The ascending trend of the tourism sector since 2001 was also supported by the launching of national development programmes such as „Super-ski in the Carpathians”, “Cruises on the Danube”, “The Wine Route” etc., social programmes like “Holidays in the countryside”, “Seaside for all”, “One week of recovery in spa and health resorts” etc., as well as the implementation of training programmes for the labour force working in tourism. The tourism sector is also promoted by two programmes financed to a minimum extent from the state budget, i.e. “Development of tourism products” and “Marketing and promotion”.

## Evolution of main tourism indicators in the period 1999-2004

Indicators	1999	2000	2001	2002	2003	2004
Tourists coming to Romania (thousand) – border visitors	5,224	5,264	4,938	4,794	5,595	6,600
Romanian citizens going abroad (thousand) – registered at the border	6,274	6,388	6,408	5,757	6,497	6,972
Turnover made by hotels, other accommodation units and restaurants included in the structures of these units * (bn. ROL)	4,612	6,143	8,700	11,637	14,133	-
Turnover of travel and tourism assistance agencies (bn. ROL)	2,514	5,154	6,557	7,071	7,010	-
Total no. of accommodation units, of which:	3,250	3,121	3,266	3,338	3,569	3,900
- private (%)	35.3	55.3	60.3	92.0	92.0	92.0
Places in functional accommodation capacities (thousand places days)	51,275	50,197	51,882	50,752	51,632	53,989
Average occupancy indicator of functional accommodation capacities (%)	34.5	35.2	34.9	34.0	34.6	34.3
Tourists accommodated in accommodation units (thousand) of which:	5,109	4,920	4,875	4,847	5,057	5,639
- Romanians (thousand)	4,314	4,053	3,960	3,848	3,952	4,279
- Romanians (thousand)	795	867	915	999	1,105	1,359
Tourists accommodated in hotels (thousand) of whom:	4,074	3,882	3,829	3,835	3,984	4,341
- Romanians (thousand)	3,337	3,086	3,000	2,935	2,990	3,125
- Romanians (thousand)	737	796	829	900	994	1,216
Average occupancy indicator of functional accommodation capacities (%)	34.5	35.2	34.9	34.0	34.6	34.3
Population employed in hotels and restaurants (thousand persons)	100	93	79	95	105	-

Source: National Statistics Institute. Collection methodology – comprehensive research

\* The indicator refers to the turnover registered by hotels, other accommodation units and restaurants included in the structures of these units

The main indicators of the tourism recorded a consistent growth, but the growth rates were not very spectacular, except for the privatisation indicator: from 35.3% in 1999 to 92% in 2003; in addition, the number of foreign tourists accommodated in the accommodation units increased by 56.7% in 2004 compared to 2000.

The most important effect of the completion of the privatisation process in the tourism sector was the increase of the turnover registered by hotels, other accommodation units and restaurants included in the structures of these units, i.e. 2.3 times in 2003 compared to 2000. We should also note a slight increase of the share of tourism in the GDP and of the currency cash-ins generated by tourism activities. However, both indicators are still very low, considering Romania's tourism potential (2.19% of the GDP in 2003 and USD 700 million currency cash-ins from tourism activities).

The coming on the Romanian tourism market of the international tourism operators (Marriott, Hilton, Best Western, Howard Johnson, Golden Tulip, Accor, Cendant, IBIS, Ramada, Sofitel, Hunguest etc.), which resulted in the increase of the number of places in high quality hotels, had a significant impact in terms of the development of the Romanian tourism and in terms of the increase in quality of branded tourism services. In 2004, the number of places in 5 and 4-star hotels increased 2.6 times compared to 2000 (10,880 places in 2004 compared to 4,244 places in 2000), while the number of places in 3-star hotels grew 2 times (36,216 places in 2004 compared to 17,928 places in 2000).

In the past 5 years, the number of accommodation units increased by about 25% (from 3,121 in 2000 to 3,900 in 2004), mainly due to the new accommodation structures (rural, urban tourism villas, agri-tourism facilities, hostels etc.). However, the number of accommodation places in all the types of units and categories decreased by about 1.45% (from 280,005 in 2000 to 275,941 places in 2004), because of the restitution of formerly nationalised buildings (in particular tourism villas) and the change in destination of large accommodation structures, mainly hotels, into business office areas. This phenomenon was characteristic of spa and health and mountain resorts, tourism villas and the city of Bucharest, as well as other county capitals (in the case of hotels).

In an attempt to observe the sustainable development principles, the number of accommodation places in the Danube Delta and the city of Tulcea increased by about 28% in 2004 compared to 2000, up to 3,180 places from 2,485. This is the area with the strongest development of ecotourism in Romania. This area is also a Danube Delta Biosphere Reservation, a protected area of global importance. The development of ecotourism in this area is carefully monitored, in order to ensure its protection and conservation.

An analysis of the accommodation structure shows the following: the resorts on the Black Sea Coast account for 42.6% of the total accommodation places; 15.9% of the accommodation places are in Bucharest and county capitals (excluding Tulcea); 15.4% in spa and health treatment resorts; 11.9% in mountain resorts; 1.0% in the Danube Delta; 13.2% in other tourism locations.

The accommodation units on the seaside and in Bucharest have capacities greater than in the other tourism areas; the hotels at the seaside have a capacity of 271 places on an average, while the average in mountain areas is 127 places. The fact that both locations have international airports (Bucharest – Otopeni and Constanta) makes that the Black Sea Coast and Bucharest are the favourite destinations of international tour operators, both for mass tourism and business tourism.

**The average occupancy indicator of functional accommodation capacities** has been rather constant in the past 5 years, around 34.5%, while the average indicator for hotels has been 41.8%. Between 1999 and 2004, the average stay duration varied between 3.5 and 3.7 days in all accommodation structures and between 3.5 and 3.9 days in the case of hotels. Spa and health resorts rank first in terms of the average stay duration, which varies between 8 and 8.9 days, being followed by seaside resorts. In Romania, the state grants subsidised treatment vouchers to pensioners, thus covering most of the accommodation and meal expenses. This explains the high occupancy rate of the accommodation places (51.5%) and the stay duration in the spa and health resorts (8.7 days), despite the outdated tourism infrastructure and poorly diversified service packages.

The seasonality phenomenon is specific mainly for the seaside tourism, even if this feature is not reflected accordingly in the occupancy indicator (41.8% in 2004). Social governmental programmes are aimed, among others, at reducing the influence of seasonality on the tourism activity.

A breakdown by accommodation units and main tourism types reflects five major characteristics of the Romanian tourism industry:

- **the business and congress tourism** generates the highest number of incoming tourists (2,624,766 tourists in 2004, i.e. 46.6% of the total number of tourists accommodated in accommodation units) but short stay durations;
- **the mountain tourism** somewhat recovered in 2004, recording a 10.6% growth compared to 2000. The growth was driven by the investments in the modernisation and development of ski facilities (increase of the number of ski slopes, introduction of artificial snow installations, diversification of „après-ski” services etc.). Although the value of these investments made within a partnership between the central and local public authorities reached only 2 million euros, their impact on the

increase of the quality of mountain tourism was immediately reflected by the increase of the number of tourists. Mountain tourism is rather poor in terms of cable transportation infrastructures, which are outdated and, even if they are safe, can no longer meet the speed and capacity requirements.

- **the spas and health tourism** accounts for 12.1% of the number of tourists accommodated in tourism accommodation facilities. This and the fact that it has the longest stay duration justify the support and development policy. In fact, as a result of the investments in the modernisation of the treatment facilities, nationally reputed resorts like Eforie Nord, Băile Felix, Covasna or Băile Herculane meet the requirements of the international tourism market.
- **the seaside tourism**, although it recorded a 12.5% growth in 2004 compared to 2000, does not fully capitalise on the tourism potential of the Romanian seaside of the Black Sea. The delayed privatisation (the resort of Neptun, the second largest, was privatised only in 2002-2003), the old accommodation capacities, the lack of investments in entertainment structures, the lack of a regional tourism policy to reduce seasonality and the lack of skilled personnel are only some of the causes which led to the decrease of the competitiveness of the Romanian seaside tourism on the foreign markets and to the loss of large tour operators, such as TUI, Neckerman, Thomas Cook etc.
- **the ecotourism in the Danube Delta** has the most spectacular development, increasing 2.2 times in 2004 compared to 2000.

On the other hand, foreign competing countries like Hungary, Bulgaria and Poland do not have the same tourism potential in the above-mentioned areas. The structure of accommodation facilities by main countries of tourist origin in 2004 proves that Romania covers and meets a tourism demand which is as diversified as its tourism potential: spa health tourism (specific for Israel, Hungary, Germany) to seaside tourism for Germany (one of the former markets was the former socialist Germany), France, Italy and the USA, mountain tourism for Israel, England, Germany and Italy, the Danube Delta for Germany and Austria etc.

Although the tourism market is still dominated by Romanian tourists, there are market segments and opportunities where Romania may become competitive on the foreign markets. The high number of German, Italian and French tourists (especially at the seaside) as well as the preference of Israeli tourists for mountain and spa and health tourism may be a great advantage for fostering business relationships with these countries and developing a marketing policy focused on these market segments. In addition, the high number of foreign tourists in Bucharest and county capitals is an opportunity for the development of urban tourism, as well as of business and congress tourism.

**The structure of foreign visitors and Romanians travelling abroad by transportation means** indicates their various preferences for the types of infrastructures and transportation means. There is an increasing trend of the number of foreign tourists travelling by road transportation means (personal cars, coaches, rented cars, motorcycles etc.) from 72.3% in 2000 to 81.8% in 2004 and a decreasing trend of the number of tourists travelling by train. The main incoming border point is Borş Customs, which accounts for 14% of the foreign tourists resorting to road transportation. The Romanians travelling abroad use road transportation means to an even larger extent (about 86.2% in 2004). Therefore, it is necessary that the investments should be directed towards road infrastructures, so as to increase quality and safety.

In addition, the number of Romanian tourists travelling abroad and using air transportation is growing slightly (from 8.4% in 2000 to 9.9% in 2004). In case the holidays/stays abroad exceed 4 days, Romanians still prefer to travel by car (64.9%); moreover, the railway transportation increased by 34.9% as a result of the completion of major modernisation works on the train fleet and railways. These works also included the main railways ensuring access to areas with a great tourist concentration and need to be continued, considering the experience of EU member states with developed tourism sectors with

regard to the importance, place and role of railway transportation in the sustainable development of tourism.

**The evolution of the population working in hotels and restaurants** reflects the same upwards and downwards trends as the other tourism indicators. The slow privatisation process and the very low salaries compared to the external offer, the emigration of the highly skilled workforce to EU countries, especially after the elimination of the visas for the Schengen area, and the increase of the number of employment contracts with EU member countries (Germany, Spain, Italy etc.) explain the decrease of the number of staff in the period 1997-2002.

A detailed analysis of the structure of the population employed in the tourism sector, the structure by genders, the evolution of the number of employees by months, seasonality etc. highlights some issues which have major economic implications. Thus, in 2003, 96.9% of the staff worked in hotels and restaurants, while 3.1% of them worked in travel agencies (11.3% of them as tourist guides). These percentages are the result of the poor development of complex tourism products and the focus laid on accommodation and meals. The structure of the population employed in the hotels and restaurants sector, by professional status, reflects the under-capitalisation on the potential to start up small and medium-sized family businesses, mainly by attracting labour force laid off in other productive sectors: industry, energy, mining etc.

The structure by age groups and genders reflects the fact that the tourism sector is highly attractive for young people: 57% of the population working in hotels and restaurants is young and very young, aged 15 to 35, and 65.2% of them are women. The young people working in the tourism sector may start up their own small and medium-sized businesses. At the same time, tourism provides excellent opportunities for female employment, as women are the most affected by the restructuring of the economy, as a result of the transition to the a functional market economy and of economic and social reforms.

### **2.6.3. Specificities of Romanian tourism**

*Cultural-religious tourism.* Romania has a valuable and attractive cultural-historical, ethnic and folklore heritage. There are over 700 cultural heritage sites of international and national interest, which have been included in the Universal Heritage of UNESCO (fortified churches, churches with exterior frescos, wooden churches in Transylvania, Maramures, Salaj, German fortresses, Dacian fortresses, archaeological sites etc.). There are also unique cultural sites like the medieval city of Sighișoara.

The Romanian ethnographic and folklore thesaurus is also highly original, and there are still human communities respecting their old traditions in their daily activities:

- the specific architecture of the villages from the historical Romanian provinces of Transylvania, Moldavia, Bucovina, Muntenia, Oltenia, Banat;
- wood carving, the traditional costumes, the art of decorating daily utility objects;
- ethnic cultural manifestations and traditional religious customs;
- communities leading a traditional rural life.

This form of tourism is supported by an accommodation capacity which represents 13.2% of the total accommodation places available in the country. The number of foreign tourists involved in cultural and religious tourism increased by about 90% in 2003 compared to 1999.

The development of cultural tourism requires investments in the access infrastructure to the tourist sites (archaeological sites, architectural monuments etc.), which is outdated and insufficient; other problems include the lack of parking places provided with units offering information and promoting cultural tourism, the lack of belvedere-type setups in the case of fortresses, medieval cities, churches, historical monuments and churches, the lack of special camping places for pilgrims.

*Ecotourism.* The competitive advantage of Romania compared to the already known tourism destinations is the preservation of the unaltered natural environment. Thus, the natural parks are habitats for endemic plant and animal species or shelter monuments of nature. Romania still preserves a virgin natural environment, flora and fauna species which are extinct in other countries or which can only be seen in captivity. In this respect, there is a proper legal framework which provides for the delimitation of natural and national parks and natural protected areas, as well as for the establishment of an authority for protected areas, in charge with ensuring their management.

The main ecotourism attractions of Romania are protected areas, having the status of national parks (12), natural parks (13), biosphere reservations (3, of which the Danube Delta reservation occupies almost half of the entire protected area of the country), scientific reservations (52), monuments of nature (228), natural reservations (527).

The promotion and sustainable development of the classical forms of tourism in areas with a natural ecotourism potential, as well as the Central European position of Romania created the bases for the development of a competitive ecotourism.

*Rural tourism, agri-tourism and forestry tourism.* These tourism forms offer the possibility for tourists to become acquainted with the traditions of the Romanian people, the hospitality and traditional cuisine of each historical region (with ecological food products), and create the foundations for the rural population to earn additional revenues, especially in the mountains. Rural tourism can be practised all year long, requires small investments and a low risk, is an occupational alternative for the rural workforce, represents a way to diversify the economic activities in the rural area and a factor to stabilise the population in the mountain areas. At the same time, rural tourism also has a strong ecotourism component. The Mountain Law establishes some facilities for the development of rural tourism in mountain areas, supporting family initiatives, in the sense that the peasant's households can be authorised to provide tourism services as agri-tourist villas or farms. The National Ecological and Cultural Rural Tourism Association (ANTREC), an NGO established in 1994, has 31 county subsidiaries and about 2500 members in 770 villages. However, rural tourism is still underdeveloped and does not meet the demand of the international tourism market.

*Spa and Health Resort tourism.* Romania has a well structured, complex and qualitative tourism potential in terms of the spa and health treatment and prevention of various disorders:

- about 1/3 of the European mineral water resources; mineral resources that are unique or not widespread in Europe;
- choke damp in the Eastern Carpathians, vegetal slimes in the Salty Lake, Techirghiol;
- temperate continental climate, appropriate for therapeutic treatment, including areas with tonic, sedative, marine and saline bioclimatic areas;
- natural factors with therapeutic properties and physical and chemical cure properties that are similar or superior to the spa and health resorts reputed internationally.

Romania has a long tradition in spa tourism. The extensive development of the spa tourism until 1989 was focused on domestic social mass tourism and on international tourism. Thus, Romania has about 160 spa and health resorts and localities which are rich in mineral resources; 15% of them are spa and health resorts of a national interest, while the others only have a local interest. Spa and health tourism ranks second in terms of the tourist amenity of Romania, accounting for about 15.4% of the accommodation capacity available in the country. The lack of investments in the past 15 years has led to the degradation of the treatment facilities. The modernisation of spa and health resorts requires significant long-term investments aimed at increasing the quality of the tourist services and of the infrastructure.

*Seaside tourism.* The Black Sea Coast and the particular configuration of the seashore created the proper conditions for the development of seaside tourism. The seaside accommodation structures are mainly concentrated in the Coast area and have limited expansion possibilities, given the limits of the seaside area. As a result, investments should be made in the modernisation of the current structures, the development of entertainment structures, the creation of events in order to reduce seasonality and the diversification of the tourist offer.

*Mountain tourism.* The natural mountain resources of the Carpathians play a major role in the development of complex mountain tourism activities. Among the types of mountain tourism, ski tourism has a natural development potential for all categories of tourists. However, in order for Romania to be recognised internationally as a competitive destination for winter sports, it is necessary to improve the general infrastructure and the winter sports offer, to rehabilitate and develop the tourist infrastructure (setup of new ski slopes endowed with cable transportation installations, artificial snow installations and ski slope maintenance facilities), as well as to develop, modernise and diversify the accommodation spaces.

#### **Key issues**

- Instability of the institutional framework in charge of developing tourism strategies and policies; lack of cooperation between tour operators;
- Low contribution of tourism to the GDP (2.19% in 2003), although it has grown slightly;
- Insufficient tourist information and promotion, thus failing to meet the demand and cover the tourism resources;
- Poor general infrastructure, mainly in terms of transportation, communications and services;
- Large number of old accommodation structures and low occupancy rate of the functional accommodation facilities;
- Underdevelopment of the potential to start up small and medium-sized family businesses;
- Poor development of complex tourism products and focus laid on accommodation and meals.

### **3. INFRASTRUCTURE**

#### **3.1. Transport infrastructure**

##### **3.1.1. Trans-European transport infrastructure**

Through its geographic position, Romania represents the intersection area of several transport routes, connecting Northern to Southern Europe and Eastern to Western Europe. In addition, Romania's transport network ensures the connection between the community transport network and the one of the neighbouring, non-community countries in Eastern Europe and Asia.

Romania is crossed by the following pan-European corridors (TEN-T):

- terrestrial corridors IV and IX (roads and railroads) whose common point is the country's capital, Bucharest;
- corridor VII, the Danube River, the domestic navigational way that ensures the connection between the Black Sea and the North Sea.

In accordance with the priorities identified by the TEN-T Summit and by the European Council and Parliament's Joint Decision no. 884/2004/EC, the Southeast Mediterranean maritime motorway will have a branch towards the Black Sea as well.

The EU TEN-T motorway priorities for Romania, set until 2011, are as follows:

- Nădlac – Sibiu motorway, continuing towards Bucharest and Constanța;
- Curtici – Brașov railroad;
- Elimination of jams on the Danube.

These projects are included in the Council and European Parliament's Decision no. 884/2004, amending the Decision no. 1692/1996 concerning the community guidelines for the development of the TEN-T network. The projects in question are at a very large scale, they entail considerable costs and are part of the future TEN-T network on the Romanian territory; their construction will allow for the traffic between Eastern and Central Europe on an infrastructure that is in total compliance with the European standards.

Despite the fact that there a series of programs of rehabilitation and building of new transport infrastructures have been initiated, the Romanian transport system is still insufficiently developed and is of poor quality, as compared to the EU Member States and to several East-European countries. Nevertheless, the total amount of goods transported on road, railroad and domestic navigational ways continues to be very high (expressed in 1,000 tons-km/GDP for 2001): 1,390 as compared to the community average of 252 or to several Member States (the Czech Republic 1,325, Hungary 637, Slovenia 432)<sup>14</sup>, which results in an overstraining of the existent transport infrastructure.

##### **3.1.2. Road transport**

In 2004, the total length of the public roads network in Romania was of 79,454 km, with a relatively uniform distribution on the entire territory of the country, except for the Bucharest-Ilfov region, which benefits from a higher density of public roads.

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<sup>14</sup> EUROSTAT: "Energy, transport and environment indicators 1991-2001", 2004 edition

In 2004, out of the total of 79,454 km (national network, excluding streets), 15,712 km<sup>\*)</sup> (19.8%) were national roads and 63,742 km<sup>\*\*)</sup> were county and communal roads. From the point of view of the modernization degree, the public roads network (the entire road infrastructure accessible to the entire population; the public roads network is made up of national, county and communal roads) accounts for 26.3% (20,880 km) of modernized roads, 24.4% (20,200 km) of roads with light road pavement and for 48.3% (38,374 km) of cobbled and earth roads. National roads account for the most important part from the point of view of the capacity, as they carry about 70% of the road traffic.

The motorway network which, at the end of 2004, measured only 211 km, is under-developed, as compared to both the community average and to the networks in the new member states (Hungary 448 km, Poland 398 km, the Czech Republic 517 km). In accordance with the European transport policies, the demand for motorways will increase in Central and Eastern Europe, including Romania, where the Romanian network will not be able to meet the transit and domestic traffic needs. The road traffic undergoes a sustained increase: the annual daily average for standard vehicles was of 6,500 for 2002 and will reach the level of 11,019 standard vehicles in 2013. Note is to be taken of the fact that Romania currently has no motorway-type connection to the EU motorway network.

The quality of the road infrastructure (capacity, accident risk, smoothness, impact on environment) and the very poor development of the motorway network do not compete with the rapid demand increase generated by the transit and domestic traffic, nor do they comply with community requirements. As far as the future TEN-T network on the Romanian territory is concerned, in accordance with the commitments undertaken within the negotiations on the 9<sup>th</sup> Chapter "Transport Policy" concerning the rehabilitation of the future TEN-T road network, this is a top priority. Consequently, until January 1<sup>st</sup>, 2007, the rehabilitation works for this network will be concluded, in such a way that, starting with this date, it will allow for the access of vehicles with weights and dimensions according to the Directive no. 96/53 (11.5 tons/simple arbour). At present, 34.22% of the future TEN-T road network (TEN-T total of 4,604.6 km, including motorways) on the Romanian territory has been rehabilitated in order to allow for the traffic of these vehicles; the rest of the network (3,030.9 km) will also undergo rehabilitation works.

Despite the fact that, during the period 1995-2004, the modernized public roads network in Romania, underwent increases, the density of public roads (33.3 km/100 km<sup>2</sup> in 2004) continues to be very low as compared to the EU average (116 km/100 km<sup>2</sup> in 2002) or even to some new EU member states (79. km/100km<sup>2</sup> in Poland).

#### **Romania's public roads network, during the period 1995-2004**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Length of public roads network (km)	72,859	73,160	73,161	73,260	73,435	78,479	78,492	78,896	79,001	79,454
Length of modernized public roads network (km)	17,608	17,716	17,813	18,031	18,084	19,418	19,868	19,958	20,368	20,880
Density of public roads (km/100 km <sup>2</sup> )	30.6	30.7	30.7	30.7	30.8	32.9	32.9	33.1	33.1	33.3

Source: Romania's 2004 Statistic Yearbook, INS 2005 statistics

Out of the national roads network with the length of 15,712 km, 90.5% has modern pavements, 7.7% has light asphalt pavements and 1.7% is cobbled and earth roads. Out of the total national roads, 1.4% is motorways (211 km in 2004), 37.3% is European roads (5,868 km)<sup>15</sup>, the rest being main and secondary national roads. A large part of the national roads opened to the international traffic, also known as

<sup>\*)</sup> administered by CN ADNR SA – Ministry of Transports, Constructions and Tourism

<sup>\*\*)</sup> administered by ADPs (Public Domain Administration)

<sup>15</sup> Source: CN ADNR SA

“European roads”, do not comply with the conditions stated in the “European agreement on the most important international traffic arteries (AGR)”, 60.16% of the national roads length having an expired exploitation validity in 2003.

Traffic capacities in city entrances and exits are outdated, lacking ringroad for routes opened to the national and international traffic. There are 354 parallel railroad crossroads<sup>16</sup> and road sectors with inappropriate traffic capacities, where traffic is done in queues, which generates the duration increases and additional fuel and lubricant consumptions; in addition, they are permanent accident and environment pollution sources. Out of the total of 3,286 road bridges, with a total length of 138,568 m (94.7% being made of concrete steel, 2.7% of ironware and 2.6% of other types of structures), 94 bridges, with a total length of 4,131 m, are in urgent need of repairs, whilst almost 50% is technically qualified as satisfactory or below.

### Romania’s public roads network per regions, in 2004

Region	Public roads-total (km)	National roads (km)	County and communal roads (km)	Density of public roads /100 km <sup>2</sup>
North-East	13,375	2,657	10,718	36.3
South-East	10,536	1,997	8,539	29.5
South-Muntenia	11,999	2,753	9,246	34.8
South-West-Oltenia	10,480	2,043	8,437	35.9
West	10,205	1,882	8,323	31.9
North-West	11,858	1,955	9,903	34.7
Centre	10,129	2,134	7,995	29.7
Bucharest-Ilfov	872	291	581	47.9

Source: Romania’s 2004 Statistic Yearbook, INS 2005 statistics

The largest part of the goods and passenger transport operators are private, the percentage of private sector operations being of about 83%.

In 2004, roads carried 294,221 thousand tons of goods (out of which 12,470 thousand tons in international traffic and 34 thousand in transit traffic), i.e. 37.2 billion tons-km, which is considerably below the average of EU states (50.2 billion tons-km). Passenger road transportation recorded 216,524 thousands passengers (9.4 billion passengers-km) – inter-county and international transportation, of which 4,050 thousand passengers in international traffic.

The number of vehicles has increased for the past years, both quantitatively and qualitatively, due to the new laws on the protection of the environment and to the increase in demand. In 2004, in Romania there were 3,225.4 thousand vehicles, 43.1 thousand buses/vans and 482.4 thousand vehicles for goods transportation. Nevertheless, the number of trucks is low as compared to the community average (in 2001, 20 trucks/1,000 inhabitants in Romania, as compared to 64 trucks/1,000 inhabitants in the EU) or to the new member states (31 trucks/1,000 inhabitants in the Czech Republic, 37 trucks/1,000 inhabitants in Hungary, 51 trucks/1,000 inhabitants in Poland), as well as to the other candidate countries (39 trucks/1,000 inhabitants in Bulgaria)<sup>17</sup>. On the other hand, the renewal rate of the number of trucks is quite high (trucks registered for the first time/total number of trucks): 9.4% in Romania as compared to the community average of 8.3% or to Hungary’s 9.0%.

A major concern regarding the road transport is represented by the sustained development and the decrease of negative effects on the environment, generated by chemical or phonic pollution.

<sup>16</sup> Source: CN ADNR SA

<sup>17</sup> EUROSTAT: “Energy, transport and environment indicators 1991-2001”, 2004 edition

Consequently, the vehicle homologation and periodical technical inspection norms have been aligned to the related provisions in the EU.

Until now, 211 km of motorways have been constructed: A1 Bucharest – Pitești 95.8 km, A2 Fetești – Cernavodă 17.5 km and A2 Bucharest – Drăjna 97.3 km. In addition, the city ringroad program and the national road rehabilitation program have started.

### 3.1.3. Railroad transport

In 2004, Romania's railroad network amounted to 11,053 km of exploitation railways (10,914 km with the normal gauge of 1,435 mm, 78 km with narrow gauge and 61 km with broad gauge), out of which 3,965 km (35.8%, as compared to the EU average of 48%) are electrified and 2,965 km (26.9% as compared to the community average of 41%) are double-lined. The railroad network is divided by 996 railway stations and request stations. The railroad network decreased in length by 2.9% in 2004 as compared to 1995, due to the elimination of low-traffic secondary railways. The non-interoperable railways (railway infrastructure related to the local traffic, connected or not to the interoperable infrastructure, administered and developed in accordance with domestic rules), with a total length of 3,388 km, are for lease (35% have been adjudicated so far following related bids). The full length of the railways (the geographical length of the railway network, without taking into account the fact that several sections are double- or triple-lined, or more) is of 21,360 km, ranking Romania the 7<sup>th</sup> in Europe, after Germany, France, Italy, Spain, Poland and Ukraine. The density of exploitation railroads is of about 46.3 km/1,000 km<sup>2</sup> of land (in 2004), below the average of EU countries (51 km/1,000 km<sup>2</sup> in 2003) and below the average of several new member states (121 km/1,000km<sup>2</sup> in the Czech Republic, 83 km/1,000 km<sup>2</sup> in Hungary, 75 km/1,000 km<sup>2</sup> in Slovakia)<sup>18</sup>.

#### Romania's railroad network, during the period 1995-2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Length of railroad network (km)	11,376	11,385	11,380	11,010	10,981	11,015	11,015	11,002	11,077	11,053
Length of electrified railroad network (km)	3,866	3,960	3,943	3,929	3,942	3,950	3,950	3,950	3,965	3,965

Source: CFR SA (Romanian Railroad Company)

The carrying-out, only to a small extent, of the maintenance works of the infrastructure and of the modernization works of the rolling stock (outdated and insufficient, both quantitatively and qualitatively) has significantly altered the railroad transport, both quality and safety-wise, thus ranking Romania's railroad infrastructure below the EU standards. Due to the high wear-and-tear degree of the railroads and artworks, the maximum running speeds are drastically diminished by setting speed limits for various sections of the railroad. Thus, for about 27% of the entire network, the maximum running speed is limited to 50km/h, whilst for about 39% of the network the maximum speed is limited to 80 km/h.

Bucharest's underground network was brought into service gradually, per sections, starting with 1979, currently amounting to 62.2 km of double-lined railways in four main lines, 45 stations and 4 depots. The underground covers 3.7% of the capital's public transport network, carrying, on average, about 15% of the total number of passengers who use the public means of transportation, i.e. about 330,000 passengers/day.

<sup>18</sup> EUROSTAT: "Energy, transport and environment indicators 1991-2001", 2004 edition

### Trends in underground use

	1991	1995	2000	2001	2002	2003	2004
Passengers (thousands)	244,356	164,418	104,815	110,000	111,000	112,000	117,450

Source: Ministry of Transport, Constructions and Tourism

With respect to the traffic of goods, the current capacities are not enough in order to meet the demand. In 2004, 72,738 thousand tons of good were transported (out of which 20,928 thousand tons in international traffic and 679 thousand tons in transit traffic), i.e. 17 billion tons-km.

### Evolution of transportation of goods

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Amount of goods (thousand tons)	105,130	105,040	93,880	76,510	62,940	71,462	71,809	68,110	68,763	72,738
Tons-km (million)	27,179	26,877	24,789	19,708	15,927	17,982	17,757	17,197	16,584	17,022

Source: Ministry of Transport, Constructions and Tourism

In 2004, the passenger railroad transportation accounted for 99,434 thousand passengers (out of which 520 thousand passengers in international traffic), i.e. 8.6 billion passengers-km. The 22 private operators, licensed for the railroad transportation of goods, cover a market share of 2.5%, the rest of it being covered by the state-owned operator. These figures have been stable for the past years.

The activity was carried out with a rolling stock of 2,059 locomotives, 218 multiple-unit trains, 60,964 freight cars and 5,584 passenger cars. The average life of the CFR Freight locomotives stock is of 30 years, exceeding the normal life cycle of 20 years. As for the CFR Passenger stock, the average life of the cars is 25 years, as compared to the normal life cycle of 20 years.

In 2004, the passenger railroad transportation accounted for 43.8% of the total number of passengers – km transported in Romania, whilst the transportation of goods accounted for 28% of the total amount in transported tons – km. The market share covered by the railroad transport is above the EU average, also exceeding the one in several new member states (e.g. in Hungary, railroads have a market share of 28.3% for passengers and of 29.5% for goods).

Among the main advantages of the railroad transportation of goods and passengers, there are: the energy efficiency (the consumption per transported unit is 10 times lower than the one for road transport and 3 times lower than the water one), the low pollution degree of the environment (the amount of pollutants released in the atmosphere per transported unit is of only 1/10 as compared to the other means of transportation), social benefits (national coverage through its own transport infrastructure), and the low number of accidents (the number of accidents is the lowest of all means of transportation).

For the past 15 years, the market share of the railroad transport in Romania has undergone a clear decrease, above the decrease average of the market share in the railroad transport of EU countries, due to the economic changes related to the closedown of several plants and industrial platforms that had produced goods used in the railroad transport, as well as due to the re-division of the goods and passenger transport market share through the competitiveness and aggressiveness of road transporters.

With respect to the railroad transport infrastructure, special attention was given to the modernization of the sections that are part of the future TEN network, also taking into account the fact that its length (about 1/5 of the total length of the railroad network) carries almost half of the total traffic. The railroad rehabilitation program was initiated in 1996 for the entire Corridor IV, a 90-km section being finished so far.

### 3.1.4. Air transport

The airport network for the public air traffic is made up of 17 civil airports, all of them being opened to the international traffic (12 on a permanent basis, the rest upon demand). This network ensures a good coverage of the entire territory of the country, with several exceptions, such as Brasov city area. The most important airports of national interest are “Henri Coandă” Bucharest (almost 80% of the total air traffic), “Aurel Vlaicu” Bucharest Băneasa, “Traian Vuia” Timișoara and Constanța. The four airports of national interest operate under the authority of MTCT (Ministry of Transportations, Constructions and Tourism), 12 under the authority of county councils and one airport has been privatized.

The air fleet is undergoing an extended modernization process. Following the decommissioning outdated aircraft, the aircraft fleet for commercial flights decreased from 75 aircrafts in 1992 to 34 in 2004. Consequently, the aircraft fleet is very small as compared to the EU-25 total (5,223) or to the fleets of several new Member States (Poland 83 aircrafts, the Czech Republic 62 aircrafts, and Hungary 47 aircrafts) or of candidate countries (Bulgaria 58 aircrafts, Turkey 159 aircrafts).

In Romania, there are 34 air operators, of which 8 are commercial flight operators. TAROM National Company is the largest Romanian air operator, which has both domestic and international flights, with destinations in Europe, Africa and the Middle East.

In 2004, the passenger air traffic was of 1,336,500 passengers, about 14.1% more than in 2003, but considerably below the EU countries average. Thus, in 2004, the transport was of 62 passengers/1,000 inhabitants, as compared to the community average of 1,396 passengers/1,000 inhabitants, as well as to several new Member States (606 passengers/1,000 inhabitants in the Czech Republic, 451 passengers/1,000 inhabitants in Hungary, 455 passengers/1,000 inhabitants in Slovenia) or candidate countries (323 passengers/1,000 inhabitants in Bulgaria and 355 passengers/1,000 inhabitants in Turkey)<sup>19</sup>. In 2001, 58% of the passenger air traffic was carried out with the EU-15 Member States, while 13% was carried out with the other 11 candidate countries<sup>20</sup>.

“Henri Coanda” International Airport, which accounts for 76% of the total passenger traffic, is part of Group 4 – small airports (according to the classifications used by the European Commission). It is estimated that the percentage of the airport use within the passenger air traffic will be maintained; it is estimated that it will reach a level of about 7 million passengers in 2010 (in 2001, the Amsterdam airport recorded 30.3 million passengers).

### 3.1.5. Water transport

Romania’s national transport includes the maritime transport and the one on navigational ways and canals. The water transport has a range of advantages as compared to the other means of transportation: it allows for the transportation of large quantities of goods in a single journey, it is less pollutant, the costs of water transportation are lower than the ones for road and railroad transportation, the setting and the maintenance of the infrastructure requires relatively low costs and it represents an important link within the development of the combined transportation system.

#### *Maritime transport*

The maritime transport is ensured by the direct connection with the Black Sea, by means of its three maritime ports: Constanța, Mangalia and Midia, as well as by means of its Danube river-maritime ports:

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<sup>19</sup> EUROSTAT: “Energy, transport and environment indicators 1991-2001”, 2004 edition

<sup>20</sup> EUROSTAT: “Statistics in focus – transport”, Theme 7, no.1-2003

Brăila, Galați, Tulcea and Sulina, whose technical characteristics allow for the access of maritime vessels.

Constanța port is the largest Black Sea one, located at the intersection of the pan-European transport corridors IV and VII - the Danube through the Danube-the Black Sea canal. Constanța port has the potential of becoming the main gateway for the Europe-Asia corridor.

### Infrastructure comparison between the Constanta Port and the main European ports

Ports	Traffic 2003 (mil. tons)	Total surface (ha)		Dock length (km)	No. of berths	Maximum depth (m)
		apă	uscat			
Rotterdam	327.8	3,500	7,000	77		24
Antwerp	142.9	2,109	11,239	129.8		15.5
Hamburg	106.3	7,500		41	320	17
Marseilles	95.5			14.19	91	22
Le Havre	71.4	5,000		28	140	14.5
Amsterdam	70.4	600	1,900			13
Genova	53.7			20	100	14
London	51			19.48	140	20.1
Dunkerque	50.1			17		20.5
Bremen/Bremerhaven	49			31.2		14
Constanța	43.2	2,614	1,312	29.83	145	19

Source: MTCT

Following the bringing into service of the container terminal, the traffic capacity of Constanta port is of about 105 million tons/year. Due to the unfavourable economic and political context in the area, the goods traffic in Constanta port has recorded alternative increases and decreases that have lead to an exploitation of the traffic capacity of about 40–50%. Thus, the goods traffic carried out through the Constanta port in Constanța in 2003 was of 43.2 million tons, whilst in 2004 it was of 37.5 million tons.

The port covers a surface of about 1,312 ha and has a port aquatic surface of 2,614 ha. The port's infrastructure includes a dock network of 29.83 km with a berth depth of up to 19 m, thus ensuring the access of vessels with a maximum capacity of 165,000 tdw for bulk goods and of 250,000 tdw for tanks and liquid goods.

The state of the water transport infrastructure has been continuously damaged, due to the fact that it is outdated and has been exploited for more than 40 years. The maintenance, repairing and preservation of the minimum technical characteristics of the water transport infrastructure are the responsibility of the port administrations and are carried out based their own funds, as the financial support of the related program cannot be totally covered through the company's own financial resources.

#### *Transport of navigational ways and canals*

The main network of domestic navigational ways and canals is located in the southern part of the country and includes the Danube with its navigational secondary branches and its navigational canals Danube-the Black Sea and Poarta Albă-Midia Năvodari. In the rest of the territory, the navigational ways network is very small and dispersed, it has a local character, it includes natural lakes and lakes of hydro-technical facilities and it is used for leisure and for small-scale local traffic of goods.

The Danube River, an international navigational way on the Romanian territory, from the entrance into the country until it flows into the Black Sea through the Sulina Canal, has a length of 1,075 km, out of

which about 170 km, between Braila and the Black Sea, provides the technical conditions for the access of maritime vessels. Due to the river natural flow, the navigation conditions on the Danube are in need of improvements, through the implementation of programs that ensure the efficient and safe exploitation of the Danube maritime sector, as well as the permanent navigation on the Sulina Canal through the reconstruction and protection of the canal's borders and through the implementation of a system of topographic and hydrographical signalling measures on the Romanian part of the Danube. In addition, in order to increase the safety degree on the Romanian section of the Danube, the vessel traffic tracking and management program is being implemented.

In order to improve the navigation conditions on the Călărași – Brăila sector, an ISPA financed project is being developed. Works are estimated to begin in 2006. In addition, the authorities are currently promoting a program for the improvement of the navigation conditions on Romanian-Bulgarian section of the Danube.

The navigational ways of Danube-the Black Sea (64.4 km) and Poarta Albă-Midia Năvodari (27.5km +5.5 km) are artificially built and are opened to the international navigation, corresponding to the 6<sup>th</sup> class of navigational ways and to the 5<sup>th</sup> one respectively (in accordance to the EEC-UN classification), ensuring the optimal connection between the Danube and Constanta Port.

The Danube, until it flows into the Black Sea through Sulina branch, and the Danube-the Black Sea Canal are part and parcel of the pan-European transport Corridor VII and provide Romania and the other states with major opportunities for the development of the water transport sector. In this respect, works and projects are currently being developed or planned in order to improve the navigation conditions on the Danube and to safely exploit the navigational canals and hydro-technical knots specific for the navigation process.

As for the domestic navigational ways, Romania benefits from a number of 30 ports and loading centres with a total traffic capacity of 52 million tons/year. All these ports and loading centres, which are part of the TEN-T, Brăila, Galați, Tulcea and Sulina are river-maritime ports, with a total traffic capacity of about 34 million tons/year; they have the technical characteristics that allow for the permanent access of maritime vessels with a capacity of up to 25,000 tdw, a length of 180 m and a fisheries depth of 7.0 m. The latter can have a longer length, under special conditions.

Domestic ports benefit from a total dock length of about 48.5 km. 85% of their state is damaged due to the physical wear-and-tear, following a long exploitation period, but also due to the lack of funds, as the maintenance, repairing and preservation of the minimum technical characteristics of the infrastructure are the responsibility of the port administrations and are carried out of their own funds. The lack of special equipment leads to the partial use of these docks. In this respect, projects are being promoted for the construction of infrastructures for specialized terminals.

Due to the fact that it is part of the trans-European transport network, the Danube has the potential to develop the combined transport system, the tourist development of the area adjacent to the Danube and the Danube Delta and to improve the current exploitation of river ports. In this respect, projects are being promoted regarding the operation technologies specific for ports and the protection of the environment on the Danube and within ports.

In 2004, 95.6% of the river transport was carried out by private vessels. The goods traffic on the Romanian navigational ways was of 14,600.5 thousand tons, i.e. 4.3 million tons-km, recording a quite high level as compared to the new Member States (2 million tons in the Czech Republic, Hungary and

Slovakia or 10 million tons in Poland, in 2001), but a quite low one as compared to other Member States (128 million tons in Belgium, 329 million tons in the Netherlands or 91 million tons in Finland)<sup>21</sup>.

The port traffic of goods in 2004 was of 71,742 thousand tons, of which 43.5% represents the river traffic, i.e. 31,211 thousand tons.

During November 2003-February 2004, Romanian river fleet underwent an extended legal and technical checking process, in accordance with Romanian related norms and with the Directive No. 82/714/CE. Of 1,563 self-propelled and non-self-propelled vessels, 279 vessels did not receive the reconfirmation of the nationality certificate, with a view to being repaired or dismantled.

### **3.1.6. Inter-modal and combined transport**

In accordance with the “European transport policy – 2010 horizon: time to decide”, the European Commission is planning to encourage the balance between the means of transportation and the increase of the efficiency of the door-to-door traffic of goods, by using two or more means of transportation within an integrated logistical chain.

The European agreement on the large combined international transport ways and related installations (AGTC), ratified by Romania in 1993, defines the combined transport infrastructure on the country's territory. Thus, the railroads that are important for the international combined transport are identified as follows: Ungheni – Iași – Pașcani – Buzău – Ploiești – Bucharest – Videle – Giurgiu / Ruse, Craiova – Calafat / Vidin, Arad – Deva – Brașov – Bucharest, Lokoshaza / Curtici – Arad – Timișoara – Craiova – Bucharest and Bucharest – Constanța.

The ferryboat transport system is carried out on the Constanța – Derince (Turcia) and Constanța – Batumi (Georgia) routes, thus reducing time and distance for freight care and TIR-type trucks.

At present, within the Ro-La system (the transport combined with motor vehicles and special trains), there is only one route: Glogovăț - Wels (Austria) and back which, during the period September 2002 – May 2004, carried about 1,000 trains loaded with about 18.000 TIR-type trucks, the traffic increasing from 3 trains / week / direction, to 12 trains / week / direction. New Ro-La routes are being planned with Italy, Germany, Hungary and Slovenia.

The container transport increased in 2003 as compared to 2002 by 54.43%, especially through the Constanta port, following the bringing into function of the new container terminal in Mol II South. It is estimated that the container traffic will undergo a permanent increase.

At present, there are 28 combined transport terminals administered by the state freight transport operator.

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<sup>21</sup> EUROSTAT: “Energy, transport and environment indicators 1991-2001”, 2004 edition

### Goods traffic in millions of net tons - km

Transport category	1990	1995	2000	2003	2004
Railroad	57,253	27,179	17,982	15,039	17,022
Road	28,993	19,748	14,288	30,854	37,220
River	2,090	3,107	2,634	3,521	4,291
Maritime	110,766	73,636	5,817	611	412
Total categories	199,102	123,670	40,730	50,025	58,945
<b>Market share (% of the total)</b>					
Railroad	28.76	21.98	44.15	30.06	28.9
Road	14.56	15.97	35.09	61.68	63.1
River	1.05	2.51	6.47	7.04	7.3
Maritime	55.63	59.54	14.29	1.22	0.7

Source: National Institute of Statistics – 2004

The water transport has the advantage of low costs, given the large transported quantities. Nevertheless, loading/unloading costs and the lack of necessary port equipments within the ports on domestic navigational ways, prevents the development of the inter-modal transport. There is a tendency of the logistical chain to become more and more complex due to the significant increase in the road goods transportation. This is firstly due to the new economic trends and to the door-to-door services provided by road operators.

#### 3.1.7. Traffic safety

With respect to road transport, traffic safety projects are taken into consideration, especially concerning lineal villages, road signalling and “the elimination of black spots”. The number of deaths following road accidents in 2004 was of 11 deaths/100,000 inhabitants, equal to the European average, but higher than that of several Member States (8 deaths/100,000 inhabitants in Germany and Denmark, 7 deaths/100,000 inhabitants in the Netherlands and in Sweden, 6 deaths/100,000 inhabitants in Great Britain) or candidate countries (7 deaths/100,000 inhabitants in Turkey)<sup>22</sup>.

The construction of overhead parallel railroad crossings and national roads is such a priority, with the aim of diminishing the number of parallel railroad crossings accidents. Within the National Railroad Company CFR SA reorganization process, started in 1997 and still under way, measures have been taken in order to increase traffic safety (rehabilitation of the existent infrastructure, equipment purchases, signalling and telecommunications). A large part of the installations that ensure the railroad traffic safety is in need of repairs. At the end of 2003, there were 303 speed limits on railroads, mostly due to the inappropriate state of the railroad and railroad apparatuses or artworks (57 speed limits more than at the beginning of the same year). Due to the same causes, 26% of the network has a speed limit of 50 km/h, whilst on 39% of the network the speed is limited to 80 km/h. In addition, following the deterioration of the railroad infrastructure, there are 1,060 dangerous spots, out of which 316 are included in the 1<sup>st</sup> category.

The water transport is currently implementing or contracting several traffic safety projects: the vessel traffic tracking and management program for the Romanian sector of the Danube, the maritime search and rescue system (MSRS), the vessel automated identification system (AIS) and the calling, danger and rescue radio-communication system on the maritime Danube.

<sup>22</sup> EUROSTAT: “Energy, transport and environment indicators 1991-2001”, 2004 edition

In 2003, for the air transport, the modernized air traffic management (ATM) system was brought into function, in accordance with the European harmonization and integration program of EUROCONTROL air traffic control.

### **3.1.8. Environmental protection**

The projects that aim at protecting the environment are carried out especially for the water transport. Thus, for the Danube-the Black Sea canal, there is an investment program aimed especially at the quality of water, given that it is used for household and irrigation purposes in neighbouring areas. The Constanta port is undergoing a complex environmental protection program, which mainly includes: ecological loading platform, wastewater treatment station and levigate treatment station, incinerator, and collecting vessel. Giurgiu port is currently implementing a system for the takeover of vessel wastes and for pollution emergencies.

As for railroad transport, a system will be implemented in order to apply the “polluter pays” principle, given that the Romanian Railroad Company CFR SA has created its own sanction program.

With respect to road transport, a calendar was established for the application of the EURO norms, as stated in the Directives No. 70/220/CEE and No. 88/77/CEE.

In addition, within the fundamental process of the investment projects for the transport infrastructure, environment impact assessments (EIA) are currently being carried out, including the organization of public consultations, in accordance with the related legislation (Government Decision no. 918/2002, with the subsequent changes and additions, which is in total harmony with the community legislation).

### **3.1.9. Development trends of the transport infrastructure**

It is estimated that, in the future, the terrestrial communications network will be developed, with an emphasis on the expansion of the motorway network, and on the modernization of existent roads and bridges, including all modern neighbouring facilities. Romania will considerably increase its motorway network, which is currently inappropriate, in order to increase the passenger and goods traffic and its safety. In addition, important railroad sections will be rehabilitated, and the main airports and ports will be modernized, in order to increase the railroad, air and water borne goods and passenger traffic.

As a value-added activity within the services area, transports will have to meet the challenge resulted from the future economic development and, implicitly, from the traffic increase, without the qualitative decrease of transport services, and taking into account the protection of the environment.

The direct effect of transports within the economy starts from the premise of the increase of the percentage of the transport activity within the GDP, from the current 7% to a minimum of 10% in 2015.

In addition, the annual increase rate of the total transport amount (transported tons) will be 2-3% higher than the GDP average increase rate, which means that for a GDP annual rate of 5%, the transport activity will increase by 7-8% per year. This will also be reflected in the effect of the transport efficiency on the other economic branches.

### **3.1.10. Differences in the access to the transport infrastructure**

One of the main causes for the inter- and cross-regional differences is brought about by the different access to the county, national and international transport infrastructure and by its inappropriate quality.

The regions that benefit from a good access to the transport infrastructure are Bucharest-Ilfov Region, Centre Region, and South Region. Bucharest-Ilfov Region has the airports with the most intense national and international traffic. Centre Region has several important railroad areas which connect Romania to Central and Western Europe. South Region has a national road network that is largely modernized; it is crossed by four international roads and has good access to the national and international road network.

Among the regions with limited access to the transport infrastructure, there is also North-East Region. Here, Botosani County has 18.7% of earth roads that cannot be used. The region's railroad network is below the national average, from the point of view of the railway length and of technical equipment.

On inter-regional level, the inappropriate transport network is a drawback in the development of villages and of small and medium towns. Many areas have a poorly developed inter-locality transport network (the villages in the Danube Delta), which even results in the isolation of several localities.

### **3.1.11. Institutional framework**

The GD no. 412/2004 concerning the organization and functioning of the Ministry of Transport, Constructions and Tourism, with the subsequent changes and additions, establishes the transport policy on the national level, elaborates the specific strategy and regulations on the development and harmonization of the transportation activity and has the role of state transportation authority.

The Ministry of Transport, Constructions and Tourism, as a specialized body of the central public administration, regulates and supervises the carrying-out of infrastructure programs and projects, and it administers, develops and manages transport infrastructures both directly and through the units under its subordination and authority.

The national road infrastructure is administered by the Romanian National Motorway and National Roads Company, whilst the rest of the public road network (county and communal roads) is administered by the local public administration authorities.

The public railroad infrastructure is administered by the National Railroad Company CFR SA, the main public operators being the Freight Railroad Transportation National Company CFR Marfă SA and the Passenger Railroad Transportation National Company CFR Călători SA. Through the implementation of the EU directives for this sector, the administrator of the railroad infrastructure was separated into the two freight and passenger operators. Bucharest's underground network is administered and exploited by the National Transport Company (SC Transport) with the METROREX SA Underground.

The water transport infrastructure is administered by the Maritime Ports Administration National Company, Constanța, the Navigational Canals Administration National Company - Constanța, the Fluvial Danube Port Administration National Company - Giurgiu, the Maritime Danube Port Administration National Company - Galați and the Inferior Danube Fluvial Administration Autonomous Agency - Galați.

The national air transport infrastructure is administered by the "Henri Coanda" International Airport National Company, the "Bucharest-Baneasa-Aurel Vlaicu International Airport National Company, the Constanta International Airport National Company and the Timisoara "Traian Vuia" International Airport National Company. Twelve airports of local interest are administered by county councils, whilst one airport is private. Air traffic services are provided by the "Romanian Administration of Air Traffic Services – ROMAT SA" Autonomous Agency. The main public air operator is the National Romanian Air Transport Company TAROM SA.

## **Key issues**

- The domestic transport has an insufficient transport capacity for goods and passengers, especially in several areas and during specific times of the year (summer season, weekends).
- Romania's transport infrastructures are not sufficiently developed and are in need of important investments in order to meet the related European standards.
- The access to the Western European transport infrastructure network, as well as to the Eastern and South-Eastern Europe, is limited and difficult, due to the low transport capacity and to the quality of the specific physical infrastructure (only 211 km of motorways, national non-modernized roads, etc.).
- Romania's position at the intersection of numerous roads that connect Western to Eastern Europe and Northern to Southern Europe, as well as its position on the transit axes between Europe and Asia, underline the importance of the existence of a developed infrastructure.
- Romania's access to the Black Sea and to the Danube is an opportunity and an argument for the increase of the amount of water transports.

## **3.2. Energy**

The energy sector is a basic strategic infrastructure within the national economy, on which the entire development of the country is based. At the same time, the provision of energy is a public service with a strong public impact.

### **3.2.1. Energy resources**

#### **Coal**

The coal industry has an important role within Romania's energy production. During the period 2001-2004, the energy productions under exploitation provided an annual amount of 29-30 million tons of lignite and 3.5 million tons of energy pit coal, quantities used for energy production in steam power plants.

The availability of domestic lignite reserves is assessed, for the following 50-70 years, at an extraction level of 30 - 35 million tons/year in surface exploitation.

The strategy of the mining industry states that the lignite production be focused on the most productive areas, which also have the lowest production costs and which are surface mines, and that non-viable mines (especially underground ones) be closed down. The lignite production considered in these documents is not subsidized in Romania and represents a competitive source of energy. This is the reason why the energy production in steam power plants will record a slight increase during the period 2005-2015, from 9,300 million tep to 10,540 million.

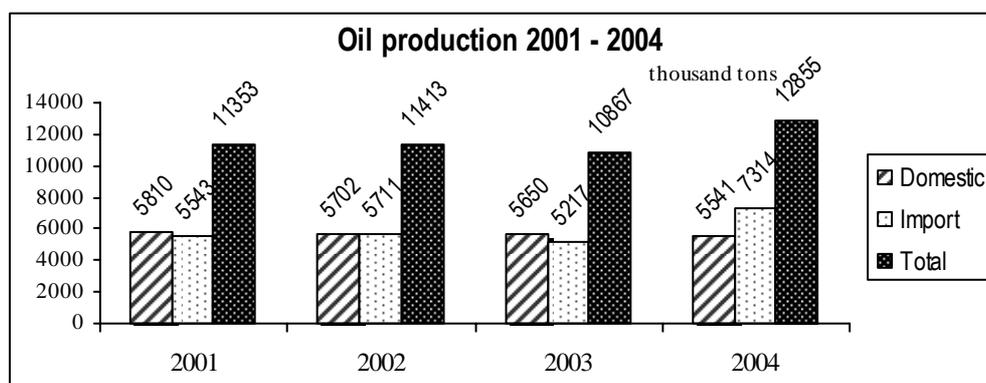
Coal steam power plants release into the atmosphere a quantity of polluting substances that was much higher as compared to hydro-carbon based power plants, accounting for more than 70% of the total NO<sub>x</sub> and CO<sub>2</sub> total emissions, i.e. 90% of the SO<sub>2</sub> emissions resulted from these plants. These have high installed powers and large quantities of consumed fuel, mainly producing energy for NPS.

#### **Oil**

The main production area was the Ploiești one, located in Southern Romania. But for the past years, several new areas have started being exploited, including oil reserves in the Black Sea. During the

following years, due to the decrease of the natural oil reserves and to the increased difficulty in exploiting these resources, the country's oil reserves will diminish and imports will increase.

According to international estimates (World Energy Council, etc), the definite exploitable oil reserves at the end of 2002 were of 100 million tons. Several institutions in the country believe that the definite reserves amount to 128 million tons. Thus, the reserves can ensure the 2003 production (5.9 million tons), for a period of 17-22 years, i.e. until the end of 2020-2025.



Source: Ministry of Economy and Commerce

## Natural gas

The natural gas quantity extracted by the main producer, Romgaz S.A., has decreased for the past years, from 8.1 million Nm.c. in 2001, to 6.6 million Nm.c. in 2004, mainly because of the diminution of natural resources. The natural gas quantity extracted by Petrom S.A. increased from 4.9 million Nm.c. in 2001 to 6.1 million Nm.c. in 2004. In 2004, the first private natural gas producers entered the market: AMROMCO and WINTERSHALL.

Given the economic increase and the gradual privatisation of the gas market for the period 2001-2004, natural gas imports doubled for the period 2001-2004.

### Total natural gas consumption

Year	2001	2002	2003	2004
Domestic production	13	12.1	12.9	12.9
Import	2.9	3.5	5.4	5.9
Total	15.9	15.6	18.3	18.8

Source: Ministry of Economy and Commerce

Given that natural gas imports will increase, it is essential to increase the storage capacity for these resources; this is one of the important objectives of Romania's Energy Strategy. Romgaz SA, the operator of the storage facilities, has as a main objective both the intensification of the development rate of the existing underground storage facilities for natural gas and the creation of new storage facilities for the areas that are confronted with both season and daily/hourly difficulties in gas fuelling.

During the period 2001-2003, the storage capacity doubled, reaching a level of 2.6 billion m<sup>3</sup>, with an estimated storage capacity of 4.5 billion m<sup>3</sup> until 2010. Thus it is necessary for the country to make an investment effort of its own and to attract foreign financial sources, to a total amount of more than \$600 million until 2010.

## *Evolution of oil and natural gas resources*

It is believed that Romania still has an exploration potential, as it is likely to have several oil and natural reserves in Transylvania, the Sub-Carpathian Hills and the Black Sea. Nevertheless, given that the recent explorations are low, it is highly unlikely for the new explorations to considerably change the reserves profile. It is estimated that there will be a gradual decrease of the oil and natural gas production in parallel with the decrease of the existent deposits. Thus, in order to cover the oil and natural gas consumption, it is estimated that imports will increase.

A measure that is taken into consideration in order to cover the domestic oil and natural gas consumption and to ensure the functioning of the refining capacities in the country is Romania's integration within the oil circuit in the Caspian Sea towards the Black Sea. Thus, the country is taking part in the construction of the Constanța-Omisalj pipeline (as Constanța is a Romanian Black Sea port, whilst Omisalj is the Croatian Adriatic Sea port). The pipeline's transport capacity will be of 48 million tons of oil/year.

In 2003, works started on the Szeged-Arad pipeline that will allow for the interconnection to the West European natural gas system. Romania is also included in the construction project for the natural gas transport corridor in the Caspian Sea and Middle East areas towards Central and Western Europe (the Nabucco project initiated by the European Union, which will have a capacity of 30 billion m<sup>3</sup>/year, following an investment of about €4.5 billion).

## **Regenerating resources**

### *Solar energy*

Five geographical areas have been identified in Romania (0-IV), differentiated on the basis of the measured energy flow level. The geographic distribution of the solar energy potential shows that more than half of Romania's surface benefits from an annual energy flow of 1,000-1,300 kWh/m<sup>2</sup>-year.

The energetic contribution of solar-thermal systems to Romania's heat and hot water needs is assessed at about 1,434 thousand tep (60 PJ/year), which could replace about 50% of the total hot water amount or 15% of the thermal energy quota used for current heating.

The exploitable potential of the energy production through photo-voltaic systems is of approximately 1,200 GWh/year.

### *Wind energy*

Five different areas for sources of wind power have been identified in Romania (I-V), depending on the existent energy potential, and on environment and topographic-geographic conditions. Romania has a slight wind energy potential in the Black Sea seaside, the Moldavia and Dobrogea plateaus or in mountainous areas. Wind power installation can be set, with a total power of up to 14,000 MW, which means an energy contribution of about 23,000 GWh/year. Based on preliminary assessments in the seaside areas, including the off-shore ones, the Wind energy short and medium-term potential is of about 2,000 MW, with an average quantity of energy of 4,500 GWh/year. The capitalization of the Wind energy potential, based on economic efficiency conditions, implies the use of appropriate technologies and equipments.

### *Energy produced in hydro-energetic facilities (low and high power facilities)*

In Romania, the hydro-energetic potential of the main rivers is of about 40,000 GWh/year and can be obtained in hydro-energetic facilities of high (>10MW/hydro facility) or low (<10 MW/hydro facility) power, according to the following distribution:

- High power hydro-energetic facilities (34,000 GWh/year);
- Low power hydro-energetic facilities (6.000 GWh/year).

The contribution of new capacities stated for the period 2003-2015 is estimated to about 500-900 MW. In 2004, 29% of the power energy was produced in hydroelectric power plants.

### *Biomass*

Romania has a high biomass energy potential, assessed at about 7,594 thousand tep/year (318 PJ/year), which accounts for almost 19% of the total consumption of primary resources, in 2000. Approximately 54% of the heat produced based on biomass is obtained by burning forestry wastes; 89% of the heat necessary for home heating and cooking (in rural areas) is the result of the vegetal waste consumption.

### *Geothermal energy*

In Romania, the temperature of hydro-geothermal sources (with drilling-extraction exploitation) in "low enthalpy" geothermic ranges between 25°C and 60°C (in deep waters), whilst in medium-temperature geothermic there are temperatures ranging from 60°C until 125°C ('medium thermal waters').

About 79 hot water wells are currently operating (with temperature above 60°C), in various geographical areas. The geothermal energy reserves, with current exploitation possibilities in Romania, are of approximately 167 thousand tep (7 PJ/year).

Romania supports the use of energy production from regenerating resources; this is materialized through the Government Decision no. 443/2003, changed by the Government Decision no. 958/2005, concerning the use of energy produced out of regenerating energy resources. Thus, the percentage of the energy produced out of regenerating resources within the gross national energy consumption will reach 33% in 2010. In addition, the promotion system of the energy production out of regenerating energy resources was established (through the Government Decision no. 1892/2004) and the Certification regulation of the origin of the energy produced out of regenerating energy sources (through the Government Decision no. 1429/2004).

### **Energy potential of regenerating energy resources in Romania**

<b>Source of regenerating energy</b>	<b>Annual energy potential</b>	<b>Energy economic equivalent (thousand tep)</b>	<b>Application</b>
Solar energy: thermal	60x10 <sup>6</sup> GJ	1,433	Thermal energy
Photo-voltaic	1,200 GWh	103.2	Power energy
Wind power	23,000 GWh	1,978	Power energy
Hydro energy, of which below 10 MW	40,000 GWh 6,000 GWh	3,440 516	Power energy
Biomass	318x10 <sup>6</sup> GJ	7,597	Thermal energy
Geothermal energy	7x10 <sup>6</sup> GJ	167	Thermal energy

Sources: Specialized studies – ICEMENERG, ICPE, INL, ISPH, ENERO

### 3.2.2. Energy infrastructure

#### Power and thermal energy sector

##### *Evolution of energy production*

Romania's energy sector had, in 2004, a total installed capacity of 18,314 MW, with the following structure: installed capacity in steam power plants of 11,391 MW, in hydroelectric plants of 6,216 MW and in the Cernavoda nuclear plant of 707 MW. The installed capacity in steam power plants based on coal is of 6,844 MW and of 4,547 MW in steam power plants based on hydrocarbons.

In 2004, the power production was of 56,899 GWh, out of which approximately 41% in steam power plants based on coal, 20% in steam power plants based on hydrocarbons, 29% in hydroelectric plants and 10% in the nuclear plant.

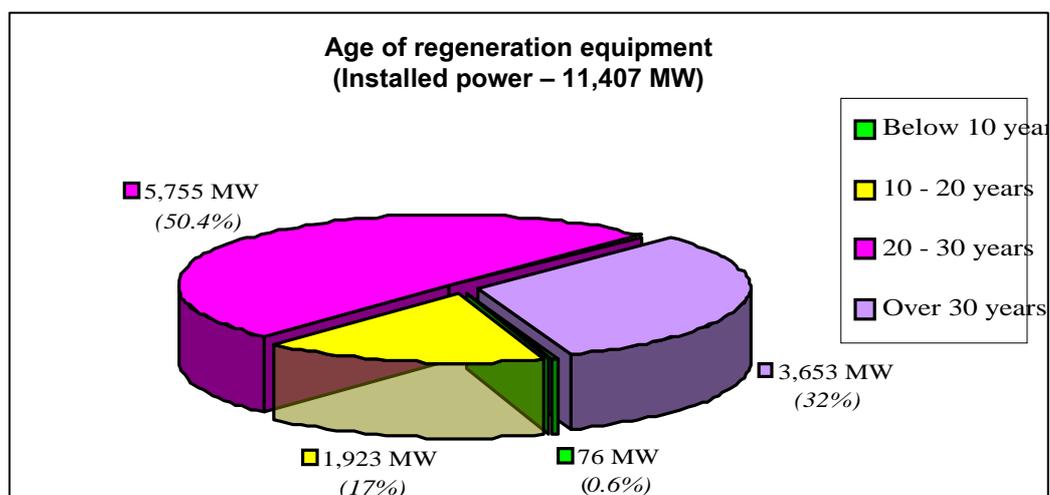
The power production increased during the period 1999-2003 by approximately 10.7%. Irrespective of the variations of the total production, the power production in thermo groups have a contribution that shows their high importance in meeting the consumers' energy needs.

#### Power production and structure per types of fuels

	-GWh-		
	2002	2003	2004
Gross domestic total consumption	52,335	54,821	55,710
Import/Export balance	- 2,854	- 2,085	- 1,189
Total production of which:	55,189	56,906	56,899
- coals	22,257	25,816	23,478
- hydro-carbons	11,347	12,922	11,274
- hydro	16,072	13,262	16,591
	5,513	4,906	5,556

Source: National Energy Dispatcher Report for 2004

Most capacities (approx. 82%) were installed during the period 1970-1980 and have more than 25 years in operation. The status of these energy groups from this point of view, for the structure of the considered installed power, can be seen in the graphic below:



### *Evolution of energy consumption*

In general, the evolution of the energy consumption followed the evolution of the national economy, i.e. of the industrial activity. During the period 1997–1999, the consumption of energy resources, power and thermal energy diminished, in accordance with the contraction of the national economy. As compared to 1999, in 2000, the consumption recorded a 2.2% increase, whilst as compared to 2000 in 2002 there was a 6.8% increase of the consumption, given the re-launch of economic activities.

The periods of decrease in the energy consumption have generated critical situations within the energy sector, characterized by the deterioration of the financial situation of the big economic agents in the sector, the slowdown of investment and repair programs, and by important personnel dismissals.

Subsequently, due to the re-launch of the economic activity, the energy consumption recorded an increase with small variations from one year to another. In 2004, the final energy consumption was of 44.6 TWh, which represents a 2.7% increase as compared to 2003.

The total domestic primary energy consumption was of 40,044 thousand tep in 2004. Fossil fuels (coal, natural gas and oil) hold the main quota in meeting the primary resources needs (85%). Approximately 41.7% of the final energy consumption is attributed to the industry, whilst the residential sector was used in about 32.1% of the total. The country's primary resources consumption accounted for 61%, whilst the resources imports necessary to cover the consumption accounted for 39%.

The gross domestic energy consumption was of 55,710 GWh in 2004. The annual energy consumption per inhabitant was of 2,055 kWh/inhabitant in 2004, and it is estimated that there will be an increase to about 2,971 kWh/inhabitant in 2015.

#### **Energy consumption per inhabitant in 2002**

	- tep/inhabitant-	
	<b>Primary energy</b>	<b>Final energy</b>
Romania	1,647	1,199
EU 15	3,899	2,531

Source: National Energy Observer within ICEMENERG – Study on the sustained development of Romania's energy sector

Even though the energy intensity significantly decreased during the period 1989–2002, the values recorded until now are relatively high, as compared to EU countries. This is mainly due to the low energy consumptions in several economic sectors, as well as to several technologies and equipments with small performances and high wear-and-tear.

Considering the estimated increase of the energy consumption of about 2.7% per year, it is necessary to extend the existent production capacities, to use regenerating resources for energy production and to decrease the energy intensity. Demands in import energy resources will increase from 39% in the primary resources consumption in 2004 to 55% in 2015.

### *Energy efficiency*

Characterized by a highly energy-intensive economy, especially prior to 1989, Romania recorded a 33% decrease of the energy intensity during the period 1990–1999, with an average long-term annual rate of 3–3.3% (as compared to 0.6% per year in the EU), due to the contraction of the economic activity and not so much to the energy intensity reduction measures, but with slight variations (from - 24% to +11%) between various years.

## Final energy intensity figures in Romania and the EU, in 2001

Energy intensity (tep/ \$10 <sup>3</sup> <sub>95</sub> )	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	The Netherlands	Portugal	Spain	Sweden	Great Britain	Romania
Final	0.095	0.135	0.073	0.151	0.096	0.091	0.139	0.105	0.109	0.120	0.149	0.129	0.119	0.121	0.637
Industry	0.024	0.055	0.014	0.068	0.025	0.027	0.032	0.024	0.035	0.039	0.052	0.044	0.045	0.030	0.282
Transports	0.027	0.030	0.022	0.028	0.030	0.024	0.052	0.039	0.035	0.029	0.051	0.048	0.028	0.039	0.120
Agriculture	0.003	0.002	0.005	0.005	0.002	0.001	0.008	0.002	0.003	0.008	0.006	0.003	0.002	0.001	0.009
Residential	0.027	0.031	0.021	0.030	0.023	0.026	0.033	0.024	0.029	0.021	0.022	0.017	0.026	0.033	0.217
Tertiary	0.009	0.012	0.009	0.010	0.013	0.009	0.010	0.014	0.004	0.016	0.012	0.010	0.015	0.013	0.039

Source: Energy Balances of OECD Countries 2000-2001, International Energy Agency, 1999-2002 Editions, Paris, France, 2002

According to the study on the “Sustained development in the national energy sector”, elaborated by the National Energy Observer within ICEMENERG, with technical assistance granted by IAEA Vienna, a decrease of the final energy intensity will be possible during the period 2003-2025, following an average annual increase rate of 3.5%. This value is high as compared to the usual international levels of about 1%, but the specialists who have carried out the study state that this is not only possible, but also compulsory.

The conclusions that can be outlined following the comparative analysis of the final energy intensities for the five economic sectors in Romania and in the EU are as follows:

- as compared to the correlation identified in the two cases, the high values account for the existence of an important economic potential of energy efficiency within the industry;
- for transports, the comparison of the final energy intensities calculated through the updated prices method emphasize a relatively high economic potential of energy efficiency, whilst the correction of the GDP with the parity of the purchase power lead to correlations between sub-unitary intensities (i.e. <1);
- even though the final energy consumptions in the agricultural sector are quite insignificant as compared to those in other sectors, the economic potential of energy efficiency exists and can be capitalized;
- just like in the industrial sector, the correlations between the final energy intensities in the residential sector demonstrate the existence of an important energy efficiency potential;
- the tertiary sector is undergoing an accelerated development process (though less important, the final energy consumption in this sector doubled in 2001 as compared to 2000), whilst the correlation between the final energy intensities demonstrates the existence of an energy efficiency potential.

The disconnection of the economic development from the energy consumption is a desideratum previously carried out in the UE area. Within this context, it is necessary for the final energy intensity within the national economy to decrease at an accelerated rate. The energy intensity decrease will be the result of the national economy modernization measures in general (both from the point of view of the structures and of the used technologies) and of the specific improvement measures of energy use performances.

### *Status of electrifications*

Basically, the total number of establishments in the urban area (99.4%) are connected to the power network, whilst in the rural area the percentage in question accounts for 96.3%.

By the end of 2002, there were 93,613 non-electrified households in 2,571 localities, of which:

- 4,636 households in 203 completely non-electrified areas;
- 64,207 households in 2,218 partially electrified rural localities;
- 24,770 households in 150 urban localities that require the extension of the distribution network.

### **Status of household connections to power networks**

	<b>1992</b>	<b>2002</b>
TOTAL HOUSEHOLDS (thousand), of which (in %):	7,187	7,166
Connected to the power network	96.7	98.0
Connected to the natural gas network	32.2	42.2
Connected to the central heating network	30.9	32.0
URBAN HOUSEHOLDS (thousand), of which (in %):	3,923	3,894
Connected to the power network	99.4	99.4
Connected to the natural gas network	57.8	71.4
Connected to the central heating network	57.5	58.8
RURAL HOUSEHOLDS (thousand), of which (in %):	3,264	3,272
Connected to the power network	93.6	96.3
Connected to the natural gas network	3.1	7.4
Connected to the central heating network	0.7	0.5

Source: National Institute of Statistics, 1992 and 2002 "Population and Household Censuses"

### *Situation of thermal energy-fuelled centralized system*

Romania has a well-developed heating system. Approximately 29% of the total number of households receives thermal energy for heating and consumption hot water through centralized systems, the percentage for the urban areas being of 55%.

The systems are made based on the technologies used prior to the 1972 energy crisis and, despite the fact that during the past years, especially in 2005, there have been revamping, modernization and development works especially with regards to transport and distribution, they continue to record low performances, high losses (between 25-35%) and high production costs.

Most users cannot cover the relatively high production, transport and distribution costs. Due to the constructive solutions and to the lack of repair funds, housing units have significant thermal energy losses, and the separation of individual heat consumptions per apartment is, sometimes, difficult and in need of additional funds.

In 2004, the "National strategy on thermal energy fuelling through centralized production and distribution systems" was approved, with the aim of establishing, on a national scale, the policies and guidelines on the organization, functioning and regulation of fuelling public services with centralized thermal energy, of setting the objectives and directions for the elaboration of development and modernization programs of the urban heating centralized systems, and of identifying the means, ways and possibilities to implement investment programs and the possible financing sources thereof.

## **Main companies in the energy sector**

*Oil extraction and treatment, and oil products distribution sector.* This sector includes the company Petrom, whose stock majority is held by the Austrian company OMV, beginning with 2004. Petrom basically carries out the entire domestic crude oil production; its structure includes two big refineries (Arpechim Pitești and Petrobrazi Ploiești) and it has the largest distribution network for its oil products. Besides Petrom, there are privately owned companies for the treatment of oil products and which usually treat imported crude oil (Lukoil Ploiești, Rompetrol Group etc).

*Natural gas extraction, transport and storage sector.* The activities in this sector are concentrated within the state owned Romgaz Medias Company. In 2006, part of the company's stocks will go public.

Distrigaz Nord and S.C. Distrigaz Sud, recently privatized companies with the companies RUHR GAS (Germany) and GAS DE FRANCE carry out the *natural gas distribution*.

The *coal extraction sector* includes three national companies: the Oltenia National Lignite Company (CNLO) - Târgu Jiu, the National Pit Coal Company – Petroșani and the National Coal Company - Ploiești.

*Power production sector.* Nationally speaking, in 2004, there were 47 companies licensed by the ANRE (National Energy Regulation Agency). The most important state owned power production companies are the Energy Complexes in Rovinari, Turceni, and Craiova, S.C. Termoelectrica Bucharest S.A., S.C. Power Plant Branch Bucharest S.A., and SN Nuclearelectrica S.A. Romania is planning to shortly privatize the energy complexes, as the process has already been started. S.C. Hidroelectrică S.A, another state owned company, carries out the exploitation of hydro energetic plants all over the country. By the end of 2004, 18 low power hydro plants were privatized, with an additional 8 micro-hydro plants in 2005.

*Power transport sector.* The power transport system included the total of 750 kV, 400 kV and 220 kV power networks. These elements of the transport system have an average wear-and-tear of 56% for power stations and of 67% for electric lines. This is the sector where the state owned National Power Transport Company Transelectrica S.A. carries out its activity.

In May 2003, Romania's transport system was interconnected to the UCTE network. The transport system will continue to be state owned, whilst part of this company's stock will go public in 2006.

*Power distribution sector.* The distribution networks operate at voltages ranging between 0.4 kV and 110 kV. S.C. Electrica S.A was set up in this sector; it has eight branches covering the entire territory of the country, of which 4 have already been privatized.

*Power supply sector.* This sector has 75 state or privately owned companies which have supply licenses issued by the NERA.

### **3.2.3. Price and tariff system**

#### **Situation of the power market**

Until power services are fully opened up, the power market remains divided between the regulated and the competitive market. In 2005, the opening up of the power market is 83.5%, the power market for industrial consumers being completely privatised, whilst the market for household consumers will be privatised in 2007.

The completely opened power market is characterized by the fact that each consumer can freely choose its supplier and that each supplier can conclude contracts negotiated with the consumers; the price of these contracts is the result of the demand/supply ratio. Until the retail power market is completely opened, distributors are obliged to also carry out the supply service for captive consumers within the authorization area. At the same time as the total opening of the power market, the ANRE will select last resort suppliers for those consumers who do not exercise their right to choose the supplier.

Crossed power subsidies, between household and industrial consumers, as well as those between the power and thermal energy, were eliminated in 1999. As for the consumed power, end power consumers benefit from negotiated prices (in the case of eligible consumers) or regulated tariffs (in the case of captive consumers).

Regulated tariffs for the power supplied to captive consumers reflect the costs related to the production and transport activities, system services, distribution and supply activities and to the fees set by law. The supplier power prices negotiated between suppliers and eligible consumers also include the tariffs regulated for transport activities, system services, and distribution and for the fees set by law.

#### *Internalization of environment costs*

The investments projects for the following period of power and/or thermal energy production companies in Romania must take into account the environment works, which are compulsory for their operation in accordance with the related EU norms. Thus, for the upcoming period, until 2012, thermal energy producers must carry out the internalization of environment costs, in such a way that the regulated price of the free market price accurately reflects this cost and that it ensures the possibility to finance these necessary works (emission reduction, desulphurization, resulted burning products eviction and storage, etc.). This internalization process will also take into account the population's endurance. According to several studies on the internalization of environmental costs, during the period 2005-2012, they can reach quite high figures, ranging from \$2 to \$5/MWh.

#### **Situation of the natural gas market**

In 2005, the openness degree of the natural gas market was set at 50%. In order to increase the number of eligible consumers, one of the licensing conditions was modified, i.e. the consumption threshold, diminished from 4 million m<sup>3</sup> of natural gas/year to 3 million m<sup>3</sup> of natural gas/year. The ANRGN (National Natural Gas Regulation Agency) licensed 76 eligible consumers, the quantity of natural gas available for the open market consumption being of 7.252 billion m<sup>3</sup>.

The privatisation process of the natural gas market in Romania will continue until it ensures its complete openness in 2007, according to the following calendar: 75% on June 30<sup>th</sup>, 2006; 100% for industrial consumers on January 1<sup>st</sup>, 2007 and 100% for household consumers on July 1<sup>st</sup>, 2007.

The ANRGN finalized the new tariff methodologies related to the natural gas industry and applied them in 2005. For the regulated distribution and supply, the tariff methodology will be of the "price-cap" type, whilst for transport and underground storage it will be of the "revenue cap" type. The tariffs calculated this way fully cover all costs, including the environment and long-term investment ones. As for environment costs, licensed economic agents in the field of natural gas have the possibility to make environment provisions, recognized, within the tariff calculation process, as an element of the capital costs.

The capitalization price of the domestic natural gas production will gradually increase, in such a way as to be aligned to the import one in 2007.

### 3.2.4. Market regulation and supervision

*The National Energy Regulation Agency (NERA) is an autonomous public institution financed exclusively of its own extra-budgetary revenues. The ANRE has the role of creating and applying the regulation system necessary to the operation of the power market within an efficient, competitive and transparent process in such a way as to protect the consumer. The ANRE has the competencies of a regulating authority stated by the Directive no. 2003/54/CE concerning the domestic power market.*

Romania opted for a regulated access to the network with the use tariffs being set by the ANRE and applied, in a transparent and non-discriminatory manner, to all users of the transport and distribution network. The activities within the power sector – products, transport, distribution, supply and dispatching – are legally separated and are carried out on the basis of the licenses issued by the ANRE.

*The National Natural Gas Regulation Agency (NNGRN) was created for the regulation and supervision of the domestic natural gas market, in order to set stable and transparent rules that would encourage the trade activity and protect the public interest.*

*The Romanian Agency for Energy Preservation (RAEP) is a specialized national organ, with institutional, financial and organizational autonomy, under the subordination of the Ministry of Economy and Commerce, financed out of its own funds and out of contributions from the state budget. The ARCE has the task to implement the national policy on the efficient use of energy and to promote regenerating energy resources, taking into consideration the aspects related to the environment and to the principles the lie at the basis of sustained development.*

*The National Agency for Radioactive Wastes (NARW) was set up in 2003, with the aim of safely managing the used nuclear fuel and radioactive wastes, including the final storage.*

*The National Commission on Nuclear Activities Control (NCNAC) is the national authority for the control of nuclear activities.*

#### **Key issues**

- The rehabilitation/revamping of the high wear-and-tear power capacities or of those that use outdated technologies, or the closedown of the non-profitable ones; the promotion of private investments in new production capacities based on cogeneration and regenerating resources;
- The lack of the internalization of environment costs, and of the dismantling of the installations and of “green” certificates;
- The high costs of the environment production measures for most steam power plants as compared to the EU requirements;
- The need to save energy by decreasing the energy intensity at the level of the EU countries and, implicitly, to increase the energy efficiency for the entire natural resources chain – production, distribution, transport, final use of power and thermal energy;
- Relatively low energy efficiency;
- A continuous low capitalization degree of regenerating resources (solar energy, biomass and Wind energy);
- Huge losses within the oil and natural gas, power and thermal energy transport and distribution networks, the access to funds in order to carry out the above;
- The need to increase the interconnection capacity of the oil, natural gas and power transport networks with those in the European Union;
- High energy intensiveness (especially due to the national economy structure);
- Increasing dependence on energy resources imports.

### **3.3. Environment protection**

#### **3.3.1. General characteristics of Romania's environment**

The central axis for Romania's environment policies is represented by the provision of a clean environment for the health of its inhabitants, the interruption of the vicious circle of poverty and environment damage, the provision of a regenerating and innovative economic increase, for the sake of current and future generations, and by the harmonization of the specific environment legislation to the one of the European Union.

The protection of the environment represents a basic component of the sustained development, this relationship being bi-univocal. The issue of the environment protection within the context of the sustained development is focused, in Romania, on combating the pollution phenomena that are inherent to several current activities, on preventing possible damages, and on assimilating, adapting and applying the environment requirements for the integration into the EU. It is also focused on the carrying-out of joint international projects for the capitalization of the Danube and Black Sea potential, in order to protect biodiversity and marsh areas, on monitoring the quality of waters and the state of forests, and of global ecological phenomena effects, on solving current issues such as waste decrease and capitalization and agricultural ecology, on promoting clean technologies and on transforming establishments into sustained localities.

Just like in other countries, the quality of the environment factors is affected in almost all economic activities, in addition to being affected by the trans-border pollution. The data on the quality of environment protection resulted from the monitoring network that belongs to the Ministry of Environment and Water Management shows a slight improvement of the quality of the environment due to the decrease of economic activities and to the revamping and modernization programs carried out at the level of several industrial facilities, as well as due to the activities undertaken by the Environment Protection Agencies and Environment Guard (increase of the number of controls of economic agents whose activity has an impact on the quality of the environment).

Environment indicators in Romania are not comparable to the ones in the EU, which implies a higher need for investments in order for Romania to align to the EU level. Romania's current economic situation does not provide sufficient resources for the re-stabilization of the environment factors. Privatization and attraction of foreign capital, under advantageous conditions, may represent ecological reconstruction solutions.

#### **3.3.2. Atmosphere protection**

Given that the atmosphere is the widest and the most unpredictable pollutant spreading vector, whose effects are felt directly and indirectly by humans and by the other environment components, it is necessary for the prevention of atmosphere pollution to become a matter of public, national and international interest. Air pollution is due to several causes, some of them being the result of human activities, other of natural area and climate conditions.

#### **Climate changes and greenhouse effect gas emissions**

Romania is the first country included in the Annex I (developed and transition countries) of the UN Framework Convention on Climate Changes (UNFCCC) that ratified the Kyoto Protocol within the UNFCCC, being committed to diminish the greenhouse effect gases (GHG) by 8% during the first part of the commitment (2008-2012) as compared to the starting year (1989).

Romania's total greenhouse gases (GHG) (without taking absorptions into account), calculated in equivalent CO<sub>2</sub>, decreased, as compared to the starting year, by 48% during the period 1989-2002, whilst net GHG emissions (taking into account the CO<sub>2</sub> absorption) decreased by approximately 52% for the same period, in accordance with the latest 2002 GHG National Inventory, sent to the UN Convention Secretariat on Climate Changes in May 2004. The decrease of CO<sub>2</sub> emissions is especially due to the quantities of burnt fuels in the energy sector (especially in power and thermal energy production sectors, and in the treatment and construction materials industry).

This GHG significant decrease is mainly due to the decrease of the industrial production, and not so much to the decrease policies and measures; it is highly likely for Romania to fulfil its commitment to decrease GHG emissions during the first part of the commitment, as stated in the Kyoto Protocol.

### Gas emissions with acidifying effect

Acidification represents an important environment concern all over Europe, and its solution requires coordinated initiatives in the affected sectors. Romania is gradually aligned to the environment community acquis - through concrete implementation measures undertaken by each operator, such as decrease programs for SO<sub>2</sub> and NO<sub>x</sub> emissions, resulted from large steam power plants, as well as from other activities (refining, petro-chemistry etc.)

Environment acidification is mainly the result of three pollutants: sulphur dioxide, nitrogen and ammonia dioxide, as well as of their synergic effects.

Romania ratified the Convention on long-distance trans-border air pollution, as well as the three Convention protocols concerning the reduction of acidification, eutrophic and tropospheric ozone level, heavy metals and persistent organic pollutants.

SO<sub>2</sub> emissions underwent a continuous decrease during the period 1995-2002, but starting with 2003 there has been an increase as compared to previous years. The main impurity sources with SO<sub>2</sub> are represented by the burning process of the energy production activity and transformation industries (with a contribution of approx. 75.73% in 2003). The decrease of SO<sub>2</sub> emissions was due both to the closedown or reduced capacity of several industrial facilities and to the decrease of the sulphur content of fuels used in power and thermal energy production activities. The decrease of SO<sub>2</sub> emissions will also continue through the introduction, on January 1<sup>st</sup>, 2007, of the obligation for economic agents that use liquid fuels to use black oil with a sulphur content of less than 1% exclusively.

### Evolution of acidifying effect gas level

- thousand tons-

	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Threshold 2010
SO <sub>2</sub>	1,311	1,085	1,050	1,044	795	728	759	834	781	803	960	918
NO <sub>x</sub>	546	407	400	398	314	262	296	330	357	325	326	437
NH <sub>3</sub>	300	234	197	211	196	210	206	164	156	182	135	210

Source: National Institute of Statistics

NO<sub>x</sub> emissions underwent a continuous decrease during the period 1995-2000, from a level of about 407 thousand tons in 1995 to about 296 thousand tons in 2000. Beginning with 2001, NO<sub>x</sub> emissions have recorded a significant increase, reaching 326 thousand tons in 2004. The main emission sources were represented by the burning processes in the energy and transformation industries (about 39.24%), by road traffic (about 31.58%) and by the treatment industry (approx. 11.39%).

Ammonia emissions were relatively constant during the period 1995-2000, around the figure of 200 thousand tons per year; subsequently, they significantly decreased up to approximately 135 thousand tons in 2004. Animal faeces and nitrogenous chemical fertilizers used in agriculture represent the main source (about 80.26%).

### Heavy metals emissions

This category of pollutants has various industrial processes as a main source; as far as lead is concerned, there is also the pollution caused by exhaust gas resulted from internal combustion motors with sparkle ignition. During the period 1998 – 2003, there was a non-uniform decrease of heavy metal emissions, due to the installation revamping process. The prognosis for 2004 shows a slight increase in heavy metals emissions, i.e. a 32% increase for Hg, 5.6% for Cd and 54.6% for Pb, caused by the significant road traffic increase and by the re-opening of new activities and/or the increase of several production activities.

#### Heavy metal emissions

	1998	1999	2000	2001	2002	2003	2004
Hg	7,580	6,863	6,560	7,080	6,836	4,525	6,657
Cd	11,158	11,483	8,200	6,901	7,498	3,736	3,958
Pb	440,160	380,069	361,478	436,644	485,448	229,177	504,658

Source: National Research and Development Institute for Environment Protection (ICIM)

### Air quality in the most polluted localities

The evolution of the impurity of the atmosphere for the period 1995–2004 was analyzed for each and every pollutant, taking into consideration the variation of the annual exceeding frequency of the sanitary norm.

As for the time variation of the annual exceeding frequency of the sanitary norm for 24 hours for *ammonia*, in three of the most polluted localities in the country (Râureni, Săvinești and Târgu Mureș) there was a significant decrease of exceeding frequencies in the case of Săvinești, from 11% in 1996 to 0% in 2003 and in the case of Râureni, from 9% in 1996 to 1.76% in 2003.

In three of the country's most polluted localities, Arad, Baia Mare and Copșa Mică, as far as the time variation of the annual exceeding frequency of the sanitary norm for 24 hours for *suspension dusts* is concerned, there was a decrease in the exceeding frequency in Baia Mare, from 28.6% in 1997 to 0% in 2003, as well as a significant increase in Arad, during the period 1997- 2003.

Suspension dusts (with diameters lower than 20 μm, having in the atmosphere a behaviour that resembles gases) and sedimentation ones (with diameters higher than 20 μm, which, following their release into the atmosphere, set on the soil, vegetation, water and constructions) are the main pollutants in our country for which the exceeding of maximum authorized concentrations is significant for various mediation timeframes. The level of the suspension or sedimentation dusts pollution continues to be high on the country's territory; in many monitored localities, the maximum authorized concentration is exceeded (both daily and annually). Dust pollution has several sources: metallurgical and ferrous metallurgical industries that release significant dust quantities into the atmosphere, steam power plants based on solid fuels, cement factories, road transport, and dumps and adde warehouses etc.

### 3.3.3. Quality of water resources

#### Water resources

The evaluation of Romania's water resources potential must take into consideration the specificity of the geographical position, the relief, climate, soil and vegetation, i.e.: the Danube River which accounts for over 62% of the water resources potential is located, for the most part, on Romania's boundary; this is why only about 30 billion m<sup>3</sup>/year can be economically used. The inner hydrographical network (the most accessible ones for various uses) is not uniformly distributed across the country's territory.

Romania has all types of fresh water resources (rivers, natural and artificial lakes, the Danube River and underground waters). The largest water resource is represented by the Danube and the inner rivers. Natural lakes, despite being numerous (3,450), have an insignificant contribution to the amount of water resources in Romania.

Romania's specific usable resources are of 2,660m<sup>3</sup>/inhabitant/year, as compared to the European average of 4,000m<sup>3</sup>/inhabitant/year. The theoretic specific resources of about 1,770m<sup>3</sup>/inhabitant/year, taking into consideration only the contribution of inner rivers, place Romania, from this point of view, in the category of countries with relatively low water resources, being ranked the 9<sup>th</sup> among European countries.

The available water resources on Romania's territory are strongly influenced, both quantitatively and qualitatively, by human actions: on the one hand, through the absorption that is close to the socio-economic resources limit (the Argeş hydro-graphic basin) and, on the other hand, through the significant pollution process (the Tur, Lăpuş, Cavnic, Arieş, Târnava, Cibin, Dâmboviţa, Vaslui, and Jijia rivers). The limitations set on the use of water resources also results from other causes, such as water resource transportation, which arise many technical and economic difficulties; this is why they are considered as regional resources, as it is impossible to create a national interconnected system thereof.

#### Use of water resources in 2004

Activity	Water demand (billion m <sup>3</sup> )	Water absorption (billion m <sup>3</sup> )	Use degree (%)
Population	1.42	1.21	85.2
Industry	4.62	3.93	85.1
Agriculture	1.98	0.71	35.9
Total	8.02	5.85	72.9

Source: "Romanian Waters" National Administration – "Situation of Romania's water quality in 2005"

*Situation of inner rivers.* Romania's main water resource is represented by its rivers. River water resources still do not have a uniform distribution in time, having important seasonal and spatial variations, as they vary depending on the altitude.

In 2004, the global quality of surface flowing waters, assessed in accordance with the situation of the 1<sup>st</sup> category, 633 surveillance sections had the following distribution: class I<sup>23</sup> (7.9 %); class II<sup>24</sup> (35.2 %); class III<sup>25</sup> (33.2 %); class IV<sup>26</sup> (16.4 %) and class V<sup>27</sup> (7.3%).

<sup>23</sup> Class I: includes waters in a good ecological state.

<sup>24</sup> Class II: includes surface waters in a good ecological state.

<sup>25</sup> Class III: includes waters in a moderated ecological state.

<sup>26</sup> Class IV: includes waters in a poor ecological state.

<sup>27</sup> Class V: includes degraded waters.

During the past years, there has been an improvement, especially due to the investments carried out by industrial operators, to the firm application of the legal provisions into force concerning the quality of waters, as well as to the decrease or halt of the activity of several highly pollutant economic facilities.

In general, the highest quota of the pollution potential, in the case of focus pollution sources, belongs to communal industrial units, to the chemical industry and to animal breeding. Economic agents within the extraction and metallurgical industries hold the following quotas.

*Flooding.* The flood occurrence frequency and their magnitude have increased, due to climate changes and to the occupation of riverbeds by unauthorized constructions and by unauthorized deforestations. From the point of view of flood vulnerability, the most affected areas are the ones of the following basins: the two Criş, Someş, Mureş, Târnave, Timiş, Olt, and Argeş. Taking into consideration the high number of deaths of the past decade, as well as the significant material damages (affected households and annexes, flooded lands, socio-economic objectives, roads, bridges etc.), whose value amounts to €1.4 billion (out of which €200 million only in 2005), one of the major concerns for the upcoming period is represented by prevention and protection against hydrological disasters.

*State of the Danube River.* The Danube, the second longest river in Europe, with a length of 2,850km, out of which 1,075km on Romania's territory, has a medium country entrance stock of 174 billion m<sup>3</sup>. The state of the Danube's water quality, assessed on the basis of the information gathered within 11 control sections, corresponds to the Class I conditions in all surveillance sections. But note is to be taken of the fact that 84% of the nitrogen content and 73% of the phosphorus content of the Danube waters are caused by uphill countries.

*State of sea and coastal waters.* Due to the out flow of the River Danube waters, the wind and sea currents, the ecological factors in the Romanian seaside area have important seasonal variations. Following the alluvia deficit and the decrease of the Danube contributions, beaches undergo a rapid erosion process. In the Romanian seaside area, the Black Sea is subject to a pollution process, following the pollutants resulted from the Danube, purified and non-purified wastewater direct evacuations, as well as through the intense port activity. The pollution sources of the Romanian sector of the Black Sea are: the Năvodari Industrial Platform and insufficiently purified industrial and household wastewaters resulted from the treatment stations of Constanţa and Mangalia. The evolution of the past three years, resulted from the analysis of the inter-relations between ecological factors and from the main groups of aquatic organisms, shows a slight improvement, especially as far as the level of the zoo-plankton basis is concerned.

### **Situation of waste waters**

The statistical analysis of the situation of the main wastewater sources, in 2004, showed the fact that out of the total evicted volume of 3,854.16 million m<sup>3</sup>/year, 2,098.71 million m<sup>3</sup>/year (54.5 %) is wastewaters to be treated.

Out of the total volume of waste waters that need to be treated, approximately 28.8% are effectively treated, approximately 29.3% are not treated and approximately 42% are partially treated. Consequently, in 2004, approximately 71% of waste waters were discharged into rivers or the sea in an unsatisfactory state.

The highest volume of wastewaters, including cooling water, was discharged by operators from power stations and thermal energy plants (over 49% of the total), communal industrial facilities (over 39%); chemical treatment (approx. 4%), extraction and metallurgical industry, and animal breeding establishments. The large urban centres are the biggest surface water pollutants with organic

substances, suspensions, mineral substances, ammonia, fat, cyanides, phenols, detergents and heavy metals.

Out of the total number of 1,359 treatment plants and storage installations investigated in 2004, 555 plants, accounting for about 40.8%, functioned properly, whilst the rest of the plants, i.e. 804, accounting for 59.2%, functioned improperly.

Out of the 2,609 urban centres of over 2,000 equivalent inhabitants, 340 urban centres have been identified as having treatment plants. Taking into account the environment protection issues and its geographical position in the Danube basin and the Black Sea, Romania qualified its entire territory as a sensitive area, which implies that every urban centre of more than 10,000 equivalent inhabitants have high degree treatment plants, i.e. the tertiary stage.

### Technical-public infrastructure

**Public drinking water supply system.** In Romania, out of the total population of 21.7 million inhabitants, 14.7 million people (68%) benefit from drinking water from the public network, of which 11.3 in urban areas (98% of the urban population) and 3.4 million in rural areas (33% of the rural population).

2,915 localities currently have centralized drinking water distribution systems, of which 268 towns and cities (100%) and 2,647 rural localities, accounting for 17% of their total.

Drinking water distribution systems have a total length of 40,269 km, covering 71% of the total street length in urban areas. The drinking water supply network has continuously expanded (in 2002, the network was 20.1% larger as compared to 1995).

The annual drinking water quantity distributed out to consumers amounts to approximately 1,350 million m<sup>3</sup>, out of which 811 million m<sup>3</sup> for household use. For the past ten years, there has been a decrease in the total water distributed in the network, mainly due to the metering and reduction of industrial activities.

**Sewerage network.** By the end of 2004, the number of localities with public sewerage networks was of 675. The sewerage network has a total length of 17,514 km, out of which 16,397 km in urban areas. As compared to the streets that benefit from water sewerage pipelines, only 73% of these also have sewerage networks.

### Evolution of the sewerage network

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Network simple length (km)	15,199	15,291	15,502	16,012	16,080	16,348	16,590	16,812	17,183	17,514
Number of localities	607	616	619	636	654	674	682	679	664	675

Source: National Institute of Statistics

In the 263 treatment plants of city wastewaters in Romania, only 77% of the total debit evicted through public sewerage networks is treated; 47 urban localities (among which: Bucharest, Craiova, Drobeta-Turnu-Severin, Brăila, Galați, and Tulcea) release wastewaters without undergoing previous purification.

The population that benefits from the sewerage service is of about 11.5 million inhabitants, out of which 10.3 million inhabitants in urban areas (accounting for 90% of the urban populations), i.e. 1.15 million inhabitants in rural areas (10% of the rural population).

Following a correlation of the two city equipments – drinking water distribution and sewerage – the country's population can be grouped into three large categories:

- Population that benefits from both services - 52%;
- Population that only benefits from water supply, without the sewerage network - 16%;
- Population that benefits neither from water supply nor from the sewerage network - 32%.

The chemical quality of the water distributed through the public supply systems, characterized by the general drinking indicators, was determined through analyses carried out in order to see the amount of toxic substances in the water (4% having higher values than the allowed concentrations), the chemical consumption of oxygen (5% having higher values than the allowed concentrations), ammonia (5% inappropriate values) and nitrates (3% inappropriate results). Consequently, the supervision of the drinking water was efficient from the point of view of the microbiological safety.

As far as the quality of the released water is concerned, note is to be taken of the fact that over 89% of the non-purified wastewaters result from the sewerage systems of localities. It can be noted that, for the past years, the situation of the operation of pre-purification and purification facilities has undergone no significant general improvement, but locally there are several progresses following several projects that benefit from foreign financing (from international financial institutions, PHARE and ISPA funds, Sapard).

#### 3.3.4. Soil pollution

Out of Romania's total surface of 23,839.1 km<sup>2</sup>, the largest part is represented by agricultural lands (61.71%), followed by forests and other forest vegetation lands (28.44%). Other types of lands occupy 10.85% of the country's surface (waters, pools, yards, constructions, means of communication, unproductive lands).

There is an increasing aridity trend of Romania's soils. For the past 25 years, the drought frequency has increased by 15%; in addition, the duration of the drought has also undergone an increase. **Drought** is manifested on 7.1 million ha, (of the 14.8 million ha of agricultural land), as well as on a large part of the 3.2 million ha that had previously benefited from irrigation works.

About one third of Romania's agricultural surface is affected by severe drought, which means that of the following one hundred years, more than 40 years will be affected by this phenomenon. Romania is periodically affected by extended droughts, such as those during the period 2000-2004, when the soil temporary humidity recorded in some areas (especially in southern and south-eastern regions) values that met the withering quotient and below.

Romania signed the Convention on the Prevention of Barrenness ratified through Act no. 629/1997. The country has elaborated *the National Strategy and the Action Program on the Prevention of Barrenness, Land Degradation and Drought*; it also created and is currently carrying out the *National Soil Monitoring System*.

**The chemical pollution of soils** is manifested in specific centres, affecting about 0.9 million ha, out of which about 0.2 million ha are affected by excessive pollution. Pollution with heavy metals and sulphur dioxide is identified especially in the Baia Mare, Zlatna, and Copşa Mică areas. Despite the fact that,

during the past years, a series of industrial facilities was closed down, whilst others cut down their activity, soil pollution is high in highly affected areas.

Pollution with oil and salt water resulting from oil wells and transport activities affects approx. 50 thousand ha; despite the fact that the affected surface has decreased for the past years, pollution continues to have a significant impact on soils.

**The inappropriate management of wastes** resulted from agriculture, mining, industry, constructions, energy production, food industry, metallurgy, chemical industry and other economic activities, as well as from household activities, leads to numerous soil contamination cases with:

- Mining adde, ashes, slag, oil refining wastes, construction and demolition wastes, agricultural wastes, foods, wood and paper treatment wastes;
- Sludge from urban wastewater purification processes and mining sludge, industry purification sludge, wood treatment and paper production sludge, food industry and thermal processes sludge.

The lands occupied by waste storage facilities are considered degraded lands. In Romania, more than 12,000 ha of land are currently affected by household or industrial waste storage. A map of the areas that are vulnerable to sludge pollution was elaborated in accordance with the Sewerage Sludge Directive.

With reference to the **soil ecological reconstruction**, measures have been taken such as: the inventory of contaminated and degraded lands, as well as of lands with other deficiencies, the elaboration of good agricultural practices recommendations, aimed at preserving and improving the quality of agricultural lands, in total agreement with international practices; the scientific elaboration of dump re-cultivation out of current mines; experiments on the detoxification of oil, oil products and oil waste polluted soils through bio-remedy actions, and the technical-scientific elaboration of the de-pollution of polluted soils with mineral oils and polychlorobiphenols (PCB) resulting from the Transelectrica S.A. facilities.

It is estimated that, in order to redo the quality of agricultural soils, as well as to ecologically rebuild certain sites, it is necessary to make a financial effort of about €20.7 million for a period of 15-25 years.

As for the risk of earthquakes, two thirds of Romania's surface is affected by the Vrancea sub-layered source – with the highest seismic potential – whilst 90% of Romania's territory is affected by layer sources, spread across the entire surface. Layer sources generally generate less disastrous earthquakes. There have also been areas strongly affected by such earthquakes – Timișoara, Moldova Nouă, Făgăraș and the Călărași–Sadla area. The most disastrous earthquake in Romania was the one of March 4<sup>th</sup>, 1977, resulting in over 1,500 deaths, out of which 1,424 in Bucharest, in 11,000 injured people and in the collapse of 32 buildings.

### **3.3.5. Waste management**

One of the most serious issues related to environment protection in Romania is the one of large amounts of wastes and their inappropriate management. The economic development of the past years, the production and consumption increase, as well as the existence of outdated industry technologies and installations that consume excessive quantities of energy and materials, have annually lead to numerous cases of soil and underground and surface water contamination, threatening the health of the population.

Waste management aims at all waste collection, transport, recovery and elimination activities. Romania's data on waste management make the difference between two important waste categories, i.e.:

- Urban wastes resulted from households, institutions, trade units, service-providing units (household wastes), street wastes, construction and demolition wastes, sludge from urban wastewaters treatment;
- Production wastes.

During the period 1998 – 2003, the ratio between the two categories has had annual variations, the average being of about 29% of urban wastes and 71% of production wastes.

### Generated wastes structure

	1998	1999	2000	2001	2002	2003
Urban wastes	6.77	8.07	8.96	8.82	9.58	8.43
Production wastes <sup>28</sup>	22	17	18	22.25	24.5	30.54

- million tons -

Source: National Institute of Statistics, Results of the pilot waste statistic study, November 2004

### Urban wastes

In urban areas, the urban waste management is carried out in an organized manner, through specialized services owned by city halls or sanitation companies. The percentage of the urban population that benefits from sanitation services increased from 73% in 1998 to about 90% in 2002-2003.

In rural areas, there are no organized waste management services, as transportation to storage areas is carried out the individuals themselves. Only a small number of rural localities, especially those in the vicinity of urban centres, benefited from organized waste management services. In 2003, approximately 5% of the rural population benefited from sanitation services.

The amount of generated urban wastes varies on an annual basis; for the past 6 years, there has been a general increase tendency, determined both by the population consumption increase and by the increase of the number of people that benefited from communal management services.

The total amount of urban wastes generated in 2003 was estimated at 8.43 million tons, out of which the amount of urban wastes was of 7.63 million tons (of which only 6.06 million tons – collected by sanitation services), the rest being made up of sludge from purification facilities (6%), construction/demolition wastes (3%) and other wastes (1%). Of the generated urban wastes, approximately 20% is not collected.

The average generation index for household wastes in urban areas is of 1.04 kg/inhabitant/day, whilst in rural areas it is of 0.15 kg/inhabitant/day. The average estimated percentage composition of household wastes in 2003 is as follows: paper and cardboard (11%), glass (5%), metals (4%), plastic materials (10%), textiles (5%), organic wastes (51%) and others (14%).

Household wastes are collected in a non-selective manner (there are only a few pilot projects) and they are eliminated through storage (in urban wastes storage facilities). That is why about 18% of urban wastes, represented by uncontaminated recyclable materials (paper, cardboard, glass, plastic materials, metals) is not recovered, but eliminated through final storage, together with the other urban wastes.

<sup>28</sup> The data in the table do not include the amount of wastes resulted from the extraction industry.

Out of the total urban wastes, approximately 40% of urban waste components is represented by recyclable materials, out of which about 20% can be recovered, as it is not contaminated. Following the selective collection through pilot projects, only 2% of the total amount of generated recyclable materials is capitalized. The rest is eliminated through storage, thus losing large amounts of secondary raw materials and energy resources.

During the past years, private economic agents have initiated several collection measures for cardboard and PETs. Several localities have resumed the setting of “collection points” where the population can submit (with or without payment) waste paper, cardboard, glass, and plastic. In Romania, there are authorized institutions in the glass, paper, cardboard and plastic masses industries, which started taking over these wastes from collection points, in order to recycle and/or capitalize them. In some cities, there have been pilot pressing facilities for biodegradable wastes.

Storage represents the main form of urban waste elimination. In Romania, there are 267 waste storage facilities in urban areas (which have wastes collected by sanitation companies in urban areas), of which:

- 16 storage facilities are or will be in accordance with European norms by December 31<sup>st</sup>, 2006;
- 238 storage facilities are not in accordance with the related European requirements and they will gradually close down until 2017;
- 13 storage facilities stopped their activity during the period 2003-2004, whilst closedown projects have been elaborated and carried out for them.

## **Production wastes**

Production wastes are represented by industrial and agricultural wastes, including those resulted from energy production. The organization of the production wastes management activity is the obligation of the generator, through its own means or by contracting the services of specialized companies. There are currently very few companies whose object of activity is the management of production wastes, and the services they provide are limited, both from the point of view of the type of wastes and of the working capacities.

In 2003, the amount of generated wastes from mining and industry was of 370 million tons, out of which the largest part (90%) is represented by wastes resulted from extraction activities (mining) – 331 million tons, while 30.5 million tons are industry and agriculture production wastes.

The economic activities that generated the largest amounts of wastes in 2003, except for the extraction industry, were the petro-chemical and chemical industries, the rubber and plastic masses industry (27%), metallurgy and metal constructions (17%), energy (13%), food industry, beverages, tobacco (10%), and other economic activities (33%).

The large waste generating industrial branches are the energy industry, the chemical and petro-chemical industry, the metallurgical industry and the food one. Out of the amount of generated production wastes, approx. 30% is recovered, the rest being eliminated through storage or incineration.

The production wastes storage facilities that comply with the provisions of the Directive no. 1999/31/EC concerning waste storage were re-inventoried at the beginning of 2004, resulting in a total number of 169 storage facilities occupying a surface of about 3,000 ha<sup>29</sup>.

By definition, **dangerous wastes** have the highest potential impact on the environment and on the health of the population. Taking into account their specific properties (e.g. combustibility, corrosiveness,

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<sup>29</sup> Source: Implementation plan for the Directive no. 1999/31/CE concerning waste storage.

toxicity), it is necessary for dangerous waste management activities be approached in a rigorous manner.

The main types of dangerous wastes reported in 2003, including in the mining industry, resulted from extraction activities (1,905 million tons), the chemical industry (0.158 million tons), metallurgy and metal constructions (0.126 million tons) and from the petro-chemical industry (0.77 million tons).

Most dangerous wastes (88%) were eliminated through storage, co-incineration or incineration in the generators' own installations. For the 169 production wastes storage facilities, the situation stands as follows: 51 are dangerous, 116 are not dangerous and 2 are inert.

**Medical wastes.** The medical wastes management is currently regulated by the Order of the Ministry of Health and Family no. 219/2002 which approves the Technical norms concerning medical wastes and the Data collection methodology for the national database. Out of the total amount of sanitary wastes, 75–90% is non-dangerous wastes that can be assimilated to the household ones, and only 10–25% is dangerous wastes.

Dangerous medical wastes are eliminated through crematories, direct incinerations and thermal treatment installations. The final elimination of dangerous medical in 2003 was carried out as follows: 76% of sanitary units used their own crematory for final elimination purposes, 13% used the crematory of another facility, 7.5% burnt dangerous wastes in improvised or open air installations, whilst 6% carried out the final elimination of the wastes in incinerators, as compared to 3.54% in 2002.

In accordance with the negotiation commitments undertaken in Chapter 22 “Environment protection”, all crematories in Romania must be closed down until December 31<sup>st</sup>, 2008, and replaced with thermal sterilization installations.

### 3.3.6. Biodiversity

Romania's bio-geographical space includes, in a relatively equal percentage, the three geographical units – plains, hills and mountains, with a larger diversity of pedo-climate and hydrological conditions. These conditions lead to the differentiation of a number of about 52 eco-regions, corresponding to the ecosystems specific for coast and Black Sea seaside areas, steppe and forest-steppe areas, hill, mountain, lake, streams and valley areas, droughty or humid areas, including those specific for the Danube Delta.

As a consequence of its geographical position, Romania is a highly diverse country from the biological point of view, both for ecosystems and for species.

**Natural habitats, wild flora and fauna species.** Romania's natural and semi-natural ecosystems account for approximately 47% of the country's surface. Following the studies carried out through the Program CORINE Biotops, 783 types of habitat were identified and characterized (13 coast habitats, 89 humid areas habitats, 196 pasture habitats, 206 forest habitats, 54 swamp habitats, 90 rocky/sandy habitats and 135 agricultural habitats) in 261 areas analyzed country-wide. In addition, 44 areas of avifauna were identified, with a total surface of 6,557 km<sup>2</sup>, accounting for 3% of the country's surface. The high degree of the habitat diversity also reflects a high degree of the fauna and flora diversity.

In order to carry out the inventory of natural habitats and wild species, Romania used two BIMS (Biodiversity Information Management System) databases and EMERALD (established under the Bern Convention), the latter being comparable to NATURE 2000.

**Situation of protected natural areas.** In Romania, there are 12 National Parks (Semenic-Cheile Caraşului, Căliman, Ceahlău, Cheile Bicazului – Hăşmaş, Cheile Nerei – Beuşniţa, Cozia, Domogled-Valea Cernei, Munţii Măcinului, Piatra Craiului, Retezat, Rodna, and Buila-Vânturariţa) and 13 Natural Parks (Balta Mică a Brăilei, Grădiştea Muncelului – Cioclovina, Porţile de Fier, Apuseni, Bucegi, Vânători Neamţ, Munţii Maramureşului, Putna-Vrancea, Lunca Joasă a Prutului Inferior, Comana, Geoparcul Dinozaurilor Ţara Haţegului, Platoul Mehedinţi, and Lunca Mureşului), added to by the Danube Delta Biosphere Reservation. The total surface of national parks, natural parks and biosphere reservations is of 1,655,333 ha (121,779 ha of maritime surface), which accounts for 6.43% of the country's land surface. In addition to national parks, natural parks and biosphere reservations, there are 800 scientific reservations, nature monuments and natural reservations, whose total service is yet to be established, but it is estimated to approximately 169,000 ha. Consequently, the land surface of natural protected areas covered 6.89% of the country's land surface at the end of 2004, with an estimated 15% increase until 2013.

Out of the national network of protected natural areas, the Danube Delta stands out, both from the point of view of the surface and of the degree of biological diversity, as it has a triple international status: Biosphere Reservation, Ramsar Site (humid area of worldwide importance), and Natural and Cultural World Heritage. Due to the favourable preservation state of ecological systems and Danube Delta species, the Council of Europe awarded this reservation with the European Diploma.

Another initiated activity is the identification of protected areas and of other landscape components that meet the criteria required to be included in the Nature 2000 European protected areas network. Within the existent protected areas network in Romania, 21 Special Avi-fauna Protection Areas have been identified as complying with the criteria required for them to be included in the Nature 2000 network.

**The national standing crop** in 2004 had a surface of 6,382.2 thousand ha, added to by approximately 320 thousand ha of woody vegetation lands (woodland pastures, alignments, etc.), accounting for 26.7% of the country's surface.

The total surface of the strictly protected standing crop located in the special preservation areas of national parks, national parks and in the scientific reservations of the Danube Delta Biosphere Reservation is of 123,349 ha which, as compared to the total surface of the standing crop, accounts for 1.94%. Taking into consideration the other types of reservations as well, the result is that 2.2% of the standing crop is strictly protected.

**Situation of the marine environment and of the coast area.** The Black Sea has a surface of 413,490km<sup>2</sup>, a maximum depth of 2,245m, a water volume of 529,955km<sup>3</sup> and a shore length of 4,020km. Numerous rivers with important debits flow into the Black Sea: the Danube, Nistru, Bug, Nipru, Rioni and Kizil-Irmak, which leads to a low salinity level (20-22‰). Out of the river contribution, assessed against 346km<sup>3</sup>, 78% is rivers in the north-western part of the basin, the largest volume being, obviously, that of the Danube.

For the past 10 years, there has been a slight improvement of the quality of marine waters due to the decrease of the activities carried out for the entire basin. About 1,500 vertebrate and non-vertebrate species have been identified in the Black Sea so far. Following the increase of the city and industrial pollution of the past two decades, there has been a decrease of the populations of several species of predatory fish, as well of several fish species of economic importance.

### 3.3.7. Impact of economic activities on the environment

**Industry** is the main pollution source of the environment through the extent of the technological process and of the large amount of substances released into the air and water. A series of industries spill waters with a high content of mainly inorganic wastes. The pressures on the soil quality mainly result from the mining and non-ferrous metallurgy activities. Thus, mine waters and coal washing facilities waters contain large amounts of magnesium, nickel, manganese salts and coal dust, whilst non-ferrous ores flotation units use large amounts of water that subsequently flow loaded with addle and lead, zinc, copper, and iron salts and even cyanides. Non-ferrous ores plants, steam power plants and atomic-electrical plants also evict waste-loaded waters.

**Natural non-regeneration resources** were and continue to be exploited and treated using technologies that lead to the intense pollution of several areas in the country. The amounts of non-regenerating raw material resources that are being extracted are below the needs of the national economy; thus, addition imports are a permanent practice in our country. The use of non-regenerating resources – minerals and fossil fuels, associated with the production of wastes, generated an impact on the environment and on human health.

In September 2003, the first elaboration exercise of the *Registrar of Pollutant Emissions into the environment for the activities regulated by the provisions of the IPPC Directive*. The analysis of the data received from economic agents, for the majority of the existent installations, lead to the following conclusions: technologies are outdated, they use poor quality raw materials, they have a high-energy consumption; in addition, technological processes result in large amounts of wastes. They also lack the possibility to monitor the emissions released into the air, they have large amounts of intermittent emissions, they lack an environment management system, they have low productivity and extended personnel and they lack contracts with third parties for maintenance services.

#### Activities and installations regulated by the IPPC Directive

Energetic industry	Metal production and treatment	Mineral industry	Chemical industry	Waste management	Other activities	Total installations	
12**	90	72	100	67+10*	203	544+10*	
						No transition period	Transition period
						219+10*	325

\* 10 waste storage facilities have been added to the 67 installations regulated by the IPPC Directive

\*\* Number does not include large burning installations with nominal thermal power equal to or higher than 50MW

Emissions of pollutants resulted from large combustion plants – plants and steam power plants with thermal power equal to or higher than 50 MW that mainly use fuels – have a special impact on the pollution of the environment. Following the national inventory of large combustion plants, the following conclusions have been reached: out of 174 large combustion plants (out of which: existent - 163 and new – 11), 7 comply with the requirements of the Directive no. 2001/80/CE, 157 do not comply with these requirements, whilst 10 are closed down or due to be closed down until the accession. Following the analysis of the 174 plants, Romania has requested transition periods in two stages, i.e. 1-6 years for 77 large combustion plants (2008-2013) and about 1-2 years for 6 large combustion plants (2016-2017).

Besides industry and agriculture, **transports** are another source of intense pollution, through the unreasonable placement of the means of communication and through the release into the atmosphere of exhaust gas. A serious pollution situation is represented by the spills of oil wastes into the sea. A major concern regarding road transport is represented by the sustained development and the decrease

of the negative effects on the environment, generated by chemical or phonic pollution. Consequently, the homologation and technical periodical inspection norms for vehicles have been aligned to the related EU provisions.

**Agriculture** contributes to the pollution of the environment through the high use of chemical fertilizers and pesticides. By means of flows down slopes, these substances reach lakes and streams and lead to the destruction of the flora and fauna. The unreasonable exploitation of the land and even irrigations, when they are carried out in an incorrect or exaggerated manner, may lead to soil damage and to the loss of certain surfaces within the agricultural circuit.

Thus, soil, water and air pollution, the fragmentation of habitats and the loss of wildlife may be the result of inappropriate agricultural practices. Despite this, the abandonment of agricultural activities may endanger the environment heritage through the loss of semi-natural habitats and of the biodiversity, as well as of the related landscape.

**Tourism.** In order to prevent the negative impact of tourist activities on the environment, we have identified the areas where the pressure of tourism in the high-peak season may exceed the existing capacity. Thus, for sea resorts (Eforie, Mangalia etc.), the population triples during the summer season, whilst it almost doubles in spa or mountainous resorts; thus, significant pressure is put on the environment, through the increase of the amount of wastewater, of road traffic and, implicitly, of vehicle emissions and noise levels. In mountainous tourist resorts (Prahova Valley) the situation is identical and is added to by the issue of parking lots, as high road traffic blocks the life of local communities.

In order to temper environment stress factors, central and local public administrations have adopted a series of measures, such as: road traffic regulation and dispersion (high fees for car access to sea resorts, direction of the traffic on access ways that do not cross resorts and high tourist concentration areas, etc.), ensuring the appropriate waste management through the combination of the opportunities provided through EU programs and local opportunities, ensuring the additional requirements for drinking water distribution and the additional wastewater treatment equipment, as well as the increase of the surfaces allotted to the storage of solid wastes. All these put significant financial pressures on local budgets.

### **3.3.8. Institutional framework for environment protection**

*The Ministry of Environment and Water Management (MMGA)* is the specialized organ of the public central administration that is responsible for the elaboration and implementation of the legislation, policies and strategy concerning the environment and water management. MEWM is also an Implementing Authority for the ISPA Program – the environment component. With respect to the elaboration of the institutional framework for the management of structural and cohesion funds following the EU accession, MEWM was nominated as Managing Authority for the Sectoral Operational Program for the Environment Infrastructure, with the responsibility of managing, implementing and administering the community financial assistance allotted to this program.

MEWM coordinates the following public institutions that have responsibilities within the area of environment protection:

- *Environment Protection National Agency*, that locally and regionally coordinates the territorial environment public authorities from the technical point of view, also ensuring the necessary training process;
- *8 Regional environment agencies*, corresponding to the 8 development regions, whose role is to implement environment policies at the regional level;
- *42 local environment agencies*;
- *Administration of the Danube Delta Biosphere Reservation*.

The water management policy is implemented by the “Romanian Waters” National Administration, an institution under the authority of the MEWM. The “Romanian Waters” National Administration controls 11 water departments organized based on hydrographical basins.

*The National Meteorology Administration*, which is under the authority of the MEWM, has the role to collect and maintain the historical meteorological data and to protect the citizens’ welfare and general safety.

*The National Environment Guard*, organized under the coordination of the MEWM, has the role to supervise and systematically control the compliance with the legislation concerning the protection of the environment.

In order to support and carry out the priority projects for the protection of the environment, especially those aimed at the implementation of the community acquis, the *Environment Fund* was created of own funds as an economic-financial instrument. The institutional framework was provided through the set-up of the *Environment Fund Administration*, a public use legal entity institution under the coordination of the MEWM.

### 3.3.9. Environment costs and investments

Environment protection costs is the economic measure of the society’s reaction in order to approach the issues generated by the state of the environment within a given stage and include the costs incurred for the carrying-out of environment surveillance and protection activities, as well as those activities related to the prevention or repair of the damages caused hereto.

Judging from the data supplied by the National Institute of Statistics, environment costs at the national level have increased for the past years (2000–2003), even though the percentage of environment investments within the GDP continues to be low as compared to EU countries.

#### Costs evolution at the national level

- ROL million -

Sector	2000	2001	2002	2003
Air protection	1,850,267	3,527,528	3,588,859	3,735,232
Water protection	3,526,441	4,927,718	4,696,615	5,947,891
Waste management	2,515,519	4,001,149	11,924,045	15,830,031
Soil and underground water protection	415,914	491,187	4,597,133	1,441,452
Noise and vibrations	201,522	152,464	152,801	104,595
Biodiversity and landscape preservation	194,550	201,625	667,297	360,142
Other activities	99,015	692,107	1,607,527	1,075,691
<b>Total national costs</b>	<b>8,803,228</b>	<b>13,993,778</b>	<b>27,234,277</b>	<b>28,495,034</b>
<b>GDP percentage</b>	<b>1.10</b>	<b>1.20</b>	<b>1.80</b>	<b>1.50</b>

The main sources of finance for environment projects are the stage budget, local budgets, the Environment Fund, foreign credits (ERDB, EIB, WB) and EU-financed programs (PHARE, ISPA, SAPARD, LIFE).

During the period 2000-2005, 42 ISPA-financed projects were approved, 30 in relation to drinking water/wastewater, 6 in relation to the integrated waste management and 6 technical assistance programs. The total value of the approved projects reaches €1.457 billion, of which €1.071 billion out of ISPA grant.

Through the PHARE program (National, Economic and Social Cohesion, CBC) projects are being carried out concerning the protection of the environment, reaching a total value of €88.3 million. Within the LIFE community program, during the period 1999-2005, 11 LIFE environment projects and 25 LIFE Nature programs were contracted, reaching a total value of €16.27 million, of which €11.7 million out of community contributions.

#### **Key issues**

- The non-uniform distribution of Romania's water resources, both in time and space.
- Insufficient equipment for the water supply and sewerage systems.
- The critical operation situation of treatment plants.
- The existence of large amounts of wastes stored in urban and industrial landfills, which occupy large land surfaces. These are not taken care of or are inappropriately exploited, thus affecting the quality of the environment, especially of underground and surface waters.
- The insufficient number of waste landfills that serve transfer units of various capacities in order to render efficient the waste management and collection, transport and operation costs.
- Atmosphere pollution.
- The need to take preservation and biodiversity protection actions.

## 4. HUMAN CAPITAL

### 4.1. The structure of the Romanian education system

The Romanian Government embraced the strategic objectives for the educational and training systems, set out by the European Commission in 2002, at the European Council of Barcelona together with the decisions adopted at an European level within the „Bologna process”. This action has hastened reform of the Romanian education system and assisted restructuring. Amendments to Education Law no. 84/1995 in 2003 and 2004 and the legislation adopted in 2004 and 2005 relating to higher education have led to modifications in the structures, the extension of mandatory education from 8 to 10 grades and the reorganisation of university studies in three terms.

The education and basic training systems are structured on the following levels: pre-school education, mandatory education, higher secondary education, post-secondary education, higher education, post-graduate education. The changes in the structures of the Romanian education system were complemented by measures to increase the efficiency of the education system. In 2004 the amendment of Law no. 128/1997 improved the status teachers and emphasised the professional dimension of the work, empowered the educational unit director to introduce measures to aid recruitment, selection and employment and provide a basis for educational management contract signed with the general school inspector in each county.

#### 4.1.1. Pre-university education

Until 2003-2004, pre-university education comprised the mandatory 8 grade education, made up of primary education (ISCED 1<sup>30</sup>) and gymnasium/ lower secondary education (ISCED 2). In the same period, the higher secondary education (ISCED 3) comprised: 1) high school education with a duration of 4 years for day courses, organised in three main fields: general/ theoretic, technological and vocational (with three study profiles: technical, services, natural resources and environment protection) and 2) professional education organised through professional schools and disciple schools with a duration between 1 and 4 years. Post-high school education (ISCED 4) comprised post-high school education and masters' school with duration of 1 to 3 years. The qualification levels obtained through the pre-university education were: level 1 for the disciple school, level 2 for the professional school and level 3 for high school education, and post-high school education. The organisation of the ISCED 3 education level until 2001-2002 (inclusive) was facing difficulties with regard to the continuation of studies at a high school level by the graduates of professional/ vocational education, mainly because the requirement to sit an exam. Graduating from high school education with a baccalaureate diploma allowed them to continue their studies and move on to higher education.

The amendments to Education Law no. 84/1995 in 2003 and 2004 led to the following main evolution: the extension of the duration of mandatory education from 8 to 10 grades; the change in the funding system of pre-university education by enhancing the autonomy of educational units and the responsibilities of local authorities; an increase in the financing of state education from public funds from 4% of the GDP in 2001 to 6% of the GDP starting from 2007.

Currently ,, *mandatory education lasts for 10 years*, starting at the age of 6-7 years and includes primary education (grades 1-4, corresponding to ISCED 1) and lower secondary education (grades 5-10, corresponding to ISCED 2) organised in two cycles that come one after the other: gymnasium (grades 5-8) and 9th and 10th grades. Grades 9 and 10 are organised in educational routes: (i) the professional route that is organised institutionally in the art and craft school (that allows students to acquire the first level of qualification); (ii) the route institutionally organised through the lower cycle of high school.

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<sup>30</sup> According to the International Standard Classification for Education

Primary and secondary education is available to all children and teenagers, including ethnic minorities. The Government provides education in the mother tongue of the ethnic minority groups. The pre-university education system for ethnic minorities for the majority of children corresponds to the general the Romanian curriculum.

From the school year 2003-2004, the higher secondary education (ISCED 3) comprised of the 11th grade, as a year for completing the professional education (which is part of the professional route and allows the acquisition of the second level of qualification). The two years of study corresponding to the higher period at high school would be grades 11 and 12, even if they are the continuation of the lower high school cycle (grades 9 and 10) or grades 12 and 13, if they are the continuation of professional/ vocational education –being part of the professional route.

*High school education* is organised on three routes: general/ theoretic, technological (the technological route) and vocational. Vocational high schools offer education in the field of military studies, order and public security, theology, sport, arts and teaching. In theoretic and vocational high school, education lasts for 4 years. Technological high schools continue to offer the three fields of study: technical, services, natural resources and environment protection, and their duration can be 4 years (the technological route) and 5 years (the professional route).

*Professional/ vocational and technical education (TVET)* represents a part of the pre-university education system and it is organised on three educational levels: the lower cycle of high school (the last two years of study, part of the mandatory education, level 2 ISCED); higher cycle of high school (level 3 ISCED); post-high school education (level 4 ISCED).

In TVET, at the level of high school education there are two routes of training:

- The direct professional/vocational route (technological high school – 2 years in the lower high school system (the end of mandatory education) + 2 years of the higher system of high school education;
- The progressive professional route – School of Art and Craft (2 years) + finishing year (1 year) + the higher system of high school (2 year). The School of Art and Craft represents an educational level introduced recently in the structure of mandatory education, whose duration has increased from 8 to 10 grades.

*The evening and reduced frequency education forms* are available in the „Second Chance” programmes, and they do not have age restrictions, thus allowing those who have not completed their studies to continue them. There are also programmes addressed to the groups facing social exclusion, such as Roma population and for which the Ministry of Education and Research is running special programmes<sup>31</sup>.

*Post-high school education* (ISCED 4), with a duration between 1 and 3 years, provides a specialised level of professional training, completed with a qualification certificate level 3 after taking the final exam.

#### **4.1.2. University education**

At the level of university year 2003-2004, *higher education* was comprising: *short term higher education* (3 year university colleges), *long term higher education* (universities, where the duration of studies is between 4 and 6 years, depending on the specialty, that are completed with a dissertation diploma) and *post-graduate education* (master's degree, PhD, post-graduate programmes).

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<sup>31</sup> See subchapter 6. Social inclusion

From the university year 2004/2005, university education has been organised on the basis of study programmes on three study programmes, according to the schemes promoted by the Bologna Process. University studies are restructured, as follows: *undergraduate university studies, master's degree and PhD*.

*Undergraduate university studies* have a normal duration of 3 years (with the exception of certain fields, e.g. medical education). Undergraduate education offers large qualifications, different fields of study. The graduates of this cycle can enter the labour market or can continue their studies with a master's degree. One can also take into consideration the possibility that before the dissertation exam and the issuance of diplomas, the graduates can fulfil a practical training stage. Such a system will provide a solution to the acute lack of qualified labour force in rural areas and in disadvantaged areas.

*Master's degrees* have duration of 1.5- 2 years. The total minimum cumulated duration of cycle I (licence) and cycle II (master's degree) will be of 300 transferable credits (ECTS). The university qualifications (specialties) will be placed at the level of the master's level, thus eliminating the existing gap at the level of the licence, with many specialties, that are too narrow and come too soon. There are two types of Master's degrees: research and professional. The psycho-pedagogic master's degree is part of the professional master's that trains at a high level the teaching staff that will work in education.

*Doctoral studies (PhD)* has a duration of 3 years and imply a gradual shift from the present system based on individual coaching of PhD students to the system of PhD schools and the development of European PhD schools. The main scheme of the duration of study cycles is going to be 3-5-8 years, with the possibility of flexibility in some areas compared to the traditions of Romanian education and the possibilities of being placed on the labour market.

## **4.2. Access and participation to education and initial professional training**

### **4.2.1. Access and participation to initial education**

In the school year 2004/2005 the school population in Romania was of 4.390.835 persons (Ministry of Education and Research, State of Education 2004/2005). There is a significant decrease in the *number of pupils registered in primary and lower secondary school education, the comparison with 1994 shows a 21% decrease*. However, the total number of pupils in education has increased over the period of 1994-2004 with over 150%. The gross rate of school coverage in all the levels of education (ISCED 1-6) has recorded a continuous progress in the period 2000 -2002 – from 66.5% to 70.2% - settling at the level of 2003-2004 around the value of 72%. The soaring trend is visible both in the case of the female population, as well as of the male population, maintaining differences, on sexes, in favour of the female population, over the course of the entire reference period.

*The participation rate in the mandatory education, between 2003 -2004 shows that 96% of young people attended school, boys were 2 percentage points higher than girls*. This figure is over dimensioned, given the action of another provision of the Education Law that brought statutory starting age down from 7 to 6 years, which determined the entry in the first grade, in the school year 2003/2004, of children of 7 years and a certain proportion of 6 year old children.

In high school and professional/ vocational education, the degree of participation continues to rise, the participation rate has increased from 71.4% in 2000/2001 to 76.4% in 2004/2005. At the high school level, a slight increase is recorded on the technological route, compared to the theoretic and vocational routes, where the inclusion rates are maintained at a constant level. A negative aspect is represented by the large difference of almost 27 percentage points that can be seen in what regards the gross rate of

participation corresponding to the two residence environments: 87.8% in urban areas and only 61.0% in rural areas, (figures for 2004/2005 school year).

Correlated to the educational offer on different levels of education, *the participation rate to education* varies from one age group to another.

The rate of participation to education of 15 year old students is of 86.7% (2004-2005 school year). This rate has fluctuated between 92.12% in the 2000-2001 school year and 80.5% in the 2002-2003 school year. This dynamics is determined mainly by the fact that the graduates in rural and/ or disadvantaged areas do not continue their education due to specific social factors, i.e. a reduced educational offer in what regards the post-mandatory obligation in rural areas, as well as the low living standards.

The participation rate to education of 18 year olds has continued to increase, between 1999 and 2005 school years, from 47.06% to 62.96%. At 20 years of age young people are involved in post-high school and university education. Although the number in post high school education has registered a constant decrease during 1999- 2004 (over 19.7%), the number of young persons that participate in the university education has increased with almost 20.2%. The increasing values can be justified by the increase in the educational offer for higher education, both the number of places at the state universities (including those that are fee paying) and the ones related to private universities.

In summary, the participation of 15-24 year old youngsters in education has risen significantly between 1999 and 2005 (increasing from 36.96% in the reference year 1999-2000 to 48.53% in 2004-2005). Whereas the total number of population in the age range in Romania (15-24 age group) has decreased by 8.6% between the same period (1999-2005).

During 2000-2005, *the participation rate in the secondary education* (high school and professional education) has recorded values between 89.7% in the 2000/2001 school year and 92.5% in 2004/2005. Although the trend upward it is noted that, in school years 2003/ 2004 and 2004/ 2005, a certain proportion of the 8th grade graduates have not continued their studies in the 9th grade or in the first year of the school of art and craft, though this is now mandatory education when the legislation came into force in 2003. The level of the indicator is still quite high, taking into consideration that the gross rate of inclusion in high school and professional education is, at the level of 2004/2005 of 76.4%. By comparing the values of these indicators (the gross rate of inclusion and the rate of transition) one can estimate that a significant number of pupils leave the education system even before graduating from the 8th grade. The available statistics show the existence of a "gap" in what is regarded as a shift from gymnasium (8th grade) to lower secondary school (9th grade) and in what regards the transition from mandatory education to post mandatory education. In both cases, the situation is worse in certain country areas, especially in very rural areas.

As opposed to the post-secondary level, the soaring trend of participation to education in higher education, that started right after 1990, has continued during 2000-2004. In this period, the gross rate of participation has increased from 27.7% in 2000/2001 to 40.2% in 2004/2005. During the entire duration of the reference period, the rate of inclusion of the female population was higher than that of the male population, the difference increasing from 5 percentage points in 2000/2001 (30.2% as opposed to 25.2%) to 10 percentage points in 2004/2005 (45.1% to 35.4%). An important role in the increase of the participation rate to higher education is due to the private alternative. It started developing in the first half of the 1990's, and private universities have (2004/2005) almost a quarter (23.9%) of the entire number of students. The main reason for the increase in the level of participation to higher education is the improved and larger capacity of the labour market able to absorb persons with higher studies and qualifications, lower unemployment risk for persons that have obtained a diploma that proves they graduated from that particular level of education.

The degree of participation to education is also reflected by the *education level of the population*. Amongst 20-24 year old youngsters, the proportion of people that have at least high school education is closed to the EU-15 and EU-25 average but below the level of that recorded in NMS-10 and under the 85% threshold that proposed by the EU for 2010. For 20-24 year old youngster, Eurostat states that, in 2004, 75.3% of the people this age in Romania had at least higher secondary education, a level close to 76.7% - the EU-25 level, but higher than 73.8% - the EU-15 level.

Of the total population aged between 25 and 65 years old, the percentage of those who have at least high school education has continued to increase during 1999-2000 and reached stability in 2004 at around 70.5%. There is a variation between men and women with the male population exceeding all the reference year 75%, and female population placing at 65.5% at the level of 2004. Regarding secondary and higher education, the gap between men and women has closed slightly, in the sense that the values for the two genders are much closer to each other: from 13 percentage points in 1999 to 12 percentage points in 2004. At national level, despite the increase with almost 1percentage point of the population with higher education in 2004 as opposed to 2003, this is no longer place in the reference interval over 10%. If in 1999 the average for higher education was 8.7%, in 2001 it reached 9.8%, with an annual drop after that of 0.1 percentage points. The evolution for the two genders here is different, in 2001 the male population with higher education, although it has a percentage of over 10%, has been a reducing after 2001, whilst the female population with higher education has increased a growing trend from 7.7% to 10.0%.

The percentage of 18-24 year old youngster with elementary level of education (gymnasium, primary or no school) who do not follow any form of training was 23.6% in 2004/2005 (Ministry of Education and Research, Status of Education 2005). Romania statistics show a significant difference when the same group is compared with other European Countries - 15.7% for the EU-25 and 17.8% for the EU-15. This represents a significant challenge given that one of the EU objectives is the reduction to 10% of the rate of early school leaving by 2010 and especially because the new member states are already under this threshold.

#### Youngsters (18-24 year old) who leave school early, without continuing their studies

- % -

	1999	2000	2001	2002	2003	2004		
	RO					RO	UE-25	UE-15
Youngster (18-24) who leave school early without continuing their studies	22,4	23,1	21,8	22,9	22,7	23,4	15,7 <sup>b</sup>	17,8 <sup>b</sup>
Youngsters who leave school early – the percentage of male population	24,2	24,1	22,2	23,7	23,9	24,9	18,1 <sup>b</sup>	20,4 <sup>b</sup>
Youngsters who leave school early – the percentage of female population	20,4	22,0	21,4	22,1	21,5	21,8	13,3 <sup>b</sup>	15,3 <sup>b</sup>

Source: for Romania: the National Statistics Institute; Labour force in households survey, average annual data; data for 2002, 2003, 2004 were extended on the basis of the results of the Census for Population and Households in March 2002; for EU-25 and EU-15: EUROSTAT, New Cronos, annual average data 2004.

<sup>b</sup> series brake – the data can not be compared with previous years

It is important to underline the differences on sexes regarding the *school leaving phenomenon*. During 1999-2003, for the male population between the ages of 18-24 there were slight increases of school leaving.

The trends recorded during the reference period reflect the increase of the rate of school losses at group's level in the last years, especially in the gymnasium period. For the primary education, one can notice a reduction of the rate towards the end of the period the rate of annual school leaving having increased 2.5 times on the entire primary and gymnasium level and almost three times in gymnasium. The studies conducted show that if the children live in deprived households there are 2.3 times more

chances to leave school, as compared to children who leave in households that are not deprived, this ratio increasing to 3.1 times in the case of those living in severely deprived households.

The highest levels of school drop out can be found in post-high school and professional schools (an average of 7.5% during 1994-2004). On the whole, compared to 1994, the drop out rates have increased in primary and gymnasium school, professional school and post-secondary education and have dropped in high school and discipline school.

The census data show an increase both of the absolute number and of the percentage of young graduates of higher education. There is also an increase in the number and percentage of graduates of post-high schools and masters' schools and primary school ones. On the other hand, there is a drop in the percentage of gymnasium graduates among young people (from 43% in 1992 to 38% in 2002). On the whole, at the level of 2002, almost 8% of young people (15-28 years.) were graduates of a third cycle, almost 82% were graduates of the secondary cycle, and 8% were graduates of the primary cycle and 3% had no schooling.

The demographic forecasts for 2005-2013 predict a decrease in the school population across the entire educational system, this will account for a reduction of about 15-20% of the school population in only 8 years. This situation will bring about significant changes in the educational behaviour. The international trends observed in comparable countries show that, in the future, there will be a need for a better qualified labour force. In the case of Romania, the need for development through education is even higher due to these demographic trends. Not only does Romania need more a qualified labour force and higher levels of qualification for its existing labour force, in order to catch up with comparable countries in Europe – but Romania needs, at the same time to come up with an even higher percentage of students that can obtain higher qualifications in order to mitigate the decrease in the number of graduates. This represents a major challenge for the Romanian education system.

#### **4.2.2. Professional and technical education (TVET)**

The Ministry of Education and Research is planning to establish facilities that will improve the access to education and initial professional training, by increasing the attractiveness of professional vocational and technical education. In addition this will provide equal opportunities men and women and those at disadvantaged areas to access professional and technical education. The increase of attractiveness took into consideration the restructuring of the education system that was presented under Subchapter 4.1.1.

In what regards the structuring of the TVET offer so that continuous education can be obtained, until now the following results were obtained:

- Organization of training programmes for adults on the basis of training standards used in the system of initial professional training;
- The introduction of the Individual permanent education portfolio, which will state the skills acquired by graduates of the formal education system (they will be issued starting with the school year 2004-2005);
- The development of institutional capacities of professional training providers through the assistance of the Phare TVET 0108.01, and through other actions of the MER, in view of participating to continuous professional training, according to the current legislation.

By doing a comparative analysis of the number of students registered in the 9th grade before the restructuring of the educational system (2002-2003 school year) which was of 110,118, with the number of 117,717 students registered in the professional route, 9th grade, in the 2004-2005 school year, there is an increase of 6.9 percentage points.

Since 2002/2003 there has been a decrease of from 750 to 742 of the number of school that organised professional and technical education. The number of school units who organise professional/ vocational and technical education in rural areas has dropped by 1.4%. The main difficulty recorded in organising professional and technical education in rural area comes from the disparities in economic development between rural and urban areas and the lack of forecasts regarding economic development strategies for rural areas.

Besides these quantitative issues regarding the access to professional and technical education, one must not neglect the qualitative aspects that are the conditions regarding the learning environment, especially in rural areas. The key problem in this respect is the limited partnership between schools and enterprises and insufficient endowment with teaching materials in schools in rural areas and in small and medium sized towns. This problem will be solved through the assistance of the Phare 2003 and 2004-2006, that in the modernisation programmes of the professional and technical education will concentrate on the rural environment.

Another issue regarding the professional/ vocational and technical education is students with special needs by integrating them in the mass education. Starting with the 2003-2004 school year, there are specific actions that are being developed in this sense within the Phare TVET project. These actions look at the development of institutional capacities of schools in the professional and technical education in view of providing education and general training for children with Special Educational Needs (SEN). The main difficulty that could be mentioned in running all of these actions is the insufficient teaching experience of special staff in order to work adequately with SEN students.

#### **4.2.3. Providing key skills in initial education**

The mandatory education system provides the study of at least *two foreign languages*. The first foreign language appears in the mandatory curriculum in primary education, in the 3rd grade, but can also be included, optionally, in the first grade. The second modern language appears in the curriculum in the 5th grade.

*Raising awareness to culture* in the formal education system starts in pre-school education. At the level of primary and gymnasium education, it is mainly done in the curriculum area "Arts", and at high school level it was introduced for all routes, with two hours a week. In the informal system this is done during extracurricular activities through different cultural events organised either at the level of the school, or of the school inspectorates.

*Information Technology and Communication (ITC)* becomes part of the common educational core starting with the 9th grade on all educational routes, as well as for the School of arts and crafts- in all fields of study. At the same time, for the theoretic route, the legislation allows for these schools to be organised in classes where IT can be taught on an intensive basis. In primary and gymnasium education, ITC is studied as an optional course or as an extracurricular activity. Depending on the existing resources, some schools offer induction courses for using computers at the level of primary education, upon the decision of the school. These situations are quite rare though, both due the lack of necessary infrastructure, and to the lack of trained human resources in the field.

In what regards the use of ITC, data were indicated that in 2001, 66.7% of the schools in urban areas had at least one computer, and 30.5% were connected to the internet, in rural areas the percentage being 15.3% and 1.1%).

From the point of view of access to internet in schools, Romania is on the 44th place out of 104 states. Although in 2001, 2002 and 2003 the data recorded for access to internet were increasing, they still

remain at low levels: i.e. 3.3, 3.8 and 4 on a scale from 1 to 7, where 1 is for very limited access and 7 for frequent access<sup>32</sup>.

The development of the “learn how to teach” skills continues to be a major concern in perfecting and modernising the teaching activity. The generalisation of the introduction of modern interactive teaching-learning, focusing the teaching actions on the student, differential treatment of students through varied or individualised topics, introduction of a series of independent activities in the lessons that are not taught in laboratories, of lessons/ activities assisted by a computer, etc. Although of these are at the moment carried out in many schools, at the level of the mandatory obligation, they are still a necessity in the teaching-learning activity.

*The entrepreneurial culture* is taught at all level of the mandatory education in the following subjects: practical abilities (in primary education), technological education (in gymnasium education), entrepreneurial education and elements of business education (in high school education – technical route- and in vocational schools). Entrepreneurial education is also approached in the curriculum as a crosscutting skill. Taking into account that the above mentioned subjects are part of the common core (national mandatory curriculum), the involvement of employers in developing this part of the curriculum is minimum.

The PISA appraisals (The International Student Appraisal Programme) of 2003 have highlighted worrying results regarding the *level of literacy*. In 2002, on a scale from 1 to 5 (where 1 is the lowest), over 40% of students aged 15 that were comprised in the sample had a level of literacy of 1 or lower. The causes for these results are linked primarily to the quality of the teaching-learning process: obsolete teaching methodology, low degree of participation to the permanent training of the teaching staff and lack of motivation to learn on the side of the students which is due to the low relevance of the education’s products on the labour market.

In 2003 the Institute for Educational Sciences has run appraisal projects to test the skills of students - TIMSS International Science Report, which meant the drawing up o a comparative study regarding results in Maths and Science, coordinated by the International Association for the Educational Achievement and PIRLS - IEA – Assessment of Text’s Comprehension Level at the End of Primary School – (Appraisal of the level of understanding of written texts, at the end of the primary cycle). According to these appraisals, Romania is on a middle position compared to other states, in what regards Maths and Science and on the last position in what regards literacy. The conclusion of the TIMMSS report is that almost half of the 15 year old youngsters that were included in the sample achieve average performances in Maths, whilst 24% of these obtain high or advanced performances. However, 21% of the young people cannot even reach the lowest performance level in Maths (on a scale of 4 levels).

#### **4.2.4. Human resources in education**

In 2004, the data show that staff that work in the education system represent 4.32% of the total employed population in Romania. The teachers have a percentage of 72.2% of the total staff in the education system, the highest rate being for the primary and gymnasium level (80.77%), and the lowest in the higher education (54.62%). Over a third of the teaching staff runs their activity in rural areas (35.66%) in 2004-2005, compared to 2000 (34.68%). At the level of primary and gymnasium education, the number of the teaching staff in rural areas does not exceed the number of those in the urban areas, which can be explained by the structure of the school network specific to this area. In the case of pre-school, the teaching staff in rural areas is lower than that in urban areas, even if the number of children

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<sup>32</sup>World Economic Forum, *Global Competitiveness Report*, 2002-2003, 2003-2004 and 2004- 2005 editions.

subscribed in this educational level is much higher in rural areas. During 2000-2004, the educational staff has had the following dynamics (Ministry of Education and Research, State of Education 2005):

- In 2004 the staff in education has decreased with 3% compared to 2000;
- In vocational education the number of staff has reduced with approx. 20%;
- In primary education the decrease is less than 1%;
- In high-school education there is an increase in 5.54%.

The reduction of staff in vocational education is determined mainly by the reduction of students that have registered to this level of education. The increase in high-school staff marks the mandatory character of the 10 year education.

In terms of the percentage of qualified teachers, in 2004-2005 this is 12.6% higher compared to 2000. During this period both the percentage of qualified teachers in urban areas has increased (from 81.5% to 94.6%) as well as that of the ones in rural areas (from 69% to 82.8%). However, the differences on these averages are still significant. In higher education there does not seem to be a problem about staff qualification anymore, as the percentage attained in 2004 is 100%.

### **4.3. Quality assurance and management**

#### **4.3.1. Creating a structured continuous professional training system**

The legislation adopted in the field of continuous professional training took into consideration the continuation of the reform of the professional training system by implementing European principles regarding quality assurance, decentralisation, social partnership and system transparency, institutional building of the professional training system. The regulating framework highlighted: the issue of permanent education; continuous professional training through the educational system; professional training for adults; granting subsidies for expenditures with professional training for certain categories of beneficiaries; identifying and implementing specific measures regarding the improvement of access to qualification, continuous professional training and support for lifelong learning.

The National Council for the Professional Training for Adults (CFPA), set up in 1999 as a three-party body with a consultative role in defining adult professional training policies and strategies, has received, since 2003, the responsibility of coordinating at a national level the process of certification of professional training providers. At the same time, the Council for Occupational and Certification Standards (COSA) was integrated in CNFPA, and it took over the coordination responsibilities of the activity regarding the drawing up of occupational and certification standards of the centres for appraising skills.

In June 2004, a Memorandum was signed for changing CNFPA in the National Authority for Qualification (ANC), and in February 2005 the three party agreement regarding the National Qualification Framework was concluded. There have also been discussions and consultations initiated by the CNFPA with business organisations and trade unions, as well as with professional associations at a sector level, in order to set up sectoral committees, whose main role will be to define and validate the qualifications at a sectoral level, include the validation of qualifications proposed by other institutions. By November 2005 there were sectoral committees set up for 10 fields of activity.

#### **4.3.2. Quality assurance and management in initial education**

In Romania there are no reliable studies regarding the quality of education. One cannot say that the Romanian education is good or bad, unless one looks at the effects of education over the

unemployment or employment rate, but these have many causes, mainly economic. The Ministry of Education and Research has assumed the programmatic idea that education is not only a national priority, but it should evolve to a next level, that of having a qualitative reform in education. After the university explosion post 1990, the problem of the quality of university education took a second place, as the educational institutions were more preoccupied with extension and increase in their number of students and specialties.

The issues regarding quality assurance in education are regulated, in a general and affirmative manner, in the Law of Education no. 84/1995, an organic law that was amended and republished during the government mandates of 1996-2000 and 2001-2004. The changes introduced by Law no. 268/2003, that amends Law no. 84/1995, have highlighted the increase of quality for all levels of education. Until 2004 none of the modifications had as an effect the introduction of reform measures of the quality assurance system in education, as there is still emphasis being placed on the accreditation and external quality evaluation measures and on the quantitative aspects of this process. The legislative framework regarding quality in education was created by approving the GEO no. 75/2005 regarding quality assurance of education that sets out the general implementation framework of the quality assurance system in Romania. There is mention of the setting up of the Romanian Agency for Quality Assurance in Higher Education and of the Romanian Agency for Quality Assurance in Pre-university Education, as specialised institutions for quality assurance in the national education system and in the field of accreditation. The new regulation places emphasis on the creation of internal mechanisms to assure and manage the quality in education.

Quality assurance for education will be focused on the results of learning, results that are expressed in terms of knowledge, skills, values and attitudes. GEO no. 75/2005 states the fields and criteria necessary in order to assure quality: institutional capacity, institutional effectiveness and quality management. The new legal regulation makes a specific reference to the internal and external quality evaluation of education. The internal quality evaluation is done at the level of each education provider institution, and the external quality evaluation is done through the Romanian Agency for Quality Assurance in Pre-University Education (ARACIP) and the Romanian Association for Quality Assurance in Higher Education (ARACIS)

### **Quality in higher education**

After 1990, the issue of quality of university education took a backseat in the higher education institutions, as they were preoccupied with extension, the increase in the number of students and specialties. Quality assurance was based on external mechanisms of accreditation and external evaluation carried out by the National Council for Academic Evaluation and Accreditation. At least partially, the decrease of the quality level after 1990 in higher education institutions can be explained not only through the level of under-financing but also through the tendency of university to have an extensive development, to register as many students as possible in order to increase their incomes; the funds that they have available are extremely insufficient to allow them to enter a competition with European Universities that spend for the same university programmes about 10-15 more per student than Romanian Universities do.

At the level of higher universities, there are some issues that influence quality:

- There are gaps between the requested qualifications on the labour market and those provided by university education.
- The lack of university staff for the whole higher education system is in average of about 40%, although it can vary between 20 and 60% in different universities;
- University education continues to remain at the level of theory, without focusing enough on developing practical professional abilities etc.

The quality of teaching, of the documentary basis in libraries or the equipment in laboratories is of a very low level in most university, including in the most representative ones, and especially in the young, public or private ones, which is associated with a chronic state of professional dissatisfaction of students and teaching staff. The living and learning conditions of students are not provided at an adequate level of quality. The number of universities, public or private is high, but they are too small and not too competitive, having a traditional management and insufficient development resources. The first 10 large and classic universities are comparable as products and resources with all the other 50 universities, whereas the administrative and management expenditures of the latter are substantial. Recently set up public universities contribute too little to the economic and cultural development of the communities they are located in, and some private universities have extended their logistic infrastructure and number of students without having an adequate teaching and research staff, as they still rely on that of the existing public universities.

### **Quality assurance in pre-university education**

In pre-university education, besides the accreditation of education providers, the main form of quality assurance was the school inspection.

The school inspection, as the most important form of control and counselling of the school inspectorates and educational units, is provided by the county/ Bucharest school inspectorates and by the Ministry of Education and Research, through special personnel.

In the context of putting together a new management, specific to reform, quality management – in which autonomy and responsibility tend to become functional components of the education process, there has been a huge emphasis placed on reconsidering the role/ functions of school inspection. This is directed towards the mechanisms specific to the education process that generates dysfunctions; the flow of information in the system, the dynamics of the continuous training for teachers, the manner in which the school offer corresponds to the material and human resources etc.

The objective of the activities carried out by the National Council for Curriculum and the General Directorate for Pre-University Education in the MER that are identified in the curriculum reform programme, is the adoption of the National Curriculum – by following the principles of continuity and quality- for the new structure of mandatory education.

### **National evaluations – quality indicators**

In 2004, the national exams in pre-university education were: the national tests that were carried out, according to the law, in one session (June-July) and the baccalaureate exam that takes place in two sessions (June – July session and August – September session).

At the national tests, the promotion percentage was 78.74% before appeals and 79.27% after appeals. 2004 was the first year in which national tests have replaced the national capacity exam, according to the provisions of the Law of Education. Compared to the results obtained in the previous years at capacity, the 2004 results of the national tests are set in a tendency of stability, with statistically insignificant small variations. Therefore, in 2003, the promotion percentage was 73.98% in the first session and 68.62% at the second session, as opposed to a promotion percentage of 76.98% in 2002.

At baccalaureate in 2004, in the June –July session, the promotion percentage was 89.23% before appeals and 89.76% after appeals, maintaining a strong decreasing tendency of weak results in the second session. In 2003 the promotion percentage was of 73.98% in the first session and 57.42% in the second one. In 2001, the average of the first session was 86.28% and for the second one 73.94%. On

the whole, the results are relatively stable for a large national exam and for a deeper analysis, a series of factors needs to be taken into consideration: number of pupils who graduate, number of candidates registered, percentages of promotion rates on different exam subjects, etc.

The rate of promotion in primary and gymnasium education has recorded differences depending on the areas of residence: 97.2% in urban areas and 95.6% in rural areas. One can notice significant differences depending on the form of gymnasium education: 96.5% for day education and 66.5% for low frequency education. In primary education the highest rate of promotion was recorded in the third grade (98.2%) and the lowest one in the first grade (94.7%). In gymnasium education, the largest number of successful students who pass was in the 8<sup>th</sup> grade (97.7% in urban areas, 96.7% in rural areas) and the lowest in 5<sup>th</sup> grade (94.2%).

In the public high school education, at the end of the 2003-2004 school year, the promotion rate was 98%, higher than in private and cooperative high schools (97.4%). A high degree of promotion was recorded in military high school (99.8%), Pedagogy (99.4%), theology (99.2%), music and arts (99.1%) from the vocational route, and lower in agro-mountainous high schools (96.6%), technical pro file (96.4%) and agricultural (95.8%) from the technological route.

#### **4.3.3. The correlation of the educational and professional training system with the needs of the labour market**

The concerns regarding the quality of education and the provisions of the new legislative framework are the premises for providing an adequate correlation between the educational objectives and social and economic development needs specific to a knowledge based economy. One of the central elements of the pre-university system reform was the drawing up and implementation of a new curriculum at a national level. The emphasis was placed on specific dimensions and principles: orientation of education towards the development skills, abilities and capacities, a more flexible educational offer, the possibility to have individualised school approaches; the introduction of new means of selecting and organising the content of different subjects, the adaptation of this learning context to the requirements of every day life and to the features of the labour force; the responsibility of social partners in education related issues. In this context the new school and framework programmes for mandatory education were adopted both professionally and at high school level

Analysing the data presented, one can notice the increase in the number of qualified graduates in the field of services, as well as the decrease of those qualified in agriculture. The cause of the increase in the number of graduates qualified in services is represented by investments, domestic and foreign, that were made in this field, and that have generated expectations regarding the enhancement of employment opportunities. If in the 1998-1999 school year, the number of graduates from theoretic education was of 76,791 students, and that of vocational and technical education was of 157,521 students, in 2003-2004 the number of graduates of theoretic education was of 84,740 compared to 152,464 graduates of professional and technical schools. This shows an increase in the interest for general theoretic education due to the reduction of jobs for the qualifications acquired from the professional and technical education, as well as an increase in the number of places for higher education.

In what regards the situation of the university education graduates on occupational field, over the period 1998-2004 the situation has not changed significantly. Therefore there is an increase in the number of graduates prepared for the service occupational field and a constant number of those prepared for the industrial and agricultural fields.

#### 4.3.4. Transition from initial education and professional training system to the work place

If one takes into consideration the structure of unemployed people depending on their years of work experience, one can see that during 2000-2002, according to the data of the AMIGO Survey, the new entrants on the labour market – the vast majority being graduates of different forms of education, especially pre-university – represented approx. 33-34% of the total number of BIM unemployed persons. Adding almost 30% - the transition rate from high-school to post-high school and university education – one can estimate that, annually only 35% of the secondary education graduates start an active life.

The survey regarding the labour force skills carried out by the Romanian National Observatory, in 2003, through detailed interviews in 100 companies, emphasised the fact that almost half of the companies included in the survey prefer to cover vacant positions with their own staff resources. Generally, they do not employ a lot of young people. Therefore, over the last three years, companies hired, on average, three graduates per company, which means less than 85% of the number of graduate that, enter the labour market. More than half of the companies have no connection with the educational institutions. The previous connections between enterprises and school are now over, and at the moment, the structured contacts between these entities do not exist anymore (e.g. exchange of information regarding requirements for skills, opinions regarding the adaptation of the curriculum, etc.).

Internships in enterprises usually takes place in organised groups under the surveillance of an instructor, therefore one cannot consider this as a real integration in the labour world. The larger number of small companies makes the task of finding a place for the practical training of students even more difficult. The data collected in the field analysis emphasises the fact that the number of students doing internships in enterprises has gone down considerably, with large differences between training profiles. As an alternative to production labour, some schools have set up “exercise companies”, in which they simulate real conditions in enterprises. One of the main objectives of the current professional training system reform is the opening of schools that can adapt more efficiently to the demand of the labour market and can establish better connections with local enterprises. In view of these, each school included in the Phare TVET RO 0108.01 establishes partnership relationships with an enterprise.

Practical training organised in enterprises must be strengthened in terms of content, duration and number of placements. The integration of work with learning is not sufficiently done in the education and system in Romania<sup>33</sup>. A large majority, if not all of the practical training is mainly in schools. Inspectors that are in charge of training in technological labs, school workshops or in companies supervise the production practice of students. Although the instructors must be graduates of post-high school education, their status, from point of view of their wages, is low, and their career development opportunities are limited.

In what regards the carrying out of practical instruction in enterprises, it is a large problem to identify a sufficient number of places in enterprises. The method of the practical organisation of production is in itself an obstacle. In order to avoid the exploitation of students that are under the age of an active life, as they might be involved in activities that are not linked to their professional training profile, the practical training in enterprises is done in groups that are under the supervision of a master instructor. Pupils cannot go unaccompanied in enterprises with a view to carry out practical training. They are not allowed to look for their own enterprise in view of a practical training. The difficulty in find the right place for production practice depends mainly on the sector of activity and the town where the enterprises are located. Some companies are willing to pay the work that the pupils carry out in their practical training period and offer additional opportunities for stages and work during holidays. Such workplace trainings can be attractive for students and employers, if the students are allowed to get involved in real activities

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<sup>33</sup> The process of work and the process of learning are perceived as two different entities according to the document drawn up by the Romanian National Observer, *Integration of work with learning*, 2001.

for a longer period of time; another means of increasing attractiveness and efficiency of practice at the workplace is to improve the training offer in enterprises. The production practice is an important means to facilitate the transition from school to the work place". Lacking needs analysis studies regarding the labour market on occupational fields and levels of qualifications, it is difficult to carry out analysis regarding the correlation between demand and supply.

#### **Key Issues**

- The need to form an educated and highly qualified human capital body and to adapt those with average qualification to state of the art production methods;
- The need to develop a permanent learning culture and to have a flexible way of providing and certifying learning;
- Insufficient material base for assuring quality in education especially in the modern technological areas that are required on the labour market;
- High rate of educational abandon of youngsters between the ages of 18-24, especially those coming from disadvantaged areas.

## 5. EMPLOYMENT

### 5.1. Structural analysis of the labour market

The labour market in Romania has undergone significant changes in the context of the economic transition process, especially reflected in the reduction of the active and employed population, by maintaining relatively constant values of the unemployment rate and by the increase of long term unemployment, being primarily affected by the limited capacity of job creation. The reduction of the employed population has brought about important changes for different sectors, fields of activity, regions, forms of propriety, age, professional status.

Changes in the labour market in Romania, over the last decade, has been under the effects of some significant demographic and social phenomena such as: the speeding up of the decrease of fertility rate and the constancy of mortality rate at a high level, increase of emigration rate, decrease of the quality of medical services and health assistance. These phenomena have contributed to the increase of the 60 years + population, as well as the maintenance at a high level of the rate of demographic dependence, especially in rural areas.

#### Main employment indicators during 1999 – 2004 (annual average)

Indicator / Year	Romania						EU-25	EU-15
	1999	2000	2001	2002	2003	2004	2004	2004
Total active population (thousands of persons)	11.566	11.585	11.447	10.079	9.915	9.957	-	-
Activity rate 15-64 y.o. (%)	68,7	68,6	67,5	63,6	62,4	63,2	69,3	70,0
Total employed population (thousands of persons)	10.776	10.764	10.697	9.234	9.223	9.158	-	-
Employment rate 15-64 y.o. (%)	63,5	63,2	62,6	58,0	57,8	57,9	63,3	64,7
BIM Unemployment rate (%)	6,8	7,1	6,6	8,4	7,0	8,0	9,0	8,1
BIM long term unemployment rate (%)	3,0	3,6	3,2	4,5	4,3	4,7	4,0	3,3
BIM unemployment rate amongst youngsters (%)	18,8	18,6	17,5	21,7	18,5	21,0	18,2	15,6

Source: for EU-25, EU-15: EUROSTAT, New Cronos for data regarding quarter II in 2004.

For RO: The National Institute for Statistics, Survey of the labour force in households (AMI GO), annual average data, data for 2002, 2003 and 2004 were extended on the basis of the Population and Housing Census of March 2002.

#### 5.1.1. Structure of employment

##### Degree of population employment

In 2004, the employed population reached a level of 9,16 million persons. Compared to 1999, in 2004, the employed population at a working age has decreased by 5.6 percentage points, reaching a rate of 57.9%.

The demise of the employment rate for the 15-64 year old population was caused by the decrease of the male employment rate. Therefore, during 1999 – 2004, the male employment rate has dropped by 5.9 percentage points (from 69.5% to 63.6%, a value that is lower than that of the EU-25), and the female employment rate has dropped with 5.4 percentage points (from 57.5% to 52.1%, a value that is lower than that of the EU-25). The 57.9% employment rate of the working population, in 2004, places Romania at a distance of 12.1 percentage points from the objective set at Lisbon for 2010 – the general employment rate of 70%, and the female percentage rate of 52.1% at a distance of 7.9 percentage point compared to the Lisbon objective of 60% set for the year 2010.

At a regional level, the North-East and South-West Oltenia regions have the highest employment rates (62.4% and 59.9%, values that are comparable to the employment rate in Bucharest-Ilfov: 59.7%), whilst the lowest employments rates are in the Centre Region (53.9%) and South East Region (54.7%). It must be emphasised that, the high employment rates in the North-East and South-West Oltenia regions are determined by the „protection” of the so-called subsistence employment in rural areas which both regions benefit from (the highest percentage of population employed in agriculture).

The disparities between regions have become larger over the 1999-2004 period, as the employment rate of the working population (15-64 y.o.) has dropped especially in the South-West Oltenia region by 8.7 percentage points (from 68.6% in 1999 to 59.9% in 2004), North-West region by 7.4 percentage points (from 63.5% to 56.1%) and South Muntenia by 6.5 percentage points (from 64.6% to 58.1%). Over the same period, this indicator has also decreased, but not significantly in the following regions: West (5.9 percentage points), Centre (5.8 percentage points), South-East (5.6 percentage points), North-East (3.5 percentage points) and Bucharest-Ilfov (2.3 percentage points). The employment rate of the working population aged 15-64 has had lower values in the Centre and South East regions (53.9% and 54.7%).

### Population employment rates by gender and age groups

Over the 1999-2004 period there was a decrease in the employment rate both for the male and the female population, and in 2004 the employment rate of the 15-64 year old population has seen a gap of 11.5 percentage points between the employment rates of the two gender categories (63.6% men as opposed to 52.1% for women).

### Employment rates by gender and age groups

%

Year	15-64 years old			15-24 years old			25-54 years old			55-64 years old		
	Total	M	F									
1999	63.5	69.5	57.5	35.7	41.0	30.2	78.1	84.3	72.0	49.6	56.9	43.3
2000	63.2	69.1	57.5	35.1	39.5	30.5	77.5	83.7	71.2	49.5	56.0	43.8
2001	62.6	68.2	57.1	34.3	38.3	30.0	76.7	82.8	70.6	48.2	54.3	42.9
2002	58.0	64.1	52.0	30.5	34.6	26.2	72.8	79.6	66.0	37.7	43.1	33.0
2003	57.8	64.1	51.5	27.9	32.6	22.9	73.1	80.1	66.0	38.1	43.5	33.3
2004 – RO	57.9	63.6	52.1	29.1	32.8	25.1	72.9	79.2	66.6	36.9	43.1	31.4
UE-25	63.0	70.6	55.4	36.4	39.2	33.4	76.6	85.0	68.2	40.7	50.5	31.4
UE-15	64.5	72.4	56.6	39.5	42.4	36.6	77.4	86.2	68.5	42.2	52.0	32.9

Source: for EU-25, EU-15: EUROSTAT, New Cronos for data regarding quarter II in 2004.

For RO: The National Institute for Statistics, Survey of the labour force in households (AMI GO), annual average data, data for 2002, 2003 and 2004 were extended on the basis of the Population and Housing Census of March 2002.

Over the period 1999 -2004 there was a decrease of the employment rate of the 15-24 year old age group by 6.6 percentage points, thus placing it at a level of 29.1% in 2004, lower than that of EU-25 (36.4%).

Over the period 1999 -2004 there was a decrease of the employment rate of the 25-54 year old age group by 5.2 percentage points, thus placing it at a level of 72.9% in 2004, lower than the EU-25 average of 76.6%.

Over the period 1999 -2004 there was a decrease of the employment rate of the 55-64 year old age group by 12.7 percentage points, thus placing it at a level of 36.9% in 2004 – in EU 25 the employment rate for this age group was of 40.2%. This employment rate places Romania at a distance of 13.1

percentage points from the objective set in Lisbon for the year 2010 – 50% employment rate for this group.

### **Employment by residence areas**

Over the period 1999 -2004 there was a decrease of the employment rate of the 15-64 year old age group in urban areas by 0.9 percentage points, from 56.8% in 1999 to 55.9% in 2004. In urban areas, the percentage of the employed population in the industry and construction fields has remained relatively constant, with a slight decrease (from 43.7% in 1999 to 41.7% in 2004). In what regards the service sector, there is a slight increase of the percentage of population by 4.6 percentage points (from 49.7% in 1999 to 54.3% in 2004).

Over the period 1999 -2004 there was a significant decrease of the employment rate of the 15-64 year old age group in rural areas, by 12.1 percentage points, from 72.7% in 1999 to 60.6% in 2004. The decrease of the employment rate in rural areas is mainly due to the shrinking of that particular population segment involved in agriculture, with a drop of 9.8 percentage points (from 73.3% in 1999 to 63.5% in 2004). The constant economic growth over the last years will lead to a significant reduction of the rural unemployment rate in its present state (almost exclusively agricultural) by the emergence of industrial type rural jobs and services, and by reducing it through the increase of urban employment.

### **Employment by economy sectors**

The employment rate is extremely sensitive to the variations of economic growth. The present structure of employment in Romania, different to that of EU-25, is the outcome of a slow economic restructuring process and the periods of positive and negative economic growth during the transition period.

In 2004, 31.2% of the employed population worked in industry and constructions, a higher percentage than in 1999 (27.6%). Over the 1999-2003 period, the percentage of the employed population in the agriculture sector dropped by 10.2 percentage points, from 41.8% in 1999 to 31.6% in 2004.

The percentage of persons employed in agriculture was relatively constant over the 1999 -2001 period (41.8% in 1999 to 42.3% in 2001), but over the 2002-2004 period, it dropped to 36.4%, 35.7% and 31.6%.

The percentage of the employed population in services has soared by 6.6 percentage points (from 30.6% in 1999 to 37.2% in 2004), with the highest increase in the form of public property (from 58.9 % in 1993 to 76.7% in 2004).

The percentage of the population in the public sector out of the total employed population has decreased by 12.5 percentage points over the analysed period (from 35.5% in 1999 to 23.2% in 2004). In this sector alone the percentage of the population employed in industry and constructions has increased from 17.6% in 1999 to 20.4% in 2004. In the private sector, 41.8% of the total employed persons have worked in the agriculture sector, a percentage that has dropped as opposed to the one in 1999 (63.4%).

Over the 1997-2004 period, the civil population<sup>34</sup> employed in the agriculture sector has decreased in all regions, with significant drops in North-East and South. This reorientation of the labour force towards non-agriculture sectors can be correlated to the creation of new jobs in urban areas, in the context of the growth of the private sector in economy, and that of the changing of status of some localities as towns.

Reflecting on the evolution of the Romanian economy, the civil population employed in industry and constructions has dropped in 2004 as opposed to 1997 in most of the country's regions with the following exceptions: the West Region, where the population employed in industry has increased slightly (by 7.2 thousand persons) and in the Bucharest-Ilfov Region, where the construction rhythm has had an extraordinary dynamics, and the civil population employed in constructions increasing by 14.4 thousand persons. Over the same period (1997-2004), in seven regions, the civil population employed in the service sector has increased, with the highest levels in Bucharest-Ilfov and North-West Regions (171.4 thousand persons and 73.2 thousand persons). The disparity between Bucharest-Ilfov and the other regions, from the point of view of the increase of the civil population employed in services, is due to the fast growth of the business sector, the relatively high rate of inclusion in higher education, a factor that supports the growth of services, as well as the level of investments in the telecommunication sector.

### **Population employment rates by working hours**

The population employed full time represents the majority of the employed population in Romania. The percentage of the population employed on a part-time basis has dropped for both genders, over the 1999-2004 period, by 0.7 percentage points for the male population and a much more significant decrease for the female population (1.0 percentage points). The low percentage of the part-time population confirms that this is usually a second job, with the main role of complementing the income of the household.

In 2004, the rate of the part-time male workers was higher by 2.8 percentage points in Romania than in the EU-25, whilst for the female population it was 2.8 times lower in Romania than in the EU-25. Although at the level of the EU, the percentage of the part-time population was higher for the female rather than the male population, in Romania, this indicator has close values, which comes to certify the fact that, to a certain extent, male persons carry out a second part time activity in order to complement the income of the household.

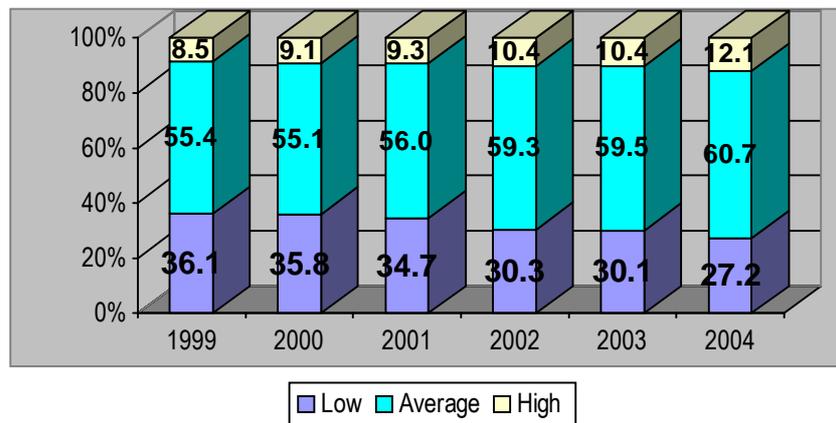
### **Structure of the employed population by the level of training**

The present structure of the employed population by the level of training is both a reflection of the present structure of economy, and the lack of higher educated persons, even after 15 years from the start of transition to the market economy. The percentage of persons employed with higher education was almost constant.

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<sup>34</sup>The employed civil population comprises, according to the methodology of the labour force, all the persons that, in the reference year, have carried out a socio-economic activity that generated revenue, with the exception of military positions and persons associated to this (the staff of the Ministry of National Defence, Ministry of Internal Affairs, Romanian Intelligence Service, soldiers undergoing their military services), employees of political organisations and prisoners.

### Structure of employed population by level of education



Source: Ministry of Labour, Social Solidarity and Family

Starting from 1999, the low increase of the number of graduates of secondary and higher level of education can be seen across the entire economy. The higher education system in particular has developed, having as an effect the easier access to the labour market for persons that have higher education. The persons that only have secondary school education represent more than half of the employed population (60.7%). Even so, the few sectors with high added value in the Romanian economy are facing certain problems in satisfying the demand of qualified labour force. There is a decrease in the number of persons with low education level (from 36.1% in 1999 to 27.2% in 2004), this group being mainly made up by the elderly population, that gradually retire from the labour market.

From the point of view of the education level of the population employed in the territories, in 2004, the Bucharest Region had 28.7% of the employed population had higher education and only 10.3% had a low level of education. In the other regions the differences are not important, but extreme values can be identified in the North-East region (only 8.5% of the employed population has higher education and 36.8% have a low level of education) and in the Centre Region (only 18.0% have a low level of education).

### Structure of employed population by their professional status

The percentage of employees out of the total employed population has increased from 57.8% in 1999 to 65.9% in 2004, and the percentage of "non-employees"<sup>35</sup> has dropped by 8.1 percentage points (34.1% in 2004). In 2004 the percentage of men that are non employees was of 34.2% out of the total male employed population, and that of non-employees female was of 33.9%. The percentage of employees in urban areas was in 2004 of 92.0% out of the total employed population, and 95.8% in rural areas. In 2004, the percentage of non-employees in urban areas was 8.0% out of the total employed population, and in rural areas 64.2%.

A large part of self-employment in Romania is concentrated in agriculture, such as subsistence agriculture which is considered as being employment with low incomes. This situation is confirmed by its evolution, with a maximum reached at the end of the 1990's, and a slight but constant decrease after that.

<sup>35</sup> Business owners, self employed workers, unpaid family workers, members of an agriculture society or other non-agriculture cooperatives.

## The Contribution of the SME sector to labour force employment

Over the 2001-2004 period, small and medium sized enterprises have had an important contribution to the creation of new jobs and to the employment of the labour force. The soaring trend of the number of SME staff started in the early 90's, when the number of employees of the large companies was facing a significant decreasing tendency, whilst that of SME's evolved from zero up to the present level, i.e. 2,349,725 at the end of 2004. The evolution of the SME employees has had a continuous increasing trend during 2001, 2002, 2003 and 2004 of +3.2%, +0.7%, +13, +10%.

The transfer of assets from the state to the private sector played an important role in the transition process, but such a shift of assets does not lead, in principle, to the creation of new jobs. As a matter of fact, the closure of some state enterprises, as well as the privatisation of others was accompanied by the vertical disintegration of some important fields of activity and by the closure of many units and the laying off of their staff. New enterprises were set up, starting from scratch, and they represent the new structure of the private economy and the ones that create new jobs. The fast development face of small and medium sized enterprises is deemed to be the proof that the new economic policy redirected the allocation of resources towards small and medium sized enterprises. This is favourable because of two reasons: because the SME's are more flexible to the structural changes generated by the globalisation of markets and because the staff demand is higher.

In what regards the different sizes of SME's, there was an increase in the number of employees for all categories of size, starting from the year 2000 for small and medium sized enterprises, and from the year 2003 at the level of micro-enterprises. On different fields of economic activity, this growth is focused in industry and constructions, whilst in the field of services and agriculture less significant growths were recorded over the given period. The number of employees in the industrial sector has increased by 5% in 2003 compared to the previous year, maintaining at the same level in 2004, and in the field of construction the increase has reached the level of 9-10% in 2003 and 2004.

The number of employees in the SME sector is relatively evenly distributed between micro enterprises (31.2%) and medium sized ones (38%), reflecting the majority, as a number, of small sized companies. The analysis carried out in 2004, shows that the personnel in the service sector are mostly employed (45.4%) in micro-enterprises, whereas only 23% work in medium sized enterprises. On the other hand, more than half of the people employed in industry SME work in medium sized (57.8%) and only 12.8% in micro enterprises, whereas the employees in agriculture are evenly distributed in the three SME categories. On the basis of the number of employees, it can be stated that the services are dominated by micro-enterprises, whereas industry and construction by small sized companies.

### Number of SME employees by field of activity

	2001	2002	2003	2004
Agriculture	72,037	78,689	78,562	77,781
Constructions	199,811	208,848	230,191	250,895
Industry	655,992	715,629	755,409	799,563
Services	1,194,777	939,799	1,070,794	1,221,486

Source: The National Agency for Small and Medium sized Enterprises, National Institute of Statistics.

In the service sector, the percentage of labour force employed in small enterprises has increased in 2004 by approx. 15%, and in micro-enterprises and medium sized enterprises it has decreased by 9.6% and 0.6%. This shift shows a more stable distribution depending on the size of the company, because the large number of persons employed in commercial activities in micro-enterprises usually hides a potential form of disguised employment. At the same time, medium sized enterprises in the field of

industry have increased by 9.6%, a very significant growth rate, compared to small and micro-enterprises that have decreased by 7.2% and 18.9%.

The analysis of the rate of SME employees on a 1,000 inhabitants scale, in different development regions, at the level of the year 2004, shows that the Bucharest-Ilfov regions has a rate of 20%, i.e. the region employees 60% more labour force in SME than the country average. At the same time, the North-West region (13%) and the Centre region (14%) have higher SME employment rates than the country average (12.5%). On the other hand, there is a group of regions that are below this average: North-East, South-East, South Muntenia (11%) and South-West Oltenia (7%), where the presence of SME's is lower.

Another interesting aspect is the modification of the rates that define the SME employment of the labour force compared to the population residing in the region during a given time period. This analysis presents the image of the labour force employment dynamics in different regions, emphasising the most recent modification trends in the SME sector. Therefore, the West Region is a mainly industrial area, in which there is a strong presence of SME's, having the fastest growth rate in terms of SME employment, the modification rate being of 118; the following one is Bucharest Ilfov with 112, South Muntenia with 111, Centre with 109, South-East with 108, North West with 105 and North East with 104. The only region that has a decrease of the percentage of the labour force employed in SME's out of the total stable population is South West Oltenia. The most industrialised areas of the country, i.e. the North and Centre regions, as well as the Bucharest-Ilfov region have significant increasing rates of the SME employment compared to that of the resident population. The most visible outcomes are the positive achievements of the South-Muntenia and South-East regions, which have the highest values. These results indicate a potential convergence of the Southern regions, characterised by a low percentage of labour force employments in SME's as opposed to the resident population, towards the model of the more industrialised regions in the North and Centre.

### **Unregistered labour**

During the transition period there was an increase of unemployment, mainly caused by the process of economic restructuring by the closure of some economic operators, especially in urban areas. Therefore, a large part of the labour force made redundant moved to rural areas, thus becoming unregistered labour force. Besides agriculture, a significant percentage of undeclared work can be found in other economic sectors such as: construction, trade, household services, car repairs or catering.

Recent estimates show that employment in the sector of unregistered economy (undeclared labour) is at a level of 1 -1.2 million persons, the equivalent of 11% of the total employed population<sup>36</sup>. This does not include subsistence agriculture, which cannot be deemed unregistered labour. It must also be mentioned that there can exist a significant degree of overlap between employment in activities that fall in the category of unregistered labour and formal employment, unemployment or even lack of activity. The estimation of the current level of unregistered labour is quite difficult, the migration for work abroad being largely the alternative to the "unregistered" labour at a national level.

#### **5.1.2. Unemployment**

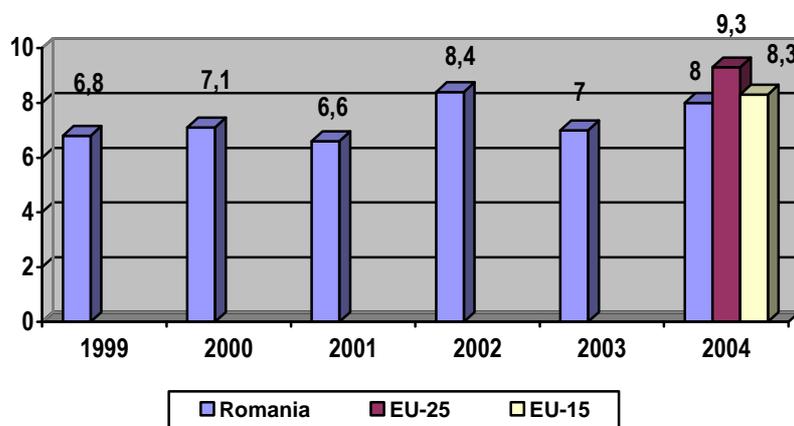
The maximum values of the unemployment rate have never exceeded 11% in Romania (during the 1991-1994 and 1997-1999 periods), being 10 percentage points lower than the maximum values in the

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<sup>36</sup> The National Institute for Scientific Research and Social Protection- Final report June 2004 "Best practices for fighting and preventing illegal labour"

transition period of the NMS-10, and at the moment they are placed at the level of 50% compared to the average in the new Member States.

### ILO Unemployment Rate 1999-2004



Source: for EU-25, EU-15: EUROSTAT, New Cronos for data regarding quarter II in 2004.

For RO: The National Institute for Statistics, Survey of the labour force in households (AMI GO), annual average data, data for 2002, 2003 and 2004 were extended on the basis of the Population and Housing Census of March 2002.

Although the evolution expected on the labour market should have had reflected an increase of the unemployment rate and of the number of unemployed persons, subsistence agriculture at the level of the mid-1990's, reflected in the high percentage of agriculture –and the recent migration for work abroad have had the effect of the protection of the labour force against a high increase in the rate of unemployment. The ILO level of unemployment for male workers was higher over the 1999-2004 period than that of female unemployment. The ILO employment rate for men was in 2004 at the level of 9.0% at a national level compared to 8.0% in the EU-25 and 7.6% in EU-15. The BIM unemployment rate for women was of 6.9% in the same year, compared to 10.0% in EU-25 and 9.1% in EU-15.

Over the 1999-2004 period, there were more significant decreases in the number of ILO unemployment in urban rather than in rural areas. The ILO unemployment rate dropped from 10.3% in 1999 to 9.5% in 2004 for urban areas, and from 3.5% in 1999 to 2.8% in 2001 for rural areas, followed by an increase up to 5.4% in 2002, then a decrease to 4.3% in 2003, increasing up to 6.2% in 2004.

The reduction of the number of unemployed people with secondary or vocational studies is a reflex of the economy's structure, focused mainly on the fields with low or average added value, and that represent at the moment "the main engine" of economic growth. This justified the necessity to shift the focus towards investment in vocational education, and especially towards continuous vocational training. The differences by genders show on the one hand the effect of restructuring, which in the second part of transition affected mainly the field of activity with the highest male involvement, and on the other hand, the present characteristics of the economic growth "driven" to a significant extent by areas of activity with a majority of female labour force. The reduction of unemployment for the labour force segment with much reduced education level reflects their retirement from employment.

### Unemployment amongst young people

The BIM unemployment rate amongst young people (15-24 y.o.) remained at a relatively constant value during 1999-2004 (being approx. 3.4 times higher in 2004 than the one recorded for the age group of 25 and over), varying from 18.8% in 1999 to 21.0% in 2004. The BIM unemployment rate amongst youngsters in urban areas is higher than in rural areas, with a decreasing tendency in urban areas, from

29.2% in 1999 to 26.9% in 2004. For rural areas this indicator has a slightly soaring trend, from 10.5% in 1999 to 15.5% in 2004. The difference of more than 12.0 percentage points between the unemployment rate for youngsters and the general unemployment rate shows the extremely important role that agricultural employment had in preventing a real “boom” of unemployment, and especially in its remaining at the current values.

Unemployment among young people in Romania is on a constantly soaring curve, showing the insufficiency of newly created job, and especially of attractive jobs for youngsters, taking into account the higher level of education than that of the generations that spent most of their active life in the system of central planning, market by permanent restrictions and constraints.

### **Long term unemployment**

The BIM long term unemployment rate has increased from 3.0% in 1999 to 4.7% in 2004. Comparatively, in 2004, at the level of the EU-25, long term unemployment rate was of 4.0% and in EU-15 it was 3.3%. Over the 1999-2004 period, the long term unemployment rate had a higher growing rate for men than for women (from 3.1% to 5.5% for men, and from 3.0% to 3.8% for women). The long term unemployment rate by different areas is increasing for urban areas (from 4.9% in 1999 to 5.4% in 2004), as well as for rural areas (from 1.2% in 1999 to 3.9% in 2004).

The BIM unemployment rate incidence<sup>37</sup> has had a significant increasing tendency from 44.3% in 1999 to 58.9% in 2004, a level that is high compared to 44.1% in the second quarter of 2004 in EU-25. The incidence by gender is lower for women than for men; therefore, for men from 41.9% in 1999 to 60.9% in 2004, compared to 43.2% in EU-25 in Quarter II 2004, and for women from 47.8% in 1999 to a level of 55.7% in 2004 compared to 45.0% in EU-25 in Quarter II 2004. The long term unemployment rate by region shows a higher incidence in rural than in urban areas, a growing evolution in the analysed period, from 47.8% in 1999 to 56.5% in 2004 in urban areas and from 34.4% in 1999 to 63.3% in rural areas.

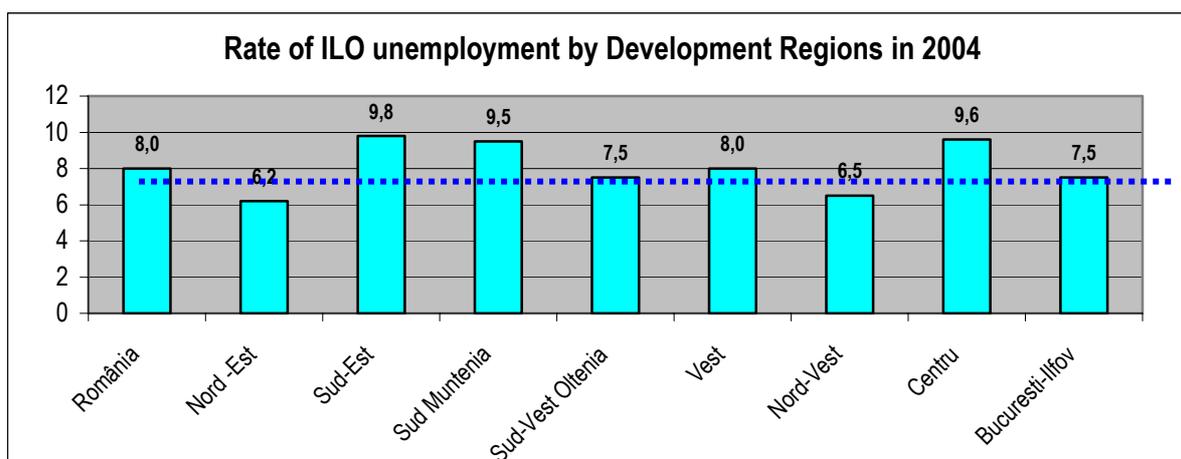
The ILO long term unemployment rate amongst youngsters has a growing evolution from 11.2% in 1999 to 14.3% in 2004 (being 3.7 times higher in 2004 compared to the 25 plus age group), being slightly higher for women (12.5% in 2004) than for men (15.5%). By areas of residence, the BIM long term unemployment rate has dropped among youngsters in urban areas from 25.3% in 1999 to 18.0% in 2004 but has increased in rural areas from 5.1% in 1999 to 10.8% in 2004. The incidence of the BIM long term unemployment among young people has grown from 59.5% in 1999 to 68.0% in 2004.

Long term unemployment rate represents today the largest part of unemployment in Romania. This shows that if the functional and short term unemployment was reduced due to a series of factors, the long term one is persistent and almost constant, with even slight increases. The main cause for the persistence of long term unemployment is a reflection of both the reduced capacity of the Romanian economy to generate a sufficient number of job, but also due to rigidities of the labour market that hinder the labour supply and demand balance. The persistence of long term unemployment and even its slight increase show that the salary policy that is focused on the increase of the minimum salary, which was extremely welcome in 2001-2002, led to an improvement of the life standard of workers with low incomes, thus reaching its limits. Therefore, the current ratio between the average salary and the minimum one discourages the real creation of jobs in companies in sectors with reduced or average added value, which constitutes the current engine of economic growth, thus allowing the formation of the “strong unemployment core” that is hard to dislocate.

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<sup>37</sup> Long term unemployment = 12 months and over; long term unemployment for youngsters (15-24 y.o.)= 6 months and over

## Unemployment at the Regional Level



Source: The National Institute for Statistics, Survey of the labour force in households (AMI GO), annual average data, data for 2002, 2003 and 2004 were extended on the basis of the Population and Housing Census of March 2002.

Regional unemployment rates are yet another reflection of the economic structure and of a phenomenon that is typical to transition in Romania. Consequently, the areas with a more dynamic economy (e.g. Bucharest-Ilfov) usually have lower unemployment rates, as they respect to an extent economic standards, and economic growth is associated with a comeback on the labour market of a certain part of the labour force retired in inactivity or in subsistence activities during the time of recession, when the newly created jobs are relatively few. The less developed countries (e.g. South-East) do not “mask” unemployment although they still have a large subsistence agriculture employment. This deforms the contribution of each development region to total employment, especially when it comes to its volume. At the same time, the higher unemployment rates in certain regions (e.g. Centre) shows the continuation of a process of industrial restructuring, even at this point. Compared to the BIM national unemployment rate in 2004 of 8.0%, the highest BIM unemployment rate is in the South East (9.8%), where as the lowest rate were in the North West (6.5%) and North East (6.2%).

### 5.2. Adaptability on the labour market and entrepreneurship

In view of the preparation for participating to the European Employment Strategy, Romania has drafted a series of policy documents that focus on adaptability on the labour market. Therefore, through the Common Evaluation Document of the Employment Policy Priorities (JAP), signed in November 2002, a series of challenges for the employment policies in Romania have been identified, with an emphasis on: the need to improve access to second chance type education, to high school and university education, especially in rural areas; to improve access to training programmes, both for employees in enterprises as well as for unemployed people; the diversification of the active employment measures in order to facilitate, test and evaluate the changes of the labour market; to provide at a local level, sufficient personnel in public employment services, in order to assist in time people who are looking for new jobs, according to new regulations according employment; to provide equal opportunities; to promote a more active role of social partners, especially through bilateral dialogue.

The measures referring to the adaptability of the labour force have considered both the interests of workers and those of the employers, so that labour force recruitment should be done on terms of profitability and competition for both sides involved, with positive aspects over the whole economic and social life. The regulating of the labour market was very active. There was a regulating of individual work

relations<sup>38</sup>, collective work relations, the general framework of the activity of social partners, labour administration (Labour Inspection), the activity and status of trade unions, business associations, and three party dialogue bodies. A system of social protection of employees was set up as well as one for the protection of the employers' interests by: regulating the minimum gross salary for the country guaranteed to be paid; establishing the maximum work duration, the minimum duration of holidays; the right the employer to sanction employees who have had disciplinary issues, the regulating of individual and collective laying off; the right of the employer to organise its activity. Protection regulations were drafted regarding certain activities or categories of persons.

### **5.2.1. The Organisation of Labour, Working Conditions and Working Hours**

Following the coming into force of the Labour Code, some progress was observed regarding the part time labour relations, temporary work and atypical working hours (work in shifts or night work), with a direct impact over the increase in employment. The analysis of labour organisation<sup>39</sup> implies approaching issues regarding the nature and distribution of tasks, responsibilities, autonomy and control of employees regarding the organisation and performance of their work.

The data for Romania for repetitive and monotonous work, showed that 49% of employees carry out repetitive activities with their hands and movement of their arms or most of their time. The differences between countries are significant in what regards this indicator, from 13% in Slovenia to 47% in Hungary. Compared to this, the same indicator for the 12 candidate countries<sup>40</sup> was of 28%, and for EU-15 31%.

In what regards autonomy and control at the work place, the indicator referring to the control over breaks, holidays and working hours in the 10 new Member States, Bulgaria and Romania, 46% of workers are not free to choose their holidays or days off, compared to 57% in EU-15, Romania being at the level of 55%. The indicators regarding the intensity of labour, the work pattern factors and the breaks in the working schedule have high variations between the EU countries and accession countries. In Romania, the indicator regarding work pattern factors has one of its lowest values of 53% as opposed to 69% in the EU-15 and 58% - the average for new member states and accession countries which reflects a higher orientation for service economy.

In what regards professional training and qualifications, in Romania, the indicator regarding employees that were included in professional training programmes for the last 12 months, had a level of 17% compared to the average of 27% of the 12 candidate countries and 34% for the EU-15 average.

Generally, the most qualified occupational categories benefit most often from training the main sectors which organise training being financial intermediation, transport and communication. There is no significant difference between women and men in what regards participation to training. Usually the employees with indefinite work contracts participate in training more often than those with temporary contracts. In Romania, the average duration of training in companies was of 3.7 hours/ person, equal with the average of the 12 candidate countries and lower than the 4.4 hour/ person average in the EU-15.

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<sup>38</sup>Labour Code- Law no. 53/2003

<sup>39</sup>The "Working conditions in the acceding and candidate countries" Study- European Foundation for Improvement of Living and Working Conditions",2003

<sup>40</sup>References to the 12 candidate countries are actually to the 10 new EU member states, Romania and Bulgaria

The indicator regarding the complexity of work shows that generally there is a high difference between the values recorded for men and women. For Romania the indicator was at 48% compared to the average 55% in the 12 candidate countries and the 57% EU-15 average.

The average duration of work in Romania is very high (45.9 hours), a level close to that of the 12 candidate countries of 44.4 hours, but much above the average (38.2 hours) of EU-15. In Romania, this indicator shows significant differences for women (49.0 hours) and men (44.0 hours), being the only country that has this kind of situation, out of all of the 12 candidate countries, where the average is 45.4 hours for men and 43.3 hour average for women.

In what regards the working hours of the employed population and of the employees, Romania has seen significant decreases starting in 1999. The constant reduction of the proportion of part-time employed population during 1999-2003 deepened the disparity with the average levels in EU-15 and EU-25 (in 2003 the percentage of the employed part time population was of 11.4%, compared to 17.1% in EU-25 and 18.6% in EU-15). Important differences from EU-15 and EU-25 can also be noticed when it comes to the percentage of temporary employees, in 2003 the level of this indicator for Romania being of 2% as opposed to 12.9% in EU-25 and 12.8% in EU-15.

Although there is diversification and growth of the number of part time work, temporary work contract, subcontracting and atypical working hours (work in shifts or night work), they currently are factors that enhance the risk level, due to a lack of adequate training, psycho-somatic problems caused by work in shifts or night work, lack of manager awareness or lack of motivation of employees with short term contracts.

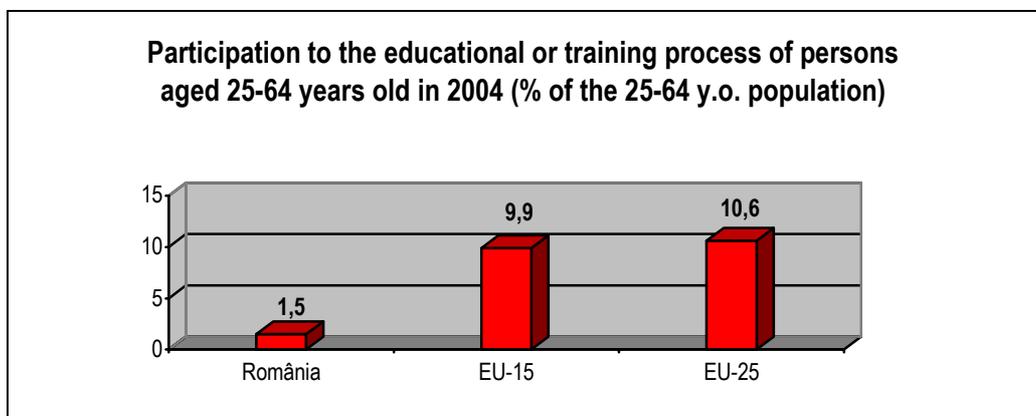
### **5.2.2. Health and safety at the workplace**

The national legislation provides that the employer is the only party responsible for providing the measures regarding the health and safety of employees at the workplace. The legislation sets out the insurance system for work accidents and professional disease, a form of social protection, a system that became functional from the 1<sup>st</sup> of January 2005. The indicator regarding the perception of the health and safety risk at the work place places Romania at a value close to the EU-15 average, but at a lower rate than that of the candidate and accession countries (at the date of evaluation 2001-2002, 12 candidate countries and Turkey were analysed). In Romania 61% of employees considered that work affects their health and safety, where as the EU-15 average was of 60%, and the average of candidate and accession countries being of 69%. Regarding the indicator concerning health problems due to work, the most frequent complaints referred to general fatigue, back pains, muscular pains and sight problems. General fatigue affects 42% of Romanian employees, more than the EU-15 employees (23%), but at a level comparable to that of the candidate and accession countries (41%). Work sustainability is expressed through the indicator referring to the measure in which workers can carry out the same job when they are 60 as well, percentage that is comparable to that of the candidate and accession countries (50%) but lower than the EU-15 average (56%).

With all the measures taken at a national and local level, although there is a slight decrease in the number of work accidents and new cases of professional diseases, the numbers are still high, and the indicator regarding the average duration of accidents is slightly increasing. The existing statistic data reflect the fact that there are work conditions with professional risk and a culture of risk prevention that is still insufficiently developed in enterprises. It must be said that there is a lack of statistics regarding professional diseases, and at the moment there is no statistical data regarding new cases of professional diseases.

### 5.2.3. Continuous Vocational Training (CVT)

In 2004, Romania had the lowest participation rate to continuous training compared to the average of the EU-15 and the New Member States.



Source: The National Institute for Statistics, Survey of the labour force in households (AMI GO), annual average data, data for 2002, 2003 and 2004 were extended on the basis of the Population and Housing Census of March 2002.

The latest NAE (National Agency for Employment) report shows that the percentage of the 27, 475 unemployed persons that took part in the training courses organised by NAE out of the total number of new unemployed people that subscribed in 2004, as of 2%. In 2004, the access to CVT is extremely reduced for persons in rural areas, given that 31.6% of the employed population used to work in agricultural fields, according to the Survey of the labour force in households (AMIGO) in 2005.

#### Access and participation to Continuous Vocational Training in Enterprises

At the moment we cannot talk about regularity in terms of collecting information regarding vocational training in enterprises, and in what regards the participation rate to courses organised by enterprises, the investments in continuous vocational training, types of courses organised. The last available data regarding enterprises that provided continuous vocational training for their employees<sup>41</sup> have emphasised the following:

- Only 11% of companies provide training (in 1999 the same indicator in the EU-15 had a value of 70%);
- The overall access rate to CVT in enterprises was of 7.6%;
- The highest rates of participation to vocational training were for transport, financial-banking and insurance activities, and the lowest rates for construction and trade activities;
- Access to CVT courses was higher for employees with higher education, that hold management or administrative position and the lowest participation rate was for the professional group of technicians.

The survey carried out upon the request for CVT shows that enterprises and individual persons have issues in what respect access to CVT. The two main reasons are: the cost of training and the fact that

<sup>41</sup> „Survey regarding the skills of the labour force and the training policies in Romanian enterprises”, ETF, Romanian National Observer, 2003 (Information taken from the survey „Characteristics of the continuous vocational training in Romania”, carried out by NIS in 2000)

there are no sufficient offers for training available at a local level. There are few Regional Training Centres of the NAE, and the 1,200 school units that provide education and vocational training are not sufficiently involved in adult education. Until now 1214 training providers (with the following regional distribution: North-East: 152, South-East: 143, South: 120, South West: 115, West: 122, North West: 157, Centre: 182 and Bucharest Ilfov: 202) for a number of 3,284 programmes, out of which 2489 are qualification programmes. More than that, private providers are usually located in large cities, and therefore the access to these providers implies transport and sometimes accommodation expenses. In this situation, the regulating and development of distance professional training can be a solution.

The training offer is very fragmented because it tends to address more to individuals and not to companies. Quite a small number of companies have a permanent liaison with the training provider. Most training providers avoid modular programmes because once one has graduated one module or more modules from a training programme, finalised with a graduation certificate that does not give them the right to practice a job on the labour market. Due to reduced incomes, both at the level of individuals, and at the level of companies to a certain extent, there is a very well oriented demand for short term modular courses. Complete qualifications, finalised with qualification certificated that are nationally accepted, are much more appreciated, because they actually give the right to practice one or more jobs on the labour market. Potential beneficiaries can hardly afford them, which will leads to a reluctance of companies to invest in vocational training, and the financial effort remains to be made at an individual level.

### **CVT Funding in Enterprises/ Companies**

Continuous vocational training is funded from different sources: unemployment fund, employer's fund, and contributions of participants to the programme, sponsorships, donations etc. In what regards employers' funds<sup>42</sup>, very few companies (approx. 7% of the companies taken into consideration in this survey) were providing in their development plan for a special budget for CVT, most of these being large companies. The funds allocated by companies for CVT represented 0.9% of the indirect personnel costs and 0.3% of the total labour force cost. The surveys carried out regarding the demand of CVT show that on the contrary, there is a clear interest and motivation in what regards CVT. Even if most employers see quite a significant economic future for vocational training, they still seem to be quite reluctant in forecasting a growth of resources allocated with over 3% of their turnover.

Although the existing legislation provides for some fiscal facilities<sup>43</sup>, for the great majority of the Romanian companies the problem of CVT funding is not perceived as the responsibility of the company, but more as an individual responsibility, which makes it not accessible to employees for financial reasons. Even if a large majority of employers and employees said that they felt there was a need for training, the same majority answered that they could only satisfy this need only if they had the adequate income.

The income obstacle in the way to accessing training is combined with the fact that few training providers bring genuine module courses on the market, offering a partial qualification. Even if their potential clientele feels such a need, it is a sign that training providers face difficulties in satisfying this need. Through the current legislation, CVT is insufficiently funded from the state budget in order to correspond to the potential demand. The only public funding source that is available at the moment is the one allocated for CVT through the unemployment security budget. The employees of the companies

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<sup>42</sup> "Study regarding education and vocational training and employment services in Romania", ETF Romania Expertise in Training, 2003

<sup>43</sup>The expenditures for the vocational training of employees, employed by economic operators, are expenditures deductible when calculating the profit and the taxed income; authorised training providers are exempted from VAT payment for vocational training activities.

benefit since 2004 of maximum 15% of the NAE CVT Budget (fighting unemployment) and maximum 20% of a company's staff can be trained annually, receiving a subsidy of 50% of the total training cost.

### **Access and participation to vocational training of persons looking for a job**

Training of people looking for a job falls under the responsibility of the National Agency for Employment (NAE). The training courses organised by the County Agencies for Employment, through their own vocational training centres, regional training centres for adults and through professional training providers, certified by law. At the end of 2004, the a NAE network comprised: 20 vocational training centres for adults subordinated to the county agencies (19 counties), 6 regional vocational training centres for adults and 3 Romanian-German foundations, all of them authorised according to the law, in jobs/ fields that are demanded on the labour market. Their own vocational training centres within the employment agency, as well as the regional training centres for are opened mainly for people looking for a job, but also for employees and other interested individuals.

The training activity for persons in search of a job is carried out on the basis of a National Training Plan, drafted by the NAE on the basis of suggestions from the agencies for employment. These suggestions are forwarded on the basis of the studies and short and medium term studies that analyse the demand o the local labour market. The training programmes for unemployed people include *induction, qualification, re-skilling, improvement and specialisation*. The access to the above mentioned programmes is possible only after participating to information activities and career counselling and mediation sessions.

According to the new current legislation, there are new groups of persons that have free access to vocational training: prisoners; persons that have gone back to working after finishing the maternity leave, persons that went back to working after finishing their military service, persons that went back to work after they regained the ability to work after having been retired for invalidity; persons employed and involved in courses in view of preventing unemployment (for training these people 50% of the unemployment protection budget is spent for a number of maximum 20% of the employed personnel); persons who carry out their activity in rural areas.

Although the training offer for unemployed people has considerably improved, the rate of participation of unemployed people to vocational training courses is still very low. In 2002, 19,535 paid and unpaid unemployed persons took part in vocational training courses, i.e. 2% of the monthly average stock of unemployed people in 2002. In 2003 23% more unemployed people took part in this courses than in 2002, 36.5% being young (under 25 years old) and 37% being long term unemployed people, young and adults. In 2004, 14.6% more unemployed people participated compared to the previous year. Over the period January – October 2005, 33, 048 unemployed people were included in vocational training courses, i.e. 20.2% more than in 2004, out of which 4, 338 (13.1%) were long term unemployed people (young and adults).

Most long term unemployed people that went to vocational training courses are over 25 years old, mainly due to the changes in the Romanian economy and the development of other qualifications that are required on the labour market. By organising training courses, over the 2002-2004 period, 39,840 unemployed people were employed, which represents 56.1% of the total unemployed persons involved in the vocational training programme. Starting in 2000, the amounts spent for vocational training have continuously increased in absolute numbers. Their percentage in the total active measure had a decreasing evolution though, until 2004, but starting in 2005 their percentage increased to 3.3% of the total funds allocated for active measures.

In order to increase the degree of employment of the unemployed people that graduate from vocational training programmes, in 2001-2004 the NAE organised two types of courses:

- Type I course, representing 80% of the total organised courses, at the end of which there was the obligation to employ all the graduates ;
- Type II course, representing 20% of the total organised courses, at the end of which there was the obligation to employ 60% of the graduates within 6 months after graduation.

In order to improve the access to vocational training programmes of an increased number of unpaid unemployed persons, starting in 2005, the NAE dropped this organisation system of the courses. Therefore, in the first 10 months of 2005, the number of unpaid unemployed people registered to training programmes was 33.7% higher than the number of unpaid unemployed people that registered for the courses in 2004. Starting with the year 2005, the NAE has also decided that 50% of the total number of employees should be employed within 12 months from their graduation, as the outcome indicator of the vocational training programme.

#### **5.2.4. Vocational education and training in order to acquire management and entrepreneurial skills**

Special attention was given to strengthening the results obtained through the education and curriculum revision process so that it can facilitate the acquisition of necessary skills in order to get a job. The reform of the TVET system, seen as a continuous process in Romania, has awarded a lot attention to improving the cooperation in the business environment and meeting individual training needs. The new curriculum for the TVET system has introduced a series of innovations with an emphasis on developing a teaching methodology centred on the student and on individualising the offer. The new curriculum focused on skills, out of which the cross-cutting ones were emphasised separately, regardless of the professional qualification obtained, as well as the adoption of the transferable credit system, promote the improvement of the capacity to adapt to the labour market and to promote the entrepreneurial spirit. Entrepreneurial education is approached as part of cross-cutting skills and is emphasised in the documents of curriculum projection.

Entrepreneurial education is also part of the mandatory education programme at a gymnasium level (a module for the technological education subject), and part of the mandatory education programme in the 10<sup>th</sup> grade + the lower high school cycle. Consequently, in gymnasium and lower secondary education, 9<sup>th</sup> and 10<sup>th</sup> grade, the educational offer comprises technological education. In vocational and technical education, entrepreneurial education continues in the higher secondary education as well.

It can be stated that entrepreneurial education in higher education is a less systematic approach than that of pre-university education. In Romania, the development of management skills can be found in most universities, regardless of their specialty, in the “management”, “administration”, “political economy”, and “marketing” subjects. It must be emphasised that more and more frequently, the Strategic development plans of universities for 2004-2007 describe the strategic line of the ‘Development of entrepreneurial skills of students’, mainly done by offering entrepreneurial education and personal development modules. The intention is therefore to improve management education by introducing some subjects specialised on entrepreneurial education at the level of higher education.

According to the “Survey regarding the skills of the labour force and the training policies in Romanian enterprises”<sup>44</sup> the policy of employers in the field of human resources is determined by a series of factors and conditions among which we can mention: the level of performance and capacity to invest, position on the labour market, size of enterprises, field of activity, stability and motivation of staff etc.

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<sup>44</sup> Source: ETF and the Romanian National Observatory, 2003

Investments in human resources are considered more of expenditure and less of an investment. There are also some differences at the level of management and administration strategies. Training programmes are more acceptable to executive staff especially in companies that have undergone a technical modernisation policy, as their purpose is to acquire new skills.

### **5.3. Opportunities of integration on the labour market**

The National Agency for Employment, set up in 1999, with a three party management (government, trade union, business association), by taking over the services regarding the labour force and unemployment from the Ministry of Labour, Social Solidarity and Family has had a positive evolution in the sense of the development of institutional capacity in order to offer services on the labour market. Starting in 2001, the NAE activity and that of its subordinated units is carried out on the basis of annual employment programmes, with tasks set out all the way to the level of local agencies and on the basis of performance indicators that are included in contracts concluded with the MLSSF. The programmes are funded from the budget of unemployment protection, but also from other sources such as: BERD funds, Phare Funds.

In the field of vocational training of people looking for a job, a network of 6 regional training centres for adults and 13 own training centres within the county agencies for employment were set up with a view to develop the existing centres and set up new ones. The NAE has its own IT system that is used for all activities at all hierarchical levels. NAE has the objective of setting up its own vocational training centre that would provide the training of its own staff.

In view of developing the services offered on the labour market, Law no. 76/2002, regarding the system of unemployment protection and the stimulation of labour force employment, was modified, and through it active measures were diversified and nuanced, extending to the categories of beneficiaries of free training services, assistance and business consultancy, credits with interest that is subsidised from the unemployment protection budget, mediation and professional counselling.

The Public Employment Service (PES) has implemented a project that looks at developing a national career information and counselling centre. The main objectives were the drafting of materials that are specific to the activity of career information and counselling, the development of modern method of testing and evolution of professional interests and abilities, as well as the training of professional orientation counsellors. At the moment, at the level of the territorial structures of the NAE, there are 173 Professional Information and Counselling Centres. In 2003, 87,879 persons were counselled through these centres, which represent only 0.01% of the total unemployed people.

Other people that benefit from the services of mediation and vocational training subsidised from the unemployment budget are the persons carrying out activities in rural areas and that do not have any monthly incomes or that have incomes that are lower than the unemployment benefit, persons that have started their activity again after having come back from a maternity leave or after completing their national military service, the persons that have started their activity as well after a having retired for invalidity, persons that are in prison that have 9 more months of jail time as well as foreign people, that live or reside in Romania and that are working according to the law.

In order to place the employers in contact with the people looking for a job, in view of establishing work relationships, the NAE offers mediation services and organises job fairs. In August 2000 an electronic mediation service of labour was launched in 9 counties. In 2001-2002 it was extended at the level of the entire country and it provides an electronic mediation between demand and supply, according to a set of standard criteria and international and national classifications. This service is free and can be accessed over the Internet.

The application of active policies in order to provide qualitative services on the labour market had immediate beneficial effects reflected in the maintaining of the unemployment rate within reasonable limits (around the value of 7%). In the long term, the impact of employment policies, will be reflected in the growth of the employment rate of the labour force, the quality of the labour force in terms of level of training, for providing the necessary skills for accessing a free European labour market. NAE has drafted its own strategy for the improvement of the quality of services that it provides and the administrative capacity in view of achieving the objectives and tasks in its field of activity. In this sense, 2003 and 2004 have seen the drafting, implementation and certification of the management system, in the beginning for the 20 local agencies and the HQ of NAE, according to the ISO 9001-2000 international standard.

#### **5.4. Trends**

The demographic sources of quantitative growth of labour resources will be limited and falling. According to the prognosis made by the National Prognosis Commission, on the basis of BIM methodology (International Labour Office) and of data in the Survey regarding labour force in Households (AMIGO), it is estimated that the total population after a decrease in 2003 and 2004 with 0.3% will deepen its decline, that will be particularly visible in the medium term. During 2005-2008 this is estimated to reduce by 0.4-0.5% annually. Labour resources will also be diminished, even if not at the same level, for the working population (15-64 y.o.) by 0.1% in 2005 and 2006 and by 0.3% in 2007 and 0.1% in 2008.

In this context of limited labour resources, it is estimated and over the next years an improvement of the employment rate is possible. The advantages provided by the economic growth process, reflected in the increase of the population employed in the private sector, will mitigate the pressure regarding employment generated by the restructuring and privatisation processes, as well as the preoccupation of enterprises to increase labour productivity, as main condition for improving competitiveness. Moreover, during 2005-2008 the modifications in the occupational structure will continue to enhance, i.e. reduction of the population employed in agriculture and the increase of the one employed in construction and services. The effects of these processes will be:

- the reduction of unpaid population in agriculture, especially the older one (over 64 y.o.) including through the exit from the labour market;
- increase of the employed population, especially of employees in services and particularly in constructions.

Consequently, the estimate is that the total employed population will reduce slightly by 0.1% annually. On the other hand the total employed population with a working age (15-64 years old) will increase, by 0.2% annually, which means that the participation rate will improve.

One of the important stimulation factors facing the labour market is the reduction in the potential labour force and the increased cost of employment including moderate growth of salary incomes and social benefit costs. After reducing the contribution to social protection in 2004 by 3percentage points, the plan is to reduce this by 2 points by the end of 2006 and by one percentage point by the end of 2007. Taking into consideration the fact that, as opposed to the situation in 2003, all these reductions will be born by the employer, it can be stated that the negative effects of this measures over net salary gains and over consumption will stop being noticed. The rhythm for the decrease of the contribution to social benefit funds (unemployment, retirement, health) will be accelerated, as they will be diminished with up to 10 percentage points starting in 2006 so that they can go from 49.5% at the moment to 39.5% in 2008. Therefore the reduction of the contribution to social benefits by 1.5 percentage points, as it is provided in the draft social benefits budget for 2006, will bring the social benefits in Romania at a level comparable to the other Central European countries.

The percentage of expenditures with the active measures out of the total unemployment benefit budget has increased significantly from year to year from 2.26% in 2000 to 20.85% in 2003. In 2001 and 2002 the percentage of expenditures for the active measures was of 12.07% and 13.9%. For 2004 the percentage was of 16.51%. The application of active policies will continue, the forecast being that every year the percentage of expenditures for active measures will increase. The results of the programmes' application, reflected in the data for the 2001-2003 period, justified the forecast of a percentage of 30% for active measures in 2006.

#### **Key issues**

- Insufficient correlation between qualifications and the needs of the labour market and the system of quality assurance in the professional training of adults with the European Model;
- Insufficient development of entrepreneurial development in the professional training of adults;
- Insufficient number of training and professional training programmes providers;
- Low geographic coverage of the professional training offer, mainly concentrated in urban areas;
- Low capacity of the labour force to create jobs.

## 6. SOCIAL INCLUSION

### 6.1. The current situation of disadvantaged groups on the labour market

During the 1990s the people of Romania experienced economic hardship and poverty due to the effects of economic transition. The period 1991–1994 and 1997–2000 were particularly hard. The social-economic developments in the past few years have brought about improvements. The level of poverty in 2004<sup>45</sup> was 18.8%, whereas the severe poverty rate<sup>46</sup> was 5.9%. The drastic reductions in the number of jobs, the deterioration of the real level of salaries, the high taxation have been important causes for the reduction in incomes. Increase in the living cost in the period 1997- 2000 was not accompanied by a proportional increase in incomes, implicitly leading to severe poverty. The real value of the net average salary went down until 2000 when it reached a minimum level for the period analyzed (87.8% as compared to 1995). After this date the trend has been upwards, in the years to come, and in 2003 it reached a level very close to that of year 1995 (99.8%).

The living standard estimated on the basis of the poverty threshold, in 2003, stood at 42.9% of the net average salary. With its upward evolution in 2003 the poverty threshold represented 36.4% of the net average salary. As of 2001 there has been a process of alleviation of poverty, considering the overall population, as such, however, it was only in 2002-2003 that the process had positive effects on the highly vulnerable categories.

#### Dimensions that differentiate the poverty risk

*The social-professional position.* Analysis of the level of poverty by individuals indicates a reduction in risk for the persons that are self-employed in agriculture, a social category that is critical as to the dire poverty related to the share in the population (10.1%). In the period 1995-2004, the most important percentage decrease in poverty was for employers and employees. Reduction of poverty in 2004 was important for employees and pensioners both in the urban and rural areas. If in the urban area persons that are self-employed, together with pupils and students, benefited by a less obvious decrease in poverty than the other occupational categories, in the rural area, these persons were almost as dynamic as the persons who were pensioners, as to getting out of poverty.

*Level of education.* Participation in a higher form of education (faculty or college) almost removes the risk of poverty. Every additional cycle of education once finished marks a significant step in reducing the poverty risk.

*The age group.* Decrease of poverty in 2004 was felt by all age categories, more accentuated by the old persons. While in 1995 the poverty risk was more threatening for the old rather than for children and youth, in the past few years, the most vulnerable categories are by far the youth and the children. However, following the significant share of the elderly in the overall population, a significant number of them are affected by poverty. The level of poverty of the elderly who are closer in age to the economically active population (in this case 25-64 years) and the high risk of poverty of the youth indicate proliferation in Romania of poverty related to the structural changes on the labour market.<sup>47</sup>

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<sup>45</sup> The methodology of measurement is elaborated by the National Statistics Institute, the World Bank and the Anti-Poverty and Promotion of Social Inclusion Commission and uses as indicator of wealth the consumption expenditures of the population. Estimation of poverty is done according to an absolute threshold calculated as value of a minimum necessary basket that includes food products, non-food products and services.

<sup>46</sup> Severe poverty represents lack of resources for meeting the bare necessities for living: food, a shelter, clothes.

<sup>47</sup> A phenomenon signalled by the studies: „Dire poverty” and „Urban poverty – rural poverty”, Manuela Stănculescu, ICCV

*Territorial distribution.* Reduction of poverty in 2004 was due mainly to a reduction in the occurrence of this phenomenon in the rural area, with a poverty rate lower by 10.7 percentage points or a reduction of 28.1% as compared to the previous year. Among the assumptions for this decrease there are the cumulated effects of some measures implemented in 2004, like the growth in pensions for farmers or the transfer of subsidies for agriculture at that year's level. In spite of this, the disparity is maintained between the two averages of residence, the rural being considered as more affected by poverty. Most of the poor persons are in the rural area (66.7% of the total poor population) and the risk of poverty is higher in this residence environment, however, in the urban area poverty is deeper (the consumption deficit is bigger). The trend for a decrease in the level of polarization between the urban and the rural is to be found also in the evolution of the dire poverty rates.

*The regional distribution of poverty.* Differences between regions in point of level of poverty has levelled considerably; the most vulnerable region, Northeast, is no longer ahead of the other regions, in point of high poverty risk, as in the previous period, following the fact that it was the most important beneficiary of the decrease in poverty in 2003 and among the main beneficiaries in 2004. A narrowing of the gap is visible also between the group of the poorest four regions (North-East and the three Southern regions) and the poorest ones. The only region with a distinct situation, in point of the extremely low risk of poverty, is still Bucharest.

*Inequality of incomes.* In 2004, inequality was below the average of the 15- EU countries, with a Gini index of 0.3; the Gini index went up in 2004 as compared to 2003 (0.28). In 2004, the incomes of the 20% wealthiest segments of the population in Romania were 4.8 times bigger than the incomes of the 20% poorest segments of the population. This reflects a polarization of the incomes distribution, in conditions of a relatively slight inequality of these incomes.

*Securing of access to housing.* The privatization of the public housing stock that has been done in the past 14 years led of an increase in the share of private housing from 67% in 1989 to 97% in 2002, placing Romania second among the European states in this respect. Almost all the privatized dwellings in Romania are flats in apartment buildings, which are in a deplorable condition, in most of the cases. The state has withdrawn almost completely from financing and construction of dwellings from public funds, from 8.7% from the state budget in 1989, to less than 1% consistently in the following years. This placed the average share of newly built houses from public funds diminish drastically in the period 1998-2001 (approx. 2.100 flats built during a year), with an increase only in the past few years (6.848 flats built in 2003). The low rate of construction of new flats during the whole period of transition places Romania in a lower position as compared to the 15-EU countries and then 25-EU countries. Another problem is that of the poor quality of living conditions for part of the population: over-crowding of living spaces, the poor quality of construction materials and poor access to utilities.

### **The children who are in the protection system**

An important progress in the reform process for child protection has been the very development of alternative services that prevent abandonment of children and their institutionalization, like: mother and baby centres, day-care centres for rehabilitation of children with disabilities, counselling and support centres for parents, services for monitoring and assistance of the pregnant women at a risk of abandoning their babies, services for the prevention of abandonment in the pre-conception period, by counselling and family planning and others.

Following the efforts made for insurance of an adequate level of caring, from among the 32,456 children that are protected in the residential system, 5,417 are in family-type of units (houses, flats, centres developed by the authorized private organizations to carry out activities in the field of child protection) and 5,414 children are in the 125 placement centres with modules. Closing of big institutions of over 100

children as well as the development of alternative services to institutionalization was possible following the implementation of programmes both with external funding<sup>48</sup>, and internal funding<sup>49</sup>, as well as with the efforts made by the county and local authorities.

Worth mentioning too are the measures taken with a view to the social integration of some underprivileged categories of the population (the street children, the young people who leave the protection system, the children in the special educational units) as well as those related to protection of children against abuse, exploitation or trafficking, with a view to promoting equality of chances for this group threatened and even faced with the risk of social exclusion. Coming into force of the legislative package for child protection (January 2005) marks transition from protection of children in difficulty to protection of the rights of children regardless of where they are. Consequently, in November 2005 the National Authority for the Protection of Children's Rights (NAPCR) submitted to public debate the draft of the National Strategy in the field of protection and promotion of children's rights for the period 2006-2010.

*Social reintegration of street children.* In 2001 the first action plan was drafted for the social reintegration of street children. For reducing the phenomenon, 15 services were set up so far at a national level for protection, counselling and support for reintegration into the family of street children (day and night shelters, coordination centres etc). at the end of 2002, as compared to 2001, the number of children and young adults who lived in the street diminished by 60% at a national level (from 2,500 to 1,500) and by 57.10% in Bucharest (from 700 to approximately 400)<sup>50</sup>. The data provided by NAPCR in September 2004, showed that there were 95 street social workers and the number of services for the street children stood at 106.

*Juvenile delinquency.* As to juvenile delinquency, efforts have been made for amending the legislation and of methods of intervention and the institution of probation has been introduced, which needs further consolidation. There is however a deficit of services of social reinsertion of former delinquents and a new system of sanctions and alternative punishments for underage is to be adopted. Similarly, a legal framework is about to be drafted for the setting up of specialized courts for children. On the other hand, the process of development of social assistance services for the victims also started. The functions of rehabilitation played by prisons for underage developed in parallel with increasing the effectiveness of intervention for the social security of the population. The methods of treatment of juvenile delinquency were very little differentiated from those for delinquents in general and little developed as a variety of interventions. Attempts are made to build an institutional system that should support specific forms, differentiated by correction of juvenile delinquents.

### **Young people of over 18 years of age who leave the state child protection system**

The socio-professional integration of young people who leave the child protection system is a very important measure. For a long time there has been no solution for them, as they left the institutions without any prospect for a home, job and without the necessary abilities to help them get integrated into the society. Out of the total of 32,456 children protected in the public and private placement centres at the end of March 2005, 12,148 had ages between 14 and 17 years and 6,329 were more than 18 years of age. Specific services started to be developed within the Department for Child Protection.

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<sup>48</sup> In the Phare programmes of 1999, 2001 and 2002 projects of local authorities of about 40 million euros were financed. For financing of projects whose objective is development of alternative services for child protection of a residential type there are several programmes being currently implemented like The Reform programme funded by IBRD and DBEC (29.5 million USD); the Programme CHILDNET funded by USAID (15 million USD) and the programme of technical assistance of DFID (3 million sterling pounds).

<sup>49</sup> In the programmes of national interest (PIN), in the period 2001-2004, 728 billion ROL were allocated.

<sup>50</sup> Source of data: a UNICEF study (at the end of 2000) and NAPCR (at the end of 2002).

At a national level there are about 50 such services and projects are being implemented in order to further develop these services. These 50 services are covering the teenagers and youngsters in the protection system and they are operational only in 22 counties. Their main target is to train teenagers and youngsters for their social and professional integration. The services provided are counselling services for acquiring the skills of independent life. Specialists who work in these services collaborate with the staff in the placement centres and monitor this activity. In April 2004 the minimum compulsory standards for the service of development of independent life skills were approved and during 2005 training sessions were organized for the staff that work in these services.

### **Families with more than 2 children and single-parent families**

These families represent another category that is facing a high risk of poverty. Decrease in poverty for families with more children (more than 3) is visible as of 2003 (with a decrease of 6.1 percentage points of the risk as compared to 2002).

Following the polarized access to health-care services and the high costs of family planning methods, there is still a high level of unwanted childbirth, the poor population having a higher birth rate. Increase in the risk of poverty is also the result of the poor policy of social support for the child. The amount of state allowance for children related to the gross salary in economy has eroded going down from 4.5% in 2000 to 3.16 in 2003.

### **The Roma population**

The segment of Roma related to the population of Romania is substantial, coming second as a minority, after the Hungarians. The 2002 census produced a number of 535,140 Roma (about 2.5% of the population), according to their ethnic identity. Out of them, 60.1% live in the rural area. However, independent estimates carried out by Romanian and foreign sociologists, as well as by representatives of the Roma, estimate that the number of Roma is between 1 and 2.1 million persons. For instance, the Country Report of the European Commission in November 2004 presented an estimated figure of 1.8 – 2.5 million Roma<sup>51</sup>.

The Roma population has a very high level of poverty, in 2003 having been 3 times higher than the nationwide average. A significant part of the Roma communities (74.3%) has a wide range of social disabilities: poor education, lack of qualification, a history of lack of participation in the formal economy, a big number of children, lack of dwelling space, lack of ownership over the land for those living in the rural area, poor education, deficit in qualification and experience on the labour market. A very big number of the Roma (according to estimates about 50.000 persons<sup>52</sup>) do not have identity papers and that is reflected in exclusion from social rights: social assistance, social insurance, and legal employment.

Setting up of the National Council for Combating Discrimination (NCCD) has been an important step further in institutional combating of all forms of discrimination; in spite of this, change of mentality needs long-term efforts. According to the data provided by NCCD, as of 2002, there have been 111 petitions for cases of discrimination against the ethnic Roma, for which 28 sanctions have been applied.

#### *Employment of the Roma population*

One of the key issues of the Roma segment of the population is their poor participation in the formal labour market. According to official data provided by „The census of the population and housing of

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<sup>51</sup> European Commission, "2004 Regular Report on Romania's Progress Towards Accession", p.29

<sup>52</sup> Institute for Research into the Quality of Life, "Indicators on Roma communities in Romania", Bucharest, 2002

2002" only 122,573 persons out of the 535,140 declared Roma (that is only 22.9% of the total) are included among the active population and from among them only 71.5% being among the employed population, the remaining of almost 28.5% being unemployed in search for a job. About 41% of them work in agriculture (of which one third are women) and 31% are unqualified workers.

There are major deficiencies among the Roma population in point of professional qualification. About half of the Roma have no profession or carry out all sorts of activities that do not require prior qualification in the formal professional development system. The big percentage of persons that work on a daily basis, 41.7% of the total number of Roma population indicates that they are in a difficult situation as to employment and, implicitly, earning of minimum income to meet the basic needs<sup>53</sup>. These aspects are reflected in the very low level of income of Roma families and in the fact that 16.8% have no income at all.<sup>54</sup>.

There are many persons who did not have at all the experience of an economic activity recognized legally or have contributed only scarcely, this being interrupted by long period of unemployment (more than 50% of the Roma have experienced a period of unemployment exceeding 27 calendar months<sup>55</sup>, whereas the share of employed persons is very low (only 13% of the average income of the Roma families, half as compared to the beginning of the transition period). The main sources of income are occasional, prevailing in the informal economy, and are not enough to secure a decent living: occasional activities, work on a daily basis, and work in their own household /as day workers in other individual households. An important part of the Roma family income comes from social benefits.

According to recent studies, the real unemployment rate among the Roma community is only 24% because very many of the Roma are active in the underground economy. According to the same sources, about 16% of the Roma people live exclusively from the social benefits from the Romanian state<sup>56</sup>. As regards the employment of Roma women, there are a series of discrepancies as compared to the situation of men. Thus, out of the total number of employed Roma population women account for less than one third<sup>57</sup>. Similarly, the share of household women among the Roma women is 4 times higher than the nationwide average<sup>58</sup>.

As of 2001, NAE included as a target group, in the annual plan of action for increasing the level of employment of the labour force, the ethnic Roma persons.

### *The education of Roma children*

The precarious living conditions and the low incomes are reflected in a negative way in the education situation of the Roma minority. Thus, drop out in school and non-enrolment in any form of education occurs at higher frequencies than the nationwide average among the Roma pupils. Almost 12% of the children aged 7-16 years dropped out school before finishing compulsory education, whereas 18% do not attend school at all. On the whole, over 80% of the children that do not attend school are Roma<sup>59</sup>. More than one third of the Roma (38.6%) are functionally illiterate<sup>60</sup>. In addition to material reasons (of

<sup>53</sup> The Institute for Research into the Quality of Life, "Indicators regarding the Roma communities in Romania", Bucharest, 2002, p.12

<sup>54</sup> The Barometer of Ethnic Relations, a programme of the Center of Resources for Ethnic-Cultural Diversity, carried out by Metro Media Transylvania, October 2002

<sup>55</sup> The census of the population and housing of 2002

<sup>56</sup> See Dena Ringold, Mitchell A. Orenstein, Erika Wilkens "Roma in an expanding Europe-Breaking the poverty cycle" Conference Edition, Washington, 2003, p. 73

<sup>57</sup> Institute for Research into the Quality of Life, "Indicators regarding the Roma communities in Romania", Bucharest, 2002, <sup>58</sup> Idem

<sup>59</sup> Ministry of Education and Research, the Institute of Educational Sciences, the Institute of Research into the Quality of Life, UNICEF, "Participation in education by Roma children", Bucharest, 2002, p.47

<sup>60</sup> „Roma in Romania 2002" CASPIS

an economic or logistical nature), the level of education of previous generations contributes itself to the low level of attendance of school of the current generations of Roma children. Likewise, the lack of pre-school education and difficulties of fluency in the Romanian language by many of the Roma children affects their school performances. Along the same line, worth mentioning are also some discriminatory practices of the teaching staff and of non-Roma pupils. All these aspects result in the incapacity of many Roma children of getting integrated in the educational environment.

In the 2002-2003 school year the Roma represented 4.23% of the total number of enrolled pupils at nationwide level. The percentage representing attendance of school by Roma pupils, in each form of education, leads to certain conclusions: low pre-school level, as compared to primary education level, than decreasing level in secondary school and the percentage is more than worrying at high school level: 1.04%. In the 2003-2004 school year, a number of 20,528 Roma pupils have chosen the additional curriculum of language, literature, history and traditions of Roma (16,925 Roma pupils studies language and literature, whereas 3603 studied and/or the history and traditions of Roma). A series of projects have been drawn up and implemented aiming at stimulation of school attendance of Roma children and decrease in drop out. The study of the Romany language in schools has intensified. It is estimated that currently over 18.000 pupils study the Romany language, which is equivalent to over 10% of the official number of Roma children enrolled in schools.

Romania is promoting the principle of equal opportunities in education regardless of individual characteristics – mental or physical deficiencies, the socio-economic environment, mother tongue, ethnic origin, geographical area etc. the Romanian law provides for the right to education of all children, regardless of nationality, religion, gender etc, in a series of general provisions, included both in Constitution and in the Education Act, as well as in other regulations on prevention and combating of discrimination.

In the 10 counties included in the PHARE 2001 Programme „Access to education of disadvantaged groups, with focus on the Roma”, in the 2003-2004 school year, an increase school attendance was registered, especially of the ethnic Roma children (an increase in school attendance of the Roma children in the 74 schools that participated – including those in the programme „The second chance” – of 11.6%, against the previous year, by comparison to an increase of 0.2% in the participation of all children included in these schools). Improvement of attendance is obvious also at the level of preschool education, where an increase of 12.3% among all the preschool children in the educational establishments included in this program corresponds to an increase of 28.2% among the preschool Roma children.

## **Persons with disabilities**

### *The legislative and institutional framework*

In the period 1999-2004 the legislative framework on protection and employment of persons with disabilities was modified, the criteria and method of authorization of protected units, the law on unemployment benefits system and stimulation of employment, prevention and sanctioning of all forms of discrimination, ratification of the Social Charter revised and adopted in Strasbourg on May 3rd 1996, approval of the National Strategy of special protection and employment of persons with disabilities.

### *Statistics on persons with disabilities*

The increase in the number of persons with disabilities in the period 2000-2001 was due to the fact that establishment of levels of disabilities was done on the criteria of invalidity, criteria that were very permissive, and there was no restriction as to distributing all diseases into levels of disability. Similarly, in 2000 other persons benefited from various disabilities (like persons that suffered a stroke, elderly

persons with serious diseases). Consequently, the number of persons with disabilities increased in an uncontrolled way and this determined the drafting of two normative acts that regulate the criteria for establishment of degrees of disabilities. After they came into force, there was a decrease in the number of persons with disabilities in 2003 and a slight increase in 2004: persons with physical disabilities (locomotory), with somatic disabilities, audio, visual disabilities, with the exception of mental and neuropsychiatry disability, on a continuous increase (the estimates of WHO for 2020 indicate that bipolar psychosis will be the third case of death rate at a global level).

In 2004 there were 19,949 persons with institutionalized disabilities, the number of employed being 13,031 persons (standard being 16,071), which is a deficit of 19% of staff employed for a beneficiary. The ratio of staff employed/beneficiary is not satisfactory (0.65) in point of quality of services for the persons with disabilities that are assisted.

There is a serious shortcoming of social workers, psychologists, ergo therapists, therapists, councillors etc. Predominant is the medical and administrative staff, which proves that the beneficiary of the services is treated medically, less or no stress being laid on his/her skills, capacity for socio-professional integration.

#### *The situation of persons with disabilities assisted by personal assistants*

The qualification of personal assistants started in 2001, when the law provided for the compulsory training of personal assistants. Data regarding the number of personal assistants trained were available as of 2003, when only 23% of the total number of personal assistants attended training courses.

As to the accessibility of public buildings for the persons with disabilities, although the law provided for this process to be completed on December 31st 2003, in December 2004 only 19.7% of the number of public buildings was rendered accessible. In 2004, the modification of G.E.O No.102/1999<sup>61</sup> provided that it was compulsory to render public institutions/buildings accessible.

An important course of the poor social inclusion, shaped ever since childhood, is the tradition of segregation of persons with disabilities in point of school education. Isolation in special schools of some children with slight disabilities was put an end to as of 2001, with the programme of integration of a number of 18,158 children in public education, without however adjusting concurrently the curricula, training the teaching staff and without promoting an attitude of support. In 2002, a number of 4,400 children with special needs studied in the public education system. The training of the teachers in public schools on the special educational requirements and integration in school of children with special educational needs will be accompanied by provision of educational services of psycho-pedagogical and special assistance by support teachers as well as by the opportunity to get education at home or to allow infrequent attendance of school and special services in the speech therapy centres and psycho-pedagogical centres.

The current experience in point of support/itinerant teaching staff proves that the current methodology is not sufficient: the statute of the support/itinerant teachers is not clear, it entails too many responsibilities, some of them could be carried out by other different specialists that work in the educational system (the speech therapist, the school advisor, the school psychologist), that there are no facilities as to the transportation of the itinerant teacher to the school where the child with special educational needs is integrated etc. In the past few years there has been this increasing concern for integrating as many children with deficiencies in the normal public schools.

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<sup>61</sup> Regarding special protection and employment of persons with disabilities.

In the 2003-2004 school year, a number of 27,493 children/pupils with deficiencies were enrolled in the special schools, which accounts for less than 1% of the total number of pupils enrolled in the normal schools in Romania (approx. 3,000,000) and 11,770 children/pupils with deficiencies integrated into normal schools, which accounts for more than 1/3 of the total number of children/pupils with deficiencies.

### *Employment of persons with disabilities*

In September 2004, the statistics of the NAPH indicated a number of 11,872 persons with disabilities that were employed. The registration is based on the reports of the county social assistance public services, the respective services in the sectors of the Bucharest Municipality and of the Association of Blind persons in Romania. At the end of 2004, the percentage of persons with disabilities that were employed stood at 3.3%, whereas the percentage employed persons with disabilities in the total population 15-64 years stood at 0.1%.

Provision of accessibility facilities at their work places for persons with disabilities, especially in the protected units, is an obligation of the respective company. Until 2004 a number of 40 protected units<sup>62</sup> were authorized in 11 counties and in the Bucharest Municipality. In 28 counties there are no authorized protected units. There are however more workshops where persons with disabilities work but that did not submit the documents with a view to getting the authorization. The development of the network of protected units should be a topic in the attention of both services for social assistance and non-governmental organizations. At the end of 2004, 1,152 adult persons with disabilities worked in protected units, out of the total of 11,782 employed persons with disabilities.

The jobs fair for persons with disabilities. As to the jobs fair for 2003-2004, although the number of jobs offered increased by approximately 43%, there have been no significant differences as to the number of employed persons with disabilities. Therefore, whereas in 2003 the supply was of 7,461 jobs and 284 were employed, in 2004 the number of jobs was 10,696 out of which 294 were taken- noticeable is that the supply of jobs is not in agreement with the qualifications and possibilities of the persons with disabilities.

## **6.2. The overall situation in the field of social assistance**

The profile of the current social assistance system in Romania includes transfers from the state to the population in the form of universal or subsidiary rights, as well as social services. The characteristics of the social assistance system is wider participation of non-governmental organization, as well as of other social partners in resolving the social cases in which the state can only ensure modest financial support and to a limited number of organizations.

Development of a single framework for organization and coordination of the national system of social assistance to include the overall problems of this domain (family protection, child protection, protection of persons with disabilities and of any person in difficulty) was absolutely necessary. A first step of this objective was made in 2001, with the adoption of Law nr.705/2001 on the national social assistance system.

The government policy on social assistance is aiming at a series of measures for combating social exclusion and for promotion of social inclusion, including by drawing up of legislative provisions to secure a coherent system, an effective management, a permanent improvement of various financial

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<sup>62</sup> The profile of these units is varied: manufacturing of brushes, cardboard packages, brooms, furniture, plastics objects, modular prostheses, editing, crafts, embroidering, ready made clothes, tailoring, locksmith, repair work etc.

measures of financial support for the family, children, persons in risk situations, as well as a consolidation and development of the network of social services.

In the period 2003-2004 a series of normative acts were approved with the purpose of securing the citizens' access to the social rights stipulated and coherence in the development of the national social assistance system. Consequently, the latest regulated domains were:

- *Social services* – regulated were all types of social services, categories of beneficiaries, providers of services and the staff, the stages in the process of assignment of social services, the responsibilities of central and local authorities, principles of finance, as well as methods of assessment, monitoring and control.
- *Prevention and combating of domestic violence* – the National Agency for Family Protection was set up having as major objectives: drawing up of the national strategy, of programmes and plans of action in the field of prevention and combating of the phenomenon of domestic violence, setting up of the monitoring and evaluation instruments, setting up and accreditation of centres for sheltering the victims of domestic violence, training and authorization of family counsellors.
- *Daily allowances* - a programme was set up on complementary family allowance and support allowance for single-parent families. Under the programme a new scheme of family allowances was set up to be awarded on the basis of the principle of testing the incomes for the purpose of supporting the families at a high risk of social marginalization.
- *Prevention and spreading of AIDS in Romania and protection of persons that are infected with HIV or have AIDS* – a provision was made for then introduction of an allowance meant to for a nutritional supplement that accompanies the medical treatment specific for this disease.

In the context of openness towards the civil society, represented by non-governmental organizations, it has been pursued to grant financial support to non-governmental organizations for improving the quality of social assistance services provided by them as well as promotion of partnership between the public administration and the civil society. The resources allocated for the implementation of this programme have been increasingly substantial taking into consideration the need to support those organizations that play an active role in developing the social infrastructure in Romania by carrying out social services for the vulnerable groups.

### **6.3. Gender equality and combating social exclusion of women**

#### **6.3.1. The legal and institutional framework for the implementation of policies on equal opportunities for women and men**

According to the Human Development Report 2004, drafted under the coordination of the United Nations Programme for development, Romania ranks 69 according to the *human development index* out of 175 and as to the *gender disparity index* this country ranks 56 out of 175 countries. In 2002, in the latest census of the population of Romania, women accounted for 51.3% of the population. At present, against the background of a decrease in childbirth and reduction in the population with ages ranging between 0-14 years, there is a general trend of decrease in the female population, in the rural area, and a slight increase actually in the urban area.

In the past few years in Romania the interest in equal opportunities for women and men, improvement of the working conditions and social protection of women, as well as increasing the responsibility of employers in this field have gone up. The legal framework in Romania, with the normative acts in place, provides the prerequisites for promoting equal opportunities for women and men. The Labour Inspection carries out control of the way in which the legal provisions on equal opportunities for women and men

are implemented. The National Action Plan for Employment (NAPE) approaches the issue of ensuring equal opportunities for women and men. For establishing an institutional frame adequate to the EU regulations regarding the policy of equal opportunities as of January 1st 2005 the National Agency for Equal Opportunities for women and men (NAEO) was set up. The scope of NAEO is to promote the principle of equal opportunities for women and men in all the walks of economic and social life.

### **6.3.2. Identification of the factors that generate differences of treatment between women and men in the economic-social sphere as well as in that of equal opportunities**

#### **Employment of women**

In the period 1999-2004, the share of the employed women population registered a slight decrease (from 46.2% in 1999, to 45.6% in 2004). In the period 1999-2004, the employment rate of women decreased, following the general decreasing trend in the employment rate. In this period, the employment rate of women between 15-64 years of age was lower than that of men. It decreased by 5.4 percentage points, whereas the men employment rate for ages between 15-64 decreased by 5.9 percentage points. Although the employment rate of women aged between 15-64 registered in Romania in the year 2004 was of 52.1%, this is at a difference of 7.9 percentage points as compared to the rate of 60% according to the Lisbon objective for 2010. In the period 2003-2004, the employment rate of women with ages ranging between 15-24 increased by 2.2 percentage points, as compared to that of men that registered a smaller increase. The employment rate of women in the age group 15-24 years is the lowest as compared to the other age groups, a situation comparable to the employment rate for men for the same age group.

As to part time employment, by comparison to the EU indicators, differences are sharp. The share of women working part time in the total number of employed women in Romania stood at only 11.2% in 2004, as compared to 31.4% in the EU-25 (data related to the second quarter of 2004), which shows a low percentage of women who work in part time. In 2004 the percentage of part time employed men was above the EU-25 and EU-15 average (10.1% in Romania, as compared to 7.0% in EU-25 and 7.2% in EU-15). The percentage of temporarily employed women in the total employed women was also very low of only 2.0% in 2004. This situation is similar for the men population, in the field of temporary employment.

*Violence and discrimination* at the work place can take various forms and is perceived differently in the NSM-10 and the 2 candidate states – Romania and Bulgaria, that is, the EU-15<sup>63</sup>. Physical violence at the work place affects more men than women, both in the NSM-10, Romania and Bulgaria and in the EU-15. As compared to NSM-10 and Bulgaria, workers in Romania indicated a high rate of violence both coming from peers (1.5%), and from persons outside of the work place (4%) however these percentages are lower as compared to the average in the EU-15 (2% of the workers were affected by physical violence from their peers and 4% from persons outside of their work place).

*Sexual harassment* is affecting women in a higher degree than men. Sexual harassment affects to a higher degree workers in Romania (3%) than in NSM-10 and in the accession countries (2%) and the EU-15 (2%).

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<sup>63</sup>"Working conditions in the acceding and candidate countries"- European Foundation for Improvement of Living and Working Conditions, 2003, statistical data of prior to years 2001 - 2002

## Income of women

As to the income of women in Romania, this has vacillated between 82% and 83% of that of men in the period 1999-2003, attaining 86% in 2004, if taking into consideration the employed women in all the branches of national economy. In the past decade modifications have been identified in the ratio of women employed and men employed, in various branches of activity, some on an increase, others on the decrease, as for instance, public administration. The analysis of the distribution of employees by groups of gross salaries in the national economy in 2004 showed that 66.4% of women employed had salaries under the gross average salary, since women are employed prevailingly in branches with a low added value, like the food industry, the textile industry, domains which generally offer lower salaries, as well as the fact that the number of women is predominant especially in the low salaries area.

In the period 1999-2003 there was a tendency of slight decrease in the percentage of women employed in agriculture, in the total number of persons employed in this sector; in 2004 this indicator went up slightly, reaching 45.6%. In the overall industry, in 2004, women are employed up to 43.8%. The sectors of activity prevailingly feminine are health, education, financial brokerage, hotels and restaurants and trade. As compared to 1999, in 2004 both the percentage of the women population aged between 25-64 with at least an average level of education and the percentage of those with completed higher education registered a 3 percent increase, and respectively 2.4 percentage points increase.

## Unemployment with women

In the period 1999 – 2002, the women unemployment rate in Romania registered some fluctuations, attaining in 2002 the level of 7.7% (by 1.5 percentage points higher than in 1999); in 2004 it came back to the level of 6.9%, a lower level as compared to the women unemployment rate registered in the EU-25 of 10%, and to the EU-15 of 8.9%. As compared to the men unemployment rate in Romania, in the period 1999-2004, the women unemployment rate was constantly lower, with variations between 1.9 – 3.5 percentage points. As to the ILO unemployment rate in 2004, for the age group 15-24 years, it attained the value of 22.4% for men, respectively 18.9% for women. For the same age group, as compared to 1999, in 2004 the ILO long-term unemployment rate (6 months and over) increased for women by 0.8% and for men by 4.6%.

The age group 15-24 years is the most affected by unemployment and long-term unemployment. The long-term unemployment rate was by 1.2 percentage points higher with men and 1.8 lower for women than the value of this indicator at total population level. As of 2003, NAEO organized the jobs fair for the Roma. In the first edition 8,243 jobs were supplied for the ethnic Roma and 633 jobs for persons at risk of social marginalization.

In the jobs fair for the Roma of 2004, 11,304 jobs for the ethnic Roma were supplied and 268 jobs for persons at risk of social marginalization. At this event 9,845 Roma persons took part, out of whom 2,257 persons were placed into employment. .

### Key issues:

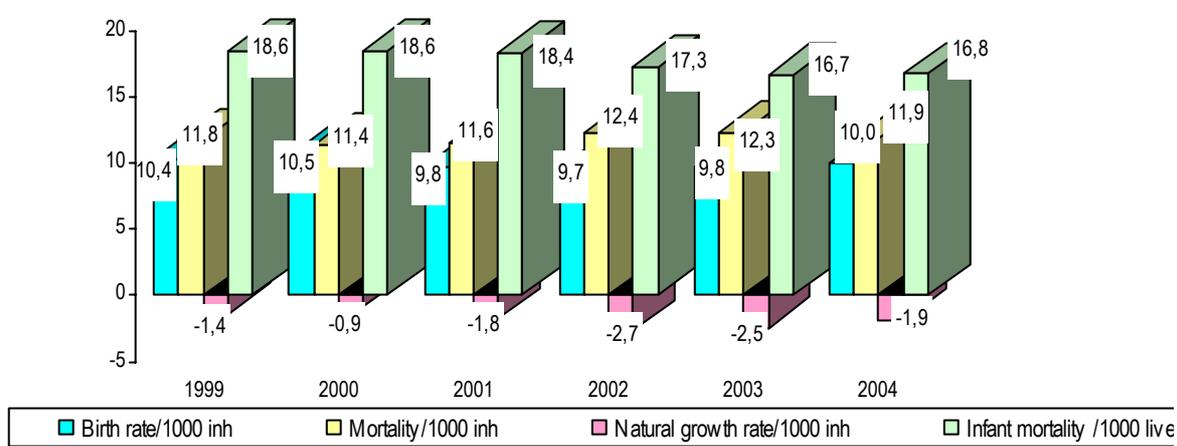
- Poor inclusion of vulnerable groups on the labour market;
- The need to develop a system of social services delivered at home, to ensure a sufficient number of caring and assistance institutions, as well as increasing the quality of services provided.

## 7. HEALTH

The health measures to be taken between 2007 and 2013 are aimed at continuing the health system reform in view of increasing the life quality and of approaching the health and demographic indicators of developed countries, while reducing the pathology specific to underdeveloped countries. The main focus will be placed on improving health care services by rehabilitating health services infrastructure and by increasing the capacity and quality of emergency health services in all the 8 regions of the country.

### 7.1. The dynamics of demographic phenomena in relation to population's health

In the last decade, the analysis of relevant statistical data shows an unfavourable position of the three major components of population dynamics – birth rate, mortality and external migration, a deterioration of the entire demographic construction, and a tendency to enter an imminent demographic crisis – direct or indirect results of the entire political, economic and social context of the transition period. Against this background, health system's incapacity to appropriately and concertedly react to these challenges has played an important role in the evolution of data presented below.



Source: National Institute of Statistics

**Birth rate** is drastically decreasing, from 16.0 live births per 1000 inhabitants in 1989, to 10.5‰ in 2000 and 10.0‰ in 2004. This period records the lowest birth rate and fertility indicators in the modern history of Romania, a very serious demographic phenomenon having a material social and economic impact on the medium and long term. Of the 8 development regions, in 2004, the highest birth rate was recorded in the North-East region (11.7 live births per 1000 inhabitants), the lowest rate being recorded in the South-West region (8.9 live births per 1000 inhabitants) and in Bucharest (9.0 live births per 1000 inhabitants).

As compared to the EU-15 average for birth rate, which is characterized by a certain stability (10.65 live births per 1000 inhabitants in 1999, 10.63 live births per 1000 inhabitants in 2001), Romania has witnessed a significant birth rate decrease in the last 4 years, from 10.45 live births per 1000 inhabitants in 1999 to 9.66 live births per 1000 inhabitants in 2002, without having a concrete possibility to improve this situation in the near future. At the same time, this trend is similar at the level of the 10 new member states, the NMS-10 birth rate average being relevant in this respect (from 9.92 live births per 1000 inhabitants in 1999 to 9.20 live births per 1000 inhabitants in 2002).

**Feminine fertility** per total is decreasing from 40.3 live births per 1000 inhabitants in 2000 to 38.4 live births per 1000 inhabitants in 2004, the indicator shifting towards the older ages, the causes for this shift being largely economic and social (increase of age at marriage, possibility to control births' number and frequency, etc.).

**General mortality** registered a significant increase between 1990 and 1996, from 10.6 deaths per 1000 inhabitants in 1990 to 12.7‰ deaths in 1996, then the mortality rate started to decrease progressively to 11.4 deaths per 1000 inhabitants in 2000. In 2004, this indicator was 11.9‰.

In Romania, the morbidity and mortality models suffered important changes in the last decades, in the sense that the prevalence of chronic diseases and of chronic diseases-related mortality increased, against a background of an increased weight of old-age population, associated with the multiple action of biological risk factors, of environmental and behavioural factors and with the influence of social, economic and health care conditions.

As compared to the EU-15 average and to the NMS-10 average for general mortality, that have a slow downwards trend (EU-15 average was 9.93 deaths per 1000 inhabitants in 1999 and 9.67 deaths per 1000 inhabitants in 2001, while NMS-10 average was 10.78 deaths per 1000 inhabitants in 1999 and 10.36 deaths per 1000 inhabitants in 2002), Romania witnesses a significant increase of the general mortality rate which, together with the dynamics of the birth rate and fertility, leads to a population ageing phenomenon in the long run, which will materially adversely impact both the health system and the social health insurance system.

Both birth rate and mortality record higher values in the rural area, as compared to the urban area, which indicates the need to efficiently implement programs aimed at increasing population's accessibility to health services. As to the average level of general mortality (11.9 deaths per 1000 inhabitants), the highest regional values are found in South – West region (13.1 deaths per 1000 inhabitants) and South region (13.0 deaths per 1000 inhabitants).

**Life expectancy at birth** followed a constantly upwards trend from 42 years in 1932 to 68 years after 1960. Since that period to date, life expectancy in Romania has stayed, with slight variations, beyond the threshold of 70 years per total country, with a difference of approximately six years between the two genders, namely 65 – 69 years for males and 72 – 74 years for females.

#### Life expectancy at birth 2002-2004

	Romania	EU – 15 average
Total population	71.32	78.28
Males	67.74	75.00
Females	75.06	81.44

Source: European health for all database 2004

Comparative analysis with the other European countries on life expectancy constantly place Romania among the last, noting that the rate of increase in life expectancy is also unsatisfactory. As an example, the life expectancy of women increased by 3.5 years between 1970 and 1998 in Romania, while in the EU this increase was of approximately 6 years. Life expectancy is a complex synthetic indicator influenced not only by the quality of medical services but also by the other factors determining the health condition.

**Health-adjusted life expectancy (HALE)** – this indicator is calculated starting from life expectancy, including an adjustment for the period with an inappropriate health condition<sup>64</sup>.

<sup>64</sup> The indicator measures the year-equivalents of full health that an individual (newborn or person aged 60) can expect to live if exposed to current mortality patterns and the prevalence of health condition distribution among population groups.

## Life expectancy

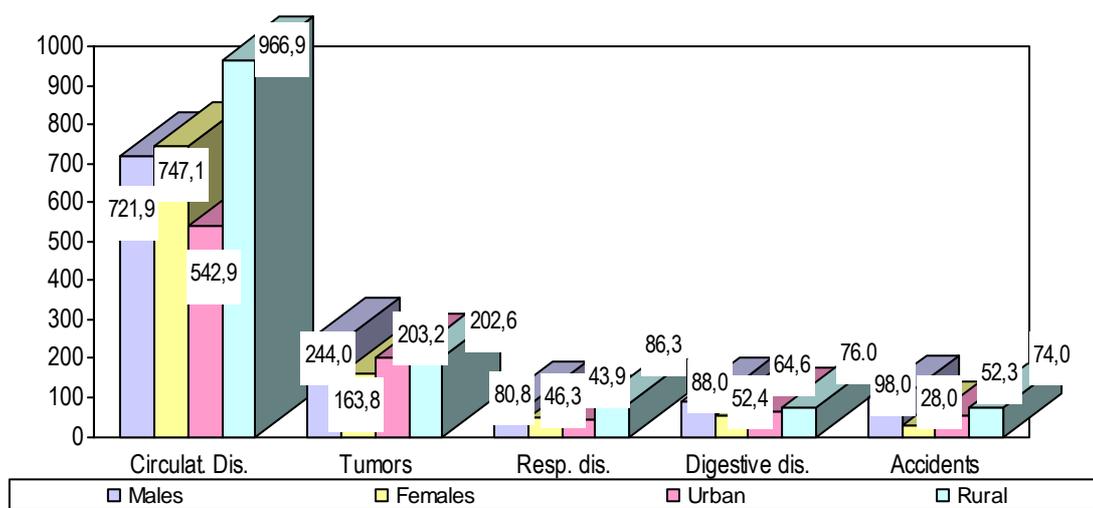
	At birth (in years)			At age 60 (in years)		% of total life expectancy, lost because of inappropriate health condition	
	Total	Males	Females	Males	Females	Males	Females
Romania	63.1	61	65.2	12.3	14.6	10.3	13
Minimum value UE-15	69	67	71	15	17	8	9
Maximum value UE-15	73	72	75	17	20	9	11

Source: WHO World Health Report 2004

According to the data shown above, approximately 8 years are lost in Romania by death before age 65, which is double as compared to the EU-15 average. The probability of death before age 5 in Romania, even though slightly decreasing, is approximately 4 times higher than the EU-15 average and approximately 2 times higher than NMS-10 average.

**Cause-specific mortality** in Romania place our country among transition countries, characterized by values which, although slightly decreasing, remain at levels at least two times higher than the EU average.

## Main death causes in Romania in 2004, by gender and provenience



Source: National Institute of Statistics

*Circulatory disease mortality* is the main cause of death in Romania, its rate increasing from 458.1 deaths per 100,000 inhabitants in 1970 to 734.8 in 2004. As compared to Europe's downwards trend, the rate increased significantly in the first years of the last decade to slowly decrease and reach the value of 1990. The two main death-causing diseases in Romania, among the cardio-vascular diseases are the following:

- *Ischaemic heart diseases* (acute myocardium infarction and other ischaemic cardiopathies) with a death rate of 248.3/100,000 inhabitants in 2004 (EU-15 average is 94/100,000). Ischaemic cardiac diseases account for 20.9% of the total number of deaths in Romania;
- *Cerebrovascular diseases*, with a death rate of 249.2/100,000 inhabitants in 2004 (EU-15 average is 59/100,000). Cerebrovascular diseases account for 17.0% of the total number of deaths in Romania.

*Tumor mortality* is the second cause of death in Romania and has had a constant ascending evolution during the last 30 years, from 123.3 deaths per 100,000 inhabitants in 1970, to 141.6 in 1989, to 184.04 in 2000 and to 203.0 in 2004. For this indicator, Romania is below EU-15 average (180.98 deaths to 100,000 inhabitants in 2001) and NMS-10 average (222.41 deaths per 100,000 inhabitants in 2002), except for the standardized mortality ratio for the cancer of the cervix which, in Romania, has values (15.37 deaths per 100,000 females in 2002) two times higher than the NMS-10 average (7.83 deaths per 100,000 females in 2002) and up to six times higher than the EU-15 average (2.45 deaths per 100,000 females in 2001).

*Digestive system mortality* is the third major cause of death in Romania, with increasing values that are two times higher than the EU-15 average. In 2004, the number of deaths caused by diseases of the digestive system was 69.8/100,000 inhabitants (EU-15 average is 30.68/100.000).

*Respiratory diseases mortality* is the fourth cause of death in Romania, a decreasing phenomenon during the last three decades, still presenting values that are two times higher as compared to the EU average. In 2004, the number of deaths caused by diseases of the respiratory system was 63.1/100,000 inhabitants (EU-15 average is 48/100.000).

*Traumatic injuries, poisoning and other external causes injuries* represent the fifth cause of death, which has a downwards trend during the last 10 years. In 2004, the number of deaths caused by traumatic injuries, poisoning and other external causes injuries was 62.1/100,000 inhabitants (EU-15 average is 38/100.000).

The differences between the values of standardized mortality ratios for Romania and the EU-15 average and the NMS-10 average prove serious deficiencies in terms of health services accessibility (insufficient specialized services, their concentration in industrialized zones, inefficient ambulance services, underdeveloped infrastructure, low degree of urbanization in certain regions, insufficient means to pay for the medicines, informal payments), their weak efficiency (insufficient program coordination for these groups of diseases, use of treatment schemes that are not proof-based, programs that are not inter-related to obtain a higher efficiency, non-performing screening for major diseases), corroborated with an unacceptably low level of health education of population (the visit to doctor is too late, insufficient knowledge of risk factors), especially in the rural areas, where the indicators are at least two times higher than the ones in the urban areas.

*Infectious and parasitic disease mortality*, even though with a downwards trend during the last decade, is two times higher than the EU-15 average and three times higher than the NMS-10 average. In 2004, the number of deaths caused by infectious and parasitic diseases was 13.4/100,000 inhabitants (EU-15 average was 8/100,000 inhabitants and the NMS-10 average was 5.86/100,000 inhabitants). The same year, the standardized mortality ratio for acute respiratory infections and influenza with children under 5 years was 122.06/100,000 children, approximately 85 times higher than the EU-15 average, which was 1.63/100,000 children). Unacceptably high values of respiratory infectious diseases and diarrheic diseases mortality for children aged 0-5 is explained by the presence in this category of a large number of institutionalized children, children of disorganized families, or that leave below the minimum poverty threshold and children with multiple hospitalizations. On the other hand, the precarious hygiene conditions within households, over-crowdedness, scarce food, lack of medical facilities and of specialized medical staff in disadvantaged areas contribute to maintaining these high values.

*Tuberculosis mortality* is a special situation in Romania. It witnessed a downward trend until the '80s (3.7 deaths per 100,000 inhabitants), and started to increase progressively afterwards, reaching 5.6

deaths in 1989 and a maximum of 11.8 in 1997, going down in 2004 to 9.6 per 100,000 inhabitants. The highest mortality values are recorded at labour-age population (35-44 years and 55-64 years). Males are mostly affected, with 16.2 deaths per 100,000 inhabitants as compared to 3.4 per 100,000 inhabitants for females (year 2004). EU-15 average has a slow upwards trend (0.73 deaths per 100,000 inhabitants in 2001) and has values that are 15 times lower than TBC mortality average in Romania. At the same time, NMS-10 average is 2.62 deaths per 100,000 inhabitants in 2002. In the rural areas the ratio is much higher than in the urban areas. Tuberculosis is poverty-related and, in this respect, any intervention to decrease the number of deaths caused by TBC, and especially to decrease the number of new cases, shall have to take into account not only the medical side (preventive, diagnostic – related and curative) but also the associated factors. Currently, Romania uses a grant from the Global Fund to Fight TBC, HIV/AIDS and malaria aimed at addressing this problem.

Smoking related mortality is increasing in Romania (539.58/100,000 inhabitants in 2002), as compared with NMS-10 average (37.82/100,000 inhabitants in 2002) and EU-15 average (220.48/100,000 inhabitants in 2001), that have a downwards trend.

Alcohol related mortality (127.02/100,000 inhabitants in 2002), even though with a downward trend, is two times higher than the EU-15 average (60.7/100,000 inhabitants in 2001). Health education and health promotion services, supported by a policy prohibiting risk factors proliferation may act in the sense of decreasing smoking alcohol related mortality.

Infant mortality, even though with a downwards trend during the last three decades, from 38.14/1.000 live births in 1973 to 16.8/1.000 live births in 2004, the descending curve of the last decade was rather flat. Romania's infant mortality ratio is currently equal to EU-15 average 30 years ago (1974) and to NMS-10 average 20 years ago (1984). According to a report drafted by specialists in maternal-infant assistance, the health system accounts for 10-15% of the causes leading to high values of this indicator, the rest being accounted for by economic and social factors. In view of redressing this situation, a strategy on Women and Children Health is currently being implemented.

Consequently, there is a need to draft and implement a multi-sector strategy to involve effectively all partners with major responsibilities in the field, whose result should be the faster and more stable decrease of infant mortality to standards comparable with EU's, as well as the reduction of discrepancies between the values of this indicator in the urban and rural areas.

## 7.2. Evolution of the main infectious diseases

Between 1999 and 2003, the main epidemiological indicators that monitor and assess the main communicable diseases in Romania showed a general downwards trend for the number of ill persons, except for tuberculosis, sexually transmitted diseases and some annual epidemics for childhood illnesses.

### Epidemiological indicators

Indicator	Romania	NMS-10 Average	UE-15 Average
Incidence of TBC in 2002	136.51	27.21	10.79
Incidence of Acute viral hepatitis A in 2003	42.24	4.07	4.39 (2002)
Incidence of Acute viral hepatitis B in 2003	9.09	4.76	3
Incidence of HIV in 2002	1.54	3.5	4.31
Incidence syphilis in 2001	55.96	6.33	1.5 (2000)

Source: European health for all database

For the diseases that benefit of active immunoprophylaxis measures included within the national immunization program, morbidity has a decreasing evolution (whooping cough – decrease by more than 80%, tetanus – no neonatal tetanus cases, measles – over 70% decrease, viral hepatitis B – approximately 15% decrease), maintains a zero level (diphtheria) or is eradicated (poliomyelitis); tuberculosis has a special situation as after a long and significant increase of morbidity values, the first stagnation was witnessed in 2003. The values recorded in Romania are approximately six times higher than the NMS-10 average and 13 times higher than the EU-15 average.

The incidence of certain viral diseases (epidemic parotiditis, smallpox, exanthema subitum) that did not benefit of specific immunization programs before 2003 increased; in this context, in 2003 Romania faced an exanthema subitum epidemic whose evolution was extended to the first part of 2004.

The total number of HIV/AIDS infections has a relatively constant level in Romania, with a change at the epidemiological level of this phenomenon. Thus, if in the beginning of the '90s Romania would face a high number of diagnosed cases among children, now there is a decrease in the number of "new" cases in children. Such cases are the ones diagnosed for children born before 1990 or for children born of HIV seropositive mothers. The number of HIV infections with adults is slightly increasing, the infection being mainly transmitted heterosexually.

The evolution of sexually transmitted infections witnessed a similar trend to tuberculosis: after 10 years of continuous increase of syphilis incidence, a first sign of decrease was to be seen in 2003.

Within the national immunization program (that provides vaccination of children against 8 severe infectious diseases considered public health priorities – tuberculosis, poliomyelitis, measles, exanthema subitum, diphtheria, tetanus, whooping cough, viral hepatitis B), 8,000,000 shots were administered in 2002, that represented a vaccine coverage of 98.8%. Between 1999 and 2003, the number of flu vaccine shots used for the control of influenza epidemic that were administered to major risk groups increased from 600,000 to 1.2 million.

### 7.3. Health network activity

Following the appraisal of efficiency and the implementation of the reform program, starting 2002 the number of hospital beds, TBC sanatoriums, preventoriums and crèches started to decrease. At the same time, all the other relevant indicators to the health network activity decreased between 1995 and 2004.

**Evolution of health network activity for 1995-2004**

Indicators	1995	1999	2001	2002	2003	2004
Consultations per one inhabitant	4.5	3.8	3.9	4.2	4.1	4.5
Treatments per one inhabitant	3.4	2.6	1.6	1.5	1.5	1.5
Vaccinations and re-vaccinations (thousands)	4,197.6	4,003.8	4,656.4	4,163.9	3,378.8	4,873.4
Hospitalization per 100 inhabitants	20.6	20.7	24.4	26.8	24.9	24.5
Man days hospitalization 100 inh.	219.4	196.9	212.3	219.1	200.4	196.8
Hospital bed use (days)	283.0	276.9	290.8	296.0	298.4	307.9
Average hospitalization (days)	10.9	9.5	8.6	8.1	8	8.1

Source: Health Statistics Center

At the level of 2002, as compared to the situation of the new EU member states, Romania's health infrastructure was deficient, mainly with respect to primary health care units per 100,000 inhabitants. At

the same time, the share of private investments in the health system is very low (0.05% of the hospital beds belonged to the private environment).

### Health infrastructure in Romania and NMS-10

Indicator / 100,000 inhabitants	Romania - 2002 <sup>1</sup>	NMS-10 - 2002 <sup>2</sup>
Primary health care units	44.29	145.89
Number of hospitals	2.03	2.74
Hospital beds (of which % private beds)	745.99 (0.05) <sup>2</sup>	661.29 (3.56)
urban / rural hospital beds	1,270 / 150	N/A

<sup>1)</sup> Source: National Statistics Institute; <sup>2)</sup> Source: European health for all database

There are inequities as to the access to services between the urban and the rural areas. According to the latest population census of 2002, almost half of country's population lives in the rural area (47.3%) and is disadvantaged with respect to health and access to medical assistance. The gross mortality ratio was 1.65 higher in the rural area than in the urban area, both because of a higher degree of population ageing and because of deficiencies in providing the necessary health services. Relatively large categories of individuals are not assigned on family doctors' list, even though they benefit of a health insurance, according to the law (low income individuals, farmers, etc), based on the free choice of the doctor to receive them or not on their patient list.

### Use of health services in Romania and NMS-10

Indicator	Romania - 2002 <sup>1</sup>	NMS-10 - 2002 <sup>2</sup>
Hospitalizations/100 inhabitants	26.76	18.77
- urban / rural	47.86 / 2.84	N/A
Average hospitalization duration	8.1	9.07
Ambulatory consultations	4.18	8.33
- urban/rural	5.07 / 3.16	N/A

<sup>1)</sup> Source: National Statistics Institute; <sup>2)</sup> Source: European health for all database

With respect to the equipment endowment, taking into account that health systems have increasingly become technology-dependent and Romania lacks state-of-the-art medical equipment, it is necessary to have consistent financing and to develop a competent management system in the field. Statistical data regarding the distribution of state-of-the-art equipment on regions is detailed under the *"Regional economic development disparities"* chapter.

### Distribution of hospitals and hospital beds on regions, in relation to the population, in 2004

Region	Number of hospitals	Number of hospitals per 100,000 inhabitants	Number of beds	Number of beds per 1,000 inhabitants
Bucharest	55	2.5	23,169	10.5
Center	55	2.2	16,241	6.4
North -East	68	1.8	21,250	5.7
North-West	66	2.4	19,815	7.2
South	76	2.3	17,134	5.1
South-East	51	1.8	17,626	6.2
South-West	43	1.9	14,092	6.1
West	53	2.7	13,349	6.9
Total	467	2.2	142,676	6.6
EU Average	---	3.2	---	6.1

Source: Health Statistics Center, European health for all

The total number of hospital beds is unequally allotted on regions, with a minimum 5.7 beds per 1,000 inhabitants in North-East and a maximum of 10.5 beds in Bucharest, as compared to the EU average of 6.1.

Computerization is one of the main elements in meeting the health system reform objectives, due to its contribution to the increase of system performance by increasing the accessibility, effectiveness and equity of medical services offered to population. At present, there is a series of IT systems in the Romanian health field that need to be improved and integrated (by establishing modern integrated platforms) that should secure their interoperability.

#### 7.4. Human resources in the health field

As compared to developed countries in Europe, as well as to the new EU member states, Romania has lower population coverage with physicians, dentists, pharmacists, nurses and midwives, clearly shown by the comparison with European data.

#### Health staff in Romania and NMS-10

Indicator/100.000	Romania - 2002 <sup>1</sup>	NMS-10 - 2002 <sup>2</sup>
Physicians	210	138.9
- urban / rural	343 / 59	N/A
Dentists	41	41.11
- urban / rural	65 / 12	N/A
Pharmacists	34	57.74
- urban / rural	56 / 8	N/A
Nurses	568	812.05
- urban / rural	949 / 137	N/A
Midwives	28.43	44.81

<sup>1</sup>) Source: National Statistics Institute; <sup>2</sup>) Source: European health for all database

The share of physicians in the rural area (58.2 physicians per 100,000 inhabitants) is almost 5 times smaller than the average share of physicians in the urban area (301.4 physicians per 100,000 inhabitants), the areas that have the higher deficit being the ones in the North-Eastern region (2541 inhabitants/1 physician) and South-Eastern region (2393 inhabitants / 1 physician). The regional distribution of the medical staff is not uniform, the number of physicians being lower than the country average in the Southern region (Ialomița - 1048 inhabitants/1 physician, Călărași - 939 inhabitants/1 physician) and higher than the country average in the Western and North-Western regions (Cluj - 234 inhabitants/1 physician, Bihor - 382 inhabitants/physician). The same unlevelled distribution is to be seen for nurses and midwives.

#### Distribution of family doctors on regions and on environment: urban and rural

Region	% inhabitants registered with family doctors in total population	Average population for 1 family doctor in urban areas	Average population for 1 family doctor in rural areas
North-East	88.1%	2127	2541
South-East	87.5%	2273	2393
South	86.4%	2191	2227
South-West	85.5%	1980	1777
West	92.4%	1715	1566
North-West	92.2%	1864	2087
Center	87.2%	1791	1823
Bucharest	85.0%	2187	1848

Source: National Health Insurance House, 2004

The critical problems of the Romanian health system as far as the medical staff is concerned are: insufficient specialized staff (especially on the prevention side, in the medico-social, public health and health care management fields), inequalities in the regional distribution of the medical staff, inappropriate share of auxiliary staff, concentration of medical staff in urban areas and hospitals. Other problems refer to the lack of incentives for choosing a medical career and lack of support for young specialists, poor organization of physicians' continuous and post-graduate training, low salaries, etc.

In the emergency assistance field, Ambulance Stations covered in 2004 more than 111 million km by using the 3303 ambulances for almost 4.5 million hours in order to answer the 4,452,182 requests, of which 1,536,237 ill individuals were treated and transported for life-threatening situations. In the emergency assistance field there is a decrease of activity and resources indicators as compared to the previous years. Statistical data on the ambulance system is to be found under the *"Regional economic development disparities"* chapter.

#### **Key issues**

- The health system is under-financed- inefficient use of resources;
- Inequitable access to quality health services (access of vulnerable groups);
- Insufficient attention to health promotion services and to the education for health;
- Deficient information management, need to develop an integrated information system in the health services field;
- Inappropriate trans-sector cooperation;
- Inappropriate quality of health services infrastructure (buildings and equipment);
- Reduced capacity of the emergency medical system.

## 8. AGRICULTURE, RURAL DEVELOPMENT AND FISHERIES

### 8.1. General aspects regarding agriculture

#### 8.1.1. Natural conditions

Romania's agriculture land was evaluated in 2002 at 14,836 thousand ha representing 62.2% of the total area of the land stock. The arable area represents 39.4% of the total area of the land stock. In 2003, the agriculture area of Romania was of 14,717.4 ha, on a decrease by 119.2 thousand ha as compared to 2002, and by 13.3 thousand ha as compared to 1999.

#### The land stock according to utilization, in 2003

	Thousand ha	Percentage
Total area of the land stock	23,839.10	100.00%
Agricultural land	14,717.40	61.74%
- Arable	9,414.30	39.49%
- Pastures	3,355.00	14.07%
- Hay stocks	1,490.40	6.25%
- Vineyards and viticulture nurseries	230.5	0.97%
- Orchards and nurseries	227.2	0.95%
Forests and other lands with forestry vegetation	6,751.70	28.32%
- Forests	6,221.30	26.10%
Constructions	648.9	2.72%
Roads and railways	390	1.64%
Waters and swamps	843.9	3.54%
Other areas	486.9	2.04%

Source: The National Agency for Cadastre and Real Estate Publicity

The agricultural lands in Romania have been affected by a series of processes of degradation of which worth mentioning are the following: water erosion (6,300 thousand ha, representing 42.8% of the overall agriculture area), wind erosion (380,549 ha), deterioration of the soil structure and aggregation (manifest in about 44% of the overall agriculture area; primary aggregation is present on about 2 mil. ha arable lands – 13.59%, and the trend of a crust being formed at the soil surface, on about 2.3 mil. ha – 15.63%), chemical pollution of the soil (affecting around 0.9 mil. ha, of which excessive pollution around 0.2 mil. ha; very strong aggressive effects on the soil are produced by pollution with heavy metals and sulphur dioxide, identified especially in the critical areas of Baia Mare, Zlatna, Copşa Mică).

#### 8.1.2. The agriculture sector in the national economy

The contribution of agriculture has relatively diminished, both to **the formation of gross added value (GAV)**, on a decrease from 16.2% (1998) to 13.3% (2003), as well as to the **gross domestic product (GDP)**, on a decrease by 2.7% for the period analysed, from 14.4% to 11.7%. An explanation for this decline is given also by statistics, in conditions in which, in four years (2000-2003), out of the six of the period analysed, for the non-agricultural branches higher economic growth was registered than the average growth rate in agriculture. This dynamic is in line with of the trends specific for modern economies and agricultures.

## The contribution of agriculture and fisheries to GAV and GDP, in 1998-2003

- % -

	1998	1999	2000	2001	2002	2003
Agriculture, hunting and forestry/GAV	16.2	15.1	12.5	15.0	12.7	13.3
Fishing and fisheries / GAV	0.0058	0.0061	0.0042	0.0049	0.0041	0.0049
Agriculture, hunting and forestry/ GDP	14.4	13.3	11.1	13.4	11.4	11.7
Fishing and fisheries / GDP	0.0051	0.0054	0.0038	0.0043	0.0037	0.0043

\* - recalculated in prices of 2003.

Source: Calculations on the basis of the dates in the Statistic Year book of Romania for 2004.

Contribution of agriculture to **the final production** of the national economy ranges in the period 1998-2002 between 13.5% (1998) and 12.8% (2002), and within it, the main share is held by the vegetable sector (between 54.7% in 1998 and 42.5% in 2002), to be followed by the cattle sector (between 39.8% in 1998 and 24.4% in 2002). The ancillary services in agriculture account for small percentages (between 2.5% and 1.8%). This situation reflects a low level of intensification of agriculture production through the animal production, a trend present in all the agricultures in transition.

The GAV structure in agriculture, by regions of development, displays, in the period 1998-2001 a relatively wide range of variation of percentages, from 21% (region Bucharest-Ilfov in the years 2000-2001) to 12.3% (region North-East for the year 2002).

**Labour productivity** as compared to the nationwide average (calculated as ratio between the gross added value, in prices of 2003, and the employed population aged over 15 years) had a decreasing tendency in the period 1998–2002, registering a level of 27.5% in 2002 as compared to 42.3% in 1998. In other words, the gap of labour productivity between the national economy and agriculture varies from 2.37:1 (1998) to 3.64:1 (2000).

The agro-food foreign trade of Romania. In the period 1998-2003, the agro food trade deficit got wider, attaining the value of 1,037.4 million Euros in 2003. The percentage of farm exports in the total of Romania's exports vacillated between 3-5% in this period, whereas the percentage of food and farm products in the total imports stood at 6-8%.

In the period 1998-2003, the *value of farm and food products varied* between 387 and 498 mil. Euro, 60-70% of the total exports of this type going to EU and CEFTA. The most important groups of exported farm and food products in the period 1998-2003 (representing 78-87% of the total) were: the livestock (22.2%), cereals (14%), seeds and technical plants (13.8%), fruits (i.6%), vegetables (6.3%), wines (6%), fats and oils (7.8%) and cheeses (4.1%). The analysis of the structure of farm and food products shows the low level of competitiveness of prime farm products and the big share of farm and food products with a low level of processing.

With the exception of 1999 (when there was a minimum of 747 million Euros), in the period 1998-2003 *imports of farm and food products* vacillated between 900 mil. in 2000 and 1.535 million Euro in 2003. The share of farm and food products with a high level of processing (foods, beverages and tobacco) tended to decrease, from 2/3 of the total farm and food imports of Romania before 1998 to 41% in 2001 and went down to 35,5% in 2003. The structure of imports shows practically the domains of minimum effectiveness of Romanian agriculture and food industry. The main groups of imported farm and food products (70-80% of the total in the period 1998-2003) were: meat and edible products (especially chicken and chicken meat products), tobacco, sugar, fast food products, fruits, cereals (in years with very small products, due to drought) coffee and tea, fats and oils, canned vegetables and fruit.

In the period 1998-2003, the *trade deficit* vacillated strongly, having attained a maximum level in 2003 (1,037 mil. euro). The main groups of food and farm products with a positive balance in the period 1998-2003 are relatively consistent, suggesting a comparative advantage: livestock, seeds, fruits and technical plants, alcoholic beverages. Cereals and vegetables are also present, with the exception of the very dry years.

### 8.1.3. The demographic situation and the labour force

In the period 1999-2004, the number of inhabitants in the rural area diminished from 10.155 million to 9.778 million; the **percentage of the rural population** stood at 45.1% on 1 July 2004, on a slight decrease as compared to 45.4% in 2001. This decrease was caused mainly by the administrative-territorial modifications (a number of 49 communes were declared towns), as well as by the negative birth rate among the rural population. The rural population density was relatively constant around the value of 47.7 inhabitants/km<sup>2</sup>.

In point of structure by age groups and gender of the rural population, in the period 1999-2004 the following are to be mentioned:

- The population between 0-14 years decreased by 7.1% (from 19.8% in 1999 to 18.4% in 2004);
- The population between 15-64 years of age was relatively constant in number (62.8% in 1999, and 63.1% in 2004, respectively);
- One of the most serious phenomena in the rural area is that of the ageing of the population. The population aged 65 and over increased in number to 6.3% (from 17.4% in 1999 to 18.5% in 2004);
- In the overall rural population up to 49 years, the male population is a majority (52.8% of the total in 2004). For the age group of over 50 years the ratio is reversed in favour of the female population, which accounted for 55.8% of the total rural population of this age group.

As to the **educational system** in the period 1999-2004, there was a tendency of increase in the number of persons with higher education studies, in the rural area, from 1.7% to 2.6%, and of decrease in the number of persons with a low level of education, from 58.7% to 47.8%. In this period, the percentage of persons with average studies in the rural area increased from 39.6% to 49.6%.

**The labour force.** The percentage of persons in the rural area who are employed in agriculture, although on a decrease, from 73.3% in 1999 to 63.5% in 2004, continues to be high which leads to the extension of the subsistence agriculture: the percentage of persons employed in industry and construction increased from 13.1% in 1999 to 19% in 2004; in the sector of services, this increased from 13.6% to 17.5% in the same period of time.

The employment rate of the rural population of 15 years and over has increased substantially from 69.2% in 1999 to 52.3% in 2004, the main cause being the significant reduction in the employment rate in the agricultural sector.

The economic dependency of the rural population indicates a sharp increase in the number of inactive persons or unemployed from 801‰ in 1999 to 1342‰ in 2004.

In the period 1998-2004, the percentage of unemployed in the rural area related to the total number of unemployed in the overall economy has different levels, ranging from a minimum of 22.1% (2001) and a maximum of 35.3% in 2004. One of the major causes of the increase in the percentage of unemployed in the rural area was the accelerated lay off of the labour force in industry that partially withdrew to the rural area, without finding non-agriculture occupational alternatives. As to the urban-rural ratio, it is

noticeable that the unemployment rate in the rural environment was 3.7 times (2001) up to 1.5 times (2004) smaller than in the urban area.

### The number of unemployed and the ILO unemployment rate in the rural area

	1999	2000	2001	2002	2003*	2004
<b>Total</b>						
Number of ILO unemployed thousand persons	790	821	750	845	692	799
Unemployment rate ILO - %	6.8	7.1	6.6	8.4	7.0	8.0
<b>Rural</b>						
Number of unemployed ILO thousand persons	203	186	166	264	203	282
Unemployment rate ILO - %	3.5	3.1	2.8	5.4	4.3	6.2

\*Estimative data

Source of data: Survey of labour force in households (AMIGO); NSI.

In the period 1998–2004, there was a descending trend in the percentage of agriculture in the total employed population, from 38.1% in 1998 to 31.46% in 2004, attaining a maximum level of 41.4% in 2000.

The population in the rural area registered a positive balance in point of internal migration with change of domicile in 2004, on an increase by 48.6% as compared to 1999. The migrant population from the urban to the rural area (117,495 persons in 2004) represented 31.8% of the total flow of internal migration (as compared to 30.7% in 1999). The rural- rural flow diminished from 21.8% in 1999 to 21.1% in 2004.

As to the percentage of income in the total monthly income obtained by a household, in the overall households, this registered values between 70.1% (1998) and 74.9% (2003), whereas for the farming households the value of this indicator registered lower levels ranking between 44.1% (1998) and 45.3% (2003). Noticeable is thus the trend of diminishing the share of incomes obtained in agriculture both in the total incomes of households, and in the farming households.

A descending trend could be noticed also as to the value of farm products consumption from own resources, in the overall households, representing percentages between 29.1% (1998) and 24.7% (2001); in the farming households, this indicator registered values between 55% (1998) and 53.8% (2003). The decrease in these values is not enough however given the need for development of the Romanian economy and transition to a modern economy that should not be based on the labour force but on the added value.

#### 8.1.4. Agricultural farms

The current situation of Romanian agriculture is characterized by many socio-economic problems, by excessive fragmentation of the land (in over 40 million plots), as well as by the existence of numerous households that are not economically viable. The structural modifications that took place in Romania's agriculture in the past 15 years resulted in the privatisation of over 96% of the agricultural lands and setting up of small and medium-sized agricultural farms; the lack of economic viability of many of these shows that the process of reform is far from being over.

In 2002, according to the data in the General Agricultural Census, agriculture farms were organized as follows:

- 4,462,221 thousand individual households with an average physical area of the agriculture farm of 1.73 ha
- 2,261 agricultural companies/associations, with an average agricultural area 431 ha
- 6,138 commercial companies, with an average agricultural area of 353 ha
- 5,698 public administration units, with an average agricultural area of 503 ha;
- 87 cooperative units, with an average agricultural area of 27 ha;
- 8,488 agricultural farms of another type, with an average agricultural area 25 ha.

Thus, in 2002, the total number of agriculture farms was of 4,484,893, out of which 4,299,361 agriculture farms (individual and legal persons) used an agricultural area of 13,930,710 ha, with an average of 3.24 ha/agriculture farms that used agriculture land.

The agricultural area, just like the arable land used represent on an average about 94% of the existing one at a national level. The agricultural area that is not used represents on an average about 94% of the area existing at a national level. The agricultural area that is not used represented 330 thousand ha in 2002.

## 8.2. The main domains of agriculture

### 8.2.1 Agriculture output

#### Vegetables output

Analysis of the structure of lands cultivated with the main crops shows a high percentage (of over 60%) of cereals to the detriment of the other crops. In the period mentioned an increase in the percentage of crops of technical plants was noticed (16.3%).

- thousand ha -

	1998		2000		2001		2002		2003	
	Total	%								
Total cultivated area, out of which:	8,972.6	100.0	8,499.8	100.0	8,905.0	100.0	9,001.6	100.0	8,880.6	100.0
Cereals for grains	1,920.6	65.99	1,655.2	66.5	6,294.9	70.7	6,038.1	67.1	1,541.8	62.4
Leguminous plants for grains	44.7	0.50	41.3	0.5	35.6	0.4	45.3	0.5	46.8	0.5
Technical plants	3.4	0.04	0.9	xx	0.9	xx	1.4	xx	1.6	xx
Oleaginous plants	1,156.1	12.88	1,067.4	12.6	938.6	10.5	1,076.4	12.0	1,377.1	15.5
Plants for other industrializations	136.3	1.52	64.9	0.8	54.0	0.6	56.2	0.6	57.4	0.6
Medicinal and aromatic plants	27.7	0.31	4.3	0.1	10.0	0.1	10.6	0.1	12.2	0.1
Potatoes	261.3	2.91	282.7	3.3	276.7	3.1	283.2	3.1	282.0	3.2

Source: The Statistical Year Book of Romania

This structure is not favourable since the average productions for rice are rather small and fluctuating from one year to another. Thus, for the entire period analysed, only 1999 and 2001 the production of 1998 was exceeded. The average output was of 2,048kg/ha for wheat and rye, as compared to the average country potential of 5,500-7,000 kg/ha, and for corn the average output was of 3,042 kg/ha as compared to a potential of 8,000-kg/ha. In 2003, the most unfavourable year in point of climate for these crops, the wheat and rye output stood at 55.7% of the overall output of 1998 for this crop, and that of rice was of 68.5%. The natural conditions represent the major element that still determines the level of these outputs. Following the application of modern technologies, including irrigation in the field areas, when drought persists, the outputs could exceed these limits.

As to the wine-viticulture areas, in the period 1998-2003 the areas cultivated with noble varieties diminished from 138.4 thousand ha to 115.8 thousand ha. Areas cultivated with vineyard that exceeded the optimum period for production were deforested. The vacuum of production is due to the fact that the deforested area is bigger than the cultivated area.

In the same period, the areas cultivated with hybrid vineyards were on an increase, from 115.5 thousand ha to 117.5 thousand ha. The hybrid vineyards are almost entirely in the farmers' households. Following negotiations with the EU (Chapter 7 „Agriculture”), it was accepted to have an area of 30,000 ha of hybrid vineyard for being replanted with noble vineyard (the period of transition being of 8 years). The financial effort for setting up the noble vineyards stands at 10,000 euro/ha, which leads to a total amount of 300 million euro.

The productivity of noble vineyards in this country is at a significant gap as compared to the EU member countries (30 hl wine per hectare in Romania as compared to an average of 50 hl of wine per hectare in the EU).

The agricultural area planted with orchards and nurseries, in the period 1998-2003 has registered a decrease from 263.0 thousand ha in 1998 to 227.0 thousand ha in 2003.

In conclusion, it should be said that agriculture in Romania should make considerable efforts, technological, organizational, economic, social in order to obtain bigger outputs in the overall territory and even in less favourable conditions.

### **Livestock output**

*The livestock.* The animal husbandry sector is one of the main difficult problems of present Romanian agriculture. Romanian experienced a decrease in the number of livestock and poultry after 1990, a trend that maintained in the period 1999-2004. In the period analysed, there was a continuous decrease in the stock of cattle (which was smaller in 2004 by about 7.8% as compared to the level of 1999), pigs (in 2004 the stock diminished by over 28.5% as compared to the level of 1999) and sheep (in 2004 the stock being by 11.4% smaller than in). The decrease in the number of livestock was caused by the increase in prices for fodder due to the long drought in 2000-2003, on the one hand, and, on the other hand, following the granting of subsidies for animal products that only covered a small part of the production costs in spite of this, “The Plan for the Recovery of the Livestock” initiated by MAFRD in 2003 could mark the beginning of the rehabilitation of this situation.

On the other hand, the horses are the only species that register increases, namely, 6.9% in 2003 as against 1998, following the fact that the small farmers need beasts of burden for their farm work, including for transport of production or other materials. Increases were registered in the number of poultry (in 2003 the growth was of 16.1% as compared to 1998). As to the number of bee families, after a continuous decrease in period 1999-2000, their number started to increase, exceeding in the past year by 24.7% the number of families in 1998.

### Total number of animals, poultry and bees (at the start of the year)

		1999	2000	2001	2002	2003	2004
Cattle	Thousand heads	3,143	3,051	2,870	2,800	2,878	2,897
	%	100	97.1	91.3	89.1	91.6	92.2
Pigs	Thousand heads	7,194	1,848	4,797	4,447	1,058	1,145
	%	100	81.3	66.7	61.8	70.3	71.5
Sheep	Thousand heads	8,409	8,121	7,657	7,251	7,312	7,447
	%	100	96.6	91.1	86.2	87.0	88.6
Goats	Thousand heads	585	558	538	525	633	678
	%	100	95.4	92.0	89.7	108	115.9
Horses	Thousand heads	839	858	864	860	879	897
	%	100	102.3	103.0	102.5	104.8	106.9
Poultry	Thousand heads	69,480	69,143	70,070	71,413	77,379	76,616
	%	100	99.1	100.9	102.8	111.4	110.3
Bees	Thousand families	620	614	648	745	781	840
	%	100	99.0	104.5	120.2	126.0	13.5

Source: Statistical Year-Book of Romania

*Animal production.* In 2003 there were increases as compared to 1998 in the production of beef (24%), mutton (4.6%) and chicken (25.9%), however the production of pork was below the level of 1998. For the milk production the recovery started ever since 2002. The wool production decreased continuously following the lack of interest of the processing industry in using the domestic raw material. The production of eggs registered an increased year by year following the growth of production in the poultry farms.

Increase in the production of beef, mutton, and chicken, of milk, eggs and honey in the past two years was due both to the increase in the stock and in the average production. The decrease in the production of pork and wool was mainly due to the decrease in the stock of animals, following the closing of some big pig farms in the state ownership, and for mutton this was due to the very low prices offered for wool.

#### 8.2.2. Ecological agriculture

The ecological agriculture is a sector for which Romania has big development opportunities, this representing also an instrument in the conservation of nature and revitalization of the rural space. The Ministry of Agriculture, Forests and Rural Development, through the Agency for Ecological Agriculture, provides policy in the field of ecological agriculture. In addition to this agency there are two commissions: the Commission for the Development of Ecological Agriculture and the Commission for the Accreditation of Units of Inspection and Certification in the field of ecological agriculture. In May of 2004 the first Romanian body of inspection and certification "Ecoinspect" was set up. In addition to the commission and the agency located in the ministry there is also the National Federation for Ecological Agriculture with branches locally.

In the period 2000-2003, the area cultivated, which also observes the ecological production methods, has increased three times, reaching from 17,438 ha cultivated in 2000 to 57,200 ha in 2003. The structure by crops includes: cereals 16,000 ha; natural pastures and fodder plants 24,000 ha;

oleaginous and protein 15,600 ha; vegetables 200 ha; fruits 100 ha; wild fruits 400 ha; other crops 900 ha. Noticeable is also the increase in the animal stock, from 10,000 heads in 2000 to 40,000 heads in 2003.

The domestic market of ecological products is still in progress; in the period analysed, 95% of the ecological products of vegetable origin was exported to the markets of Germany, Switzerland, Holland and Italy, where demand for such products is on the increase. The exported products are: cereals, oleaginous and protein, wild berries, medicinal plants, bee honey and feta cheese. On the domestic market, in 2003, vegetables, Schweitzer, cheese, butter and eggs were sold.

### **8.2.3. Forestry**

*The forestry area.* In 2003, the national forestry stock amounted to 6,368 thousand ha, out of which 6,221 thousand ha actually covered by forests. The remaining of 147 thousand ha represents lands destined for reforestation, lands that are needed for crops, forestry production or administration, idle lands etc included in the forestry arrangements, according to the law.

Romania ranks 12 among the European countries as to the forest area. The share of forests in the total area of the country stands at 26.1%, as compared to the European average of about 32%. The forest area per capita stands at 0.28 ha which places Romania under the European average of 0.30 ha.

*The situation of the forest stock in point of nature of ownership.* Following the modifications that came after the restitution of ownership rights over the forests, the structure of the forest stock has considerably modified in the sense of a decrease in the plots that belong to the public property of the state (from 94.7% in 1998 to 69.8% in 2003).

*Distribution of forests by functional groups.* In relation to the ecological, economic and social functions that forests perform they are divided into two functional groups: group I – forests with special protection functions, representing 49% of the total forests and group II – forests with functions of production and protection, representing about 51% of the total. The wood stock comes mainly from forests in group II; the wood stock coming from the forests in group I are allowed only for certain functional categories and only with restrictions regarding nature and intensity of cutting.

*The natural habitats* in Romania are represented by the forestry areas included in the national and natural parks and amount to over 430 thousand ha, representing approx. 67% of the cutting and approx. 6.5% of the national forest stock. It is important to mention that in the forest stock there are about 300 thousand ha of virgin and cvasi-virgin forests, some being unique in Europe, including natural ecosystems of special interest both in point of conservation of forest genetic resources and in point of scientific interest.

### **8.2.4. The food industry**

The share of the food processing industry diminished in the total national industry from 18.2% in 1998 to 13% in 2003.

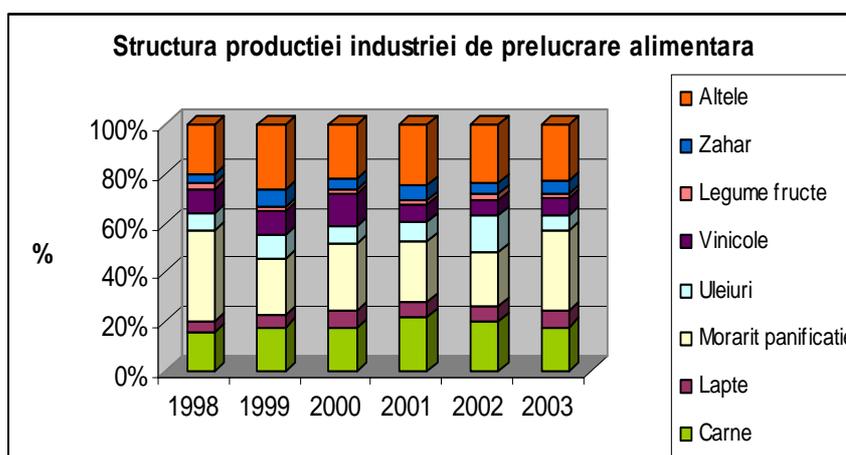
The food industry ensures occupation of 10% of the labour force in the processing industry and 4% in the labour force employed at a national level. In both cases, the share of the food industry in the labour force is much lower than its share in the total industrial output. This indicates a higher labour productivity than the average of the overall industrial activity.

For all the food industry branches, the production capacities are mainly located in the urban area, especially as a result of the economic policies promoted in the socialist period, when industries, regardless of their profile, were concentrated in towns. The number of businesses stood at 10,237, in 1998 and at 10,688, 2003. Statistical data show significant vacillations from one year to another, but with a tendency of increase, towards the end of the period analysed (1998-2003), which indicates that reforms in the previous years give signs of consolidation at a structural level.

By branches and sub-branches, the biggest number of units is to be found in the bakery industry and production, processing and conservation of meat and meat products. For the bakery activity the situation is different, almost 50% of the production capacities being located in the rural area.

The percentage of various sub-branches in the total food industry has modified along the years, registering a decrease in importance (bakery from 37% in 1998 to 22% in 2002 and 31% in 2003 and the winery industry from 10% in 1998 to 7% in 2003).

The milling and bakery industry continues to be the most important sub-branch, this aspect reflecting the importance of the basic cereals products in the catering habits of Romanians.



Source: MAFRD

The other sub-branches increased their shares in the branch, the most remarkable one being the industry for the processing of edible oils and margarine that grew by 7%. This growth should be correlated to the growth in the production of oleaginous seeds, due to the potential of competitiveness of these crops and the exports opportunities, including on the EU market.

In the period 1998-2003, the food production expressed in physical units had different evolutions in Romania, according to the groups of products. Thus, a sharp decrease is noticed in 2003 as compared to 1998 (by 40% at the meat production, by 33% for the canned fish production, by 40% for the milk consumption, by 30% for cheeses, by 17% for wheat and rye flour and by 27% for margarine).

In exchange, there are products that registered significant increases in the period 1998-2003: the fresh milk products (80%), the sugar products (16%), ethylic fermentation alcohol (21%), wine for consumption (26%), beer (25%), tobacco products (10%).

In the meat processing industry, at the date when agriculture negotiations with the EU concluded, there were 27 units that met the European requirements (regardless of the processing capacity), 73 units will meet the EU requirements in 2007 and 39 have restructuring plans for the transition period 2007-2009.

The *milk and milk products industry* - processed milk represents only part of the total milk produced. Approximately 80% of the total quantity of milk is either consumed in the households, or sold in the form of liquid milk, cheese or sour cream. Only 20% of the raw milk is delivered to processing plants. In the period 1998 – 2003, the milk products production registered an increase at all varieties – with the exception of the butter production, the most important increase having been signalled in the case of cheeses (36%) and of fresh products (33%).

In the milk processing industry, when the negotiations with the EU concluded (Chapter 7, Agriculture”), there were 18 units that met the requirements of the EU, a number of 35 units that will meet the European standards at the accession date (2007), and another 28 units with plans of restructuring for the period 2007-2009.

As to the *sugar industry*, given the economic and social conditions of this period, the area cultivated with sugar beet diminished considerably. It diminished and reached 46.2 thousand ha in 2003, and 16.9% respectively, of the area necessary for meeting the sugar consumption. Reduction in the cultivated areas produced a direct decrease in the national sugar production. The new owners did not continue to produce sugar beet but concentrated on refining of raw sugar. Under these circumstances, the cultivated area, as well as sugar production diminished, attaining only 8-10% of the production obtained by Romania before 1989. Under these circumstances, the demand of sugar for consumption is met in a proportion of 10% of the domestic production and 90% from import.

In the wine and spirits industry there has been a decrease in the value of production by 17.8%, caused by the evolution of prices. Worth mentioning is that structurally there has been a decrease both in the value of the wine production by 20.2%, and in that of spirits, by 16.8%.

The volume of productions achieved as well as the quality of wines produced place Romania among the 10 viticulture countries of the world. In 2003 the production of wine stood at 5,457 thousand hl per hectare. A positive phenomenon is that the production of noble varieties of wine increased more rapidly than the total production, being by 10.3% higher in 2003 as against 1998, the noble vineyards having a higher productivity than the hybrid ones. The structure of production is still far from being satisfactory: both in 1998, and in 2003, the wine production from noble varieties was only a few percentage points over 50% in total<sup>65</sup>.

Analysis of the *agro-food consumption* for the major products leads to the following conclusions:

- in Romania, since the average income per person is low, the share of food consumption in the family expenses is high (about 60%), as compared to the EU countries, where this indicator does not exceed 20%;
- the evolution of the physical agro-food consumption has gone upwards for all the products, especially after 2000;
- in the structure of the agro-food consumption predominant are the vegetable products. Thus in 2002, in Romania, as compared to the EU, for cereals and potatoes, the consumption per person was higher by 80.4 kg and 4.8 kg respectively, and for eggs and meat lower by 1.7 kg and 45.2 kg respectively.

### **8.2.5. Services for agriculture**

*Irrigations.* In the past few years effective irrigations were only on around 30 - 36% of the rehabilitated area, among the causes being:

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<sup>65</sup> Calculations on the basis of the data from the NSI

- the associations of water users were not set up in the same rhythm as the rehabilitation of certain areas;
- where such associations were however set up there was an almost integral absence of irrigation equipment and purchasing of new equipment is extremely costly for the water users;
- there has been no set up of an adequate structure of crops potentially irrigated in best conditions (small areas disseminated to the water users associations).

Analysing the situation of the areas set up for irrigation at the level of state agricultural farms there has been a decrease every year, the irrigated area standing at 27% of the level of 1998 and at 20% in 2003, whereas in the private sector there has been an increase (the area in 2002 was bigger by 9% than in 2001). The area effectively under irrigation in the private sector, out of the areas set up for this purpose, is also very small, standing at 1.5% in 1998 and at 13.2% in 2003, and in point of evolution there has been an ascending trend.

*Fertilizers and phyto-sanitary products.* Consumption of fertilizers and the areas where treatments are carried out are very small, which represents a limitation in point of vegetables production. In Romania, the average consumption of these products is 8-10 times smaller than in the EU member states. The phyto-sanitary products are provided in a proportion of 20-25% from a minimum necessary amount, whereas the projections for a medium term are not optimistic. A considerable influence on the markets of pesticides is still exercised by the subsistence agriculture: small, fragmented and with a low power of technological absorption, for competition, for trading.

*Mechanization.* Statistics for tractors and farming machinery in Romania indicate that this country is one of the poorly equipped countries in Europe in this respect, with a load of about 58.6 ha/tractor, whereas the European average is of about 13 ha/tractor, and in Germany around 9 ha/tractor, Belgium cca. 7 ha/tractor and Austria only about 4 ha/tractor (1999). As to the wheat and corn harvesting machinery the situation in 2004 was of 86.8 ha of wheat and corn/machine.

The statistical ratio of the number of economically active persons in agriculture to the number of tractors indicates that in Romania there are 20 persons/tractor as compared to 1.94 persons/tractor in Europe, 9.78 persons/tractor in Bulgaria, 3.12 persons/tractor in Poland 1.5 pers./tractor in Germany (1999).

The situation is even more serious if taking into consideration the obsolescence of such equipment, knowing that over 71% of the existing tractors are more than 8 years old and half of the fleet is almost all the time under repair. Consequently, the real load is practically twice as much, ranking us among the very last in Europe.

As of 2001, the tractors and farming machinery fleet started to grow reaching in 2000, a level of 86.42% tractors and 55.32% farming machinery as compared to year 1986. The sharpest increase was in the period 2001-2004, when there were subsidies for the purchasing of tractors and farming machinery.

*Consulting in agriculture.* The National Agency for Consulting in Agriculture (NACA) is a public institution with legal personality financed integrally from the state budget, in the subordination of the MAFRD, that provides consulting in the field of agriculture.

NACA is organized both at a central, and at county and local levels. At the commune level, the consulting services are provided through the local centres. The coverage is 26%, as there are 700 local centres for consulting in agriculture, with a random distribution locally. Likewise, NACA organizes, in collaboration with the County Centres for Consulting in Agriculture, training and qualification courses for farm producers.

## 8.2.6. The sanitary-veterinary and phyto-sanitary infrastructure

The system of control of the agro and food products in Romania has the following structure:

- The National Sanitary-Veterinary and Food Safety Authority (NSVFSA).
- Veterinary institutions, benchmark authorities at a national level for the domains of competence specific for them, legal persons, in the subordination of the Authority;
- The sanitary-veterinary and food safety directorates at county level and the directorate of the Bucharest Municipality, legal persons, in the subordination of the Authority.

The central level is represented by:

- The Institute for Diagnosis and Animal Health;
- The Institute for Food Hygiene and Veterinary Public Health;
- The Institute for State Control over the Biological Products and Medicine for Veterinary Use.

## 8.3. Rural development

### 8.3.1. Rural Infrastructure

#### Technical-urban infrastructure

- The number of houses in the rural area increased from 3,688.9 thousand in 1998, to 3,867 thousand in 2003;
- In the period 1998-2003, there were improvements in point of network for supply of drinking water in the rural area, and the length of this network increased from 14,452.8 km in 1998 to 18,428.3 km in 2003 (increase by 27.5% is much more as compared to the overall country average of 15.4%, and as compared to 7.3% in the urban area, respectively). In 2003, it so came out that out of the total length of this network, 43.6% be located in the rural environment and 56.4% in the urban area;
- As to sewerage, the gap between the rural and urban areas is still very big; thus, in 2003, in towns there were 93.2% of the total length of pipes and in villages only 6.8%;
- Although thermal energy is very little used in the rural area – only approximately 0.5% of the total thermal energy is distributed to these areas; the reason is that many of the units that produced this energy and distributed it to the nearby villages either sized down their activity or gave up provision of these services.

**The transport infrastructure.** As to the road infrastructure, in the beginning of this period predominant in point of length were the communal roads, whereas in 2000 the majority was to be held by the county roads, since part of the communal roads was placed in the category of county roads; in 2003, in Romania, only 10.2% of the county and communal roads was modernized and 29.2% surfaced.

**The telecommunications infrastructure.** In the field of telecommunications, in the rural area there was a reduction of 22.9% in the number of post and telephone-telegraphy units, from 8410 units in 1998 to 6,488 units in 2003, following mainly the introduction of improved, automated systems in telephone, that replace the old telephone exchanges.

**The health infrastructure.** Analysing the number of the main health units (polyclinics, clinics) in the period 1999-2004, there was a general decreasing trend in the rural area, whereas in the urban area hospitals and TB sanatoria had a positive evolution. Thus in 2004 in the rural area there were only

79.7% of the hospitals that existed in 1999 and 20.1% of the health clinics. The number of pharmacies and pharmaceutical units increased with 16 units as compared to 1999.

In the period 1999 – 2004, there were fluctuations, but not very sharp, in the number of various categories of the health staff in the rural area. Thus, as compared to 1999, the number of doctors diminished by approximately 7.5% from 5,979 to 5,531, and the ancillary staff decreased by approximately 15% from 15,607 to 12,692. The number of dentists in the rural area increased by 50.3% in the period of time analysed, the same trend being identified for the number of pharmacists that increased by 31.9%. This phenomenon was due to the increase in the private activities in the two domains. As to the ancillary staff there were consistent reductions in the number of the two categories of sanitary staff so that in 2004 there was a relative loss of 18.7% and of 17.8% as compared to 1999.

Although over 40% of the country's population lives in the rural area, less than 15% of the sanitary staff at all levels serves this population. Consequently, there is one doctor for 1735.8 persons in the rural area in 2004, by 69.3 persons more than in 1999.

**The education infrastructure.** The number of graduates of *high school education* with an agriculture profile decreased in the period 1998-2004, from 10,314 in 1998/1999, to 2,520 in 2003/2004, representing only 24.41% of the value of the year of reference. Consequently, the percentage of graduates of agriculture high schools in the total number of high school graduates was on a decrease from 5.64% in 1999 to 1.46% in 2004.

In *higher education* there was a variation in the number of young persons that attend studies in agriculture, the number of graduates of agriculture education in the total number of graduates at a national level being on a decrease from 2.44% in 1999 to 1.98% in 2004.

In the period 1998-2004, there was a drastic reduction in the number of educational institutes, especially of those in the rural area, by about 58.1% from 21,034 in 1998/1999 to 8,744 in 2003/2004.

## **Culture**

An important component in the life of the village is the cultural one, a domain that can contribute specifically to the increase in the level of attractiveness of the village for the young population. The means that help inducing culture into the rural area are: houses of culture, libraries, cinemas, the radio and the television.

The current situation of *houses of culture* in villages shows a decline both in number and in quality. Out of the total of 6,147 houses of culture countrywide in 2002, only 1,874 developed cultural activities as such, the other houses of culture (over two thirds) developed other activities not specifically cultural. Although the majority of houses of culture (about 97%) benefit from own facilities, the equipment there was not satisfactory for about 82% of them.

The situation of *libraries* is part of the general trend of deterioration of cultural life in the countryside. The number of libraries in the rural area diminished by about 11.6%, from 9,388 in 1999 to 8,306 in 2004. The situation is worse as to the actual functioning of libraries in the rural area. For a number of 8,947 libraries in the rural area, in 2003, there were only 1,726 thousand readers, which means only 193 readers for a library.

As to *cinemas* in the rural area, the number of shows and of audience is much bigger than related to the number of halls because many of the films run in multi-functional halls, part of them in the houses of

culture. There is however a drastic decrease in the number of cinemas in the rural area, from 55 to 8 in 1999-2004.

### **8.3.2. Non-agricultural economic activities**

In the rural area, there are a series of non-agricultural activities (rural tourism, agro tourism, agricultural raw materials processing, transports etc) that have a positive impact on the rural communities, contributing to insurance of complementary incomes and to the growth in the level of use of the labour force.

In 2003, there were 363,377 businesses in the rural area with non-agricultural activities, out of which 355,958 individual agricultural farms (97.9% in total) and 7,419 legal entities (2.1% in total).

Out of the individual businesses the biggest share is held by the trading companies, that is, 33.2%, followed by those for milk processing - 17.7%, grapes processing - 17.1%, fruit and vegetables processing - 9.3% and meat processing - 7.9%. Individual businesses that perform non-agricultural activities, others than those mentioned, represent a very low percentage (milling, fodder processing, wood processing, agro-tourism, fisheries, crafts, transports-deliveries etc).

As to businesses that are legal entities, the biggest share is held also by the trading companies (70% for cooperative units, over 32% in the case of agricultural companies and in that of commercial companies). Units of a commercial type in the field of bakery, meat processing, and transports hold lower percentages, between 7-9%.

The businesses that perform craft work (knitting, artisan work) also hold a low percentage, between 1-2.6%, the number of individual agricultural farms standing at 6,880, and the legal entities 81 (1.2% of the total).

**Rural tourism and agro-tourism** also developed in point of infrastructure. In the period 1998-2003, the number of pension houses increased from 600 pension houses in 1998 to 3.500 in 2003, which represents an increase of 5.8 times. Pensions in 2003 had 28,000 accommodation places, as compared to 3736 in 1998. Tourist pensions and agro tourism pensions are to be found in 27 counties, covering all the development regions; a bigger concentration of pensions being noticeable in the regions of the Centre, Northeast and Northwest.

**SME-s in the rural area.** As compared to the overall situation of SME-s in the rural area, their dynamic analysis is liable to show a series of tendencies regarding the socio-economic conditions of the villages in general.

Analysis of SME-s in the rural area in 2002 shows the relatively low capacity of SME-s to meet the requirements related to the supply of jobs for the village population, both due to the small number and to the structure of employees. At nationwide level there is a strongly asymmetric distribution of companies, a major percentage being held by micro-enterprises - 94.45% and, within them, especially of companies without any employee (68.1% of the total companies registered). The companies that theoretically have a bigger potential of job opportunities, the small and medium sized ones, are in a small number, representing only 4.6%, the „small” companies (with 10 up to 49 employees) and respectively 0.9% - in the „medium” companies (with over 50 employees, but not more than 249). During the years, most SME-s were set up in the rural area in the field of trade (48.6%), following the processing industry (19.6%), agriculture (9.8%), tourism (7.2%), transport (5.9%), construction (3.3%), services (i.3%), and last the extraction industry (0.2%).

The set up SME-s are mainly in the field of trade, since trade presupposes smaller resources, shorter periods of return of investment, poorer experience in point of organization and management etc. an important role is played by persons who returned to the rural area, from the urban area, have a high level of education and are also qualified in many trades in the sphere of industry but that could be performed or adjusted to trades of interest for the rural community as a modern community.

### **8.3.3. Agro – environment**

The current practices in agriculture, industry, urban agglomerations etc led to the deterioration of the natural environment in agriculture therefore a series of measures are necessary to rehabilitate the area affected by these phenomena but especially to prevent the negative effects of agricultural activity on the environment.

The major problems that need intervention by agro-environment measures in Romania are:

- Pollution of hot water springs and surface water, reduction of the biological quality of agricultural products, the changes in climate, reduction of soil fertility etc.
- The degree of degradation of agricultural lands by: erosion of water (6.3 mil. ha), erosion of wind (380,549 ha), landslide (702 thousand ha), chemical pollution of the soil (affecting around 0.9 mil. ha), this creating problems for agricultural production, safety of houses and infrastructure and quality of waters in the affected areas. The use of chemical fertilizers in Romania is of approximately 38 kg/ha, by 2.5 times smaller than the use of chemical fertilizers at a world level and 4 times smaller than in the EU.
- The natural value of some important areas of agricultural lands which, although are not included in the nature reserves, need special management in order to be preserved.
- The damage produced to the farmers by the protected wild animals as well as the damage produced by farmers to the habitats of wild animals during the normal production processes.

In the SAPARD programme Measure 3.3 „Agriculture production methods designed to protect the environment and preserve the rural landscape” was adopted mainly to serve the development of practical experience for the implementation of agro-environment measures. In addition, the vulnerable areas and the „Code of agriculture good practices” was drawn up.

### **8.4. Fishing and fisheries**

Currently, the fishing area in Romania, including areas covered permanently or temporarily by waters, is estimated at 500,000 ha stagnant waters, 66,000 km running waters, rivers in the mountain, hilly and valley areas and 25,000 km<sup>2</sup> sea water in the Exclusive Economic Area of the Black Sea. The waters in the public domain are represented by: 300,000 ha natural lakes and swamps; 98,000 ha storage lakes and polders; 47,000 km of rivers in the hilly and valley area; 18,000 km of rivers in the mountain area; 1,075 km the river Danube.

According to the statistics of the MAFRD in Romania there are 100,000 ha of fishery units structured as follows: 84,500 ha of fish breeding units, 15,500 fish nurseries, 25 ha trout breeding units, out of a total number of 168 farming units.

The structure of the fishery stock, by breeds, in Romania is dominated by cyprinides, both autochthonous and of Asian origin, representing 85% of the total, the remaining is represented by pike, sturgeon of fresh water (15%).

In the period 1998-2003, *the fishery production* of Romania registered a significant decrease, thus in 2003 it stood at only 63% of 1998. Captures from the Black Sea in the period 1998-2003 had a descending evolution, the minimum being registered in 2003, when they only represented 36.5% as against 1998. The causes for the decrease in fishery production both in fresh waters and in sea waters were to be found in the conditions characteristic for the transition to the market economy (small investments in this sector, both in production and in capital), exploitation by over fishing in the fresh and sea waters, pollution of waters, destruction of habitats and lack of reproduction matter.

The List of Fishing Vessels includes 24 such facilities, out of which 12 trawlers, with only 7 operational, in the ownership of the state.

There are currently approximately 50 businesses that are operational in the processing industry, fishery and aquaculture products processing. The total capacity of processing and conservation of fish and fish products stands at 31,996-t/a year, out of which 4,324-t/a year in the rural environment.

*Trade with fish and a fish product on the domestic market* is done through fisheries farms, processing units, importers, wholesalers and retailers. The available production for consumption on the domestic market as compared to the reference year 1998 dropped by 29% in 1999, in 2001 by 14%, and currently has reached again the level of the year 1998.

Trade with fish and fish products on the external market –exports dropped significantly as of 2000 until now, going down by up to 70% as compared to 1998. Imports, as compared to 1998 dropped reaching 70% in 1999, after which they started to grow, so that now they are bigger than in 1998 by approximately 6%.

## 9. REGIONAL DISPARITIES FROM THE POINT OF VIEW OF THE ECONOMIC DEVELOPMENT

When compared with EU Member States and the Candidate Countries, Romania entered the transition period with a relatively low level of regional disparities. Nevertheless, disparities rapidly appeared, especially between the Bucharest-Ilfov Region (which includes the country's capital city) and the other regions. The inter-regional disparities are, in real terms, relatively low in comparison with parts of the European Union, but in relative terms, they have reached levels which can be comparable to those in the Czech Republic, Slovakia, and parts of Belgium and France.

The comparison of the regional disparities in Romania and other European countries reveals that in Romania, as in the majority European countries (Great Britain, France, Belgium, Czech Republic, Austria, Portugal, Sweden), the countries most developed region includes the capital city. Similarly the most underdeveloped regions are the border regions (e.g. Austria, Germany), particularly where the border regions are adjacent to the former socialist countries.

### 9.1. General development disparities between Regions

The Bucharest-Ilfov Region, enjoys a more favourable economic climate and being the Romania's capital has been able to attract economic growth. The Romanian regions nearest to the Western European markets have also led to improved economic growth for those areas. Although the statistical data shows some variations, due to the local geography, the regions in the North-Eastern, on the border with Moldova, and in the South along the Danube are the most underdeveloped. This underdevelopment manifests itself mainly in high unemployment, especially to rural communities and the inability to attract foreign direct investments (FDI). The table below is a summary of key regional development information.

**Key regional development indicators in Romania (national average = 100)**

-%-

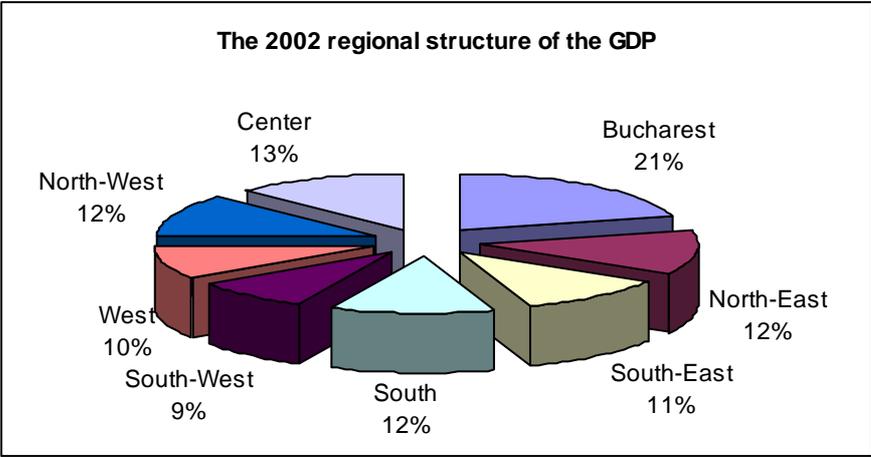
Region	GDP/capita		Unemployment rate (ILO)		FDI/ capita		SME/ capita <sup>66</sup>		Rural population	
	1998	2002	1998	2003	1998	2003	1998	2003	1998	2003
North-East	79.8	71.5	127.0	88.6	15.3	23.7	71.3	65.9	123.9	127.0
South-East	100.1	85.9	81.3	158.1	42.7	87.2	101.4	94.2	94.7	96.1
South	85.8	80.0	96.9	96.9	65.5	66.6	77.0	70.5	129.0	127.3
South-West	90.0	79.9	76.2	78.9	11.9	28.4	85.9	73.8	120.8	117.4
West	100.9	108.3	133.3	106.7	99.1	59.2	91.2	101.9	83.8	82.2
North-West	95.5	94.1	87.5	81.3	41.9	53.3	106.5	111.0	104.9	104.7
Center	105.9	108.0	110.7	147.7	87.7	50.7	101.1	104.6	87.1	87.6
Bucharest-Ilfov	162.2	208.2	98.4	78.1	598.3	430.8	194.1	217.0	24.8	24.0

Source: The calculation was made based on Romania's Annual Statistics 1999, 2004

The North-East Region is characterized both by its dependence on agriculture, and its closeness to the border with Moldova and Ukraine. Similarly the South Region is to a large extent is dependant on agriculture. In the South Region the Danube has acted as a barrier to cross-border trade. The West, North-West and Centre Regions attracted more foreign investment, which has made a significant contribution to the development of these regions as has their proximity to the Western markets and lower dependence on the primary sector.

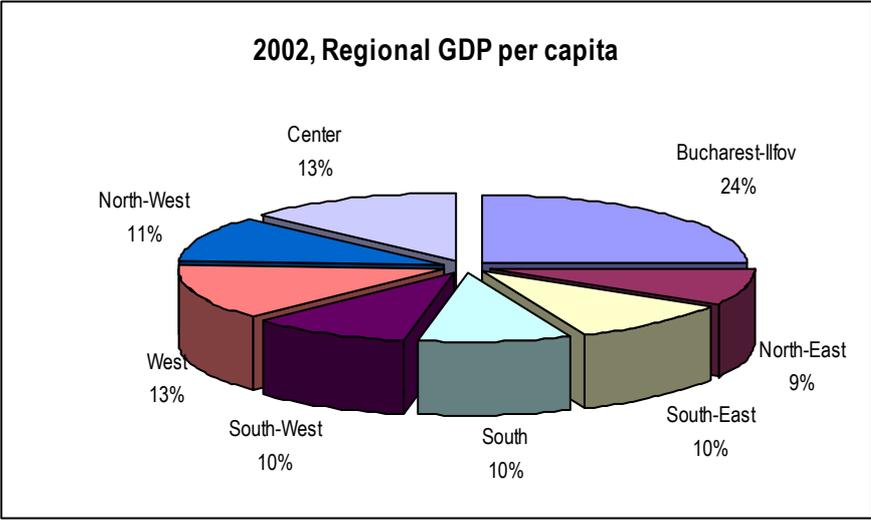
<sup>66</sup> It includes the local units active in industry, construction, trade and other services, with less than 250 employees per 1,000 inhabitants.

The Bucharest-Ilfov Region in 2002 contributed 21% of the country's GDP (10,173.8 million euro), the contributions from the other regions vary with 9% (South-West Region), and 13% (Centre). The North-East, North-West and South Regions contribute about the same at 12%.



Source: National Institute of Statistics

When comparing regional distribution of the GDP and GDP capita, differences can be seen. For example North-East Region, which is third at 12% of the GDP, ranks last with GDP per capita of 9%. The West Region, which is seventh with GDP at 10%, ranks second with GDP per capita at 13%. In the Centre Region where labour productivity is higher the Region enjoys the second position with 13% in both tables.



Source: National Institute of Statistics

As the recent studies on regional disparities have shown<sup>67</sup>, the interregional disparities, measured in GDP per capita, become more evident where there have been significant reductions in the dominance of state-owned industries within the economy.

<sup>67</sup> "The Economic Development Potential of the Romanian Regions and their Regional Specialization", The Economic Prognosis Institute, 2005.

### The 1998-2002 evolution of the GDP per development regions

Region	Ro	NE	SE	S	SW	W	NW	C	BI
GDP / inhabitant (PPS)									
1998*	4,699.2	3,739.1	4,685.7	4,008.8	4,248.3	4,793.4	4,505.1	4,993.3	7,704.9
2002	6,058.0	4,337.1	5,198.9	4,853.1	4,867.2	6,593.8	5,726.2	6,547.3	12,564.7
Relative growth (%)	29	16	11	21	15	38	27	31	63

Source: Eurostat and calculations made by MEI, Department of Regional Policies and Programming

Note: \* Eurostat Estimates

The comparison in the GDP over the period 1998-2002 shows an approximately 63% growth in the case of Bucharest-Ilfov region, while for the other regions the growth is under 31% (except for the Western region).

Some of the major causes that led to and continue to increase disparities are: the location and the volume of foreign direct investments within the developing regions, the increasingly less competitive business base when compared with internal and external markets, due to the use of outdated and inefficient equipment and under investment in technologies (especially noticeable in the Eastern regions), and for the SMEs' limited access to finance.

Foreign direct investments into Romania have taken place in the regions that are functioning more efficiently and have the better geographical locations. Quality and adaptability of the management has also been a factor that has influenced decisions on investment. After 2000, the foreign capital focused more in the regions Bucharest-Ilfov, West, North-West, and Centre, which has had a positive impact on those regions' labour markets, creating permanent jobs for qualified labour force and developing business services (e.g. specialized recruitment agencies).

Up until 2003 Bucharest-Ilfov Region had attracted 53.9% of the total FDI in Romania because of the fact that the capital city is the main attraction for foreign investment and this is confirmed by today by the large number of foreign-capital owned companies located in the Region. The port of Constanta also attracts investments and most of the foreign investment in South-East Region is located in Constanta.

### The structure of the foreign direct investments implemented up to 2003 within each development region

Development region	Value (Billion euro)	% in total
North-East	300.8	3.0
South-East	1,107.7	10.9
South	846.1	8.3
South-West	360.5	3.5
West	751.9	7.4
North-West	676.9	6.7
Centre	644.6	6.3
Bucharest-Ilfov	5,471.1	53.9
Romania	10,159.6	100.0

Source: NRB and NSI – Statistical research on Foreign Direct Investment in Romania in 2003

The other seven development regions have attracted between 3.0% (North-East Region), and 10.9% (South-East Region) of the foreign investments. Nevertheless, the country's Western and the North-Western regions benefit from a relatively higher rates of foreign capital invested due to economy of the region and the ability to adapt international business environment.

Availability of a highly qualified labour force is an important factor in attracting investments. As the economy improves in Romania, the need for an increasingly highly qualified labour force will intensify. Latest economic data shows that the regions that were able to attract an important volume of investments, like the Western Region, are already faced with labour shortages and difficulties in finding highly qualified labour force, especially in the technical and administrative areas business.

ISMEs<sup>68</sup> hold an ever more important place in the economy and they are the key to growth in all the regions. The SMEs will provide additional jobs to replace those lost in the 1990s through economic and industrial restructuring.

## 9.2. Disparities in the employment rate

Employment rates vary across the Regions as a result of economic restructuring and the employment opportunities provided by the small and medium-sized enterprises.

### The population's rate of employment

-%-

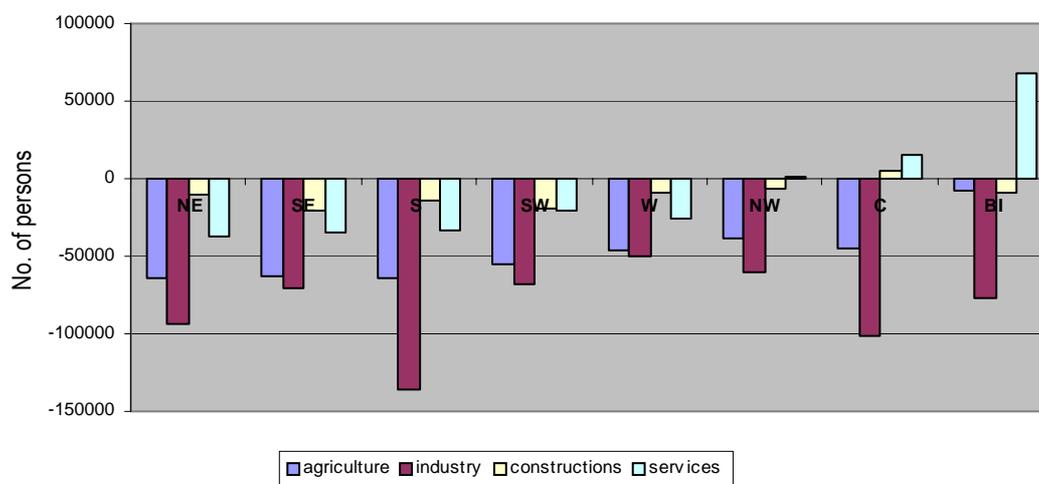
Regions	1997	2000	2003
<b>Romania</b>	60.9	58.8	51.0
North-East	64.7	64.2	54.8
South-East	57.6	56.1	49.2
South	61.5	60.2	51.2
South-West	68.0	66.1	55.3
West	59.7	56.8	49.2
North-West	66.1	58.6	50.9
Centre	56.2	53.9	48.1
Bucharest-Ilfov	51.5	51.4	47.4

Source: Territorial Statistics, 2005, NSI

Between 1997 and 2003 the employment rate fell in all the regions due to the economic restructuring of industries and there were also losses in the economically active population due to external migration. There were also reductions in agriculture in all regions in 2003 when compared to 1997. Construction industry employment in the Centre Region increased during this period – employees in employment increased by 4,700 employees.

<sup>68</sup> Seen the fact that there are statistical differences in the small and medium-sized companies, this section focuses only on the locally active units of the companies located in the regions

### Evolution of employed population on fields of activity (1995-2003)



Source: Calculation based on Territorial Statistics, 2005, NSI

The number of persons employed in the service industries fell during the same period (1995-2003). In five regions out of eight the lowest figures have been registered in the North-East and South-East regions (- 37.5 thousand / - 34.9 thousand persons), while the number of employed population grew significantly in the regions Bucharest-Ilfov and Centre (+ 67.8 thousand / + 15.5 thousand persons), due to these regions ability to attract foreign investments.

The increased disparity between Bucharest-Ilfov region and the other regions has been fuelled by the expansion of the service sector and particularly investments in the telecommunications industry. These industries have benefited from a ready supply of graduate labour.

The unemployment rose rapidly after 1990 in all the regions, the highest increases were registered in the regions with frail industrial economies resulting from the '60s-'70s. Most badly affected Regions were North-East and South-East while the Bucharest-Ilfov and West Regions fared best. Unemployment remained high through to 2000 in the North-East and South-East Regions, but at this time South-West Oltenia, West and Centre Regions were similarly affected due to restructuring within the large companies in mining and the heavy engineering industries.

The lower unemployment rates registered after 2000 may be explained by a number of factors - larger number of retirements, people leaving to work abroad, a rise in work available within the black economy and that long-term unemployed people no longer bothered to register at unemployment offices.

### The evolution of the unemployment rate per regions and year

- % -

	North-East	South-East	South	South-West	West	North-West	Center	Bucharest-Ilfov
1991	4.5	4.0	2.7	3.4	2.5	3.2	1.8	1.4
1995	13.7	10.6	9.0	9.9	7.5	8.6	9.1	5.1
2000	13.2	11.4	10.4	11.6	10.4	8.5	10.3	5.8
2002	10.8	10.0	9.2	9.4	6.6	6.8	9.0	3.3
2003	9.0	8.1	8.3	9.1	7.0	5.4	8.3	2.8

Source: Romania's Annual Statistics, 2004, NSI

The unemployment rates vary within the regions, and from one county to the next. This is most noticeable in the Eastern part of the country than in the West.

The highest 2003 unemployment rate was registered in the South-Western Region (9.1%), while the lowest ones were registered in the North-West and Western regions (5.4%, respectively 7.0%). The rate of unemployment in the Bucharest-Ifov region is as low as 2.8% due to the rapid development of the financial-banking services, and to the development of the telecommunications' sector.

The counties that record the highest unemployment rates are located in the Eastern side of Moldova, the counties Botoşani, Iasi, Vaslui and Galaţi; the high unemployment rate registered in these counties (between 6.2 and 10.2%) is a consequence of the counties' traditional underdevelopment, and they were also the last areas to embrace restructuring, this is especially so in Galaţi and Vaslui.

High unemployment rates (between 9.2 and 11.1%) were recorded in the counties of Braşov, Prahova and Ialomiţa. In the first two counties this is due to their traditional industrial base and restructuring that impacted the mono-industrial nature of these small and medium-sized centres. The restructuring also affected the rural hinterland of the urban centres (commuting workers). In the case of the Ialomiţa County, high unemployment was due mainly to the traditional agricultural base and underdevelopment of the industrial base.

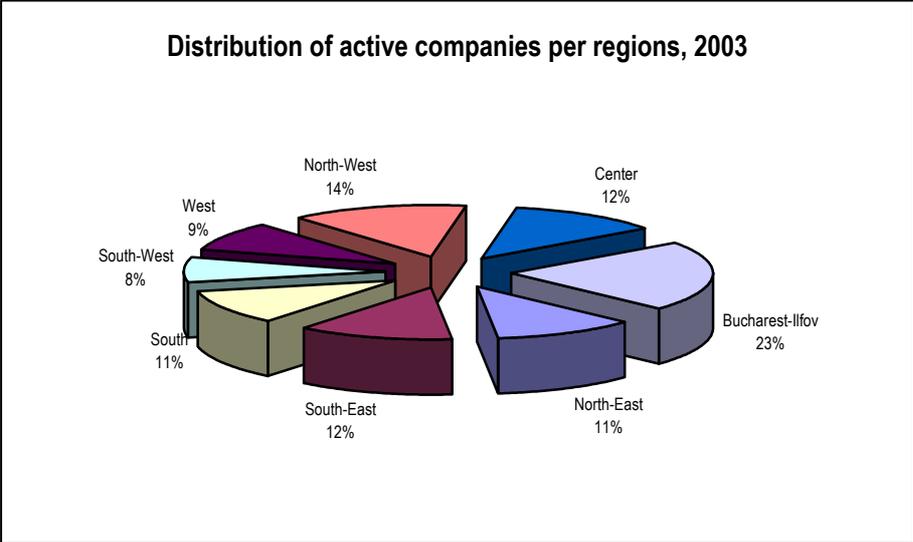
Similar patterns were experienced in the counties of Gorj, Vâlcea, Olt and Teleorman where high rate of unemployment (between 8 and 8.7%) was recorded. Gorj experienced industrial decline while the other two counties were affected by the predominantly agricultural nature of their economic base.

The other areas affected by high unemployment were the counties Caraş-Severin, Hunedoara and Alba where rates of unemployment between 9 and 11.7% were recorded was due to the make up of the traditional industrial base namely ore extraction in Alba, Hunedoara and Caraş-Severin and coal mining in Hunedoara and Caraş-Severin together with metal processing in Alba and Caraş-Severin.

**9.3. Disparities in entrepreneurial developments**

**9.3.1. Small and medium-sized enterprises**

The total number of active enterprises in 2003 was of 359,399, out of which 357,071 were SMEs and 2,328 were large companies employing over 250 persons. The regional distribution of active companies (see the chart), reflects a massive concentration in Bucharest-Ifov region, with around 23%, followed by the North-Western region (14%).



Source: National Institute of Statistics

The entrepreneurial development of the different regions of Romania is quite marked when considering the number of companies per 1,000 inhabitants. Compared with the EU average, Romania has 2.5 times fewer enterprises per 1,000 inhabitants and there is uneven distribution between the eight Development Regions. In Bucharest-Ilfov Region there are 24.34 enterprises per 1,000 inhabitants which is over 3 times the rate in the North-Eastern region - the most underdeveloped region. The most spectacularly positive developments in entrepreneurial development have occurred in the last few years in West, North-West and Centre Regions, whilst the situation since 1997 in South-West, South and South-East has increasingly worsened. In the case of the regions North-East, South-East, South, and South-West, the low entrepreneurial development is related to low education rates of the employed people and the rural nature of the regions. These regions have remained less attractive to investors.

In the period 1998 – 2003, the growth of the SMEs varied, but the general trend was a positive.

### SME Growth - 1998 to 2003

Regions	1998				2003				Difference Total
	Total	%			Total	%			
		Micro	Small	Medium-size		Micro	Small	Medium-size	
Romania	320,955	90.0	7.8	2.2	357,071	87.0	10.4	2.6	36,116
North-East	38,663	89.0	8.7	2.3	40,562	86.3	10.9	2.8	1,899
South-East	42,568	91.3	6.7	2.0	44,266	88.1	9.4	2.5	1,698
South	38,301	90.7	7.3	3.0	38,917	87.2	10.0	2.8	616
South-West	29,573	91.9	6.1	2.0	28,256	89.0	8.8	2.2	-1,317
West	26,669	87.7	9.6	2.7	32,595	85.0	11.8	3.2	5,926
North-West	43,419	89.6	8.3	2.1	50,048	87.1	10.4	2.5	6,629
Center	38,294	88.6	9.0	2.4	43,750	86.0	11.2	2.8	5,456
Bucharest-Ilfov	63,468	90.9	7.2	1.9	78,677	87.4	10.2	2.4	15,209

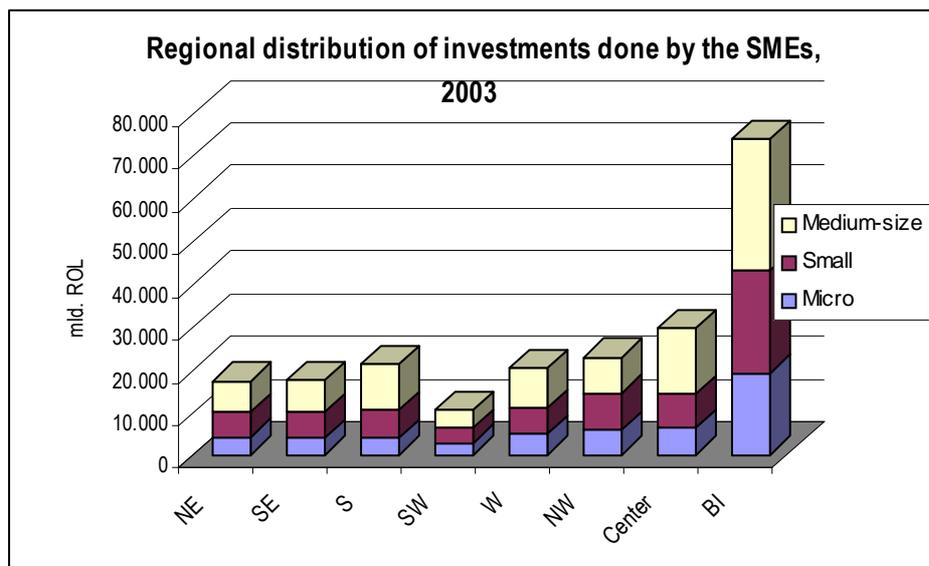
Source: National Institute of Statistics

Due to the healthy business environment and the fiscal advantages (e.g. low taxes), the number of the SMEs increased in almost all regions except for the regions South and South-West. Out of the total number of SMEs in the regions micro-enterprises represent 85% of the total number of SMEs, but their survival rate fell during 1998 to 2003 in all the regions.

In 2003 the active SMEs<sup>69</sup> invested approximately 5.16 billion<sup>70</sup> EUR (50% of the total volume of investments), out of which 59% were invested in 3 regions: Bucharest-Ilfov (34%), Centre (14%) and North-West (11%).

<sup>69</sup> From industry, constructions, trade and other services

<sup>70</sup> Exchange rate 1EUR = 41,117 old lei



Source: National Institute of Statistics

The small and medium-sized enterprises invested 88% out of the total volume of investments, while the micro-enterprises invested very little due to the difficult access to funding. The investments made by the SMEs focused in the regions Bucharest-Ilfov, Centre and North-West, the regions which had the highest contribution to the creation of the GDP. The investments made by the SMEs per capita are also relevant. In the year 2003 the SMEs located in these three regions alone, made investments higher than the national average (260 EUR): Bucharest-Ilfov 892 EUR, Central 307 EUR and West 277 EUR.

### 9.3.2. Business support infrastructure

The business support infrastructure<sup>71</sup> includes industrial parks, scientific and technological parks, business incubators, business consultancy centres technology and information transfer centres, and business associations.

*The industrial parks.* The Ministry of Administration and Interior (MAI) had until 2004 registered 28 industrial parks (IP) covering a total surface of 1,174.8 ha out of which, 685.56 ha was “greenfield”, and 489.24 ha “brownfield”. In accordance with the provisions in force, the MAI awarded them the title of an “Industrial Park” thus they could benefit from governmental and local support.

#### Industrial parks in function of the type of property 2004

Regions	Total	Private	Public	PPP*
North-East	2	1	-	1
South-East	2	-	1	1
South	9	2	7	-
South-West	1	-	1	-
West	1	-	1	-
North-West	2	-	2	-
Center	9	2	6	1
Bucharest-Ilfov	2	2	-	-
<b>TOTAL</b>	<b>28</b>	<b>7</b>	<b>18</b>	<b>3</b>

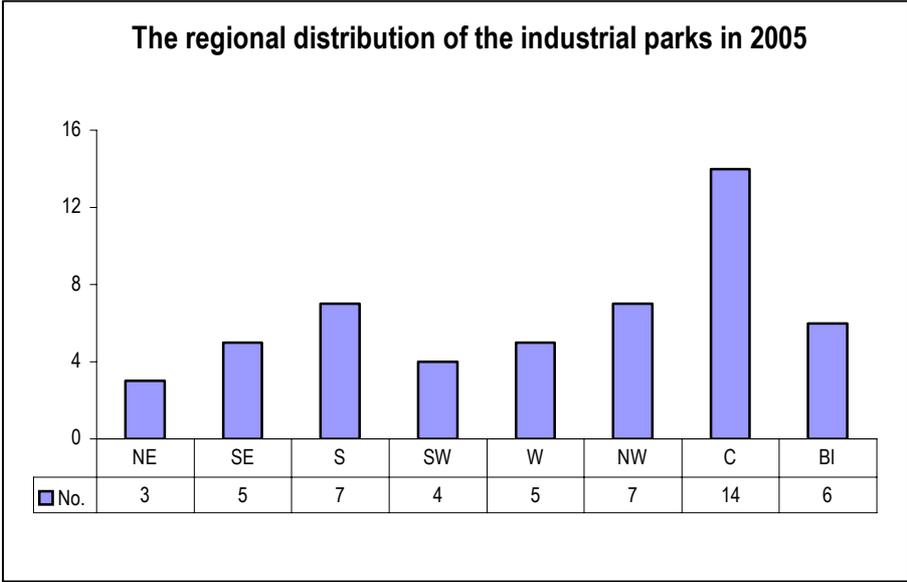
Source: Ministry of Administration and Interior

Note: \*PPP – Public-Private Partnership

<sup>71</sup> Resource: the analyses of the current situations for the Structures Supporting Businesses lays both on statistical data, but also on the consultation Process in view of drafting the Regional Operational Program, questionnaires and one-on-one interviews.

The largest IPs are to be found in the regions South and Centre (approximately 74% out of the total brownfield IPs). The IPs located in the regions South-East, Bucharest-Ilfov and North-East are fully furnished, while four industrial parks located in the regions North-West, West and South-East are completely un-furnished.

The analyses done half-way through 2005 within a Technical Assistance project (under the Phare Program) identified 52 industrial parks whose regional distribution is represented in the chart below. There are industrial parks in all the regions, but most of them are located in the regions with traditional industries, that is the regions South and Centre.



Source: Ministry of European Integration

Only 40% of the IPs are fully operational, 25% are partially operational, and 35% are not operational yet due to the fact that they are currently being furnished or there are land-ownership problems which need to be solved. The industrial parks are well positioned, close to the national motorways (at an average distance of less than 4 km), and the railway stations (at an average distance of less than 3 km).

The industrial parks encompass a wide range of industries: wood, chemical and petro-chemical , steel processing, ecologic and agri-tourism, logistics, construction, IT&C, high-technologies, bio-technologies, ship-construction, business services, electronics and electro-technologies, light industry and others.

*The business incubators.* There were 19 operational business incubators in Romania in 2003, which provided business space for approximately 400 companies. Most of the incubators are located in the regions South-West and Central (47% out of the total number of active business incubators). The number of incubated companies in these two regions is relatively limited compared to the regions North-East, South-East and North-West, where the incubated companies represent 61% out of the total number of businesses which benefit from the services provided by the business incubator.

The most used services by the tenants and/ or the authorized companies are the consultancy services, training and secretarial services.

The incubators' survival rate (the rate between the number of operational companies and the total number of companies) is high (93%), which only goes to show the effectiveness of these services in supporting business growth and improving sustainability and competitiveness.

## Territorial distribution on business incubators on development regions in 2003

Regions	No. of active incubators	No. of incubated companies	No. of incubated companies/ incubator	No. of business incubators to be created
<b>Romania</b>	<b>19</b>	<b>400</b>	<b>21,05</b>	<b>20</b>
North-East	3	118	39,3	1
South-East	2	65	32,5	0
South	2	37	18,5	2
South-West	5	56	11,2	1
West	0	0	0,0	8
North-West	1	64	64,0	5
Center	4	19	4,8	3
Bucharest-Ilfov	2	41	20,5	0

Source: ANIMMC – “The 2003 Annual Report on Romanian SMEs”

The business incubators located in the regions support the active SMEs in the following fields of activity: clothing and textiles, electronics, design, food, gas equipment, construction parts and steel, car services, publishing, handcrafts and advertising.

## Number of jobs created within the business incubators in 2003

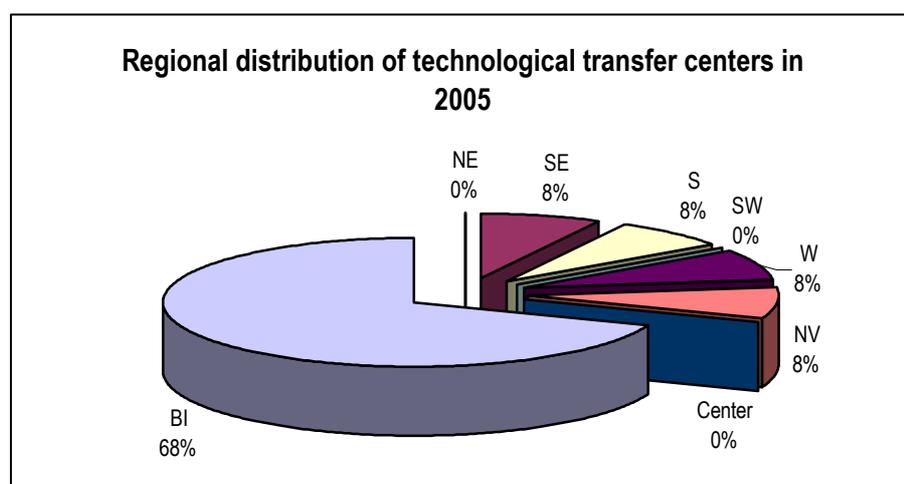
Regions	Romania	NE	SE	S	SW	W	NW	C	BI
No. of jobs – total -	1902	270	603	80	266	0	200	255	228
No. of jobs /incubator	100.1	90.0	301.5	40.0	53.2	0.0	200.0	63.8	114.0

Source: ANIMMC

In 2003 the 19 business incubators operating had created over 1,900 new jobs, of which 603 only were in the South-Eastern region.

The business incubators are faced with problems such as: difficult access to funding, low quality of the infrastructure (including the IT&C infrastructure), lack of construction sites, inefficient marketing strategies, lack of quality certifications, and lack of qualified human resources.

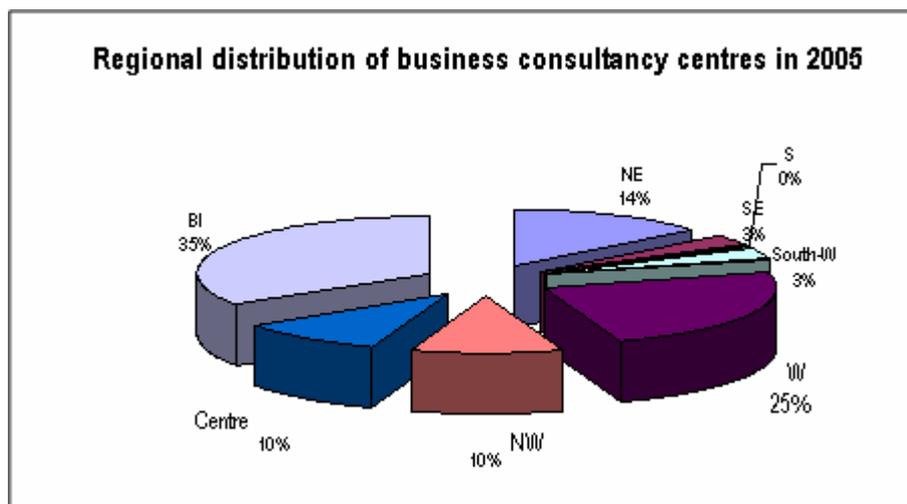
*The technological transfer centres (13)<sup>72</sup> are underdeveloped in Romania seen the fact that in three regions there are no such centres.*



<sup>72</sup> Study done by the MEI under the Phare Program, contract no. RO 2002/000-586.05.01.04.02.02, based on the questionnaires and interviews

*The scientific and technological parks*<sup>73</sup>. There are 7 such parks in Romania unevenly distributed in the eight regions, but only three of them are operational (Galați, Iași and Brașov). The other 4 are not operational yet due to different reasons such as: finding residents (TIM Scientific Park from Timișoara), organizational and space development-related issues (MINIATECH-RO Bucharest), lack of funding and support from the local authorities (SOFITEX Brăila), and partnership issues (CyberLAB Slobozia).

There are 29 *business consultancy centres*<sup>74</sup> which are unevenly distributed across the eight regions, as shown by the attached chart. The main problems these centres are faced with relates to the infrastructure, qualified human resources, lack of knowledge regarding business needs and high operational costs, and difficulty in access to funding. The regional distribution of the Business Consultancy Centres shows that they are mainly focused in those regions where the entrepreneurial activity is very intense (e.g. the regions Bucharest-Ilfov, West, and Centre).



#### 9.4. Differences in access to the transport infrastructure

Access to county, national and international transport infrastructure is one of the main causes for the disparities in the inter- and intra-regional development an additional factor is the poor quality of the transport infrastructure.

The regions that have better access to the transport infrastructure are the regions Bucharest-Ilfov, Center, South-Muntenia and West. Bucharest-Ilfov region hosts the airports which have the most intense international and national traffic. The Central region has several important railway junctions that link Romania to Central and Western Europe. The region South-Muntenia includes a network of national roads which are largely modernized, and it is crossed by four international roads, thus having good access to the national and international roads. The Western region ensures the railway and road transit to Western Europe, and contributes to diversifying the central transport junctions by means of the airports located in Timișoara and Arad.

The North-Eastern region is among the regions which have limited access to the transport infrastructure. At the level of the region, Botoșani County has 18.7% of the roads built out of dirt, and thus non-operational. The region's railway network is under the average national level insofar as length of the track and the technical equipment.

<sup>73</sup> Idem

<sup>74</sup> Idem

The inadequate transport network is an intra-regional obstacle for the development of the small and medium-size cities, communes, and villages. A lot of the areas have a poorly developed transport infrastructure between localities (e.g. the villages located in the Danube Delta), which further isolates some localities.

#### *Road transport*

The limited financial resources were mainly focused on rehabilitating the network of national roads, while the additional county/ communal network of roads was neglected both from the point of view of its value, as its quality.

**The network of public roads in Romania, per region, in the period 1995-2003**

Region	Total public roads (km)	% Non-modernized public roads	National roads (km)	% Non-modernized national roads(km)	County and communal roads (km)	% Non-modernized county and communal roads (km)	Public roads' density (per 100 km <sup>2</sup> of land)
North-East	13,345	76.5	2,601	11.8	10,744	92.1	36.2
South-East	10,648	81.2	1,804	0.5	8,844	96.8	29.8
South	11,805	72.1	2,515	2.4	9,290	91.0	34.3
South-West	10,480	68.3	1,983	15.99	8,497	80.5	35.9
West	10,192	74.5	1,881	7.8	8,311	89.6	31.8
North-West	11,569	72.1	1,942	13.2	9,627	84.0	33.9
Center	10,112	77.0	2,127	6.3	7,985	95.8	29.7
Bucharest-Ifov	850	49.2	269	0.8	581	71.6	46.7

Source: National Institute of Statistics

The rate of modernized roads within the regions is low, which has negative effect when attempting to attract investment and develop productive economic activities, thus limiting both the trade with agricultural products even in urban centres. Poor roads and access also affects the regions' tourism potential (e.g. the sub-Carpathian region of Muntenia and Oltenia, Mehedinți Plateau, and Apuseni Mountains).

The main problems that the public network of roads at regional level is faced with are represented by the insufficient capacity to handle heavy traffic and extra-heavy vehicles (especially in the regions Bucharest-Ifov, North-West and West), lack of motorways, inadequate lighting and signs, which decrease the restricted speed and increases travel times and fuel consumption. These reasons support the need to extend and improve the ring roads, so that they may take on the excess traffic on the already existing public roads. In addition there are poor inter-modal transport links between the road and the railway networks.

Almost half of the modernized roads are in a poor state of repair due to lack of investment and heavy usage particularly between major centres, in the cities and around the border areas.

#### *Railway transport*

The Romanian railway network covered, in 2003, 11,077 km, out of which 3,965 km (35.80%) are electrified, and 2,965 km (26.77%) are double lines. The density of railway usage is approximately 46.2 km/ 1000 km<sup>2</sup>, under the EU average (65 km/1000 km<sup>2</sup>). The railway network has a relatively evenly

distributed at the level of the regions, and, just as shown in the table below, but has not been extended in recent years.

### Operational network of railway, per region

Region	Total length of railway (km)						Railway density / 1,000 km <sup>2</sup> of land at the end of 2003
	1998	1999	2000	2001	2002	2003	
North-East	1.505	1.507	1.506	1.506	1.506	1.506	40.9
South-East	1.326	1.327	1.329	1.329	1.329	1.362	38.1
South	1.671	1.699	1.699	1.699	1.699	1.713	49.7
South-West	983	1.001	1.001	1.001	1.001	997	34.1
West	2.010	2.010	2.011	2.011	2.011	2.009	62.7
North-West	1.659	1.645	1.645	1.645	1.645	1.638	48.0
Center	1.534	1.470	1.470	1.470	1.457	1.509	44.3
Bucharest-Ilfov	322	322	354	354	354	343	188.4
Romania	11.010	10.981	11.015	11.015	11.002	11.077	46.5

Source: National Institute of Statistics

Budget constraints have led to drastic cuts in the amounts of money allocated to infrastructure maintenance and rehabilitation of the rolling stock (which is insufficient, aging and of poor quality). These factors have reduced the quality and security of the railway transport system which is below the European standards.

#### *Air transport*

There are 17 airports in Romania, the most important being „Henri Coandă” Bucharest International Airport, (approximately 80% of the total air traffic), „Aurel Vlaicu” Băneasa Airport, Timișoara, and Constanța. Over the last few years the air traffic has intensified also for the airports from Cluj, Sibiu and Arad, while Constanța airport operates only international charters.

## 9.5. Social infrastructure

### 9.5.1. Hospital infrastructure

The hospital buildings in Romania are between 50-100 years old, or even older, most of them do not even have earthquake expertise. In the South-West and North-Western regions the big majority of the buildings (94% /86%) do not have authorization to be operational, which has an impact on the services provided and the security of the patients hospitalized. The requests for the retrocession of hospitals registered especially in Transylvania and in the Western part, external to the Carpathian arch, endanger the continuity of the medical activities implemented in the respective buildings. Given this context, the estimated need for rehabilitation, expressed in the percentages at the level of each hospital analyzed varies between 5.89% (in South-West) and 36.12% (in North-West).

### The hospital situation per development region

Region	No. of hospitals	% hospitals >100 years old	% hospitals >50 years old	% hospitals without authorization	% hospitals without earthquake expertise	% claimed hospitals	Estimate rehabilitation needs <sup>75</sup> %
NE	136	29	29	61	8	6	17.05
SE	71	30	34	55	4	6	6.45
S	101	18	54	66	5	5	9.03
SW	48	25	46	94	2	4	5.89
W	106	17	43	70	17	16	16.93
NW	125	19	54	86	17	14	36.12
C	221	33	35	22	73	11	8.49
BI <sup>76</sup>	29		65				

Source: Ministry of Health, 2005

Except for some recent external investments, the equipment which is used by the medical services is old and/or their operational duration has expired. This and the degraded infrastructure lead to the system's general lack of efficiency.

### Distribution of equipment and needs per development region

Reg	Inhabitants (no)	No. of pieces of equipment CT (2004)	Estimate d need for equipment CT	No. of pieces of RMN equipment. (2004)	Estimate d need for RMN equipment	No. of pieces of equipment cardiac angina (2004)	Estimate d need for equipment cardiac angina	Estimated need for equipment radiotherapy (tele-cobalt)	No. of pieces of equipment linear accelerator (2004)	Estimate d need for equipment radiotherapy (linear accelerator)
NE	3,738,601	8	21	2	12	1	12	2	1	5
SE	2,850,318	8	16	1	9	0	10	1	2	4
S	3,342,042	6	19	0	10	0	11	2	0	4
SW	2,317,636	4	13	1	7	1	8	1	1	3
W	1,939,514	9	11	3	6	2	6	1	1	3
NW	2,738,461	6	15	3	9	2	9	1	3	4
C	2,539,160	7	14	3	8	1	8	1	3	3
BI	2,207,596	27	12	11	7	14	7	1	5	3
<b>Total</b>	<b>21,673,328</b>	<b>75</b>	<b>120</b>	<b>24</b>	<b>68</b>	<b>21</b>	<b>72</b>	<b>11</b>	<b>16</b>	<b>29</b>

Source: "Planning and Regulating the Health Services' System" 2004

The shortage of equipment at the level of each development region is caused by the fact that county administrations have insufficient funds to invest and can hardly keep up with maintenance and repairs works.

*The emergency medical service* operates in the emergency hospitals and in the emergency departments located at the level of each county, within the county hospitals, in the ambulance services and in the SMURD services. There are currently 38 emergency hospitals which are insufficiently

<sup>75</sup> Except for Bucharest-Ilfov Region

<sup>76</sup> As for Bucharest-Ilfov region, the data provided relates only to Bucharest municipality that is 29 hospitals, out of which over 65% are more than 50 years old, and 20% are more than 20 years old. These need to be rehabilitated, need repairs, as well as earthquake analysis.

equipped so as to answer the requirements of the eight regions, their infrastructure is poor, and the equipment is old and worn out.

The ambulance service is mainly focused in the urban areas having a 15 minutes emergency-call response, while the emergency-call response for the rural areas varies in average between 30 and 45 minutes.

#### Ambulance system (B&C) per development region<sup>77</sup>

Development region	Total no. of B & C ambulances	Type C ambulances	Type B ambulances	Population (million inhabitants)	No of B and C type ambulances /100,000 inhabitants
Bucharest-Ilfov	60	27	27	2,219,200	2.70
Center	113	25	88	2,625,783	4.30
North-East	48	10	38	3,802,008	1.26
North-West	74	11	63	2,834,538	2.61
South-West	43	13	30	2,430,953	1.77
South	77	17	60	3,478,277	2.21
South-East	65	21	44	2,904,514	2.24
West	49	10	39	2,012,241	2.44
<b>Total Romania</b>	<b>529</b>	<b>134</b>	<b>389</b>	<b>2,230,751</b>	<b>2.37</b>

Source: Ministry of Health, 2005 (the data provided is for the year 2004)

The best coverage at country level is registered in the Centre Region. The region with the lowest number of ambulances/100,000 inhabitants is the North-East Region. In this region access to rural areas is difficult also because of the poor quality of the infrastructure. One of the problematic regions is the South-East Region where the low number of ambulances/ 100,000 inhabitants combines with the low number of hospital beds/ 1,000 inhabitants.

Given the context of the last 15 years, additional structures have been developed in 8 counties, respectively within the 8 development regions – SMURD – (Mobile Emergency Assistance, Reanimation and Extrication Services). This unit takes emergency calls and activates as an integrated structure with the county firefighters' department and the county hospitals, and, just like in the case of several European countries, it is co-financed by the local authorities (the hospitals provide specialized medical staff, and the firefighters' department paramedical and technical staff). Collaboration between the Ministry of Administration and Interior, local authorities and health facilities has provided three air bases at in the development regions, Bucharest-Ilfov, Centre and North-East, which operate with the technical staff provided by the aviation unit operating under the Ministry of Administration and Interior.

#### 9.5.2. Education infrastructure

The situation of the educational infrastructure is still poor, regardless of the budgetary efforts implemented by Romania and by the numerous programs funded by the EU (pre-accession funds), and the World Bank. The constructions' and basic utilities' wear is still an unsolved problem and therefore they need rehabilitation, modernization and consolidation works.

The main problem that the education infrastructure is faced with is the lack of exploitation security due to the damages brought about by the earthquakes, but also the age of the buildings. Part of the

<sup>77</sup> In Romanian there are currently 3,020 operational type A1 and A2, B, C ambulances, other means of transportation unclassified and with no on-board adequate equipment, according to the 1789 CEN UE classification, only 529 ambulances are type B ambulances (first-aid interventions) and type C ambulances (CPR).

buildings were built in the 18<sup>th</sup> century, some of them had been initially built for other purposes, and were later transformed and refurbished with an operational consolidation and conformity structure having major flaws. Only 43% out of the total number of schools were built after 1960.

According to the data provided by the MEdC in 2004 over 70% of the undergraduate units were in need of rehabilitation, the most important investments were needed in the North-Eastern region (90.8%), while at the other end was the Bucharest-Ilfov region with a 32.92% need.

The number of PCs in schools is low, and does not exceed 35%, with the exception of Bucharest-Ilfov region, where there are 38.88% of the schools that have IT labs. Due to the governmental programs, the schools received until 2004, 37,150 PCs, 1,510 servers, and were created 1,510 IT networks, 600 schools were connected to the internet.

The equipment is a specific issue for the rural environment. From a technical and public utility point of view, the most serious situation is in the rural environment where there are still 43 units with no power and 2,805 units with no running water. 28% of the schools' furniture is good, but from the point of view of the educational means and equipment, the situation is very poor in 5-10% of the preschools, grammar schools and professional schools, and in 5-10% of the high-schools.

### **9.5.3. Social services infrastructure**

The social assistance services are provided by means of some institutions which in 2004 were made up of: social aid cantinas (183), retirement homes for the elders (20), rehabilitation and recovery centres for adults (44), day-centres for the recovery of the handicapped children (89), foster homes (1,369), etc., as well as other different special education units – kindergartens, schools, high-schools, professional schools, re-education centres. There are 6 regional centres and 20 county centres (within the County Labour Offices) aimed at the continuous professional development of adult population.

The insufficient allocation of funds to the educational system and the social services' units limits the activity which the latter were created for. The big majority of the buildings that host these institutions need rehabilitation and/ or the constructions of new units and investments in ensuring the utilities for all these social assistance centres.

### **9.5.4. Public security infrastructure for emergency situations, natural and technological disasters**

Romania is a country with a high disaster risk (earthquakes, floods, etc.). The assessment of the emergency services<sup>78</sup> showed that these do not have the capacity to manage major accidents because of two reasons: the infrastructure of the operational bases is deteriorated or inexistent, and the equipment is worn out, which has an impact on the capacity to efficiently cope with a major accident.

Currently 44.7% of the emergency units have specially equipped vehicles. The South and South-East Regions do not have any specialised vehicles or equipment to deal with smoke and gas incidents, or specialised lighting equipment for emergency work, while the West Region has no specialised vehicles for high-altitude work and rescue missions. Similar situations have been identified with other equipment for the emergency units: the compressed-air breathing equipment represent 50% of the total needs, the fire extinguisher substance is below 50%, both in the case of powder and liquid foam. Only 1.4% of the total number of vehicles in use has a life expectancy of more than 6 years - the normal usage period. Except for the SMURD equipment, which has bases only in 8 counties, there no other specialized

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<sup>78</sup> TAIEX, 2004

pieces of equipment for first-aid intervention which could support accident victims (30% of the SMURD interventions at national level were done by SMURD units located in Mures County). This situation puts at risk human lives and restricts emergency support.

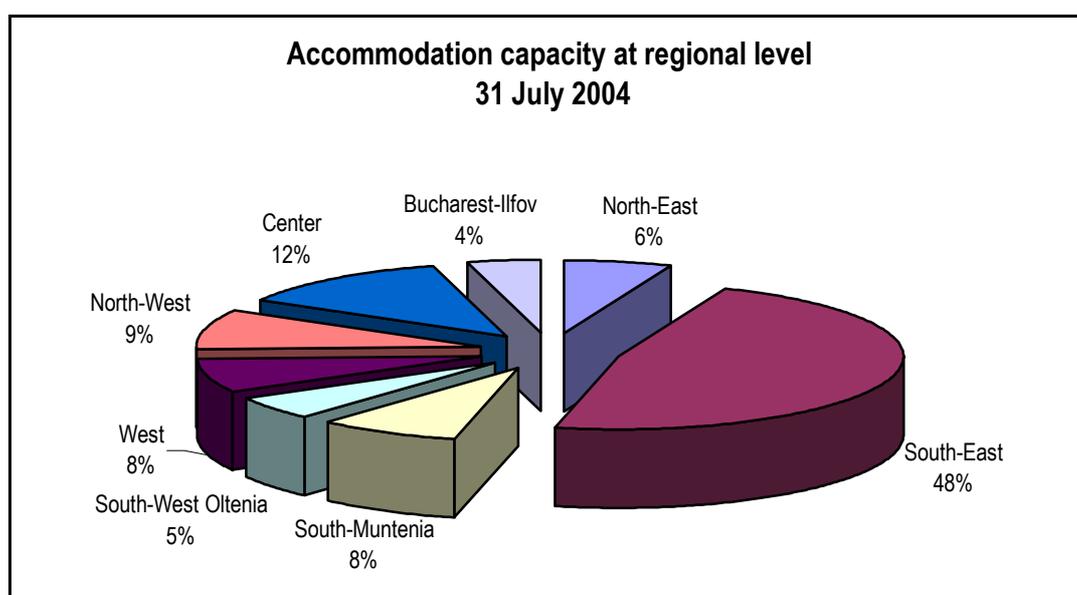
## 9.6. Tourism infrastructure

All the eight regions have a valuable tourism development potential, but the current (2003) contribution of tourism to the national economic growth is still low (2.19%<sup>79</sup> of the GDP).

The regions have an important tourism potential from the point of view of the natural, cultural and historic landscape. The differences from one region to the next, insofar as adding value to their tourism potential, are caused both by their historical development conditions, as well as by the country's general infrastructure, which was sometimes an obstacle in developing some very attractive areas, but facilitated the development of others. One such example is the development of the Prahova Valley, in comparison with Rucăr-Bran corridor, and Buzău Superior Valley.

Statistical data show an increasing interest in the Romanian tourism attractions, which is also proven by the high number of arrivals and accommodation units established after 2000. Thus, in 2004 the number of tourists reached 5,638 million (24.1% foreign tourists). The number of nights spent grew during this period by 5.11%, reaching 18.5 million. A significant increase in the number of nights spent by the foreign tourists – 3.3 million (2004) was registered, that is a 55.6% increase in comparison with 2000.

The tourism infrastructure underwent major changes after 1900. Thus in 2004 the existing accommodation capacity was 21.8% lower than in 1991. Although the quantity-wise the capacity is low, it improved from the quality point of view, as shown also in the conclusion of the analyses<sup>80</sup>. For the year 2004, approximately 42.7% of Romania's tourism accommodation capacity can be found on the shores of the Black Sea (which is in fact only used 2-3 months/ year), 16.3% in Bucharest, and the county capitals (except for Tulcea), 15.7% in the spa and health resorts, 0.8% in the Danube Delta, and 12.9% in other tourist destinations.



Source: NSI - „Current Accommodation Capacity 31 July 2004”

<sup>79</sup> The National Prognosis Commission

<sup>80</sup> The study was drafted under the Phare Program RO 2002/000-586.05.01.04.02.02, under the project “Developing schemas for the Regional Operational Program”.

The availability of tourist accommodation does not automatically attract tourists, consumer preferences, quality and service, together with price and infrastructure facilities all play a part. Currently, these vary widely and affect differently distribution of tourism. The regions that have the capacity for a sensitively balanced tourism development will continue to develop also over the next few years the Black Sea coast and the Danube Delta, as well as in the other Carpathian and Sub-Carpathian areas offer real potential.

The development of tourism in the regions offers real regional differences, both in attracting tourists, as well as in using the accommodation capacities and the need is to build new markets after the massive decline of the tourism activities experienced in the 1990s, which led to a drastic national fall in the number of tourists and accommodation capacity.

#### The evolutions of the main tourism indicators for the period 1993 - 2004

Region	Accommodation capacity 2004 (beds)	Accommodation capacity I/2004 vs. 1993 (%)	Nights spent 2004 (thousand)	Nights spent I/2004 vs. 1993 (%)	Arrivals 2004 (thousand)	Arrivals I/2004 vs. 1993 (%)
North-East	17,183	-18.6	1,172.2	-46.13	479.5	-48.1
South-East	130,854	-6.05	5,107.6	-33.2	1,031.0	-26.3
South-Muntenia	22,494	-4.3	1,387.4	-46.9	437.1	-51.06
South-West Oltenia	13,936	-22.77	1,282.2	-38.0	274.2	-52.39
West	21,066	-9.72	1,529.2	-27.2	412.9	-41.5
North-West	24,576	+5.21	1,754.6	-35.35	541.9	-48.57
Center	34,365	-2.49	2,077.8	-40.9	756.7	-35.75
Bucharest-Ilfov	11,467	+25.55	1,005.3	-47.6	539.5	-34.6
<b>Romania</b>	<b>275,941</b>	<b>-5.83</b>	<b>15,316.3</b>	<b>-38.1</b>	<b>4,473.2</b>	<b>-40.8</b>

Source: National Statistics Institute

#### 9.7. Disparities in the Regions' urban development

In 2003, 53.4% of Romania's population was urban population, which places Romania among the lowest urbanized European countries. When linked to the region's general level of development, the Romanian urbanization rates vary from one region to the other. The regions - North-East, South and South-West have a relatively low general development rate, the urban population is under 50% (the lowest percentage is registered in South – 40.7% and in North-East – 40.8%), while in the other five regions the percentage is above 50%. The highest urban population percentage is registered in the region Bucharest-Ilfov– 88.8% (because of the capital city), and in West – 61.7%.

As a result of the economic, social and historic developments, the urban population in the Western and Central regions reached a relatively high percentage in comparison with the regions North-East, South and South-West, which are predominantly rural. The South-Eastern region where the population's density is low has a high number of inhabitants in the few cities such as Constanța, Galați or Brăila.

### Regional population, in average, in 2003

Development region	Total population (no. of persons)	Urban (no. of persons)	% urban population out of the total population	Rural (no. of persons)	% rural population out of the total population
North-East	3,743,242	1,526,407	40.77	2,216,835	59.23
South-East	2,867,936	1,584,806	55.25	1,283,130	44.75
South	3,374,916	1,371,613	40.64	2,003,303	59.36
South-West	2,341,074	1,047,051	44.72	1,294,023	55.28
West	1,954,713	1,206,429	61.72	748,284	38.28
North-West	2,755,931	1,409,501	51.14	1,346,430	48.86
Center	2,546,639	1,498,796	58.85	1,047,843	41.15
Bucharest-Ilfov	2,210,342	1,964,132	88.86	246,210	11.14

Source: Territorial Statistics, 2004, NSI

Romania's urban network included, in the 2003, 276 cities<sup>81</sup> with a total number of 11,600,157 inhabitants.

57% of Romania's urban population lives in 25 cities with populations of over 100,000. Bucharest alone has 16.6% of the total urban population. This percentage is proof for the capital's influence in comparison with the second ranked city Iasi is significant (1,959,615 inhabitants in Bucharest in comparison with only 313,444 inhabitants in Iasi).

The cities with populations of between 20,000 and 100,000 inhabitants rank in the middle of the urban hierarchy and include 80 cities whose total population is of 28.5% of the urban population. The small cities (under 20,000 inhabitants), although numerous (164), account for only 14.6% of the total urban population. These cities towns have in the main less than 10,000 inhabitants. These cities have been granted the title of cities in the last twenty years, but many have insufficient or no infrastructure or public utilities in order to develop.

### City distribution in function of size and development region

Development regions		NE	SE	S	SV	V	NV	C	BI	TOTAL
Year	Category									
1994	< 20,000	13	20	26	20	23	22	27	1	152
	20,000-99,999	14	8	15	9	10	10	18	0	84
	100,000<	5	5	2	3	2	4	3	1	25
	TOTAL									
1999	< 20,000	13	20	26	19	24	22	29	1	154
	20,000-99,999	14	9	15	10	10	9	18	0	85
	100,000<	5	4	2	3	2	4	3	1	24
	TOTAL									
2002	< 20,000	13	22	27	22	25	22	29	1	161
	20,000-99,999	14	6	14	8	10	9	18	1	80
	100,000<	5	5	2	3	2	4	3	1	25
	TOTAL									
2003	< 20,000	13	22	27	23	25	22	31	1	164
	20,000-99,999	14	6	14	8	10	9	18	1	80
	100,000<	5	5	2	3	2	4	3	1	25
	TOTAL									

Source: Romania's Annual Statistics, 1996, 2001, 2003, 2004

<sup>81</sup> The number of cities on 31 of December 2003

<sup>82</sup> The number of cities on 1st of July 2003

The cities' distribution per development region shows a higher concentration in the Central region (55 cities), where there is big part of the Transylvanian historical province, a province that has an old but well-structured urban network, and in the Southern region (43 cities), the region with the biggest number of counties (7).

#### Distribution of cities and municipalities, per development region in 2005

Regions	Number of cities and municipalities	Municipalities
Romania	276	103
North-East	34	17
South-East	33	11
South	43	16
South-West	35	11
West	38	12
North-West	35	15
Center	55	20
Bucharest-Ilfov	3	1

Source: Territorial Statistics 2005, NSI

Nevertheless, the territorial distribution of the big cities is relatively well balanced within the country. The most important regional urban centres, insofar as demographics, are as follows: Iași – 314,444 inhabitants (North-East), Constanța – 309,965 inhabitants, Galați – 300,211 inhabitants, Brăila – 221,369 inhabitants (South-East), Ploiești – 236,724 inhabitants (South), Craiova – 300,843 inhabitants (South-West), Timișoara – 308,019 inhabitants (West), Cluj-Napoca 294,906 inhabitants, Oradea – 208,805 inhabitants (North-West), Brașov – 286,371 inhabitants (Center) and Bucharest – 1,929,615 inhabitants (Bucharest-Ilfov).

The majority of the cities counting over 100,000 inhabitants, that could play the role of essential role in the national network of localities but they have registered significant falls in the number of their inhabitants. This demographic decline had an impact on diminishing the role and the functions that these cities should have played at the level of the region in economic regeneration and growth potential. The most important fall in the number of inhabitants was registered in Bacău (annual average population growth rate for the period 1990-2002 was of -0.6%) and Iași (-1.1%) - in the North-East region, Brașov (-2.0%) and Sibiu (-1.6%) in the Central region, Brăila (-0.9%) and Constanța (-1.1%) in South-East region, Timișoara (-1.1%) and Arad (-1.4%) in West region, Satu-Mare (-1.3%) in North-West region.

Although Romania has a dense urban network, many of these urban centres have growth potential and could contribute to balanced regional development. There are few economic links between the urban centres and their surrounding areas due to the way in which they developments were separately conceived. Moreover, in all the country's regions, there are small and medium-size mono-industrial cities which have found it difficult to make the change and grow economically. The urban transportation system does not always favour the process of strengthening the relationships and the contacts between counties. As a result, there is no regional labour market, which has aided the development of mono-industrial city's labour markets and assist commuting. At the higher level there has been little migration to the urban centres located within the same region.

### *Demo-economic urban developments*

After 1990, the economic restructuring with its impact on lower living standards, the migrations of the economically active people, abortions being made illegal, and the retrocession of the agricultural land brought about a demographic change in Romanian cities. The results being lower birth rates, the high mortality levels and the movement of people from urban to rural areas. The population within the urban areas at country level registered after 1990 decreased, falling from 12,608,844 inhabitants in 1990 (54.3%) to 11,600,157 in 2003 (53.4%).

The size of the cities, over the period 1992-2002 shows a slight increase in the number of the inhabitants of the small cities, and a fall in the number of the inhabitants across all cities, the fall is more obvious in the case of the medium-size cities. This fall is due to the decrease of the urban birth rate, from 12.9% in 1990, to 8.7% in 2003, and to the increase in the urban mortality rate from 8.2% in 1990, to 9.7% in 2003, phenomena which lead to a fall in the natural growth from 4.7‰ (1990), to -1.0‰ (2003). Another cause in the fall of the total number of urban population is outward migration. In 1992 the dominant trends were on the rural-urban direction (39.2%), in 2003 the situation changed radically, the dominant trends were the urban-rural ones (30.2%).

#### **The structure of the migratory trends, per area**

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Rural-Urban</b>	<b>39.2</b>	<b>35.0</b>	<b>30.4</b>	<b>25.1</b>	<b>24.6</b>	<b>22.6</b>	<b>21.9</b>	<b>21.0</b>	<b>19.5</b>	<b>24.5</b>	<b>22.4</b>	<b>23.1</b>
Urban-Urban	24.3	25.3	25.6	26.1	27.4	25.0	26.0	26.5	23.7	27.5	25.8	27.3
Rural-Rural	22.7	25.0	25.5	27.9	24.5	25.6	23.5	21.7	23.0	20.0	21.6	19.3
<b>Urban-Rural</b>	<b>13.7</b>	<b>14.6</b>	<b>18.4</b>	<b>20.8</b>	<b>23.4</b>	<b>26.8</b>	<b>28.5</b>	<b>30.7</b>	<b>33.8</b>	<b>27.9</b>	<b>30.1</b>	<b>30.2</b>

Source: Romania's Annual Statistics, 2004, INS

The restructuring of the companies located within the cities but, at the same time, the growing unemployment rate, the increase in the prices for housing and public utilities, the retrocession of the agricultural land were just some of the reasons which lead to a constant increase of the number of individuals who left the cities.

At the same time, the fall in the number of jobs in the urban areas, and the low wages lead to a massive migration of the population abroad. At the beginning of the '90s, the Western part of the country and Bucharest were the areas where migration happened but this spread more widely and also extended in to the rural areas. The consequence of this was that in some regions the businesses and investors had problems in recruiting highly qualified labour (notably. Timișoara, Arad, Oradea, Bucharest.).

The Romanian *labour market* was faced during the last 15 years with a series of crucial problems, mainly relating to the economic restructuring. The transit from a centralized economy to a market economy was a difficult process which lead to a drastic fall in the number of employed, and especially in the number of employees, and to the growth of the unemployment rate.

The industrial restructuring had an impact first of all on the mono-industrial small and medium-size cities. The large cities with wider industrial base were also affected by the restructuring, but the affect on life in the urban centres was slower. Company closures and privatization led to a fall in the number of jobs and redundancies – this had negative impacts on the tax revenues and led to a decline in living standards in the urban environment.

The big cities have a diversified economic base and could assimilate the effects more easily. Still, the small and medium-size cities, which are inter-dependent on one or two industrial companies, were

seriously affected by company closures or reduced activity, which had as a consequence a fall in the employment rate and, implicitly, an increase of the unemployment rate.

The employment rate in urban centres continuously fell from 1997 (54.3%), to 2003 when the rate was 47.5%. At the same time, the unemployment rate grew from 8.5% in 1997, to 11.2% in 2002. The last years' economic development reflected in the fall of the unemployment rate to 9.5% in 2003.

The 2003 regional analyses of the labour market in the urban environment showed general disparities in the different development opportunities. The employment rate in the urban environment of the eight development regions shows superior values for the Central region (48.6%), South (48.6%), North-West (48.3%) and Bucharest-Ilfov (48.0%), the lowest employment rate was registered in the North-Eastern region (45.4%).

#### The employment rate in the urban environment, per regions

Regions/ Years	1997	2000	2001	2002	2003
Romania	54.3	49.8	49.2	47.3	47.5
North-East	52.2	49.6	47.8	44.8	45.4
South-East	51.5	46.6	46.1	45.3	46.1
South	56.0	51.6	51.7	48.4	48.6
South-West	58.8	50.4	51.8	47.2	47.2
West	53.8	49.2	48.9	48.0	47.4
North-West	59.4	50.7	50.3	48.1	48.3
Center	53.5	50.2	50.4	48.0	48.6
Bucharest-Ilfov	51.9	50.7	47.4	48.5	48.0

Source: Territorial Statistics, 2005, The Analyses of the Labour Force within the households (AMIGO), INS

The *unemployment rate* in the urban environment, experienced low rates in the Western part of the country, in the regions West (6.8%), North-West (8.2%), as well as in the Bucharest-Ilfov region (8.5%). The highest unemployment rate was registered in the cities located in the South-Western region (11.1%). The lowest unemployment rates in the Western regions of the country are also partially determined by the high number of inhabitants who lived in the cities located in these regions and who left to work abroad. During the last few years, this phenomenon characterized more and more the cities located in the North-Eastern region, however the unemployment rate is still very high. The migration of the workforce has an influence on the unemployment rate, which is those who are working abroad would have increased the number of unemployed registered in their original regions, which is in the regions North-East, South-East, South and South-West.

#### The ILO unemployment rate in the urban environment, per regions

Regions	1997	2000	2001	2002	2003
Romania	8.5	11.2	10.4	11.2	9.5
North-East	15.7	13.3	12.4	12.7	10.7
South-East	9.5	14.2	12.8	13.4	10.8
South	8.4	12.1	9.6	13.5	10.9
South-West	8.1	12.8	13.0	12.5	11.1
West	7.7	9.9	8.0	8.5	6.8
North-West	6.2	10.8	10.4	10.5	8.2
Center	6.9	10.3	8.8	10.9	9.1
Bucharest-Ilfov	5.5	7.2	8.8	8.5	8.5

Source: Territorial Statistics, 2005, Analyses of the Labour Market in Households (AMIGO), NSI

The following is the 2003 structure of the employed labour force by sectors of activity within the national economy: 4.8% agriculture, 42.5% in industry and construction, and 52.7% in services. A high percentage of the labour force working in agriculture and living in the settlements which were declared cities mainly during the last few decades lead to the high percentage of urban population working in

agriculture. After 1990, following the industrial restructuring of these new cities, big part of the population that was made redundant went back to the agricultural works.

For the 1999-2003 the analyses shows a fall in the number of persons employed in agriculture (6.6% in 1999, in comparison with 4.8% in 2003), while there was an increase in the level of employment in the services' sector (52.7% in 2003, in comparison to 49.7% in 1999), which is a phenomenon characteristic to developed economies. Nevertheless, the current level of the employment in the services sector is still insufficient in comparison with the European cities. The secondary sector (industry and construction) registered a high level especially based on the construction which were showed significant fluctuations..

### The structure of the employment per activity sectors of the national economy, per area

	1999	2000	2001	2002	2003
<b>Total</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
Agriculture	41,8	42,8	42,3	36,4	35,7
Industry and Construction	27,6	26,2	26,2	29,5	29,8
Services	30,6	31,0	31,5	34,1	34,5
<b>Urban</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
Agriculture	6,6	6,8	6,4	4,4	4,8
Industry and Construction	43,7	41,6	41,9	43,0	42,5
Services	49,7	51,6	51,7	52,6	52,7
<b>Rural</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>
Agriculture	73,3	74,5	74,1	68,3	67,3
Industry and Construction	13,1	12,6	12,3	16,0	16,9
Services	13,6	12,9	13,6	15,7	15,8

Source: Territorial Statistics, 2005, NSI

### Public urban and transport infrastructure

The basic infrastructure represents an important pre-condition for the sustainable development of the cities and it also had an impact on their rate of activity. Thus, out of the total 276 cities as registered in Romania's urban network in 2003, 182 urban localities (66%) had a natural gas distribution system, and only 158 cities (57%) had thermal energy.

### Public utilities within the cities in 2003

Regions	Number of cities and municipalities	Cities and municipalities with thermal energy	Cities and municipalities with natural gas	Cities and municipalities with running water utilities
Romania	276	158	182	276
North-East	34	24	22	34
South-East	33	21	15	33
South	43	24	30	43
South-West	35	18	17	35
West	38	24	28	38
North-West	35	14	20	35
Central	55	30	47	55
Bucharest-Ilfov	3	3	3	3

Source: Romania's Annual Statistics, 2004, INS

The analyses of the basic infrastructure within the Romanian cities is better in the bigger cities (over 100,000 inhabitants), in comparison with the smaller cities. For example 93% households located in the large cities (population over 200,000 inhabitants), are connected to the sewerage system where as only 54% of the households in smaller cities (populations lower than 30,000 inhabitants) were connected. The percentages vary at region level from 73% in South region, to 94% in Bucharest-Ilfov.

As for the percentage of households connected to the thermal energy system, one can notice the same differences: 18% in the cities with less than 30,000 inhabitants, 53% in those with 30,000 to 100,000 inhabitants, respectively 77% in the cities with over 200,000 inhabitants. At regional level, the least equipped are the cities located in the regions North-Western (40% of the households are connected to the thermal energy system), and Centre (44%), while the best equipped are those in the Bucharest-Ilfov region (79%).

### Public utilities within households, in the urban areas in 2002

-%-

Types of cities	Households with access to running water	Households with access to the swage system	Households with access to the heating system	Households with access to the natural gas distribution system
Over 200,000 inhabitants	95	93	77	81
100-200,000 inhabitants	94	91	66	93
30-100,000 inhabitants	88	82	53	71
sub 30,000 inhabitants	69	54	18	56
Total urban	94	91	71	75

Source: Analyses of living conditions: lack of housing and precarious living conditions, ICCV, 2004

A similar situation is registered in the case of the houses connected to the natural gas distribution system for which the percentage varies from 56% for the cities with a total number of the population of less than 30,000 inhabitants, to 93% in those where the number of the populations is between 100,000 and 200,000 inhabitants. At regional level one can notice the Central region where 96% of the households have access to the natural gas distribution system.

### Public utilities within the households located in the urban areas, per development region in 2002

-%-

Development region	Households with access to the swage system	Households with access to heating	Households with access to the natural gas distribution system
North-East	82	64	82
South-East	82	63	52
South	73	51	76
South-West	75	58	63
West	80	50	69
North-West	82	40	66
Center	82	44	96
Bucharest-Ilfov	94	79	89

Source: Analyses of living conditions: lack of housing and precarious living conditions, ICCV, 2004

This very high percentage is caused by the numerous natural gas distribution units located in the region and which provides natural gas also to the rural localities. Bucharest-Ilfov region (89%) and North-East (82%) towards which come the main gas pipelines from Transylvania (the Central region). The lowest figures are registered in the regions South-East (52%) and South-West (63%), which are located at the outskirts of the natural gas resources located in the middle of Romania.

An even higher percentage was registered in the case of the urban households linked to the (cold) water distribution system, 94% out of them have access to running water.

Although the Romanian cities and municipalities have access to utilities, the vast majority are not fully operational and are inadequately maintained. This caused by drastic cuts in the public investments made by the local authorities and a failure to modernize the utilities. A large number of small and medium-size cities in Romania are faced with difficulties in ensuring urban public utilities' services. It has also proved difficult to attract investors and stimulate small entrepreneurs.

The road systems are highly important within the structure of a city and ensures access to goods and services, to allow the movement of labour and goods and contribute to the local economic development. However traffic has a significant impact on the quality of the urban living standards, and has negative impact on the environment and the population's health. The high level of congestions which characterizes mainly the big cities has an impact also on the economic growth. Therefore, a well-structured road network and inter-modal public transport are essential features of a modernization programmes.

The urban roads' modernization rate varies from one region to the next, fluctuating around the national average of 59.7% - modernized roads. The lowest percentage of urban modernized roads is registered in the Bucharest-Ilfov region, with just 47.3%. The situation may be explained because of the fact that there is a high rate of no modernized roads located in the majority of neighbourhoods located on Bucharest's outskirts, while in the other two cities of the regions, only the main roads were modernized.

#### The length of the urban roads in 2003

Regions	Total (km)	Modernized	% Modernized
Romania	23,441	14,009	59.7
North-East	3,199	1,786	55.8
South-East	2,854	1,969	69.0
South	3,347	1,951	58.3
South-West	2,340	1,496	63.9
West	2,954	1,903	64.4
North-West	3,108	1,816	58.4
Center	3,686	2,163	58.7
Bucharest-Ilfov	1,953	925	47.3

Source: Romania's Annual Statistics, 2004, NSI

The South-East Region has a high rate of modernized urban roads (approximately 70%), due to the fact that this region has more large cities (with a higher number of modernized roads). In the other regions, the rate is between 55.8% (North-East Region) and 64.4% (West Region), these figures reflect the poor state of the urban transport infrastructure, with its negative impacts on the level of attractiveness for investors, and the quality of the urban living standards.

*The urban public transport* is extremely important in the life of a city as it ensures the links between the different operational areas such as residential, administrative and industrial areas. Recreational and cultural activities also impact on these issues. The urban transport assists social equality because it can facilitate the access of the population living in the disadvantaged areas of the city to a wider range of services and opportunities and impacts on the quality of the environment.

The analysis of the national urban public transport shows a fall in the number of vehicles for all types of means of transportation, especially tramcars which fell from 2,374 in 1990 to 1,798 in 2003. As for the buses and trolleybuses, increased during the period 1990-1995 but fell there after. Therefore between 1990 and 2003 public transport slightly increase from 63.3% in 1990, to 67.2% in 2003 but tram routes fell by 4.7%, while the trolleys kept their 10% market share.

The fall in the number of means of public transport was brought about by the fall in the number of the urban population due to industrial restructuring and redundancies. The creation of private public transport companies (microbuses) has also led to reduced capacity in urban public transport.

There has been an increase in the number of people using the trams and a decline in the number of people who use buses and the trolleybuses. It must be recognised that both trams and trolleybuses offer more environmentally friendly forms of urban transport.

The structure of the urban public means of transportation shows complex developments at regional level. Thus, the 8 Romanian development regions can be split in two categories, in function of the structure of the urban rolling stock over the period 1990-2003.

In the first category fall the South-East, West, North-West, and Centre Regions. These areas are characterized, on one hand, by a raise in the rate of buses out of the total number of means of transportation, with figures in between 5.5% (Centre Region), and 13% (South-East region). On the other hand, the tram rates fell by 6 to 9 % (North-West and West) and the trolleys by 7 to 9% (South-East and Centre Region).

The second category (North-East, South and South-West) is characterized by a fall in the rates of the number of buses (9.6% in North-East), and an increase of the tram rates (5.8% in South), and trolleys (5.3% in North-East).

One can thus notice that in the regions that fall under the first category, where the predominant relief are the hills and the mountains, the big majority of cities have a topography, which lead to an increase in the infrastructure construction and maintenance costs needed for the good operations of the trams and trolleys. As a consequence, the buses are preferred for the urban public transportation since they can use the already existing road infrastructure, without needing supplementary infrastructure. Under the second category fall regions within the plains, and the topography of the cities is more favourable to special infrastructures needed by tram and trolley lines, hence the increase in the rate of these types of means of transportation for the urban public transport.

Bucharest-Ilfov region has a different situation as this is the only region with a metro as a means of transportation (62.2 km of double lines in 2004). In the development of the transportation it is noticeable the 10.4% increase in the number of buses, the 3.3% increase in the number of trolleys, while the rates of the trams fell by 13.7%. These developments may be caused by the problems facing the tram lines infrastructure and their presence in the already busy capital traffic, as well as the high maintenance costs for the specific infrastructure. Moreover, the focus is on increasing the length of the metro network as a way of solving Bucharest's urban public transport problems.

### **Key issues**

- Increase in the development disparities between the Bucharest-Ifov Region, and the other regions
- Unequal development between the Eastern and the Western part of the country, that is between the regions North-East, South-East, South, South-West and West, North-West, Centre
- Essential underdevelopment focusing on the North-East Region, on the border with Moldova, and the South Region, along the Danube
- Important existing intra-regional disparities which reflect the patchy structure of the economic development: within the regions there is a mixture of underdevelopment and relatively developed regions
- Massive decline of a the small and medium-size cities, especially of the mono-industrial cities, brought about by the industrial restructuring
- Low attractiveness for the majority regions
- Social and economic decline of a lot of big urban areas and fall in their role to develop the surrounding areas

## 10. EUROPEAN TERRITORIAL CO-OPERATION

Romania is currently faced with a weak social and economic development and integration of its border regions, and with a relatively low involvement of Romania's regions in the different cooperation programs between different European regions.

The following elements provide a general overview on the current situation of Romania's border regions:

- Rivers that cross the border area, e.g. the Danube, Tisa, Mures, Cris, Prut (international trade, cross-border river pollution, floods, water management) and the Black Sea;
- Low level of development of the NUTS III border areas in comparison with the national average (except for the Romanian-Hungarian border);
- Rural typology predominantly agricultural, and the level of other economic activities is much lower, strong local traditions;
- Varied landscape, natural environment generally well-preserved, forests and natural resources with an important potential for tourism development;
- Migration and aged population in the border areas, especially in the south and east; multi ethnic population in the western part;
- Limited access to, and low living standards due to the underdeveloped infrastructure (roads, water distribution system, swage system, IT&C) and the social services;
- Business and innovation centres focused in the urban centres of the border areas (Iași, Oradea, Arad, Timișoara, Craiova, Galați)
- Links and partnerships signed between institutions, counties, and regions, including the Euro-regions.

Romania was declared eligible country under the cross-border cooperation programs with the coming to force of the EC Regulations No. 2760/98. These regulations defined the eligible NUTS III areas, that is: 7 counties on the Romania - Bulgarian border, and 4 counties on Romania - Hungarian border.

The projects funded under Phare – Cross-border cooperation are homogeneous annual programs aimed at supporting Romania in its process of accession to the European Union. Common programming documents including the eligible fields of cooperation, the economic analysis and the development strategies, priorities and measures to be funded, etc. have been drafted for the implementation of these programs. The priorities stipulated under the program cover the following fields of activity: transport infrastructure, environmental protection, and economic development.

### **The Romanian – Bulgarian Relationship**

The longest section of the border between the two countries, whose total length is of 631.3 km, is made up by the Danube river (470.0 km), 139.1 km is land, and 22.2 km of the border is on the Black Sea. From a geographical point of view, the river border raises the major problem of improving accessibility (currently there is only the bridge in the area Giurgiu - Ruse). The similarities in so far as post-communist developments, as well as the European political context – the two countries are simultaneously running up for the accession to the European Union – lead to similar opportunities and constraints.

At territorial level, the bilateral relationship between Romanian and Bulgaria has an advanced perspective for further development by means of developing the project aimed at building a new bridge in the area Calafat–Vidin. The spatial implications of the bridge's location will offer opportunities to

develop the area around (the area's urbanization, development of new economic activities, tourism, improvement of the quality of the natural environment, protection of the built heritage).

The counties involved on the Romanian-Bulgarian border are:

- On the Romanian side: Mehedinți, Dolj, Olt, Teleorman, Giurgiu, Călărași, Constanța;
- On the Bulgarian side: Vidin, Vratza, Montana, Veliko Târnovo, Pleven, Ruse, Silistra, Dobrich.

On each side of the border the counties mentioned fall under three NUTS II development regions. The total surface of the border area is of 69,250 square km, and the population is of 5.33 million inhabitants. During the period 1999-2000, the Romanian – Bulgarian cooperation received 29 million euros-worth of Phare funds.

### **The Romanian – Hungarian Relationship**

The border between the two countries is 448 km long, out of which 415.8 is made up of land, and 32.2 km is made up of rivers (Mureș, Criș, Someș). The fact that a big part of the border is made up of land encourages a special cross-border relationship, taking into account the possibility of having several border crossings.

The counties involved on the Romanian-Hungarian border are:

- On the Romanian side: Satu Mare, Bihor, Arad, Timiș;
- On the Hungarian side: Szabolcs-Szatmár-Bereg, Hajdú-Bihar, Békés, Csongrád.

On each side of the border, the two northern counties belong to a NUTS II area (in Romania's case, the North-West and the Western areas), while the two southern ones belong to another area. Thus there are 4 development regions involved in this process. The total surface of the border area is of 50,455 square km, and the population is of 4.12 million inhabitants. During the period 1996-2002, the Romanian – Hungarian cross-border cooperation received 23 million euros-worth of funds under PHARE CBC.

This cooperation program is currently integrated in the Hungarian-Serbian program in view of creating a trilateral program (although the Romanian – Serbian cooperation is implemented separately, under the Pre-Accession Instrument). This program registered considerable progress, with over 400 applications submitted for the first call.

The 2004-2006 Neighborhood Programs have been launched along the external borders of the future enlarged European Union based on the future ENPI (The European Neighborhood and Partnership Instrument) aimed at supporting the cross-border, transnational and interregional cooperation whose implementation will start, based on the Commission's press release from July 2003 entitled "Opening the Road toward the New Instrument on Neighborhood", in 2007. The European Neighborhood Policy will strengthen the current types of regional and sub-regional cooperation and will provide the framework for their future development.

### **The Relationship Romania – Serbia & Montenegro**

The border between the two countries is 546.4 km long, and it is partially a land border (256.8 km), and remainder is the course of the river Danube (289.6 km). The bilateral cross-border relationships are positive due to a relatively highly level of economic development of the regions located in the vicinity of the border, which is a relevant fact, and to an important degree of urbanization of the regions in both countries. The weak points insofar as the relationship are marked by the important impacts that the

bombing during the war in the Republic of Yugoslavia had on the technical infrastructure on the territory of Serbia and Montenegro, as well as by a lack of inter-institutional coordination.

### **The Romanian - Moldavian Relationship**

The border between Romania and Moldova is 681.3 km long, and follows the river Prut, being included in between two contact points with Ukraine.

The political and, more over, the complex economic determining factors could not overcome the last ten years. These are also rooted in the traditional historical, cultural and shared language. The regions located in the vicinity of the border are both regions with a significantly low economic development, and a relatively high rate of unemployment. Environmental protection requires special consideration and more measures be taken both for the protection of the eco-systems and the landscape, as well as for the prevention of the natural risks (floods, land-slides).

From a transport infrastructure point of view, the need is to improve its quality, especially that of the railway infrastructure which requires solving the problem of the differences in gauge of the track.

### **The Romanian – Ukrainian Relationship**

The border with Ukraine is 649.4 km long, out of which 273.8 km is on land, 343.9 km is on river (Tisa, Prut, the Danube), and 31.7 km is on sea (the Black Sea).

The cross-border relationships between the two countries are marked by important landmarks due to the geographic position. Both countries belong to the Tisa valley and the “Carpathian” mega-region, they have a direct relationship with the Danube Delta natural reservation, and they have a beach on the shores of the Black Sea.

As future member state, Romania will be get involved in the 2007-2013 period in the following territorial cooperation programs:

a) cross-border cooperation programs:

- on the internal borders of the European Union: with Hungary and Bulgaria;
- on the external borders of the European Union: under the Pre-Accession Instrument with Serbia & Montenegro, under the European Neighborhood and Partnership Instrument with Ukraine and Moldova.

b) transnational cooperation programs – the Danubian – Balkans’ Space (Southern CADSES).

c) interregional cooperation – thematic networks and exchange of know-how and experience.

## 11. ADMINISTRATIVE CAPACITY

Romania is preparing for accession to the EU and experiencing the process of transition from a centralized planning system to a market economy. Convergence with the European Union' standards and practices adds additional strains on the public administration which has undergone a radical transformation process during the past 15 years moving from a typical totalitarian regime towards a democratic regime. New institutions and regulations have been promoted, with the help of the pre-accession funds of the EU and other donors aiming at restructuring the administration and making it more efficient. State institutions have registered significant progress in modernizing the legislative and administrative foundations on which the public sector is functioning, and the latter is ready to stand up for its responsibilities as an EU member state.

The Romanian Government drafted in 2004 the updated Strategy aimed at accelerating the public administration's reform, a document that was also approved by the European Commission. Nevertheless, this progress is not fast enough as the European Commission<sup>83</sup> asked for more focus on strengthening the administrative capacity in to lead up to accession. The need for investments in the administrative capacity is stated in the Community Strategic Guidelines for Cohesion, under which the administrative capacity and good governance are one of the main priorities of the 2007-2013 period<sup>84</sup>.

### 11.1. Public administration

#### 11.1.1. The central public administration

Article 102 of the Romanian Constitution regulates the Government's role and structure. This ensures achieving the country's internal and external policy and provides for the general management of the public administration. The Government collaborates with the interested social bodies in fulfilling its duties.

During the period 1990-2005 the Government's structure underwent a series of changes regarding the number, role and duties of ministries, governmental agencies and other specialized bodies within the central public administration. The Romanian Government currently has 15 ministries. The Government's working apparatus is made up of the Prime Minister's Chancellery, the Government's General Secretariat, departments and other such institutional structures that have specific duties as set forth by the Government's decision. There are 23 institutions working under the Government's subordination.

The Government passed Decision no. 750/2005 with regard to creating the permanent inter-ministry councils in view of drafting, integrating, correlating, and monitoring policies. The document regulates the creation of 11 permanent inter-ministry councils, consultative bodies with no legal status. *The Inter-ministry Council for Administration and Public Service, Decentralization, Local Communities* was created in the field of public administration.

The management of the public institutions was mainly political, ignoring the importance of strategic planning and management as management tools. Some local initiatives have been implemented towards developing some plans and strategies, but it is difficult to estimate their results. The introduction of the public manager in the local administration could be a step forward in strengthening the management capacity. Nevertheless, the organizational culture within the public administration is

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<sup>83</sup> The Report of the European Commission on the progress registered by Romania in view of the accession, October 2005

<sup>84</sup> Strengthening institutional capacity and efficiency of public administrations and public services in the next programming period (2007-2013) – DG Employment and Social Affairs

characterized by the focus placed on fulfilling the current duties, while a common vision or strategy lacks<sup>85</sup>.

### 11.1.2. The local public administration

Romania's Constitution and Law no. 215/2001 with regard to the local public administration regulates the structure and functioning of the local public authorities. Thus, articles 120, 121 and 122 of the Constitution stipulate that "the local public administration relies on the principles of decentralization, local autonomy, and de-concentration of public services. The elected local councils and mayors are the local authorities who implement local services in communes and cities in accordance with the provisions stipulated under the law. The county council is the public authority which coordinates the communes and city councils ensuring the provision of public services at county level."

There are 41 counties currently operating in Romania, the General Council of Bucharest Municipality and 6 district local councils, 314 local city councils, and 2,852 local commune councils. The local council and the county council are policy making authorities, and the mayors are executive authorities.

The European Commission has recently signalled in its 2005 Report on Romania's progress in view of accession significant deficiencies at the level of the local administrative capacity which, if not eliminated, could be a serious threat to a successful financial decentralization. This relates directly to the reform of the public function and the development of a real training capacity at regional level through the Regional Training Centres.

The European Commission has explicitly focused on the structures and mechanisms involved in accessing the structural funds. It expresses its concern with regard to Romania's possibility to benefit from the accession to the European Union stating that: (a) there is a lack of clarity insofar as allocating financial responsibilities and resources between administrative levels; and (b) the legislation on decentralization, the prefect's institution and the local public funds, although they are in process of being amended, do not lead, so far, toward a clear solution.

There is still a big need in Romania for developing the administrative capacity insofar as managing development programs. Chapter 21 with regard to the Regional Policy and the Coordination of Structural Instruments states that the Member States "have to have adequate, operational institutional structures in order to ensure the correct and efficient implementation both from a management point of view, as well as from the point of view of financial procedures." The multi-annual budgeting of programs as well as a certain degree of flexibility in their management, continue to be necessary, while local co-funding mechanisms need to be clarified. The monitoring and evaluation procedures are insufficient, and it is necessary to involve the local and regional stakeholders.

These conclusions are generally confirmed by other studies, including the ones done by the World Bank. Thus, there is a consensus according to which the current local situation brings about constraints insofar as the absorption capacity is concerned. Thus:

- *Mechanisms, structures, resources for planning local development and preparing incomplete or missing projects.* The partnership mechanisms which gather a series of stakeholders in order to plan in a coherent and integrated manner the activities are also an important requirement for „good governance” and involvement of the civil society in the process of economic growth and job creation.

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<sup>85</sup> The Centre for Public Administration Research, *The Organizational Culture within the Public Administration*, 2005

- *Interest, knowledge, limited/ non-equilibrated experience both of the locally elected, as well as of those appointed to develop investment policies and strategic plans, and to know the EU procedures.* This happens regardless of the fact that the number of projects implemented in the field by UNDP and USAID is significant. The EC procedures are seen by those at the local level who implement projects to be too complex.
- On top of the donors' procedures, the *current national/ internal budgetary system* provides for a state of uncertainty.
- From a structural point of view, *local governance* is complex and has several levels: communes, cities, municipalities, prefectures, county councils, and development regions. The current, yet inconclusive, debates on decentralization add up to the uncertainty with regard to unclear responsibilities and duties both at the level of the different elected authorities, as well as between the latter and the deconcentrated structures. There are also missing or non-allocated responsibilities.

### 11.1.3. Human resources

Law no. 188/ 1999 on the Statute of the civil servants and the additional legislation passed after the latter were, until April 2003, a first stage in the legislative development of the field of the public function and civil servants. The approval of Law no. 161/2003 with regard to some measures to ensure transparency of the public function, public integrity and business environment, prevention of and sanctions against corruption, which also amends and completes, amongst others, Law no. 188/1999 improved the legislative framework of the public function and that of the civil servants.

#### Comparative situation of the public servants for the period 2003 – 2005

	2003		2004		2005	
	Number	%	Number	%	Number	%
<b>NUMBER OF PERSONS</b>						
Total civil servant positions, out of which	110,426	100.00	112,847	100.00	107,058	100.00
Taken	97,142	87.97	94,576	83.81	91,546	85.51
Vacant	13,284	12.03	18,271	16.19	15,512	14.49
Within the central public administration	65,497	59.31	62,707	55.57	53,312	58.24
Within the local public administration	44,929	40.69	50,140	44.43	38,234	41.76
Men	31,507	32.43	32,453	34.31	30,489	33.30
Women	62,635	64.48	62,123	65.69	61,057	66.70
Senior servants	310	0.28	246	0.22	181	0.20
Leading positions	11,824	10.71	12,267	10.87	10,838	11.84
Executive positions	98,292	89.01	100,334	88.91	80,527	87.96

Source: National Agency for Civil Servants

#### *Recruitment*

To become a civil servant candidates have to pass an exam organized by the public authority or institution.

Although the recruitment pool is large, studies have revealed that more than half of the civil servants currently working in the public administration have come from the restructured industrial state-owned or private companies. As a consequence there are a large number of engineers within the administrative system.

### *Professional civil servants*

Statistical data with regard to professional civil servants depicts an extremely favourable image: at the end of 2004 over 75% out of the total number of civil servants hired within the central public administration, that is over 58% out of the total number of civil servants working within the de-concentrated services and almost half of the total number of civil servants working within the local administration were university graduates. An annual growth in the percentage of civil servants who are university graduates' is more important within the public institutions which lacked well-trained human resources (an almost 7% growth rate at the level of the de-concentrated services, and approximately 3.5% growth rate for the local public administration).

Nevertheless, just like any statistics, this data has to be regarded and interpreted realistically: due to a deficient recruitment process, a high percentage out of the number of civil servants have basic studies which do not meet the requirements to the positions that they hold. This is why, although the Romanian public administration has valuable human resources, the level of professionalism of the civil servants as a whole still does not reach the expected level.

### *Promotion*

The provisions of the law in force does not allow promotion of the persons already hired within the institutions of the public administration, this can be done only by passing an exam which can be taken by all those who want and who fulfil the requirements for the vacant public position. This is the reason why there is no real career progression and why "promotions" are done by means of defining the requirements for the exam so that these may favour the candidate whom the institution wants to promote.

### *Training*

Civil servants are obliged to enrol in professional development training organized by the National Administration Institute or any other organization, certified in accordance with the provisions of the law in force, for a minimum of 7 days per year.

Nevertheless, different studies have proven the fact that almost half of the total number of civil servants have not graduated from one professional development course. Approximately 23% graduated from only one professional development course, and only approximately 14% have taken part in such courses.

### *The Wages*

The average wage within the public administration for the period 2003-2005 was at the level or slightly t under the level of the average wage for economy as a whole. It is noticeable the fact that there are significant differences in the salaries between the different levels and administrative institutions.

#### **The wages of the civil servants in the period 2003-2005**

- old Lei-

	<b>2003</b>	<b>2004</b>	<b>2005</b>
Central public administration	8,507,211	9,282,789	9,625,595
Deconcentrated public services	6,231,131	6,865,750	7,289,486
Prefectures	---	8,373,329	---
County councils	---	8,571,699	8,674,777
Local public administration	6,267,978	5,726,039	6,175,274
Total	7,001,605	7,763,921	7,941,283

Source: National Agency for Civil Servants

### *Mobility*

Mobility among civil servants is relatively low, the annual staff turnover within the different categories of civil servants varies between -0.97 and +1.76%. This demonstrates a satisfactory level of stability within the Civil Service. Job changing amongst newly appointed civil servants is higher than within the general staff (+ 1.76%), which shows stability within the more long serving members of the public administration.

#### **Mobility among the civil servants for the period 2003-2004**

Synthetic indicator	2003	2004	Rate
Total number of public positions	110,426	112,847	+ 1.02%
Starting civil servants	3,566	6,286	+ 1.76%
Permanent civil servants	106,860	106,561	- 0.99%
Total number of taken civil servant positions	94,142	94,576	- 0.97%
Women civil servants	62,635	62,123	- 0.99%
Men civil servants	31,507	32,453	+1.03%
Total number of the taken civil servant positions within the central public administration	60,459	62,707	+1.03%
Total number of the taken civil servant positions within the local public administration	36,683	50,140	+ 1.36%
Senior civil servants	310	246	- 0.79%
Leading positions	11,824	12,267	+1.03%
Executive positions	98,292	100,334	+1.02%

Source: National Agency for Civil Servants

#### **11.1.4. Drafting public policies**

The first law which regulated the methodology for drafting legislative acts is Law no. 24/2000, with its additional amendments and additions.

Following the 2003 Decision of the Prime Minister no. 258/2003 the Public Policies' Unit was created under the subordination of the Government's General Secretariat. The main duties of the PPU aimed at strengthening the government's capacity to coordinate the public policies' drafting, implementation and monitoring process at central level, and strengthening the Government's administrative and management capacity. In 2005 the Inter-ministry Committee for coordination of the public policies was created, and the Government's Decision no. 775/ 2005 for approving the Guidelines with regard to the procedures for drafting, monitoring and evaluating public policies at central level, which will come to force starting with January 1, 2006, was passed.

The lack of modern public policies' management techniques within Romania civil service is a long standing problem and concern of the EC, OECD/Sigma, the World Bank and DFID. A recent Sigma report notes a series of facts with regard to the administration's monitoring functions at central level, the coherence of the process of drafting policies, the inter-ministry consultation process, the coordination and strategic capacities. The knowledge in the field is new and training is needed in order to successfully complete the reform of policy management. Development in policy drafting and management will improve convergence of several modernizing initiatives by means of working hand in hand with the multi-annual budgetary reform process, which includes the public expenditures' management, and by means of supporting the introduction of strategic planning and monitoring within the ministries, and the performance management based on management and personnel evaluation competences and techniques.

The Romanian public administration also relies on the legal thinking which places a major focus on extremely detailed procedures and on respecting them. The poor quality of the regulations, or the political changes lead to a high degree of legislative instability.

### **11.1.5. Decentralization of public services**

Priority is being given to the reform of the public administration and the decentralization of the public services and utilities. The organization of the public services and utilities focuses mainly on continuing the process of decentralizing the basic public services: education, health, social assistance, the utilities and transport, as well as on delegating responsibilities in view of providing local public services by means of a better administrative and financial separation between the public services provided to citizens.

An important step in continuing the decentralization process is therefore introducing a new chapter within the draft law on decentralization with regard to duties executed by the local public administration institutions, regardless of them being exclusive, split, or delegated.

The process of transferring responsibilities from the level of the central public administration to that of the local public administration needs a relatively long period of time and adequate human and logistical resources.

Decentralization of services was so far done without allocating the necessary resources. The transfer of responsibilities from the direct responsibility of the government to the local authorities generated real problems in using own revenues which were anyway considered to be insufficient. The consultations with the authorities were, most of the time, superficial.

The representatives of the county authorities confirmed that the decentralization is, first of all, a financial problem which links to available resources, while acknowledging issues link to the human resource developments, experience, training and the abilities of the staff members within the local authorities to understand the decentralized perspective and the entire responsibility being devolved<sup>86</sup>.

The decentralization/ de-concentration will continue to be an essential element on the agenda for Public Administration Reform (PAR). Although the current legislative framework increases local autonomy, in practice the problems relating to transparency and local revenues continue to be a challenge. A new legislative framework for decentralization as part of the public administration legislative package is currently under public debate.

### **11.1.6. IT&C within the public administration**

In the age of information society, extending the IT&C technology at the level of the public administration is indispensable for the local, regional, and national development management.

The regulations in force (Government's Decision no 1007/ 2001 with regard to IT within the public administration) focus exclusively on elements that generically link to e-administration - modernizing the administration through IT technology.

Latest developments have shown a significant growth, from one year to the next, of the absolute value of all the specific indicators targeted by the national statistics.

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<sup>86</sup> The Institute for Public Policies: The Local Budgets from Theory to Practice, Bucharest, 2001.

### Main statistical indicators with regard to IT&C within the public administration

Indicators	2001	2002	2003
IT&C Specialists (individuals)	6,988	8,096	10,662
Number of pieces of equipment	98,434	122,165	162,284
Number of PC with Internet access	36,357	84,482	86,856
Number of Internet users (individuals)	16,910	30,875	46,296
Percentage of institutions with Internet access out of the total number of institutions (except for the commune local councils) (%)	54	80	93
Percentage of investments and expenditures for IT&C products and services out of the total volume of investments and expenditures (%)	22.6	47.5	51.9
Investments and expenditures for IT&C products (billion lei)	1,275	4,768	6,056

Source: National Institute for Statistics

It is noticeable that over the last three years change has occurred within the public administration sector, which can be compared with the economic and financial sectors.

### The development of IT&C within the public administration in comparison with the economic and financial sectors

Indicators	2002/2001	2003/2002
Number of IT&C Specialists - the economic and financial sectors	105,9	119,9
- public administration	<b>115,8</b>	<b>131,7</b>
Number of pieces of equipment - the economic and financial sectors	121,9	123,8
- public administration	<b>124,1</b>	<b>132,8</b>
Number of PC with Internet access - the economic and financial sectors	147,4	148,6
- public administration	<b>232,4</b>	<b>102,8</b>
Number of Internet users (individuals) - the economic and financial sectors	145,0	110,6
- public administration	<b>125,1</b>	<b>150,0</b>
Percentage of companies with Internet access out of the total number of active companies (%) - the economic and financial sectors	127,9	115,4
- public administration	<b>148,1</b>	<b>116,2</b>
Investments and expenditures for IT&C products (billion lei) - the economic and financial sectors	-	140,6
- public administration	<b>374,0</b>	<b>127,0</b>

Source: National Institute for Statistics

Nevertheless, according to a 2002<sup>87</sup> study performed by the Central Unit for Public Administration Reform within the MAI aimed at evaluating the administrative capacity of the public institutions within the central and local administration (ministries, prefectures and county councils) the following facts have been identified insofar as the logistics of the respective institutions:

- The quality analysis proves that 35% of the ministries have a very good logistical base, 18% - good, 35% - satisfactory and 12% - unsatisfactory. As for the network, 29% of the total number of individuals has very good conditions, 12% has good conditions, 6% is satisfactory, and 12% are not working in a network.
- The operational resources within the prefectures are 60% unsatisfactory; the number of fax machines/ PCs/ phone lines is, generally, below the real need.
- The IT&C technology translates, at the level of each prefecture, mainly in PCs, but there are problems insofar as their moral use, use of modern programs, use and access to electronic communication. Network facilities are also unsatisfactory.

<sup>87</sup> CUPAR: Analysis of the Current Status of Process of Modernizing the Public Administration, Bucharest, 2002

### **11.1.7. The administration and its relationship with the citizen and the civil society**

The public opinion polls have shown the negative opinions of the citizens with regard to the public administration. Only 30% of the citizens trust the Government, and only 43% trust the city halls. The Government's activity within different fields is perceived as being weak, there are more unsatisfied than satisfied citizens in all given case scenarios. The lowest rated activity is in the field of jobs, health, and living standards. Nevertheless, there could be situations when the citizens positively rate some services provided by the public administration, especially those which are closest to them (a better opinion about the city halls only goes to prove this). 75% of the citizens perceive corruption as a generalized phenomenon within the administration. The 2005 corruption perception rate is of 3.006 (in comparison with the EU-25 of 6.6 or the EU-15 average of 7.73), which places us on the 85<sup>th</sup> position among 159 countries.

### **11.2. The judiciary system**

The judiciary system underwent significant changes between 1990 and 2005 and this reform sought to provide an independent and efficient judiciary that would ensure a favourable and stability legal system that would aid competitiveness and stable business environment.

The principles, structure and organizational structures that form the basis of the Romanian judiciary system are stipulated in the Romanian Constitution and in the legislative framework regarding the reforming the judiciary system (Law no. 303 on the statute of the magistrates, Law no. 304/ 2004 on the organization of the judiciary, and Law no. 327/ 2004 on the Superior Magistrates' Council).

The Romanian Constitution was revised in 2003 and was harmonized with European standards regarding independence of the judiciary system and the magistrates. New additional guarantees have also been introduced in order to respect the human rights throughout the legal process.

Within the process of reforming the Romanian judiciary system, in September 2004 a new legislative package was introduced. Although the provisions of the 3 laws adopted in July 2004 laid down the basis for the judiciary system reform, their implementation proved the fact that amendments are necessary in order to improve the efficiency of the judiciary system. In addition, in June 2005, the Law No. 247/ 2005 regarding the reform of the property rights and the judiciary was adopted, as well as other supplementary measures which refined laws passed in 2004.

The reforming of the judiciary system continued, in March 2005 being approved the Government Decision No. 232/ 2005 regarding the Judiciary system reform strategy (2005-2007) and the additional Action Plan, which were the basic documents for this process and emphasized the necessary objectives and measures in order to create an independent, impartial, credible and efficient legal system.

The main actions which lay at the basis of the Legal Reform Strategy are the following: guaranteed justice, independence, quality and efficiency of the judiciary, transparency, responsible judiciary system, guaranteed free access to justice, efficient justice for the under-aged, consolidation of the business environment, improved conditions within the penitentiaries, victim protection and criminal social integration, prevention of and the fight against corruption within the judiciary system.

### 11.3. Public order

Following the analysis-diagnostics implemented under the Updated Strategy<sup>88</sup> the following facts were identified:

- the functional structures have a high capacity to adapt to the changes and to the requirements of the social and economic environment, as well as to the national objectives imposed by the European accession and the statute of member state of the North-Atlantic Alliance – NATO;
- the process of drafting and promoting legislative acts in accordance with the standards of the European Union and the *acquis*;
- increase the transparency of the public relations;
- pass and implement new instruments and modern management methods;
- active relationships with similar institutions from other countries and international organizations in the field;
- organized and disciplined working environment;
- multiple training and professional development opportunities;
- insufficient number of staff within the operational structures which decreases the capacity of public order institutions;
- delay in enforcing some of the reforming measures set forth;
- delay in passing and implementing modern real-time crisis management methods and instruments;
- lack of criminal risk assessments within the local communities;
- malfunctions in providing logistical and financial means.

#### **Key issues**

- The quality of the processes of passing laws and regulations;
- Complicated administrative procedures which permanently change;
- Structural and procedural problems – such as weak coordination, information flow, cumbersome procedures, lack of transparency and, consequently, limited capacity for implementing policies;
- The coordination of policies between the different ministries and agencies is still pretty weak;
- Insufficient administrative and financial decentralization;
- Lack of planning and strategic management capacity;
- Low administrative capacity of the local public administration to implement specific duties;
- Low development of the human resources in comparison with the current and future requirements;
- The relationship with the citizens and the civil society;
- Low action capacity of the public order structures;
- Criminality risk within the local communities;
- Real-time crisis management.

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<sup>88</sup> The Updated Strategy from 14 April 2005 with regard to the 2005-2006 institutional reform of the Ministry of Administration and Interior

## 12. SPATIAL DEVELOPMENT

### 12.1. Spatial planning in Romania

Spatial planning activities in Romania are currently regulated by Law no.350/2001 on spatial and urban planning, which stipulates the following:

- **the main goal** of spatial planning is to harmonize, across the entire Romanian territory, all economic, social, ecological and cultural policies, developed at national and local level, in order to ensure the balanced development of the country's various areas, with a view to increase cohesion and the effectiveness of their economic and social relations;
- **the objectives** of spatial planning are: to reach a balanced economic and social development of all regions and areas, in keeping with their particularities; to improve people's living standard; to properly manage natural resources and environmental protection; rational land use;
- the national spatial plan has a **guiding character** and is the synthesis of all sectoral medium and long terms strategic programs, for the entire Romanian space;
- the national spatial plan is made up of **specialised sections**.

Currently, Romania's National Spatial Plan (NSP) has the following sections, as provided by the law: Section I, **means of communication**, approved under Law 71/1996 (undergoing a process of revision); Section II, **Water**, approved under Law 171/1997; Section III, **Protected areas**, approved under Law 5/2000; Section IV, **city network**, approved under Law no. 351/2001; Section V, **natural risk areas**, approved under Law no.575/2001. By the end of 2006, the sections on tourism and education will be finalised. Also, new sections, deriving from the National Strategic Concept of Spatial Development and reintegration into the European Structures will be developed.

NSP traces action lines for the drawing up of regional and national spatial plans, and also general urban plans. On the other hand, it synthesizes and harmonizes regional and local needs with the national action lines. Talking about *regional spatial plans (RSP)*, we should say that only the plans for the N-E and S-V regions have been drawn up so far. However, all *county spatial plans (CSP)* and *general urban plans (GUP)* for cities, towns and communes have been finalised. Part of them followed a strategic vision (Bucharest, Iasi, Cluj, Timisoara, Constanta, Targu Mures, Oradea, Baia Mare). Strategic vision broadens the temporal perspective of spatial development and ensures the harmonization of public objectives and investments that support them on short, medium and long term. For the areas that are confronted with special problems, special zonal, cross/border, inter-communal, peri-urban, tourist, etc. plans have been drawn up or are being drawn up.

Also, the national spatial development strategy is being developed currently. This will lead to: the creation of a methodological model of strategic approach to Romania's spatial development; the proposal to include Romania's spatial development in the framework defined by EU objectives and political options; the designing of a strategic concept as fundamental objective and five long term spatial development strategic objectives – the year 2005; the completion of the draft proposal and the drawing up of the framework-content of Romania's Guiding Spatial Plan, for the correlation of regional spatial development strategies with the chapters included in the NSP; highlighting implications and updating and drawing up new sections of the NSP.

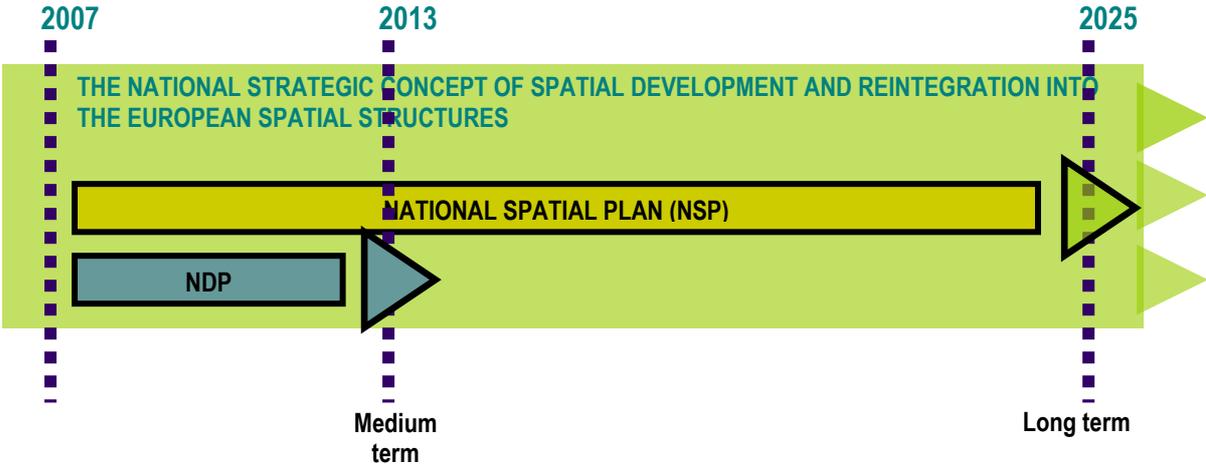
Up until now Romania's land and urban planning policy has been somehow neglected, if we look at the previous programs and the political priorities: this is not part of the community acquis that must be implemented by Romania, therefore is not monitored by the EU; also there is no coordination at national level and central and local institutions in line are not properly structured. Efforts in the field should be boosted in the run up to Romania's EU integration, considering the EU priorities of territorial cohesion

and urban development, especially for the after 2007 period. Both in the pre-accession period, and especially after accession, Romania has to adapt its institutional framework and public policies in order to fulfil these objectives. The progress made so far in terms of territorial cohesion and urban policy, correlated with the larger integration process, shows that in the next stage the concepts used in these fields need to be clarified, and all the stakeholders must be informed and involved, in order to secure the harmonization with the EU standards in the field.

In October 2005, the Romanian Government initiated and approved the *Strategic Concept of spatial development and reintegration into the European spatial structures (2007-2025)*. This concept also structures the related institutional framework. The guiding lines of the spatial development strategic concept focus on the orientation of national efforts towards creating a Romania capable of defining and taking responsibility for its future development and the role it can play in the EU and the world, by using, developing and consolidating its own potential.

This concept will integrate the following documents: the 2007-2013 National Development Plan; the System of national spatial plans, including: the National Spatial Plan; the Regional Spatial Plans; Area Spatial Plans (micro-regions) – currently in the initial stage; County Spatial Plans; Romania’s commitments made under international and multinational agreements on cooperation in the coordination of spatial plans.

The temporal connection between these elements, taking into account the territorial cohesion objective, is represented in this graph:



## 12.2. Romania’s spatial development framework

### 12.2.1. The prospects of long term evolution

The preliminary estimation of **Romania’s long term evolution, a prerequisite for the sustainable development** of the EU (Hanover 2000) is linked with the principles of the EU Spatial Development Scheme, a document passed by the EU in 1999, and the Guiding Principles for Sustainable Spatial Development of the European Continent, passed by the European Council in 2000. Spatial planning also takes into account public planning and investment efforts, which most of the time have a long term impact, even if they are planned on medium term. This is also the case with the investments that Romania will make under the 2007-2013 NDP, whose impact is taken into account both in medium and long term spatial planning. Against this background, the following elements (2007–2025) are taken into

account: population and labour resources development, scientific and technological development, sectoral development, spatial development.

*The spatial implications* of the processes that are triggered by decisions concerning Romania's development and its integration into the European structures involve: the integration of development centres and networks, complementary poles, activities aimed at stimulating economic and social development, cooperation with a view to bridging the gaps in regional development, between urban and rural areas, a systemic approach to environmental issues, internal accessibility and the connection with the European and international systems.

These endeavours are also aimed at securing spatial cohesion at regional, trans-regional and inter-regional level, and are based on medium and long term investment and public intervention programming in the spatial and local development. On the other hand, the public efforts to accomplish a sustainable spatial development depend on the national capacity to generate revenue and the country's involvement in long term processes and investments.

### **12.2.2. The prospects of population and labour resources development**

The latest "prospective vision of Romania's population in the 21<sup>st</sup> century" starts from the reality that between 1992 – 2002 Romania's population dropped by 1.1 million inhabitants. Although information about natural and migrating circulation after 1989 indicates a serious demographic decline, what is really surprising is the scale of this phenomenon and especially the contribution of external migration to the deterioration of Romania's demographic situation. Against this background, the deterioration of the age structure of the Romanian population and the implications in terms of labour resources are extremely worrying. For this situation to improve, coherent policies must be properly structured and implemented, but even so, the results will become visible only in the long run.

In the preliminary phase to spatial development, the year predictions for the year 2025 were considered. Estimates predict that in 2025, Romania will have 21.4 million inhabitants (with a projection of 20.3 million for 2050), against the dropping of the share of young and employed population and the increase in the general level of dependency. The big population fluctuations by age will directly influence the numbers of people with the labour market, and labour force migration, medium and higher education, required by advanced technologies and the growing importance of research and development in economy, especially against the backdrop of a decrease in the young population. Another alarming phenomenon is the decrease in the number of high-school and university students that come from rural areas.

*Spatial implications.* It is anticipated that, as in other European countries, the declining population will not lead to a lessening in demand for land in cities. Moreover, demands in the metropolitan areas will continue to grow as the labour forces become more mobile and pressures for higher living standard and increased accessibility bites.

The demand for building land will increase for both housing and industrial purposes to meet the higher living standards. This is anticipated to reach the EU average of 1 person per room and minimum 15 sq.m / inhabitant by 2025. Second and even third homes will be an increasing feature that will need to be monitored; residential building will focus on low population density / environmentally friendly developments; increased space for public services and green areas; increased industrial areas for new forms of production and distribution activities. These policies will reverse the excessive population density in the residential areas constructed in the '80, and alleviate their negative social effects.

Romania needs to develop an integrated vision for its spatial planning, a vision that will lead to a sustained approach to support both Romania's sustainable development policy and its business competitiveness at European and international level. These policies will manifest themselves in the following actions:

- The creation of conditions for the implementation of services aimed at stimulating demographic growth, and other services in fields such as education, public health-care and labour force education, development and guidance. Special attention is paid to the highly qualified labour force, whose performances are directly linked with the level of the GDP;
- The attraction and retention of highly qualified labour force, by: using free, usable land within the city limits, diversifying and improving the housing stock, rehabilitating unwholesome residential areas, ensuring a good quality of life, an attractive local and rural environment, accessibility and decent services, rehabilitating historical and cultural sites, maintaining green corridors within and around cities;
- The identification of the local economic development potential, of local competences; planning and diversifying local and regional economic activities, providing necessary services, rehabilitating abandoned areas in order to render them attractive to new investors;
- Good co-operation between the towns and communes in the respective area, in all fields.

### **12.2.3. The prospects of scientific and technological development**

Against the background of globalisation, successful economic development requires competent research and development institutions and facilities that convert ideas to real market opportunities. This requires cooperation between the research institutions both in education, the state and industry. These institutions should be linked to international networks and afforded full IT services and modern equipment. The labour force should be highly qualified and the higher education system should be dynamic to meet market requirements. Due to its strategic importance and the high costs involved, research has predominantly been the government's responsibility.<sup>89</sup>

The movement of qualified labour from under developed countries to developed countries ( the brain drain) has affected Romania. The strategies developed by the countries that have recently joined the EU reflect the strong relationship between scientific and technological development and the development of higher education. The countries that joined the union in the last two accession waves and some candidate countries have significantly developed their higher education systems, even more than in the old EU member states, in order to:

- prepare to face the EU competition by developing development strategies based on key competencies and by supporting the research sector as key development factor;
- increase the number of students and researchers and improve the students / researchers ratio;
- postpone the entrance of young people into the labour market during the period of adjustment to the new context generated by the EU accession;
- make up for the brain drain and the migration of highly qualified labour force.

The evolution of higher education and research in 2005, as an essential factor of development, should take into account the following parameters:

- 3,000-3,500 students per 100,000 inhabitants (with all the implications in the development of high-school education – boarding schools and scholarships) to avoid the demographic decline of the young population and to give pupils in rural areas more chances to attend high school and then university;

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<sup>89</sup> In France, 50% of the research activities are carried out in the public sector and is, under the law, an instrument used to balance national development by supporting new research centres

- support for research and a better students / researchers ratio, standing at 15.0–18.0 (19.2 in 1999)<sup>90</sup>;
- the development of higher education and research, especially in the capital and regional centres that are likely to turn into metropolitan areas, in co-operation with scientific and technological parks, making efforts to connect them to the current international network.

*The spatial implications of scientific and technological research show that currently specific research and development and technological programs are linked solely to local industries. The need will be to show how these programmes can reflect both the local, regional and national needs and to integrate them into the European and international networks. Sustainable spatial planning has a role to play in ensuring the integration of this work.*

The following integrated spatial policies are currently taken into account:

- the creation of centres of excellence and the development of the existing development centres, focused on the fields that ensure Romania's competitiveness; they are mainly located in the capital and in regional centres, but also in some specialised centres;
- a balanced national representation of research and development and higher education;
- correlation between research/education and the development of related services, the localisation of scientific and technological parks, with communication and information networks, while ensuring accessibility and technical equipment. This entails an integrated strategic approach, inter/institutional cooperation and adequate funding systems. In the first stage, their coordination and integration should strengthen the structure of regional and national urban poles and corridors.

#### 12.2.4. The prospects of sectoral development

Identifying sectors of activity, spatial planning and territorial cohesion take into account: sectoral restructuring and the relationship between urban and rural, while identifying key competences and ensuring Romania's competitiveness within the EU.

The process of **sectoral restructuring** raises a large number of problems that impact on spatial development at inter-sectoral and intra-sectoral level.

**Inter-sector restructuring** entails the inevitable decrease in the number of people employed in the primary sector (agriculture, forestry, fishing), the decrease or, in some special circumstances, the moderate growth of the secondary sector (industry and construction) and the substantial growth of the tertiary sector (services, mostly represented by the so called "abstract production").

**Intra-sectoral restructuring** triggers significant changes in the primary, secondary and tertiary sectors:

- in the primary sector: a different subsistence / production agriculture ratio; chains/clusters focused on production, processing, transport, specific services, research, export; the setting up of 'agri-industrial centres' or 'green centres' that make the connection with international sectors; using IT systems in agriculture, compatible with EU systems; adjustment to the requirements of peri-urban agriculture; the development of an ecological agriculture etc.;
- the secondary system: concluding the privatisation process; attracting investors for a moderate re-industrialisation, based on new technologies and modern organisational systems (activity parks); transforming former industrial platforms in keeping with market requirements, supporting relevant economic areas and creating competitive product and excellence clusters;

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<sup>90</sup> The index showing the number of students / researchers is not generally used, but can provide indirect information about the involvement of research and higher education in development

- in the tertiary sector: favouring the emergence of a 'service industry' as an abstract production activity; supporting research and higher education; developing public services at European level; developing a spatial cluster tourism.

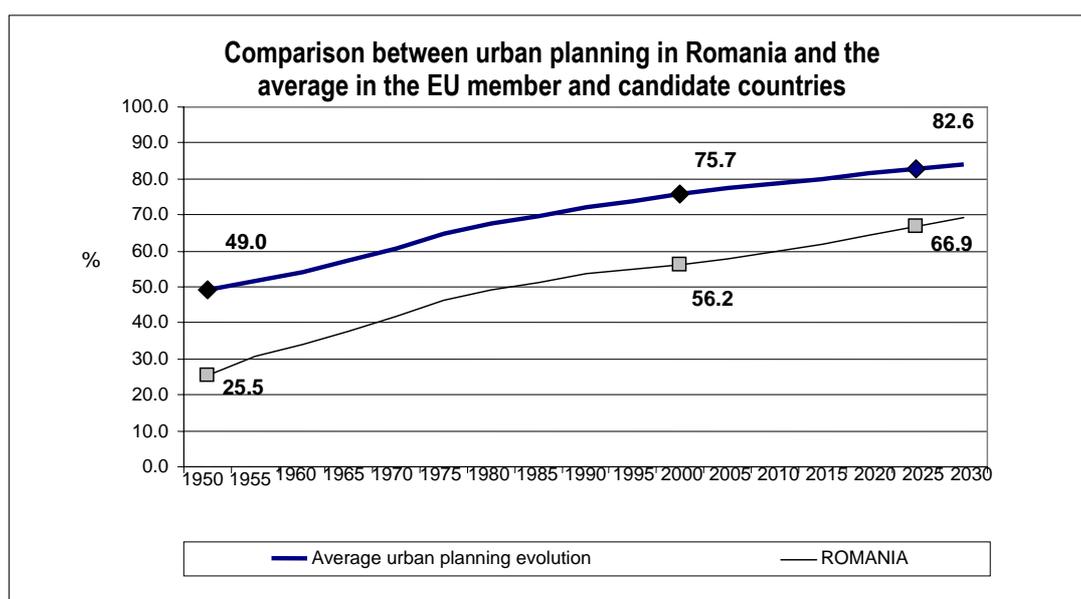
**Urban planning** reflects the evolution of economic activities towards globalisation of the economy, and urban spatial strategies aim at facilitating the accomplishment of this objective, creating specific spatial conditions for an economy based on knowledge. Rendering urban planning more dynamic is a major factor in the spatial strategies that aim to create favourable conditions to pass from the rural to the urban status, in two ways:

- around cities by developing metropolitan areas;
- by favouring the setting up of urban corridors along the main trans/European and national transport routes, starting from inter/modal and inter-rank strategic junctions.

The dynamics of urban planning, anticipated by the UN, place Romania among the countries that have been slow to embrace the concept. As to the evolution of urban planning continues the 10 year predictions made by the UN in 1991 and 2000 for years 2025-2030 show Romania will still lag behind.

The estimates are as follows:

- 1991 estimate - % urban population in 2025 = 72.3
- 2000 estimate - % urban population in 2025 = 66.9, that is 6.4% lower



Source: MTCT, based on data provided by the UN

It is estimated that, along with sectoral restructuring, Romania will register a significant urban growth (above the average of the countries in the same group), from 56.2% in 2000 to 66.9% in 2025. This means that the status of over 1.1 million inhabitants will change from that of rural inhabitant to urban inhabitant (most of them will remain in their villages, which will be turned into towns)

#### Probable evolution of the urban population in Romania between 2000-2025

	2000		2025		Difference	
	Thousand inhab.	%	Thousand inhab.	%	Thousand inhab.	%
Total population	23,435	100.0	21,377	100.0	- 2,058	- 8.8%
Urban population	13,194	56.2	14,301	66.9	+1,107	+8.4%
Rural population	10,241	43.8	7,076	33.1	-3,165	-30.9%

The growth of the urban population and the decrease in the rural population, against the background of a decrease in the total population of over 2 million inhabitants between 2000 and 2025 (-8.8%), actually accounts for a growth of the population with urban status of 1.107 million inhabitants (+8.4%) and a decrease in the population with rural status of 3.165 million inhabitants (-30.9%). In the current stage of urbanisation, the urban population will continue to grow, both by turning communes into towns, along with the sectoral restructuring, and due to people's migration to urban areas. The scale at which these processes will take place can be seen in the following demonstrative comparison:

- the average rate of village people who will turn into town people in the following 24 years is 46.125 inhabitants / year (slightly above the average number of inhabitants in a Romanian town);
- the equivalent of the growth of the urban population by 1.107 million in 24 years is : 659 medium-sized localities (urban and rural) or 24 medium-sized urban localities or 1451 medium-sized rural localities.

The criteria by which a place will be given rural or urban status in Romania will have to be established in the same way they are established in the EU countries (EUROSTAT). In this way, depending on the share of the population whose incomes are generated by farming activities, this share will account for less than 20 % in urban settlements, 20-40% in transition settlements (from rural to urban) and over 40% in rural settlements. It will be pretty difficult to establish the right shares, because statistical data and the Trade Registry can only provide data about the population employed within the area belonging to the respective commune or town, with no records on the situation of commuters. On the other hand, the social-economic and political processes of the past decades have already changed the status of several rural settlements located in the near vicinity of big cities, based on different criteria. These changes cannot support a real sustainable development.

**The competitiveness factor** is analysed in connection with the spatial localisation of combinations of economic activities, resources and development services and with the evolution of all economic sectors. The spatial distribution of competitive advantages, of competitive poles and areas and the support granted for their good functioning (to reach specific European indicators) are also taken into account.

*Spatial implications*- to prepare the strategic support consisting in guiding plans/schemes on national spatial planning, related to the emergence of new forms of aggregation and specialisation in the three sectors: the need to identify the national network of centres of international significance for the processing and distribution of farming products; to set up a cooperation system between rural communes and their small urban centres; to establish economic development areas and their profile, aggregation of industrial parks, logistic platforms with national or regional-European role, aggregation of metropolitan functions of international and regional-European scope.

The development of the main network of high level service and industrial centres involved specific packages of criteria and indicators on accessibility, resources, services, connections, equipment, the relation with the market, the quality of the natural and built environment, prestige, cultural influence, cultural tourism, prospects generated by medium and long term decisions of strategic importance, the local government's innovative spirit and their capacity to conclude public/private partnerships, etc.

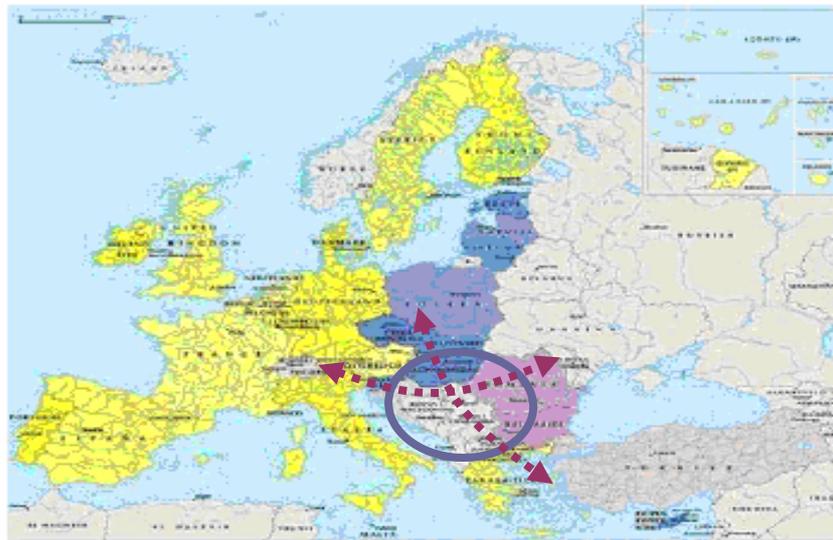
Considering the European countries' general development trends, our country has to deal with a number of additional problems, such as:

- the need to find ways to skip several stages, including by anticipating the spatial behaviour of the activities incurred by sectoral restructuring;
- the effort to avoid negative spatial consequences triggered by the current development process, due to the lack of correlation between economic, social and spatial policies

### 12.2.5. The prospects of spatial development

The spatial development vision shared by some of the spatial plans developed for the EU (15) and some candidate countries<sup>91</sup>, reflects the integration of the following elements that are subject to constant change : spatial development areas, structured to fit the EU member and candidate countries' spatial development policies; the European network of metropolitan areas and trans-national centres, at national and regional level; the European network of corridors and force lines; the new relations between urban and rural; the use of natural and cultural assets. For our country, the differences and similarities concerning each of the long term spatial development prospect of the EU member and candidate countries, are related to the spatial implications that demographic, scientific and technological evolution, as well as sectoral restructuring, are likely to impose.

From a spatial point of view, Romania's image against the European background is given by its position as junction point between north-south and east-west and its potential to establish inter-continental relations.



yellow=EU-15; blue=NMS-10; violet=Accessing Countries; pink=Candidate Countries  
Source: www.eurunion.org

According to ESPON studies, at European level Romania has the following spatial characteristics: 2 metropolitan areas (Bucharest and Timisoara); 12 functional urban areas with 150,000 to 320,00 inhabitants that play a national and sometimes trans-national role, at various levels; 45 functional urban areas of local and regional importance (7 cities are missing). Because the development of its long term spatial development strategic outlook was delayed, Romania is differently presented in various documents and studies on Europe, which do not highlight its real potential. That creates a spatial vision different from that outlined in the ESPON studies, which diminish the role played by corridors 4 and 7, and do not take into account the importance of their eastern terminal, the Black Sea port of Constanta.

**In keeping with the Hanover principles, Romania needs a national spatial development concept to support the role of regional relay between east-west and north-south and junction between Europe, the Middle East, Africa and Asia.**

<sup>91</sup> This study is based on research carried out before 2004, when the last accession to EU took place;

**Key points**

- Based on the strategic concept of spatial development, Romania needs a development plan integrating, at regional and trans-national level, medium and long term spatial and sectoral aspects, while observing the principle of spatial cohesion and coming in line with EU vision of integrated development;
- Romania's strategic sectoral and spatial development plans on medium (2007 – 2013) and long (2007-2025) term, must be really integrated, in order to maximize the impact of national and structural investment;
- The slow pace of urbanisation and modernisation of the rural areas should be accelerated, through measures aimed at improving accessibility, equipment, services and the general living standard;
- The development of the legislative, institutional and technical framework, in order to support Romania's spatial planning at EU level;
- Cooperation and participation in spatial planning should be boosted and spatial cohesion ensured.

## II. SWOT Analysis

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>- macroeconomic stability</li> <li>- large, low cost labour force with good initial education</li> <li>- high levels of qualified ICT workers</li> <li>- natural resources</li> <li>- energy sources</li> <li>- selected successful primary and manufacturing sectors</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>- concentration in low added value sectors/low cost strategies</li> <li>- low level of R&amp;D and innovation and weak connection with market needs</li> <li>- weak enterprise culture/SME base</li> <li>- low capitalisation of SMEs</li> <li>- poor access to business finance and information</li> <li>- low degree of sophistication of the consumer markets</li> <li>- high energy intensity</li> <li>- old technology / high costs of non-labour inputs</li> <li>- insufficient and degraded infrastructure /poor connectivity outside and inside the country</li> <li>- poor environmental management (including poor infrastructure)</li> <li>- labour over-intensive/inefficient, fragmented agriculture</li> <li>- weak tourism infrastructure and marketing</li> <li>- obsolete skills, low adaptability of labour and poor LLL</li> <li>- poverty/weak social fluidity</li> <li>- governance reputation (insufficiently developed administrative capacity)</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>- EU accession</li> <li>- scale; second largest post- EU 15 population</li> <li>- new sources of investment including SF</li> <li>- FDI</li> <li>- niche(s) tourist destination</li> <li>- potential gas and energy hub/renewables</li> <li>- Introduction of new legislation public procurement</li> <li>- privatisation of markets and modernisation of business models</li> <li>- developing business support infrastructure</li> <li>- e-commerce/e-government</li> <li>- agricultural rationalisation &amp; modernization</li> <li>- modernisation of Bucharest and other key urban centres</li> <li>- urgency/acceptance of need for change</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>- increased exposure to globalised markets</li> <li>- long stagnation periods/ economic decline at European and global level</li> <li>- migration of current sectors to lower costs locations abroad</li> <li>- reinforcement of position/image as a low value-added economy</li> <li>- migration of better educated workers</li> <li>- climate change/environmental degradation</li> </ul>

### III. DEVELOPMENT STRATEGY

#### ROMANIAN NDP 2007-2013 STRATEGIC VISION

*A competitive, dynamic and prosperous Romania*

#### GLOBAL OBJECTIVE

Considering the development gap between Romania and the EU (Romanian GDP per capita in 2004 was 31.1% of the EU average) and the NDP function as an instrument for accelerating the economic and social convergence process, the Global Objective targets:

*The rapid reduction of the social and economic development disparities between Romania and the EU member states*

#### TARGET

*Romanian GDP per capita at 41% of EU average by 2013*

#### DEFINING THE STRATEGIC VISION

Romania is faced with its most important development opportunity in generations as it approaches membership of the European Union and more fully enters an increasingly globalised economy. Romania's future is as a dynamic, competitive and innovative economy operating within the economic, social and political structures of the European Union and of the globalised economy.

Increasing integration in the international economy is a dynamic process both for Romania and for a globalised economy that is, itself, changing. Globally, there is an accelerating sophistication of consumer tastes and demand for innovation, quality and differentiated products and services, underpinned by rapid technological change affecting both producers and consumers. There is an increasing fluidity of movement of people, goods, services and capital. Further, new markets and new competitors are emerging.

Romania needs to be ready to embrace the potential benefits resulting from these changes. There are significant challenges in adapting economic, social and institutional systems to maximise the benefits of these processes and to manage inevitable changes and impacts on individuals. The task is to orient all aspects of society towards sustainable economic growth.

The nature of the global economy means that Romania's strategy must sustain a focus on the fundamental drivers of economic and social change, in order to achieve growth; the strategy needs to be sufficiently flexible to adapt to shocks and processes of change.

**Economic growth** is the key to a successful transition of Romania, bringing higher living standards; investment in productive capacity; public infrastructure and services - including enhancing cohesion and inclusion; and investment by individuals to maximise their employment and other opportunities and quality of life.

In the context of an increasingly integrated global economy, growth will be derived from:

- **increased productivity** achieved through increased labour and management capacity and the capitalisation of production;
- increased market knowledge, successful market penetration strategies and higher added value products and services by a **dynamic entrepreneurial base**;
- effective application of research knowledge to **innovation**;
- infrastructure investment to improve **accessibility** and increase the quality of life;
- **effective public and private governance** to provide an investment-friendly environment and efficient targeting of public resources, including the use of Structural and other funds;
- the embracing of the principles of **sustainable development** to ensure effective husbanding of resources; management of environmental conditions; the inclusion of all groups in the development of society; and balanced and complementary geographical development.

### *Productivity growth*

Romania aims to become a high added value economy with high rewards for investors and workers. The core driver of this is increased productivity through investment in productive capital, equipment and technology and in human capital.

Automation of industry, mechanisation of agriculture, rationalisation of production units, upgrading of technologies and equipment, information technology and new business processes will underpin and facilitate much of the development of business productivity and higher agricultural yields.

To the same end, the contribution of FDI to assisting the transition, making immediate impacts on productivity and the orientation of managers and workers to market realities is recognised. Romania will benefit from an active approach to the absorption of FDI. This must not, however, unduly reinforce Romania's position in lower added value or declining sectors.

Also, greater efficiency in the consumption of energy will drive productivity growth in Romania. This will be promoted in research and innovation related to the operational and productivity needs of companies.

Investment in human capital will complement and provide long-term sustainability for productivity growth. A highly skilled, well-educated labour force with the capacity to adapt to changing technologies and markets is essential to a dynamic, competitive economy.

Romania will invest in services to support the capacity of its workforce and active labour market policies to drive adaptability and flexibility. The aim is to achieve maximum participation of all those capable of working as the basis for a competitive economy.

This will include initial education, job-related training and retraining, management skills and access to careers advice as well as intervention in the education and training systems to increase economic activity rates and underpin and supply growing skill areas. Romania will focus particular attention on the generation of young people who will form the prime workers of the next period to ensure that they have access to high standards of education, are adapted to the flexible and changing nature of modern working life and have the maximum opportunity to contribute to and benefit from Romania's increasingly dynamic economy.

A high density of knowledge workers and graduates is correlated with innovative and high added value sectors and Romania will increase the proportion of graduates in the labour force to this end. Support will also be directed to develop critical skills and competences in key growth sectors.

### *Dynamic entrepreneurial base*

Sustaining and growing the dynamism and internationalisation of Romania's entrepreneurial base is the means by which the nation's economy will develop and prosper and by which Romania will respond to the challenges and opportunities of open and globalised markets.

Romania will promote the transition to become a knowledge based economy and to occupy a position higher in the economic 'added value chain'.

To this process, Romania will invest to widen the entrepreneurial franchise and to promote an enterprise culture in order to create the widest possible pool of talent from which growth-oriented innovative entrepreneurs can be drawn and to provide opportunities for entrepreneurship to the widest group in society. Romania seeks to develop businesses of scale, fully capable of addressing opportunities in domestic, regional and global markets with headquarters and/or key 'higher order functions' to be located in Romania and will promote diversification of its industrial and business sectors and markets.

The role of SMEs in creating an innovative, high added value and prosperous economy is recognised. SMEs constitute a critical growth engine and have the capacity of boosting the economy towards its development potential. Efforts will be directed towards not only competing successfully in international markets but also competing more successfully to satisfy domestic demand.

Furthermore, the role of the large companies in promoting a sustainable economic growth will not be neglected.

Support systems will be developed to underpin these processes, including the provision of market intelligence, market studies, technological information, the development of new processes and assistance with market penetration. In part, this will include support for the development of quality systems and certification.

Addressing undercapitalisation and limitations on access to growth capital will be achieved through support for the provision of development and risk capital. Other factors inhibiting the establishment, expansion or relocation of firms will be addressed through the development and servicing of key sites and support for the provision of business premises.

Support for company networks and emerging clusters will be provided as well as for the promotion of horizontal and vertical integration to create competitive advantage. There will be specific support for key sectors in transition and growth.

### *Research and innovation*

Romania will create a healthy environment for research, the commercialisation of research and research-led innovation and technology transfer in order to drive business competitiveness. To this end, Romania's target level by 2015 is to increase R&D expenditure to 3% of GDP.

This will involve investment in, and support for publicly-led research as well as privately-led. Research will be supported that is market-relevant or near-market relevant. Romania will also invest in mechanisms for the commercialisation of research and the protection of intellectual property and the promotion of brands. The mechanisms to promote a research- and innovation-oriented culture and the appropriate dissemination of research knowledge will also be supported. Moreover, consultancy and

other support will be provided to assist businesses to conduct, commission, absorb and commercially exploit research.

The participation of Romania in the European project network will be promoted, targeting the commercialisation of research and innovation and the provision of an adequate response to an increasingly demanding market.

Support will also be provided for the development of knowledge management systems in businesses in relation to processes, products and markets. Special focus will be given to energy efficient processes and the use of renewable energy sources.

#### *Accessibility, inter-connectivity and infrastructure*

Romania will undertake strategy-led investment in infrastructure to facilitate the movement of people, goods, services and ideas and to make the country more attractive in which to live and to locate businesses.

Integration in European transport corridors and the creation of modern road, rail, water-borne and air transport together with the promotion of enhanced inter-modality and safety will form the cornerstone of this. Besides facilitating movement, investment in transport infrastructure will underpin the development of opportunity corridors and enhance focal points for growth and of emerging clusters.

Projects aiming to improve energy efficiency and connections to the European energy transport networks will also be supported. This will impact on economic growth and create economic advantage by reducing production costs and will contribute to the creation of healthier living and business environment.

Investment in digital connectivity will extend the opportunities for Romania in e-commerce, e-government and e-services as well as making these opportunities ubiquitous. Romania needs to be fully integrated in the global digital world – business, government, social and personal - contributing to, and benefiting from this inter-connectivity.

Investment will also be made in the systems such as waste management, water management and flood and other risk prevention. These will secure infrastructure and natural, residential and business environments and send market signals about the security of investment and healthy living and working environment in Romania.

An important dimension to investment in infrastructure will be to send a market signal about the attractiveness of Romania and to help reduce the net out migration for the people seeking better living and working conditions.

It will be important to improve urban centres as attractive locations for 'knowledge-based' workers and to enhance Bucharest's and other key urban centres' importance, as well as to provide complementary attractions and balanced development and effective territorial planning.

Va fi importantă în special dezvoltarea centrelor urbane ca locații atractive pentru forța de muncă din domeniul noilor tehnologii și creșterea în acest scop a importanței capitalei și a altor centre urbane cheie, precum și realizarea unei planificări teritoriale eficiente care să ducă la creșterea atractivității și promovarea dezvoltării echilibrate.

## *Governance*

Romania will further enhance the process of establishing systems of public and private governance and administrative capacity for a modern economy. Efforts will be increased to eliminate the administrative and other barriers negatively influencing economic and social development.

This process will send a market signal about the transparency of the investment environment and will increase the attractiveness for investors. It will promote the establishment of a level playing field with open procurement and effective administration of the public element of investments and the administration of the regulatory systems.

Efficient public administration supports enhanced productivity in the economy through focused strategy, more certain decision-making, quicker procedures, clearer policies and better targeted services that optimise the impacts of investments and create a more secure platform for innovation.

Within this process, the role of the local authorities at local and regional level will be important in promoting real reform, managing change and sustainable development will be important. Actions to consolidate the administrative capacity of these institutions to achieve the development goals will be supported, through access to internal and external financing.

## *Sustainable development*

The country's development must be sustainable in economic, social and environmental terms.

Romania will husband its natural resources and the processes of energy consumption; waste minimisation and management; pollution prevention and control; agricultural and fishery methods.

Romania will invest in ensuring an equality of access to opportunity between men and women and for all social groups, allowing the widest range of talent to contribute to innovation and development in the Romanian economy and society. Services, including education and health, will be developed to ensure access is equitable and delivered to promote the personal, social and economic resilience and opportunities of individuals and communities. A complementarity and balance of attraction between regions will be promoted in order to maximise access to opportunity and to safeguard against excessive and wasteful overdevelopment in specific locations.

Promotion of an information society accessible to all people can "democratise" access to development opportunities. It will also allow individuals and communities to benefit from advances in technology and participate in innovative and higher productivity activities.

## **TERRITORIAL DIMENSION**

The strategic vision of the NDP is correlated with the long term goals of the territorial development of Romania, as established by *"Romania's Strategic Concept for spatial development and re-integration into the spatial structures of the European Union"* (Horizon 2025). This will target national efforts and the achievement of the country's potential in a European and international context.

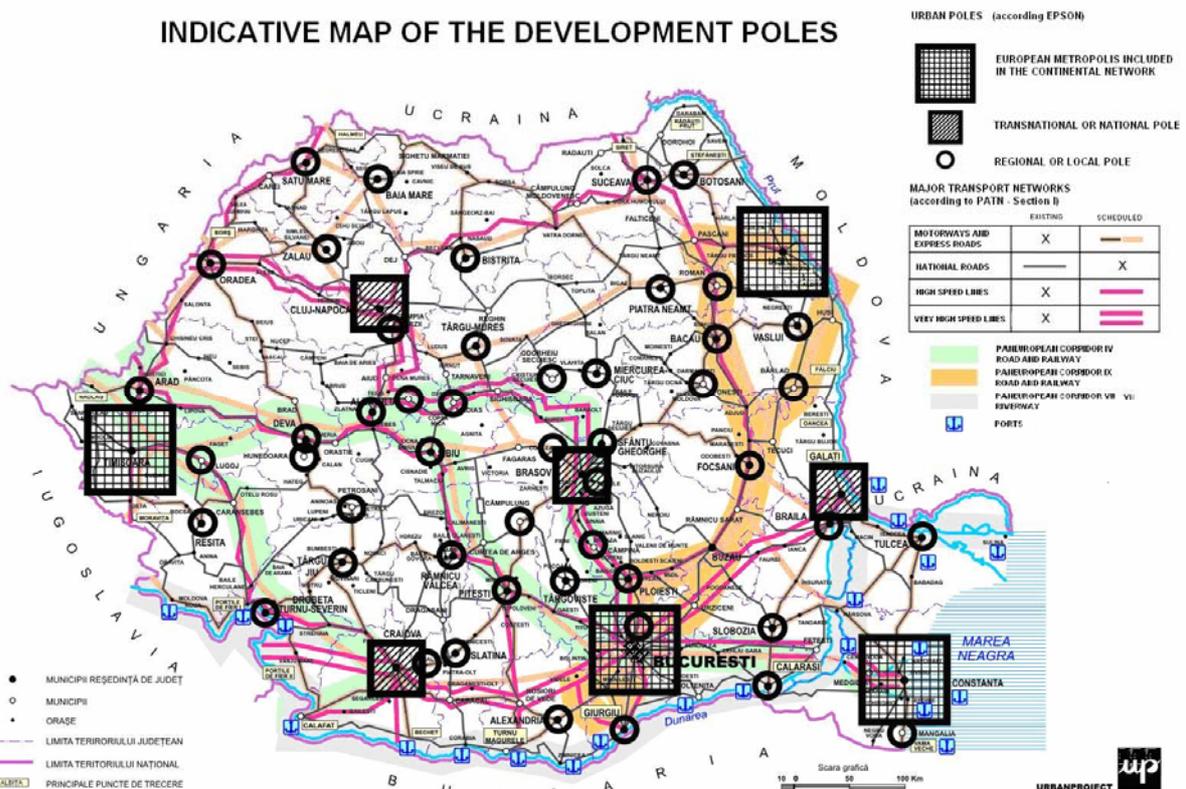
In the long term, the strategic objective of territorial planning is the assertion of Romania's regional and European identity, as a hub between the North-South and East-West, as well as a connection between Europe and Asia. As well as through physical and communication connections, this increased

integration will be achieved through sustainable development, reducing gaps and increasing competitiveness.

The following specific objectives are subsumed to the strategic objective:

- connection to the European and intercontinental network of the territorial centres and corridors
- structuring the urban network through a balanced development of the urban centres
- promotion of a balance of services and opportunities between urban and rural communities
- enhancing the natural and cultural heritage.

The strategy will target existing or emerging corridors/ poles. It will seek to create the conditions for concentration of development in areas around the poles/corridors as well as an efficient connection network at regional, national and trans-European level.



## GRAPHIC REPRESENTATION OF THE NDP VISION

Romania, as a future EU member state, will benefit from support for promoting economic growth and social cohesion. The National Development Plan represents the strategic planning document that will direct and promote Romania's socio-economic development, in line with the development policies of the EU.

The general objective of the NDP, that targets the reduction of the socio-economic development disparities with the EU, is supported by three specific objectives:

- *increasing long term competitiveness of the Romanian economy;*
- *infrastructure development at European standards;*
- *more efficient use of Romania's human capital.*

With a view to achieving the general and specific objectives for 2007-2013, the measures and the actions considered are grouped within **6 national development priorities**:

- Increasing economic competitiveness and development the knowledge-based economy
- Development and modernization of the transport infrastructure
- Protecting and improving the quality of the environment
- Human resources development, promoting employment and social inclusion and strengthening the administrative capacity
- Development of the rural economy and increasing productivity in the agricultural sector
- Reducing the development disparities between the regions.

The national development priorities ensure the continuity with the strategic guidelines of the NDP 2004–2006 and draw together the elements of the sectoral policies and the regional development policy, including the view of National Strategy for a Sustainable Development (“Horizon 2025”), and the strategic guidelines at European level and the specific requirements for accessing the post-accession EU funds.

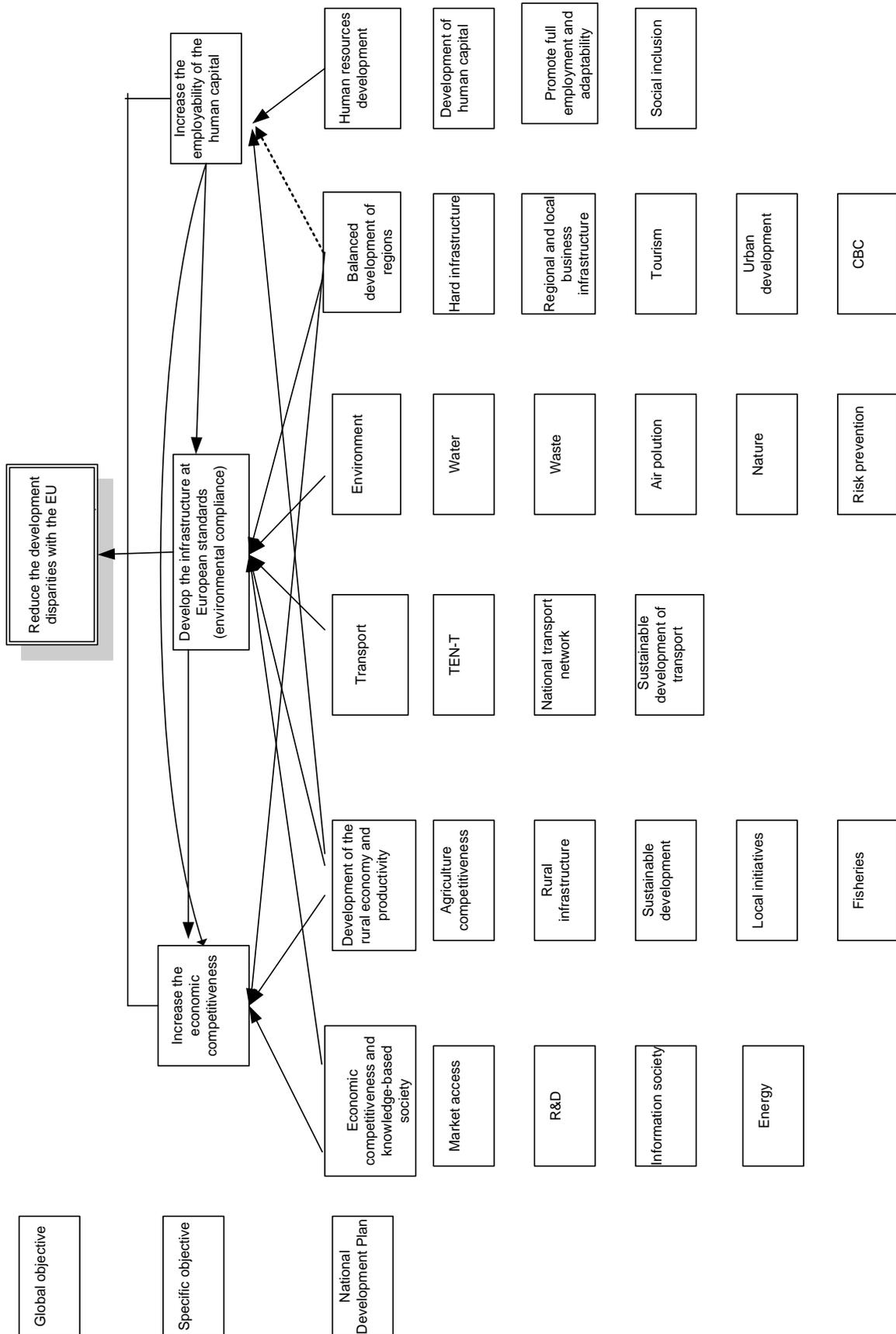
The implementation of these priorities is achieved through combined actions of different public funds: state budget, local budgets, European funds, other sources (internal and external loans). The contribution of the private sector is important also in view of the co-financing needs for the projects dedicated to this sector.

The chart presented reflects the relations between the Global Objective, the Specific Objectives and the National Development Priorities. These are inter-related and reinforce each other, ensuring a coherent and synergetic approach of the priorities and planned actions, both at intra-sectoral and inter-sectoral level.

Accelerating the process of real convergence with the European Union through realisation and enhancement of the endogenous potential will depend on the efficiency of applying this model by the institutions with responsibilities in promoting and managing a sustainable socio-economic development. The global objective of the NDP can be achieved only through coordinating all the institutional, technical, financial and human resources available.

Long-term Spatial Planning

Develop an efficient administration



## **NATIONAL DEVELOPMENT PRIORITIES**

### **P1. INCREASING ECONOMIC COMPETITIVENESS AND DEVELOPING A KNOWLEDGE BASED ECONOMY**

#### **1.1. RATIONALE**

Along with the EU accession, Romania's development will have to follow the European economic trends, both in theory, but especially in practice. This gap bridging process involves sustained economic growth in the 2007–2013 period, while maintaining a stable micro-economic balance. The key factor that boosts economic growth, against the background of a fierce market competition, is the growth of economic competitiveness. Moreover, the development of competitive economic advantages must be a constant process, taking into account the European tendencies and the globalization process.

Therefore, increased competitiveness should not be regarded as the exploitation of short term advantages (such as low labour costs), but as the process of building an economic structure based on capital investment and research – development – innovation processes. In other words, when talking about following the European economic trends, in the medium and long term, we must focus on the development of an economy based on knowledge.

Sustainable economic development and improved living standards for the population are triggered by the growth of economic competitiveness against global challenges (economic globalization, open international markets, fast technological changes), challenges that must be turned into opportunities for the Romanian economy.

Although in the past years Romania has registered significant progress, gaps in competitiveness, as compared to the western and central European countries, still exist. The causes of Romania's lagging behind can be found at the level of all elements that define competitiveness. In fact, it all comes down to low productivity, which best expresses the problem of Romanian competitiveness. The GDP per PPP<sup>92</sup> is just 50% of the average of the new EU member states.

An analysis of the current situation shows that there are several factors that have a negative influence on competitiveness. Despite progress in privatization and in regulating and improving the financial sector, companies' access to capital is still very limited.

The use of outdated, power consuming technology and equipment drastically decrease productivity in most industrial sectors.

The SME sector is probably the most affected of all, its structure revealing a poor orientation towards productive areas. Despite a positive dynamics, the SME share in the GDP is still insufficient; therefore the SME sector should grow, both quantitatively and qualitatively. The SME access to capital, technology and infrastructure is poor, way below the level that would allow the sector to increase its economic competitiveness, through innovation and adaptability to market demands.

Scientific research is suffering due to the ever dropping level of investments in the field, both in the public and private sector, the decreasing number of highly qualified professionals and the low number of centres of excellence. As concerns corporate strategy, poor management abilities are a shortcoming

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<sup>92</sup> Purchasing Power Rate;

that affects all levels. Most domestic companies still focus their strategies on low cost management and not on improved productivity. As compared to the European Union, innovative companies in Romania are 3 to 4 times fewer. The protection of intellectual property has registered some progress in terms of regulations, but not so much in implementation. There is no support infrastructure for innovative start-ups, and past initiatives (business incubators, etc.) have failed, due to faulty planning and management.

Another field where the Romanian economy is characterized by major deficiencies is that of related industries and support services. Many of the economic sectors have developed due to either natural advantages (wood processing, building materials, tourism) or the massive forced industrialization (machines and equipment, metallurgy, chemistry, etc.). Both approaches lack in aggregation and cooperation within the same sectors, with serious problems in providing a proper production chain, able to create added value.

Business infrastructure in Romania also lags behind, and support services are still in an incipient stage of development. The SME sector, which employs almost half of the working population, has limited access to specialized consulting services.

In the OECD countries, the ITC sector has an important contribution to economic growth, through both the related industry and the fields that use information technology. Although in the past years Romania has managed to bridge some gaps in implementing the information society through the development of ITC industry, infrastructure ( hardware, software, means of communication) and specific applications and services, still the ITC penetration rate is still low. This happens because of the low demand on the market, partially due to the citizen's low purchasing power, the scarce ITC education and the infrastructure incapacity to ensure access and accessible costs.

The competitiveness of an economy is also affected by the efficient use of energy. Therefore, special attention must be paid to the improving production, transportation, distribution and use of energy. Romania is characterized by an extremely high energy usage, when compared with the EU average and that of the former communist countries in the region. Moreover, a comparative analysis of selected competitiveness indicators shows that energetic intensity is the competitiveness factor in relation to which Romania's situation is the worst, as compared to the EU countries. This will become a major problem for Romania in terms of economic competitiveness, especially against the background of increasing energy costs and demands for the harmonization with the European standards.

There are some other major competitiveness factors that are not in the direct focus of this strategy, but which should be approached in close relation to the process of competitive development. Transport and environmental infrastructure is unsatisfactory, both from a quantitative and qualitative point of view, after years of insufficient investment. Access to higher and lifelong education is still below the regional average, as the situation of graduates in rural areas is quite bad (corroborated with the low level of urbanization at national level). The improvement of these factors is addressed as part of the other NDP priorities.

Increased economic competitiveness depends both on the economic activities undertaken, and from a territorial point of view, on their location, on distribution and spatial links with raw materials, necessary labour force, equipment, and relevant services and markets.

From a **spatial** dimension point of view, the economic competitiveness is defined by:

- Involve the urban centres in a creative and innovative transfer of the national potential, create a hierarchic system of development poles/ areas so as to try some schemes of competitive products and services or that might have a chance to becoming competitive (IT and financial services, creative industries, environmental services, customized services, tourism, etc.) while developing, at the same time, accessibility, educational resources and research and innovation, business infrastructure, the quality of the environment and the quality of life;
- Create an integrated accessibility system for the national potential and establish interconnections between the elements of the polycentric system;
- Use the potential of research and innovation, especially that of the university centres, which thus become promoters of innovative activities and which provide multiple opportunities and ways for professional development as a means of stabilizing the labour force and attracting highly qualified workers;
- Develop and promote tourism by means of developing the natural and cultural heritage and the activity focusing on natural and cultural landscape. Moreover, tourism development will follow the national plan for spatial planning (the tourism section), and will aim for a creative natural landscape and culturally rural heritage management;
- Establish higher-level connections at the level of the territory as a means of stimulating the process of establishing and strengthening the economic clusters.

The territorial cohesion leads, in the long run, to balanced economic development and to an improvement of the living standards. In medium-term, a policy focusing exclusively on spatial economic development would lead to weakening of developed areas and thus, it is necessary to assess, select and prioritize the investment opportunities taking into account the best mix/ combinations for competitive activities, equipment to train the human resources, the offer of necessary space/ land and their operational compatibility.

## 1.2. STRATEGIC OBJECTIVES

### 1.2.1. General Objective

The overall objective of Priority no. 1 of the National Development Plan is **to increase the productivity of Romanian companies in order to get closer to the EU average productivity rate**. The aim is **to generate an average annual productivity growth of 5.5% that will allow Romania by 2015 to attain a level representing 55% of the EU average**.

This can be achieved by monitoring the growth of labour productivity per working person, which can be interpreted as the contribution of two factors: the contribution of capital increase per working person and the modification of the Solow residual, also known as total factor productivity. Therefore, this indicator reflects the evolution of the efficiency of all factors contributing to economic development, including natural resources, labour force, capital investment and even the share of RDI and the development of the information society.

### 1.2.2. Specific objectives

- Increase the SME contribution to the GDP by 20% by 2015;
- Increase the value of total R – D expenses by up to 3% of the GDP in 2015;
- Increase the number of internet corporate users (access to on-line services) from 19% in 2003 to 55% in 2015;
- Cut down on primary energy intensity by 40% by the year 2015, compared to 2001.

### 1.3. STRATEGY

The strategic directions of the NDP priority “increasing economic competitiveness and developing knowledge based economy” are in full harmony with both Romania’s long term competitiveness policy objectives and with the action lines traced by the European Commission regarding the 2007 – 2013 competitiveness and innovation framework and the guidelines proposed by the European Commission for the 2007 – 2013 cohesion policy.

Measures under this priority will focus on the following sub-measures:

- Increasing competitiveness by improving the enterprises’ access to market (especially small and medium sized enterprises)
- Developing an economy based on knowledge, by promoting research and innovation and accelerating the development of the information society
- Improving the energetic efficiency and the use of regenerative power resources

In the following sections the paper briefly describes each sub-priority, motivating their selection and indicating some of the main action lines envisaged.

#### *1.3.1. Increasing competitiveness by improving businesses’ access to the market*

Enterprises are the engine of economic growth, as the competitiveness of the entire economy depends on their performance. Supporting their presence on the single European market by facilitating access to funding, and boosting investment in industry, while observing the principles of sustainable development, is a prerequisite for the development of competitive economy in Romania.

As for small and medium sized enterprises, despite real progress in the implementation of the European Chart on SMEs, there still are difficulties created by insufficient resources, significant technological gaps and the lack of know-how that would allow them to rapidly adjust to the European market requirements and the changes in the global economy.

For enterprises to develop, **investments in production must be supported** (new equipment and technology). This will allow **the adjustment of production to the requirements of the single European market**. Focus will be laid on the purchase of highly efficient and environmental friendly equipment, contributing thus to the reduction of energy consumption in the productive sector in Romania and on curbing environmental pollution. Competition on the EU market is fierce and consumers’ needs are more and more complex, therefore Romanian companies will have to improve the quality of the products they bring on the market and certify their performance, while ensuring a high level of consumer safety and protection. The large scale implementation of the European and international voluntary standards is an example of best practice that has become routine on the developed markets. *Environmental and quality certification* is an investment that will ensure the presence of Romanian products in the European space and access to the domestic market. Obviously, the existence of a proper certification infrastructure is a critical condition for the elimination of any obstacles in the certification process.

**The creation of a favourable environment for business funding**, on a competitive financial market, is a significant qualitative and quantitative leap as compared to the previous approaches, when the focus was on direct investments. Funding based on commercial criteria entails a better monitoring by donors, whose expertise is a guarantee for the validation of the process of selection of competitive companies or business models. Certain enterprises, such as start-ups or high tech companies, are in

need of serious intervention, as they are in a disadvantaged position due to their insufficient lack of experience to be eligible for funding and the performance criteria imposed by financial institutions.

An important factor for the consolidation of existing companies and for supporting start-up businesses is **the development of a proper business infrastructure. This will be achieved through the application of** specific hardware and software equipment to meet business needs, improved business management, access to finance and funding sources and other guarantees, from the technical advantages provided by the ITC services and the active cooperation with universities and research centres, which assist companies develop their scientific knowledge and capitalize on their creative potential.

*Support to business incubators* - this will benefit both the development of new competitive businesses and the full use of an SME's innovation potential, preparing it for the market competition.

*Development of business centres* - this is another business support factor, because it facilitates access to consulting services, and to other types of specialised support services.

Also, Romania can encourage *the development of emergent clusters* by supporting the efforts of a group of companies to use the economic concentration potential to the fullest.

The internationalisation process is obviously much more risky for SMEs than for the companies with a broader production base. Successful SMEs in Romania do not manage to score the same success abroad. It is clear that the SME sector is trying to internationalise its activity through exports and not so much by means of direct foreign investments, in order to minimize associated risks. The expansion of SME export initiatives is extremely important for Romania in its current development stage. Moreover, in preparation for the next stage of competitive development, **SME internationalisation activities** will be supported through investment, delocalisation and the extension of national networks.

One of the ways of achieving long term economic competitiveness is by **increasing the competitiveness of Romanian tourism and improving Romania's image by promoting its tourist potential**. For this objective to become a reality, besides developing a sustainable tourist industry, actions must be undertaken to promote Romania as international tourist destination. This economic sector is developing because Romania can boast extraordinary natural conditions and a rich cultural – historical heritage. On the other hand, one major means of promoting specific economic products on the foreign markets and of developing the domestic market is to advertise such products through tourism. Against this background, *the development of the national tourist brand* is both a general priority, due to its contribution to the country brand, with effects translating in foreign investments and current account balancing, and also a specific one, if we take into account the related effects of tourism development, which are currently low, mainly due to the precarious tourist and general infrastructure.

The promotion of tourist products and services on the domestic market by means of an incisive national campaign and boosting domestic tourism are other means of increasing the competitiveness of tourist SMEs. Another important factor contributing to the intensification of domestic and international tourist circulation is the Internet, as a means of promoting and booking tourist services (e – Tourism).

It should be noted that investments in tourism infrastructure are addressed by priority no. 6 of the NDP "Supporting the balanced development of all the regions of Romania", under sub-priority 6.3.3 "Development of local and regional tourism".

### *1.3.2. Development of knowledge based economy, by promoting research and innovation and accelerating the development of the information society*

Although the objectives set in Lisbon Strategy in 2000 have proven too ambitious even for the EU<sup>93</sup> developed countries, it is clear that the promotion of research – development – innovation and setting the grounds for an information society is not only a desiderate, but also a *sine-qua-non* condition for Romania's development in the competitive environment created by globalisation.

Taking into account the Lisbon objective to stimulate innovation, as the foundation of competitive economic development, Romania needs to systematically apply **stimulating measures for technological innovation and transfer**, also by funding research – development activities.

The dynamics of **research – development expenses** has been modest in Romania until now, but along with Romania's integration into the community market and boosting competition, the research – development activity will allow companies to stay on the market. The government will encourage private research – development activities both directly, by *increasing public research – development expenses and encouraging the purchase of high technology*, and also indirectly, through *risk funds, indirect fiscal measures, promotion campaigns, etc.* To achieve this research and development infrastructure projects will be developed.

Value added, long term competitiveness and giving Romanian companies access to the international markets, which translates into a lower commercial deficit, we also talk about stimulating innovation. In that respect, **the innovative capacity of companies should be supported**, through assistance and consultancy support, assistance in access to finance, and creating the proper conditions for development.

*The protection of intellectual property* is a *sine-qua-non* element of competitive development based on investments and innovation. *The development and promotion of brands* encourages the education of local demand as a fundamental element to the competitive "diamond"<sup>94</sup>. Also, due to the development of local brands, local companies can improve value added in the sector within which they operate and the contact with the final consumer in the destination country is closer, which creates the grounds for the internationalisation of the respective companies.

The barriers between research and the use of research findings in commercial activities are still a matter of concern in Romania's. **Strengthening cooperation with universities and research centres** can be a major factor. Developing the business support services and access to consulting services through joint projects will be essential.

Taking into account the fact that Romania has an active and booming ITC sector (especially the software component), this productive sector, which is recognised as one of most competitive sectors, can be further supported by **stimulating the use of information technology**. However, measures are also needed to stimulate national providers to play by rules of competition, with a view to increasing their capacity to compete on the single market.

The performance analysis of the information society indicates that Romania has made progress in using ITC equipment in education and local government, but has not managed to actively involve the business sector in the development of the ITC field.

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<sup>93</sup> According to Sapir and Kok reports, the 2004 interim evaluation on the level of fulfilling the objectives of the Lisbon Agenda with regard to competitiveness shows the European Union's delay in comparison to that of the USA and Japan.

<sup>94</sup> "Porter's Diamond" a model which represents the elements that adds up to creating the competitive advantages of an economy.

Services cannot exist or develop without fast and reliable information exchange instruments. Therefore, *the extension of the broadband networks* is a prerequisite for the existence of a knowledge-based economy.

Due to the generally low incomes in Romania, the PC purchase and internet connection rates are also low, as the evolution of the IT market also indicates. The gap between Romania and the EU in this respect justifies the need to support on-line access at corporate level.

**The development and effective use of electronic public services** is beneficial both at public and private level. Institutional transparency, regulatory credibility and low costs of regulation and management are fundamental for securing economic competitiveness. All these can be done by implementing e-Government solutions, whose outcomes are: better information quality, short dissemination time, significantly lower administrative costs for the state, lower costs for citizens and companies.

Romania has made significant progress in e-governance, and the national system is considered an example of best practice at European level. However, the interaction between citizens and government is poor, both in terms of expansion (number of users) and in intensity (the small proportion of bidirectional interactions).

Providing on-line education services and resources (e-Education), along with increasing the use of internet and the number of PCs in education units will generate a better trained workforce, more flexible and better adjusted to the market requirements, with positive effects on labour productivity, wages and employment. This education system can be also useful in supporting life-long education, which is under-developed in Romania.

The savings triggered by e-health services both in the health care system and for patients are considerable. To this we can add the improvement of services by ensuring a more accurate record of the patients' medical history, the provision of complex information for patients and time saving. All these are in themselves savings at national level and contribute to improving the health condition of the population, which in turn triggers increased labour productivity. In addition, actions will be taken to improve the quality of the national IT system in the health sector through the development of IT standards according to the EU recommendations, improving the collection and utilization of the data in the health sector through IT solutions in integrated platforms, databases, software and electronic transfer of the medical reports.

In order to increase its economic competitiveness, Romania needs a **safe and dynamic e-business environment**, which can be achieved by increasing the number and level of exploitation of e-business opportunities by companies in general and SMEs in particular. E-commerce, just like ITC in general, can generate significant cost dropping in the long run and can facilitate access to domestic and foreign markets.

**Increasing the security of electronic communication networks**, the implementation of ITC anti-fraud solutions and the promotion of intelligent cards contribute to the development of the e-business and e-government environment, and encourage the better use of ITC services. Therefore, this measure is very important for the success of the other measures related to the development of ITC in Romania.

Information safety is also a qualitative indicator of the use of IT, considering that the issue of safety is stringent from a certain level of complexity on. The structure of the IT market is indicative of this field's complexity in Romania, which is still low.

This measure aims to stimulate the development of the e-business environment, by supporting the creation and implementation of e-business solutions in conditions of information safety.

### 1.3.3. Improving energetic efficiency and using regenerative energy resources

Romania intends to **reduce energetic intensity by increasing the energetic efficiency along the entire chain – natural resources, production, transportation, distribution and final use of electric and thermal energy**, in keeping with the commitments made during the EU accession negotiations. Due to the implementation of energetic efficiency enhancement projects, the financial effort for the purchase of primary resources will get smaller.

Romania's technical potential is relatively high, including all types of regenerative resources (water, wind power, solar radiation, biomass, geothermal). At the moment, much of this potential is undeveloped. The production of power using alternative energy sources is 'clean' and represents an alternative to burning fossil fuels. The use of available regenerative energy sources will contribute to the integration of isolated areas into the economy.

The EU goal for the year 2010 is that 22% of the total consumption of electric power should be energy produced from regenerative resources. Therefore, Romania will intensify its actions aimed at **capitalizing on regenerative resources**. Especially in the medium and long run, Romania is concerned with using alternative energy resources to produce electric and thermal energy, thus contributing to boosting innovative technological development and the use of new technologies.

## 1.4. COHERENCE WITH THE EU AND NATIONAL POLICIES

COHERENCE WITH THE EU POLICIES		
EU Policies	Reflection of the European policies in the NDP strategy	NDP sub-priorities
Decision 2000/819/EC on the multiannual Programme for enterprises and entrepreneurship, especially for SME-s (2001-2005)  The European Charter for Small and Medium Sized Enterprises Industrial policy	To sustain productive investments To sustain the access to external markets and the internationalization activities of enterprises, of SME-s in particular To develop the infrastructure of business and consulting services for business To develop the enterprises access to financing, especially the SME-s	1.3.1. To raise competitiveness by improving access of enterprises to the market, especially SME-s
The European Council in Barcelona in 2002 –EC Presentation „More Research for Europe- Objective 3% of GDP” - COM (2002) 499 (fixing the target of minimum 3% of the GDP as general expenditures for RD, until 2010, out of which minimum 2% from industry – objective „3%”)	- To sustain the transfer of technology of enterprises - To sustain the start-ups and spin-offs - To encourage investment in research and innovation and support for improving effectiveness of these investments - To improve cooperation in the field of RD between universities, research-development-institutions and industry - To support the attraction of specialists that work abroad, in the field of services and products with average and high added value, as well as young people in the activity of research	1.3.2. To develop the knowledge-based economy, by promotion of research and innovation and stepped up development of the information society
Integrated Guidelines for Growth and Jobs 2005-2008	- To encourage investments in research, development and innovation and support for improvement of effectiveness of these investments - To improve collaboration in the field of RDI between universities, research-development institutions and industry - To support the transfer of technology in enterprises - To support the spin-offs - To promote and develop own marks on the market	1.3.2. To develop the knowledge-based economy, by promotion of research and innovation and stepped up development of the information society
Proposal for a Decision of the	- To support start-ups and spin-offs by venture	1.3.2. To develop the knowledge-

<b>COHERENCE WITH THE EU POLICIES</b>		
<b>EU Policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<p>European Parliament and of the Council establishing a Competitiveness and Innovation Framework Programme (2007-2013) (presented by the Commission) {SEC (2005) 433}</p> <p>The Entrepreneurship and Innovation Programme</p>	<p>capital</p> <ul style="list-style-type: none"> <li>- To support the transfer of technology in enterprises</li> <li>- To support the access to national and international networks of information and data bases with the results of the RDI activity</li> <li>- To encourage private activity of innovation, innovative investment projects, to support effectiveness of promotion and trading of innovation</li> <li>- To promote and develop own marks on the market</li> <li>- To improve collaboration in the field of RDI between universities, RD institutions and industry</li> </ul>	<p>based economy, by promotion of research and innovation and stepped up development of the information society</p>
<p>e-Europe 2005</p> <p>Public Internet Access Points (PIAP's)</p>	<ul style="list-style-type: none"> <li>- To support the use of information technology</li> <li>- To develop and streamline modern electronic public services of e-government, e-education, e-health</li> <li>- To promote electronic commerce and reduce deficiencies of securitization in ITC</li> </ul>	<p>1.3.2. To develop the knowledge-based economy, by promotion of research and innovation and stepped up development of the information society</p>
<p>The EU Treaty –Article 174 Working together for growth and jobs – A new start for the Lisbon Strategy- 2005</p> <p>“Cohesion Policy in Support of Growth and Jobs: Community Strategic Guidelines, 2007-2013”- 2005</p> <p>Action Plan to improve Energy Efficiency in the European Community (COM (2000) 247) Energy Efficiency in the European Community - Towards a Strategy for the Rational Use of Energy- (COM (1998) 246)</p> <p>Green Paper on Energy Efficiency or Doing More with Less- (COM (2005) 265)</p> <p>Proposal for a Directive of the European Parliament and of the Council on energy end-use efficiency and energy services. COM (2003) 739</p> <p>New Framework Programme “Intelligent Energy for Europe” Programme (2003 – 2006), COM (2002) 162 Decision no. 1230/2003/EC</p>	<p>Improving energy efficiency by:</p> <ul style="list-style-type: none"> <li>- Supporting investments in equipment for production and utilization of energy in a highly efficient manner</li> <li>- Supporting investment in the electric energy distribution system</li> </ul>	<p>1.3.3. Improving energy efficiency and utilization of the renewable energy sources</p>
<p>Proposal for a Directive of the European Parliament and of the Council on energy end-use efficiency and energy services COM</p> <p>Green Paper on Energy Efficiency</p>	<p>Improving energy efficiency by:</p> <ul style="list-style-type: none"> <li>- promoting provision of services for increasing the energy efficiency by the energy service companies (ESCO)</li> <li>- Supporting programs for the establishment of an energy service market</li> </ul>	<p>1.3.3. Improving energy efficiency and valorization of the renewable energy sources</p>

<b>COHERENCE WITH THE EU POLICIES</b>		
<b>EU Policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<p>or Doing More with Less-(COM (2005)265)</p> <p>Energy Efficiency in the European Community - Towards a Strategy for the Rational Use of Energy-(COM(1998) 246)</p>		
<p>The Treaty of Amsterdam (1995) underpins the Community initiative in the energy sector, namely the Trans-European Energy Networks (TENs)</p> <p>Council Decision 96/391/EC of 28 March 1996 laying down a series of measures aimed at creating a more favourable context for the development of trans-European networks in the energy sector</p> <p>Proposal for a Decision of the European Parliament and of the Council of 10 December 2003 laying down a series of guidelines for trans-European energy networks and repealing Decision No 96/391/EC and No 1229/2003/EC [COM(2003) 724 final].</p>	<p>Improving energy efficiency by:</p> <ul style="list-style-type: none"> <li>- supporting the investment needed for interconnecting the transport networks for electric energy, petrol and natural gas with the European networks</li> </ul>	<p>1.3.3. Improving energy efficiency and valorization of the renewable energy sources</p>
<p>Energy for the future: renewable energy sources - White Paper laying down a Community strategy and action plan</p> <p>Commission Green Paper of 20 November 1996 on renewable sources of energy</p> <p>Directive no. 2001/77/EC of the European Parliament and of the Council on the promotion of electricity produced from renewable energy sources in the internal electricity market</p> <p>“Cohesion Policy in Support of Growth and Jobs: Community Strategic Guidelines, 2007-2013”- 2005</p> <p>Green Paper on energy efficiency – the Action Plan “Intelligent Energy for Europe” Programme (2003 – 2006), COM (2002)162</p>	<p>Increasing the share of the energy obtained from renewable sources by supporting investment for the valorization of:</p> <ul style="list-style-type: none"> <li>- wind energy resources</li> <li>- hydroenergetic resources</li> <li>- solar energy, mainly investment in thermal and photovoltaic captors</li> <li>- biomass (thermal biomass)</li> <li>- geo-thermal energy sources</li> </ul>	<p>1.3.3. Improving energy efficiency and valorization of the renewable energy sources</p>

<b>COHERENCE WITH THE NATIONAL POLICIES</b>		
<b>National policies</b>	<b>Reflection of the national policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<p>The Government Strategy for supporting the development of SME-s in the period 2004-2008 (GD no.1280/2004, MO no.790/ 27.08.2004</p> <ul style="list-style-type: none"> <li>- Creation of a business environment favourable to the setting up and development of SMEs</li> <li>- <i>Development of the competitive capacity of SME-s</i></li> <li>- Improvement of the access of SME-s to financing</li> <li>- Improvement of SME access to external markets</li> <li>- Promotion of entrepreneurial culture and consolidation of managerial performances</li> </ul> <p>Law no. 346/2004 on the encouragement of setting up and development of SME-s, art.2 published in the OJ nr.681/29.07.2004, 6 (Allocation of 0.2% from GDP for the development of programmes to support the Strategy)</p> <p>G.D nr. 1172/2005 to approve the Industrial Policy of Romania and the Plan of Action for the implementation of the Industrial Policy of Romania (OJ nr.945/2005) - Section of SMEs</p>	<ul style="list-style-type: none"> <li>- To sustain productive investments</li> <li>- To sustain access to external markets and activities of internationalization of enterprises, especially of SMEs</li> <li>- To develop the infrastructure of business and consulting services for business</li> <li>- To develop access of enterprises to financing, especially of SMEs</li> </ul>	<p>1.3.1. To increase competitiveness by improving access to the market of enterprises, especially of SME-s</p>
<p>The National Strategy for RDI</p>	<ul style="list-style-type: none"> <li>- To support the transfer of technology in enterprises</li> <li>- To support spin-offs</li> <li>- To encourage investment in research, development and innovation and to give support for raising the effectiveness of these investments</li> <li>- To improve collaboration in the field of RDI between universities, research-development institutions and industry</li> <li>- To support attraction of specialists who work abroad in the field of services and products with average and high added value, as well as of young people in the activity of research</li> </ul>	<p>1.3.2. To develop the knowledge-based economy, by promotion of research and innovation and stepped up development of the information society</p>
<p>The national strategy for the development of ITC „HORIZON 2025”</p> <ul style="list-style-type: none"> <li>- To ensure access of a big number of end-users to the infrastructure of broadband electronic communications</li> <li>- To ensure wide band access in the underdeveloped, poor or remote regions</li> <li>- To encourage the use of multiple platforms for supplying the information content</li> <li>- To ensure protection of the</li> </ul>	<ul style="list-style-type: none"> <li>- To support the use of information technology</li> <li>- To develop and streamline modern electronic public services of e-government, e-education, e-health</li> <li>- To promote electronic commerce and reduce deficiencies of securitization in ITC</li> </ul>	<p>1.3.2. To develop the knowledge-based economy, by promotion of research and innovation and stepped up development of the information society</p>

<b>COHERENCE WITH THE NATIONAL POLICIES</b>		
<b>National policies</b>	<b>Reflection of the national policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
integrity and security of public electronic communication networks		
<p>The road map for energy in Romania, approved by GD no. 890/2003</p> <p>The national strategy in the field of energy efficiency, approved by G.D. no. 163/2004 and Law 199/2000 on the efficient use of energy</p> <p>The GD draft for approving the National Energy Policy Document 2005-2008</p>	<ul style="list-style-type: none"> <li>- To support investment in equipment that produce and use highly efficient energy (including rehabilitation and revamping)</li> <li>- To support investment in the electric energy distribution system</li> <li>- To promote services for increasing the energy efficiency achieved by energy service companies (ESCO)</li> <li>- To support programmes for achieving an energy services market</li> <li>- Sustaining the investments necessary for interconnecting the networks for the transport of electric energy and of oil and gas with the European ones</li> </ul>	1.3.3. To reduce energy intensity and improve energy efficiency
<p>The strategy for the capitalization of renewable energy resources, approved by G.D. nr. 1535/2003</p> <p>G.D 443/2003 on the promotion of electric energy from renewable energy resources</p> <p>The map road for energy in Romania approved by G.D nr. 890/2003</p> <p>The G.D. draft for approval of the National Energy Policy Document 2005-2008</p> <p>The commitments assumed by Romania in the process of negotiations with the EU – Chap. 14 Energy.</p>	<p>To increase the share of energy obtained from renewable resources by sustaining investments for harnessing on:</p> <ul style="list-style-type: none"> <li>- The wind energy resources;</li> <li>- Hydro-energy resources;</li> <li>- Solar energy resources, prevailingly investments in tapping of thermal photovoltaic solar resources;</li> <li>- biomass (biomass-thermal);</li> <li>-geo-thermal energy resources.</li> </ul>	1.3.3. To reduce energy intensity and improve energy efficiency

## **1.5. CONTRIBUTION TO HORIZONTAL OBJECTIVES**

### **1.5.1. Equal opportunities**

Under priority no. 1 of the NDP, special attention will be paid to the promotion of the principle of equal opportunities, not only for women, but also for other disadvantaged social categories, thus meeting the requirements stipulated in the European strategies on job creation and social inclusion.

Projects will be assessed in terms of the strategic impact on equal opportunities, taking into account criteria concerning the facilitation of access to the labour market for excluded or disadvantaged categories and the improvement of working conditions.

A number of monitoring indicators will be developed, to assess the impact on the equal opportunities objective.

- Sub-priority 1.3.1 – improving the access of small and medium sized business to the market - will encourage the observance of the equal opportunities principle, using this principle, if applicable, as one of the project selection criteria. The selection will include those projects granting equal opportunities for employment to disadvantaged social groups, by allowing for

instance, distance working, part time and / or flexible jobs, and other activities for physically disabled people.

- Sub-priority 1.3.2 – developing a knowledge based economy, by promoting research and innovation and accelerating the development of information society - will support equality by including it as a selection criterion (when possible). This will also translate into more opportunities for disadvantaged brackets (women, young researchers, ethnical minorities, etc.) Moreover, the development of the information society, especially of the broadband infrastructure will support equality of opportunities by including a selection criterion regarding the access to information and to the labour market of small and / or isolated communities and disadvantaged social groups ( if applicable).

### **1.5.2. Sustainable development**

A condition for achieving sustainable development is to meet present needs without jeopardizing the future generations' capacity to meet their own development needs. The first priority of the NDP includes a number of measures that will contribute to meeting Romania's sustainable development objectives. They promote part of the activities proposed at the UN summit on sustainable development hosted by Johannesburg, such as promotion of cooperation between the research- development sector and businesses, promotion of clean energy production, use of regenerative energy sources and alternative technologies.

Priority no. 1 of the NDP intends to promote innovation within companies, with a view to obtaining new or improved products and services, through rational and effective use of available natural and human resources. Direct support will be granted to replacing old technology with 'non-polluting' technologies.

- Sub priority 1.3.1 – supporting business investment, especial in the SME sector, with a positive impact on the environment, entails both the use of new equipment, machines and technologies, with a low impact on the environment and the certification of quality and environmental systems.
- Sub-priority 1.3.2 – measures aimed at stimulating research-development activities and technological transfer, with a view to introducing new modern production technologies, in conformity with the European quality and environmental standards will lead not only to improved economic competitiveness, but also to a more rational use of energy and material resources, and therefore less pollution. The development of the information society and e – economy also contributes to sustainable development due to the support for a rationalised use of resources and energy and by creating, developing and maintaining a data base of environment-related issues.
- Sub-priority 1.3.3 – the improvement of the energy efficiency on the entire chain – natural resources, production, transport, distribution and final usage of the thermal and electric energy – will be achieved by supporting investment in the energy sector, contributing to the reduction of the environmental pollution. The introduction of the renewable energy sources is based on the utilization of non-polluting technologies.

Investment projects supporting the implementation of this priority will have to be environmental friendly, the observance of protection regulations in force being a condition. Moreover, environmental protection will become a project selection criterion (if applicable), in order to favour initiatives that pay full attention to environmental protection. The selection will include project whose implementation will have a minimum impact on the environment or will focus on environment protection in developing technologies, products or services.

### 1.5.3. The information society

The measures addressed by sub-priority 1.3.2, especially those involving the development of the information society will lead to a significant development of ITC services, with a direct impact on economic competitiveness. Romania has a good position in this respect, and will try to turn it to good account in the period targeted by the National Development Plan. Besides encouraging the private sector to increase and diversify ITC services, Romania intends to also render public goods offered to the population more efficient.

In this way, these measures will facilitate the access of all social categories to information, education, professional training, managerial consulting, and indirectly will contribute to opening new windows of opportunity for disadvantaged categories. For instance, the development of the information society and the ITC sector can offer women or people with disabilities new opportunities to work at home, in a flexible regime, or to continue their education or professional training also during their absence from the labour market.

### 1.6. INDICATORS

Indicator	Base level	Target 2013
Labour productivity at SME level ( turnover/ population employed in SMEs) (euro/employee)	27,823 euro/employee (2004)	50,000 euro/employee
Share of exports in SME turnover - %	10.5% (2004)	15%
Tourism contribution to the GDP - %	2.19% (2003)	3.45%
Share of total research and development expenses in the GDP - %	0.4% (2004)	3%
Population employed in medium and high technology services ( % of the total labour force)	5.01% (2001)	6,2%
Number of internet users: citizens / companies ( access to on-line services)	4,400,000 (2004) / 180,000 (2004)	11,500,000/ 470,000
Primary energy intensity = total consumption of primary resources with reference to the GDP – in tep/1000 Euro exchange rate	0.770 (2003)	0.504
The share of electric power from renewable resources in the national gross consumption of electric power (%)	29.78% (2004)	33%

## **P2. DEVELOPMENT AND MODERNIZATION OF TRANSPORT INFRASTRUCTURE**

### **2.1. RATIONALE**

An efficient infrastructure, connected to the European transport infrastructure, contributes to the increase of economic competitiveness, facilitates the economic accession into the EU and allows the development of new activities on the domestic market.

“The analysis of the current situation” and the conclusions of “SWOT Analysis” have pointed out that the current state of the national transport system is characterized by a small number of motorways and express road-like connections to neighbouring states and the EU member states, of ring roads and of electric railways; in addition, the waterways have seriously deteriorated and the operating infrastructure is subject to significant wear-and-tear. Under these circumstances, it is necessary for the national transport network to be revamped and developed, based on the quality parameters of the provided services and on meeting the mobility needs of people and goods, with respect to capacity, quality and safety, in such a way as to increase Romania’s level of accessibility and the promotion of sustainable development of the transport system.

Thus, the aim of the strategy for the “Development and Modernization of the Transport Infrastructure” is that of generating a balanced development of all transportation means, by ensuring modern and sustainable transport infrastructures, as well as an increase of the service quality and the creation of an operating “unity in diversity” system.

The development of the transport infrastructure is a necessary requirement for the successful implementation of Romania’s other development priorities for the period 2007–2013, thus contributing to the increase of people and goods mobility, to the integration of regional development centres within the trans-European transport network, to the prevention of the isolation of underdeveloped areas and, last but not least, to the development of the local and regional transport network.

Romania has established certain guidelines for national and European lines of communication by means of the “National Territory Design Plan”, section I, “Communication Routes”, as a support for the complex and sustainable development of the territory on long term, including the regional development. It also represents our country’s specific contribution to the development of the European space, as well as the integration premise within the European social-economic development.

The National Territory Design Plan, section I, “Communication Routes”, defines the bases of the national communication network, identifying priority projects and the necessary measures for its short, medium and long-term development. It also proposes solutions that aim at establishing balanced economic relations in the country, following the European-wide objectives, and it connects the major communication network to the three main European transport corridors crossing Romania, as agreed upon within pan-European transport conferences, which ensure the connection between Central and Eastern Europe and Northern and Western Europe.

Thus, Law no. 203/2003 concerning setting up, development and modernization of the national and European transport network, as per republication, sets the short and medium-term development priorities of the transport infrastructure–until 2015.

The future economic increase, the evolution of the society and the development opportunities in the country will put increasing pressure on the transport system, which will require constant improvement of the infrastructure and levels in the quality of service. The demographic evolution, the development of the tourism sector, the reorganization of industrial production processes and agriculture, the spread of urban areas will all lead to further demands for change and modernisation of the transport infrastructure.

These changes will be accompanied by a demand for an increase in the service quality that must be met within the context of Romania's access to post-accession European funds that will contribute to the increase of infrastructure investments.

The increased demand for the transportation of goods is closely linked to the economic development. Increased demand is always higher than the increase in GDP. This can be seen from the experience of other developed states. In Romania it is estimated that the rate of increase for transportation of goods will be 2% higher than the increase in GDP. This is in accordance with the experience of other Member States that have recently become EU members (Hungary, Poland, Slovenia, and the Czech Republic). This increase in demand for goods transportation is considerably higher than the GDP increase because of the low value of the goods being transported (e.g. many goods have a higher weight and a low financial value). In West European economies, the value density ratio is higher, i.e. the goods weigh less and have a greater value. This results in there being for each additional GDP unit generated a lower goods transportation volume. The conclusion is, that in Romania, it is estimated that economic development in Romania will create increased demands for transportation.

The development of the transport infrastructure will play an important role in the integration of domestic market and will help the capitalization of Romania's geographical location as a transit area, at the intersection between the pan-European corridors IV and IX. Romania's position at the intersection of numerous routes connecting Western and Eastern Europe, and Northern and Southern Europe, as well as the country's location on transit axes between Europe and Asia, represents a justification for the strategic options presented regarding the development and modernization of the transport network. The opportunities created by the Black Sea and the Danube River also have a key position in the strategy and provide access to an attractive transportation route for international goods within Europe and the other continents.

European-wise, the Danube is of strategic importance, being one of the most important four domestic navigable waterway routes within the European transport system. The Danube has a promising potential and, by means of an appropriate exploitation, it can contribute to Romania's sustainable connection and integration into the EU.

A viable transport alternative in Romania is provided by the transit on inland navigable channels, along the length of the Danube River (1.075 km) and the Danube-Black Sea Canal which provides the connection between the Danube and Constanta port. The Danube-Black Sea Canal is approximately 400 km in length providing a route for goods coming from/to the Black Sea and outgoing towards Central European Danube ports, thus providing a direct link between Constanta and Rotterdam.

At the same time, the River Danube, provides a Europe-wide facility and contributes to the development of more sustainable EU- wide transport,. Romania has an important opportunity and holds a key position in this transportation network, in relation to Europe and other continents.

The air transport has significant potential to improve its position within the medium and long-distance traffic.

Romania must take advantage of its geographic location by attracting and investing in infrastructure and transport services. The development of the transport infrastructure will increase the accessibility of underdeveloped regions, both to internal and international markets, thus increasing employment and improving the flexibility of economy and the competitiveness of the regions benefiting from development projects.

An advantage is represented by the relatively equal distribution of the transport infrastructure at the national level, but it is necessary to initiate sustained actions in order to develop the inter-modal

transport. This allows for the low-cost transportation of goods and raw materials, while also meeting the objective of sustainable development. Consequently, it is necessary to establish a balance between railway and road traffic and to increase the role and inter-modality of air and water transport systems (maritime and river).

The development of the road transport system and its alignment to European standards is motivated by the necessity for a coherently connected national network that links with the European major transport networks and by the correlation of Romania's development projects with those in neighbouring countries.

The Romanian Railway Company must integrate the national railway infrastructure within the European technical and operational standards, in order to be compatible and integrated part of the future trans-European railway network. At the EU level, the main objective for the railway transport system for the period 2007-2013 is the percentage increase of the total transport market from 6% to 10% - for passengers – and from 8% to 15%<sup>95</sup> - for goods, in order to ensure a more balanced use of transport options, as well as the protection of the environment. The major objective for Romania, with regards to the railway transport system for the period 2007-2013, is that of maintaining a balanced percentage on the transport market, by maintaining the values of 25% out of the goods' total and 35% out of the passengers' total.

As for the air transport system, the authorities are planning on improve the efficiency of the air transport industry and maintain the highest safety standards compatible with European policies, standards and institutions. All civilian aeronautical activities already comply, for the most part, with the applicable European standards, regulations and directives, those that do not currently comply will do so by the date of EU accession. Special attention will be given to the market requirements. It is estimated that the number of passengers transported from and to Romania will triple by 2013<sup>96</sup>, whilst the volume of the goods transported by air will increase following the EU accession. In addition NATO membership increased air transport usage. With a view to ensuring European-level services, it is necessary to revamp and expand the airport infrastructure located on TEN-T, special attention being paid to the four national airports coordinated by the Ministry of Transport, Constructions and Tourism.

As for the water transport system, the modernization and sustainable development of the maritime and river transport infrastructure is aimed at increasing the market share. The increase in volume of goods transited through Romanian ports and the efficient use of the existing port infrastructure will help to consolidate the trade potential of Romania's sea and river ports. This will increase the importance of the Black Sea area and the River Danube, thus ensuring a safe and solid infrastructure, well-integrated trans-European transport network (TEN-T). It will provide a coherent market basis for the free access and safe transportation of passengers, goods and services.

## **2.2. OBJECTIVES**

### **2.2.1. General objective**

The analysis of the current state and the conclusions of the SWOT analysis have emphasized the fact that the Romanian transport system is still insufficiently developed and of a poorer quality as compared to the EU Members States and to other East-European countries.

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<sup>95</sup> White Paper on European Transport Policies

<sup>96</sup> Estimate made by the Bucharest "Henri Coandă" International Airport, also taking into account the "Single European Sky" concept

In this context, the main objective is **the provision of an expanded, modern and sustainable infrastructure, as well as of all the other requirements concerning the sustainable economic development and the improvement of the quality of life, in such a way that the percentage of the transportation activity within the GDP increases from €3.6 billion (at present) to a minimum of €7.0 billion until 2015.**

Reaching this objective will directly contribute to the increase of Romania's accessibility, and ensure the transport system's inter-modality whilst promoting the balanced development of all means of transportation. This also implies the improvement of the services quality and efficiency, the decrease of the transport impact on the environment. The sustainable development of the transport sector will have a positive impact on the economy and indirectly, influence the transport network on the economic agents, the cost structure and improve the integration of the Romanian economy within the world economy together with increased stimulation of cross-border passengers and goods flows.

### 2.2.2. Specific objectives

- **Modernizing the national road network** consisting of modernizing, to European standards, 5.701 km of the road network, of which 1.347 km will be rehabilitated on TEN-T, setting the road structure in order to sustain an 11.5-t axis load and resizing of 1,933 bridges to E loading classes, during the period 2007–2015. Special attention will be given to the motorway construction; approximately 1,052 km will be built during this period. Approx. 301 km of ring roads will be built or modernized.
- **Ensuring railway inter-operability** in such a way that, for the period 2007-2015, the length of modernized operable railways will be 1,100 km, that will be part of the TEN-T, in addition 100 km which will be not part of TEN-T will also be modernised. The improvement of the railway system and increased intermodality<sup>97</sup> and the improved quality of the rolling stock will ensure that by 2013, at least 25% of the transported goods total and 35% of the transported passengers total will be carried by the railway network.
- **Increasing goods traffic through inland and maritime ports**, as well as on the two navigable canals, and through the improvement of the maritime infrastructure that by 2015, the goods traffic increases by 3.79 million tons through navigable waterways and canals and by 39.47 million tons through maritime ports, as compared to 2003 traffic figures.
- **Modernizing airport equipment and facilities** at the four national airports will allow for the increase of the passenger flow to 11.3 million passengers per year by 2015.

## 2.3. STRATEGY

The general and specific objectives of the development priority "Development and Modernization of the Transport Infrastructure" are carried out by means of measures grouped in three **sub-priorities**, as follows.

### 2.3.1. Modernization and development of the trans-European transport network and of the connecting network

This strategic element will generate the territorial cohesion between Romania and the EU Member States, by decreasing the travelling time to the main domestic and foreign destinations, and by modernizing and developing the road infrastructure (especially motorways) and the railway, maritime and air facilities, in order to meet the goods and passenger intensive traffic demands.

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<sup>97</sup> Final Commission communication no.COM(2003)110 on guidelines on additional indications for candidate countries

## Modernization and construction of trans-European road infrastructures

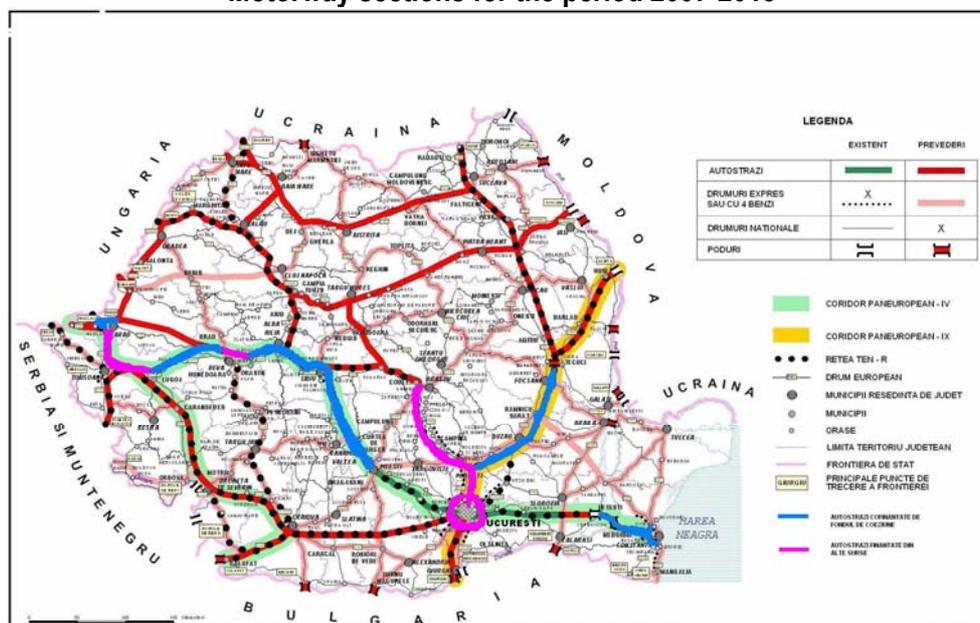
This measure will aim at finalizing the motorways currently under construction, building new motorways and express ways, building ring roads for the cities located on TEN-T, and modernizing the roads and bridges on TEN-T.

The main benefit obtained by road transport is the increasing of speed and capacities of changing the places on road pan-European transport corridors. According to assumed commitments of Romania in negotiation process for Chapter 9-“Policy in transport domain”, the implementation of the projects that will develop, and modernise the transport infrastructure on Corridor IV will be an absolute priority. The National Company for Motorways and National Roads in Romania will be the main beneficiary of financial allocation for road infrastructure development of national and European importance.

Romania will pay special attention to motorways construction, a field which is highly underdeveloped, as there are currently only 210 km of motorways, well below that of other EU Member States. By developing the motorways network, the traffic capacity will be higher, the running speed will increase up to 120 km/hour, and the traffic safety will be greater. The expansion of the motorways network has important social-economic advantages, such as an economic revival, new job opportunities, an accelerated development of the across regions and, last but not least, the acceleration of Romania's European integration process.

The main projects will be on the north side of Corridor IV, among Nădlac - Sibiu, Orăștie - Sibiu, Lugoj - Deva, Sibiu - Pitești, Cernavodă – Constanța localities.

### Motorway sections for the period 2007-2015



Source: MTCT

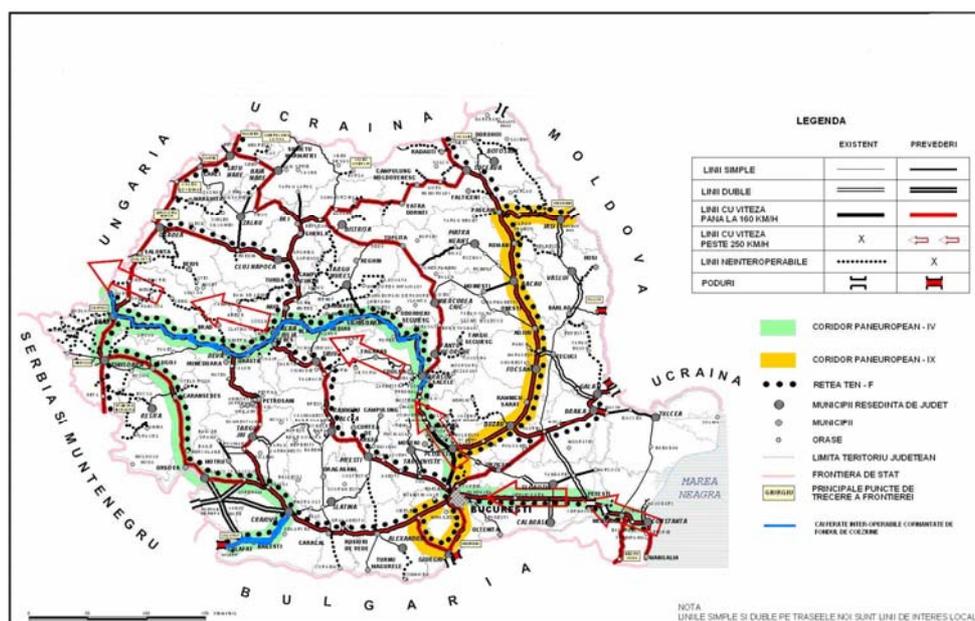
## Modernization and construction of trans-European railway infrastructures

The actions refer to modernizing the railway infrastructure that will mainly aim at increasing the attractiveness for the railway transport system by increasing the speed limit for certain sections within the inter-operable network (TEN-T, Corridors IV, and IX) to 160 km/hour for passenger trains and to 120 km/hour for goods trains.

It is intended for the railway transport system to maintain its market share of 25% - 35%, and its high level of traffic safety, to implement modern maintenance methods for the railway infrastructure and to create the necessary condition for the inter-operability with the European railway transport system.

During this period, some of the railway sections that will be rehabilitated will be Curtici - Simeria, Simeria - Coşlariu, Coşlariu - Sighișoara, Sighișoara - Braşov, Braşov - Predeal, and Craiova - Calafat.

### Inter-operable railway sections for the period 2007-2015



Source: MTCT

### Modernizing and expanding the trans-European navigation infrastructure

This aims at developing the Romanian navigation infrastructure, using at maximum the potential of the Danube River. In this respect, a series of projects will be carried out, that will contribute to the improvement of the navigation on the Danube and on the Danube-Black Sea Canal. The measures will include bank protection works and hydro-technical constructions consolidation works, the implementation of a photo-hydrographic measurement system and of a signalling and tracking system on the Danube.

The navigation conditions on the Danube, for Călărași – Brăila section, will be improved, and the works on the common Romanian-Bulgarian section of the Danube, navigable Danube-Black Sea Canal and Poarta Albă - Midia Năvodari Canal will continue.

### Modernization and expansion of the trans-European airport infrastructure

As for the air transport system, there will envisaged the modernization of air transport infrastructure and equipment. Special attention will be accorded to modernization and development of airport infrastructure, for the national airports—respectively “Henri Coandă” International Airport in Bucharest, “Aurel Vlaicu” International Airport in Bucharest-Băneasa, “Traian Vuia” Airport in Timișoara and the Constanța Airport. It is essential to prepare the airport capacity with a view to processing traffic in order to avoid congestions.

## Modernization and construction of connections networks to the TEN-T

The connection of the local/county/national transport network to the trans-European transport network will lead to the improvement of accessibility, resulting in a quicker access to the TEN-T and in the increase of goods and passengers flow transiting the country.

Special attention will be given to the inter-modal connections to improve passenger flows, and ensuring quick and comfortable inter-connection and the accessibility increase of the areas adjacent to the TEN-T.

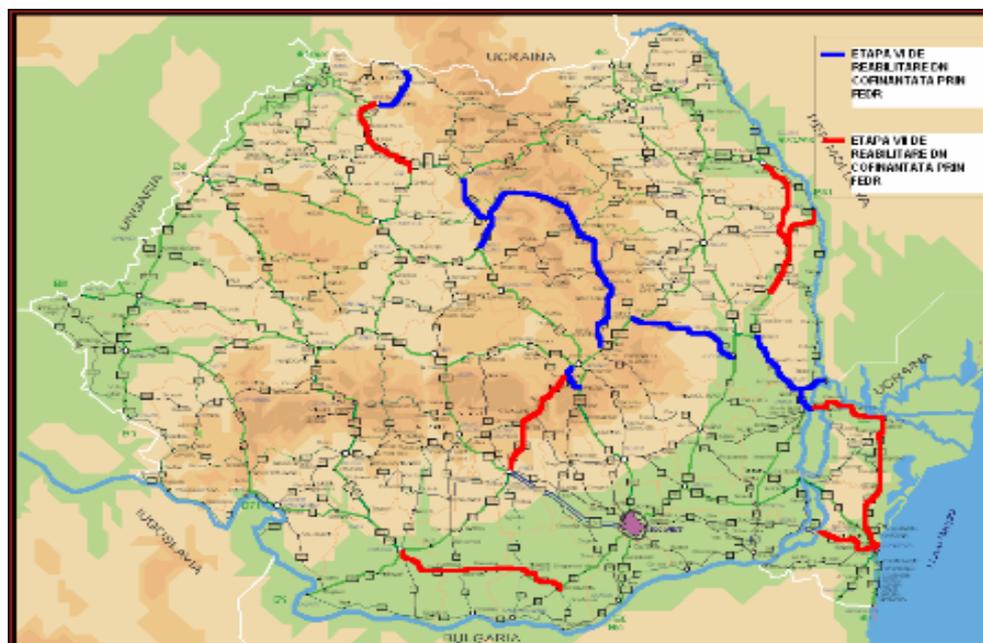
### 2.3.2 Modernizing and developing the national transport infrastructure and improvement of related services

This strategic element includes measures regarding the modernization and development of the transport infrastructure for the TEN-T; at the same time, it will have a direct impact on the national transport network outside the TEN-T, as well as on the improvement of railway services, both for passengers and goods.

#### Modernization and construction of national road infrastructures

An initial measure is focused on the road infrastructure and it includes: the construction of motorways, express roads, ring roads, and the modernization of national roads, other than those on the TEN-T. It is envisaged that part of the physical infrastructure will create the conditions that will allow for a sufficient accessibility in order to carry out the general objective of economic and social cohesion at the regional, national and European level.

#### Rehabilitation stages 6 and 7 for the period 2007-2015

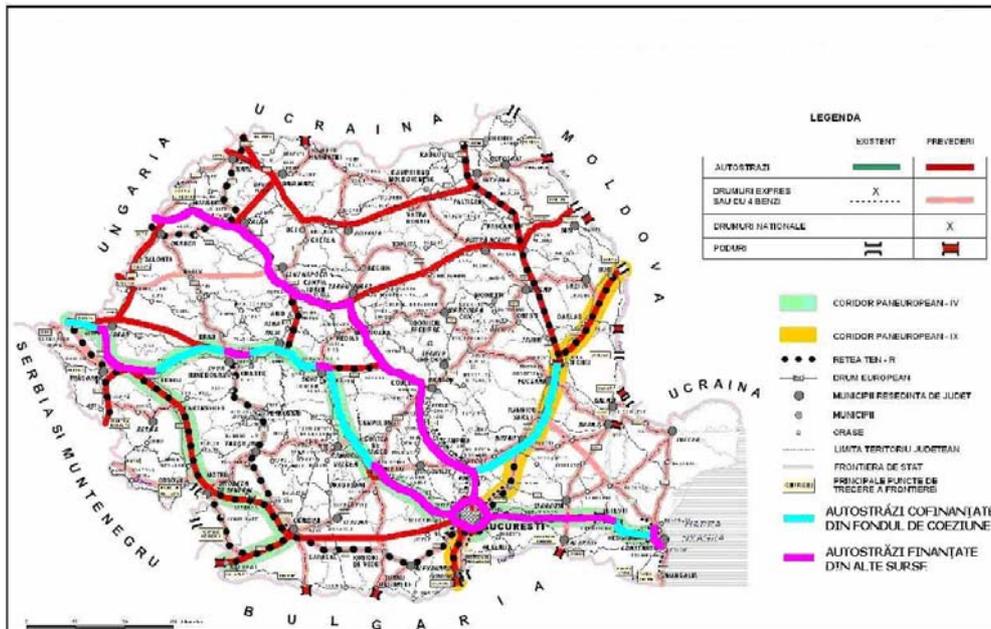


Source: CN ADNR SA

In collaboration with the specialized local and central authorities, the national road infrastructure will be revamped and developed, which will allow for the access to less developed regions, as well to the areas with high economic potential. In this respect, we will consider the existent and estimated trade flows for

the programming period 2007-2013 and, last but not least, the raw material supply needs for the industrial branches whose development is encouraged nationally and/or locally. We will also take into account the people's access to these areas, in order to ensure the workforce necessary to the proper development of the activity.

### Road network development for the period 2007-2015



Source: MTCT

Also, the works will continue on motorways route which is on the axis Bucharest-Brașov- Borș (Bucharest-Brasov-Targu Mures-Cluj Napoca-Zalau-Oradea).

### Modernization and construction of national railway infrastructure and improvement of related services

In this respect, we will ensure the inter-operability of the conventional railway network (TEN-T and outside the TEN-T) with the European railway transport network, by introducing the necessary ETCS (European Train Control System) elements both in the engines and the rolling stock, modernizing the centralization installations of railway stations through the introduction of electronic centralization installations, developing the IT system for all railway stations on the inter-operable network in Romania, developing the telecommunications network in order to ensure the data transmission support and the implementation of railway IT systems in all railway stations on the inter-operable network in Romania, the implementation of the national centre for the centralized traffic coordination on the Romanian territory and by the rehabilitation of energy-fuelling installations of the contact line. In addition, measures will be taken in order to elaborate preliminary studies on the route and costs of the high-speed railway network in Romania, in order to connect it to the European high-speed network.

In order to improve the passenger and goods railway transport system, it is necessary to purchase circulating material and to revamp it, within the context of the rehabilitation of passenger services, of the transport quality improvement and of the alignment to European standards, in the perspective of the integration into the European transport system. The railway passenger transportation should become an efficient transport system, capable of developing activities on the free transport market, by modernising f the rolling stock and to meet the current demands of the transport market of Romanian passengers,

particularly modernizing long-distance coaches and locomotives and by developing a modular rolling stock for short and medium distances, as an alternative to the classic system currently in use. These measures will lead to a better coverage of the transport market and a better access of the passengers to the main transport routes, by interconnecting them to the regional services, and to the increase of the passenger load for the main and regional routes.

### **Modernization and expansion of the national navigation infrastructures**

The measure focuses on the water transport system, where there were identified the following strategic actions: development of the transport infrastructure and port facilities, creation of premises for the increase of the goods traffic and training for sailors. In addition, the measure also focuses on the modernization and development of maritime and river ports, in the perspective of increasing the traffic of goods through Romanian ports, and on the efficient use of the port infrastructure, in such a way that, together with the activities considered within other NDP priorities, it contributes to the development of trade, tourism and recreation activities.

### **2.3.3. Sustainable development of the transport sector**

Through the measures described this strategy aims to integrating the principles of sustainable development within the transport sector, following the conclusions of the Cardiff European Council (1998) and of the European Strategy for Sustainable Development (Gothenburg 2001).

#### **Promotion of transport inter-modality**

The aim is to ensure the transport inter-modality by improvements of the road and railway infrastructure and by creating the logistic centres for inter-modal railway-road, railway-river, railway-maritime, road-river, road-maritime and road-air transport system.

There are measures for the creation of multi-modal goods facilities within international airports, as well as measures that will allow the port of Constanta to become a connection point in the Black Sea area, within the logistic chain of multi-modal maritime bases that will be created on Corridor IV by the maritime motorway for South-Western Europe<sup>98</sup>.

An aspect to be considered within the development of all means of transportation is the correlation with the measures that focus on the regional and local transport infrastructure, implemented through other sector/regional operational programs. Thus, there will be elaborated spatial planning plans at regional, county, and local level, which will provide the correlation of socio-economic and spatial development with the development of transport networks of national, regional, and local interest. Special attention will be given to the accessibility of tourist or tourist-potential areas and resorts<sup>99</sup>.

With a view to ensuring the connection between the means of transportation, the measures aim at public transport development, having in view expanding the Bucharest metro network, thus ensuring a quick and comfortable connection between points for passengers flows creation, as well as the increased access to areas that are adjacent to the capital, on TEN-T. The expansion of the metro

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<sup>98</sup> Maritime motorway from South-West Europe (Western part of Mediterranean Sea, connecting Spain, France, Italy, including Malta with connections to the South-Eastern maritime motorway and to the Black Sea, according to Decision no. 884/2004/EC of European Parliament and Council.

<sup>99</sup> These resorts/areas will be identified through direct consultations with the local authorities and the National Tourism Authority

network and the modernization of related services will lead to the increase of the metro traffic from 350,000 passengers per day at present to 700,000 passengers per day in 2013.

### **Improvement of traffic safety for all means of transportation**

The measure aims at providing transport services that comply with European safety, security, quality and cost standards. This implies the elaboration and systematic compliance with the specific safety, security, quality and cost standards, within the branch of transport industry. The compliance with the above-mentioned standards will be achieved by improving the technical state of the existent road and bridge network by carrying out the specific safety works, based on the requirements imposed by the increasing traffic, by the implementation of the meteorological programme SIMIN (National Institute of Meteorology and Hydrology) at national level (road sections and districts), and by checks on the overloading of vehicles above the accepted axis load through the intensification of vehicle weighing controls checks.

In addition, modern technologies will be applied, using procedures and materials that would lead to the diminution of the construction thickness of road layers and to the increase life of road surfaces, in order to ensure the users' high-level comfort. The arrangement of level intersections, the construction of railway passing places, the horizontal and vertical signalling, the information of all users, the use of the complex software PMS (Pavement Management System), BMS (Bridge Management System) and BCTDR (Central Bank of Road Technical Data) and the elaboration of information and orientation marks and signs on the road network will be a priority within the road infrastructure development and modernization policy.

In order to provide transport services to European standards, the development of the road infrastructure will be accompanied by the training of personnel who are responsible for the implementation of the new requirements and objectives. In this respect, these personnel must benefit from continuous professional training.

Special attention will be given to the implementation of intelligent transport systems, with a beneficial effect on traffic safety and this will lead to reductions in travelling time and fuel consumption. We will aim at integrating the above into the community policies in the field (introduction of telematic systems, the satellite navigation system etc).

In addition, this measure will be implemented by improving and developing the physical infrastructure, by preventive measures (road signalling, linear localities, press campaigns etc) and by supporting the road traffic legislation.

In order to increase the railway traffic safety, it is necessary to modernise the infrastructure and carry out specific rehabilitation works with a view to improving the technical specifications, which are currently above the accepted norms. There will be a programme to continue to implement traffic easement measures and introduce surveillance systems (video cameras, audio signalling bands, pedestrian crossing signalling and protection etc), as well as the infrastructure improvements at linear localities. This will also include the elimination of some railway level crossings. The cooperation between local authorities will be needed in order to maximise these benefits and prevent the expansion of linear localities alongside roads and/or ring roads, which could annul the overall objectives and investments.

The aim to diversify and modernise the rail services for both goods and passenger traffic through the introduction of new infrastructure, improved maintenance and use of technologies and the implementation of specialised IT&C communication networks. In addition, the aim is to improve and modernizing railway stations in order to ensure the inter-modality between the railway and road

transport systems, and at developing and correlating the high-speed passenger inter city trains, both for long and short-distances, with a view to increasing the attractiveness of the railway transport system.

Another measure will be represented by the improvement of the port service quality and efficiency and the increase of navigation and river safety and security through the development of the vessel traffic management information system (VTMIS) and the implementation of the automatic identification system (AIS) for national navigable waters, as well as the expansion of IT services, the use of electronic maps for the river transport system and of a modern measurement and signalling system for Romanian Danube sector.

The increase of the air transport safety level and the reduction of the generated costs will be carried out by improving the air traffic management. In addition, it will be implemented modern security measures at the level of civilian aeronautical agents.

### **Decrease of the impact of works and transport activities on the environment**

The measure on the reduction of the impact of works and transport activities on the environment aims at the development of efficient, non-polluting/environment-friendly infrastructures, in compliance with European and worldwide compatibility requirements.

### **Transport infrastructure safety**

Taking into account the regional and national weather changes, it is necessary to ensure the safety of the transport infrastructure through measures that prevent flood damage, the elimination of dangerous points and of speed limits imposed by flood conditions, landfalls, rock falls and other natural hazards. These measures will comply with environment protection criteria. We will consider those measures that will complete the measures undertaken through specific environmental programs.

## **2.4. Coherence with the EU and national policies**

<b>COHERENCE WITH EU POLICIES</b>		
<b>EU Policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<p>The White Paper of the European Transport Policy</p> <ul style="list-style-type: none"> <li>- Equilibrated development of all modes of transportation</li> <li>- Remove roadblocks</li> <li>- Security within the transport policy</li> <li>- Globalization of the transport policy</li> </ul>	<ul style="list-style-type: none"> <li>- Modernization and construction of the trans-European motorway infrastructure</li> <li>- Modernization and construction of the trans-European railway infrastructure</li> <li>- Modernization and construction of the trans-European navigation infrastructure</li> <li>- Modernization and construction of the trans-European airport infrastructure</li> <li>- Modernization and construction of the motorway infrastructure important at national level</li> <li>- Modernization and construction of the railway infrastructure important at national level, as well as improving the additional services</li> <li>- Modernization and construction of the navigation infrastructure important at national level</li> <li>- Inter-modality promotion</li> <li>- Improve traffic security on all means of transportation</li> </ul>	<p>2.3.1. Modernizing and developing the trans-European transport infrastructure and linking ways</p> <p>2.3.2. Modernizing and developing the transport network important at national and European level and improving the additional services</p> <p>2.3.3. Transport sector sustainable development</p>
<p>2001 Gothenburg European Council Conclusions</p>	<ul style="list-style-type: none"> <li>- Reduce the impact of transport works and activities on the environment</li> </ul>	<p>2.3.3. Transport sector sustainable development</p>

<b>COHERENCE WITH NATIONAL POLICIES</b>		
<b>National policies</b>	<b>Reflection of the national policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
Law no. 203/2003 on developing and modernizing the transport network important at national and European level and Law no. 71/1996 for the approval of the National Territory Design Plan – Section 1 – Communication ways	<ul style="list-style-type: none"> <li>- Modernization and construction of the trans-European motorway infrastructure</li> <li>- Modernization and construction of the trans-European railway infrastructure</li> <li>- Modernization and construction of the trans-European navigation infrastructure</li> <li>- Modernization and construction of the trans-European airport infrastructure</li> <li>- Modernization and construction of the motorway infrastructure important at national level</li> <li>- Modernization and construction of the railway infrastructure important at national level, as well as improving the additional services</li> <li>- Modernization and construction of the navigation infrastructure important at national level</li> </ul>	<p>2.3.1. Modernizing and developing the trans-European transport infrastructure and linking ways</p> <p>2.3.2. Modernizing and developing the transport network important at national and European level and improving the additional services</p>
Law no. 3/2001 to ratify the Kyoto Protocol	- Reduce the impact of transport works and activities on the environment	2.3.3. Transport sector sustainable development
Governmental Decision no. 321/2005 on evaluating and administrating noise	- Reduce the impact of transport works and activities on the environment	2.3.3. Transport sector sustainable development

## **2.5. CONTRIBUTION TO HORIZONTAL OBJECTIVES**

### **2.5.1. Equal opportunities**

Equal opportunities for men and women represents a major issue that affects the development of the economy and of the society at large. In the transport sector, men have an advantage in finding employment. Thus, special attention will be given to this aspect and measures will be taken in order to maintain the equality of opportunities principle not only for men and women, but also for disabled people, ethnic minorities and immigrants.

### **2.5.2. Sustainable development**

Sustainable development will be addressed within the transport sector by reducing the environment impact of transport activities by lowering the level of emissions and polluting agents. This will be in line with the commitments made during the negotiations on Chapter 9 “Transport Policy”, as well as in international treaties and agreements that Romania and/or the EU are part of (UN Framework Convention on climate change in 1992, Kyoto Protocol in 1997, Geneva Convention on trans-border air pollution etc). There will be permanent collaboration with the relevant environmental protection authorities. Romania’s objective is to reduce greenhouse emissions by 8% as compared to the 1989 level, for the first part of the commitment, (2008-2012) as an integral part of the objective on the reduction of global greenhouse emissions by at least 5% as compared to the 1990 level, for the period 2008-2012<sup>100</sup>.

These objectives will be achieved through the expansion of combined and inter-modal transport systems together with appropriate carrying capacity, by using specialized rolling stock with high performances and improved energy consumption and environment protection level, by using technically

<sup>100</sup> Kyoto Protocol, 1997

and operationally high-performance means of transportation and by creating the noise barriers and acoustic isolation conditions (tree planting / protection measures).

In addition, we aim at introducing logistic-based integrated services in the road transport system, increasing the use of rail electrification, developing modular units for goods trains, expanding the use of Diesel and electric frames within the passenger railway transport system, including the expansion of the electric railway network, by introducing modern loading-unloading systems/technologies in ports and by implementing de-polluting technologies specific for the maritime and river transport system. The improvement of the conventional railway infrastructure and of the rolling stock which leads to the increase of the attractiveness of the railway transport system, thus integrating it within the main EU objective for the period 2007-2013; it also lead to the reconditioning of the railway transport system by providing a non-polluting alternative which is safer from the points of view of transported goods and passenger integrity, as compared to other means of transportation.

As for the air transport system, we aim to discourage the use of high noise aircraft and to use modern noise monitoring systems at areas adjacent to airports to monitor the waste disposal systems and landing-taking off procedures in an effort to reduce the impact on residential areas.

Special attention will be given to the provisions of the “Green Paper on noise-prevention measures<sup>7</sup>”, through the use of modern source noise monitoring systems that help eliminate source noises, thus protecting public health.

Based on the conclusions of the Marco Polo Programme concerning the transfer of goods transportation from the road transport to the other means of transportation<sup>101</sup> and taking into account the European Commission’s request to continue the programme<sup>102</sup> for the period 2007-2013, Romania has complied with its procedures in due time and is signing the Memorandum of Understanding between Romania and the European Community confirming Romania’s participation in the Marco Polo Programme. This will adjust and encourage the measures aimed at the inter-modality and the combined goods transportation, as well as the development of the carrying capacity.

Through government programmes, there will be encouragement to renew transport ‘stock’ (road vehicles, railway rolling stock, maritime, river or air fleets), which represents one of the main ways of achieving the objective of sustainable development. This measure that includes financial and normative components will have a decisive effect on the decrease of the soil, air and water pollution level, as well as on the increase of the transport energetic efficiency. Last, but not least, this renewal will have positive consequences on the transport safety at large.

### **2.5.3. Information Society**

During and after the programme, it will require the continued involvement of all interested economic and social partners to ensure the measures through which the specific and general objectives will be achieved continue. In this regard the society based on knowledge that will have to be used to maximum the potential and IT&C technology widely deployed over the more traditional forms and ensuring all citizens benefit from the advantages of the information society.

For the railway transport system we are aiming at diversifying and modernizing the goods and passenger transport system by using new infrastructure and construction and maintenance technologies. This will involve implementing specialized IT&C specialized communication networks,

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<sup>101</sup> Regulation 1382/2003 of July 22<sup>nd</sup>, 2003

<sup>102</sup> Final regulation proposal „Marco Polo” of the European Commission no. COM (2004)0478

digitalizing the activity of transport operators, implementing multi-modal information systems in real time for passengers and implementing the IT system "Ticket sale and reservations for passenger trains" for the entire conventional railway network in Romania.

In addition, the aim is to improve and modernise railway stations in order to ensure the inter-modality between the railway and road transport systems, and to develop the inter-connectivity of time-tabling for high-speed passenger trains, both for long and short-distance, with a view to increasing the attractiveness of the railway system for users.

## 2.6. INDICATORS

In order to monitor the above-mentioned objectives, there are proposed the following key indicators that must be followed during the implementation of the National Development Plan:

Indicators	UE-15 Reference (2000)	Romania	
		Reference year (2004)	Target objective 2015
Annually transported passengers (passengers/km)	-	19,707.9 mil.	
Total of annually transported goods (tons/km)	1,701,354 mil.	58,951.3 mil.	
Rate of goods road transportation out of goods transportation total (%)	78	63.09	
Rate of passenger road transportation out of passengers transportation total (no. of passengers) (%)		47.9	
Rate of goods railway transport out of goods transportation total (%)	14,6	28.9	25
Rate of railway passenger transport out of total passenger transport (%)		43.8	35
No. of transported passengers on rivers and inland canals out of total transported passengers (mil)	-	0.2	1.0
Goods conveyed in transit through ports (mil tons) – total, of which:		71.74	115
-maritime	-	40.53	80
-river		31.21	35
No. of transported air passengers out of passengers total (mil)	-	3.39	11.3
Transported goods by air out of total transported goods (ton)	-	5,500	43,750
Length of motorways (km)	-	211	1,263
Length of inter-operable railways (km)	-	90	1,200
Length of rehabilitated TEN-T, only national roads (km)	-	1,565	2,912
Length of rehabilitated national roads, outside TEN-T (km)	-	877	5,231
Ring roads (km)	-	5.47	307
Bridges resized at Class E (pieces)	-	92	2,025

Source: National Institute of Statistics

## **P3. PROTECTION AND IMPROVEMENT OF ENVIRONMENT QUALITY**

### **3.1. RATIONALE**

Located at the crossroads between the Carpathians-Danube and Danube-Black Sea ecosystems, Romania has a beautiful diverse and balanced natural heritage. Romania's natural resources have a special value to the EU natural heritage, which will thus gain two of the bio-geographical areas that are highly important at the global level – the Danube Delta and the Carpathians.

Despite this, the natural environment in Romania has been highly affected since before 1990, following the industrialization process and the unsustainable agricultural development, doubled by a lack of interest of the political system regarding environmental issues. During that period, the industrial policy aimed at developing the heavy and energy industries, depending mainly on the use of carbon and on high energy consumption. Moreover, the large-scale agricultural production was tied to the excessive use of chemicals. Furthermore, the environment legislation was not taken seriously at the time.

Consequently, at the beginning of the '90s, Romania's environment was seriously affected, by high levels of emissions in the atmosphere and in the water and by a severe deterioration of the land, due to agricultural, industrial and domestic solid waste products. The uncontrolled deforestation that reached critical limits in some Romanian regions also had a negative impact on the environment.

By applying European directives in the field, Romania has adopted new laws and standards related to the environment. Despite being costly and demanding, their implementation represents a radical change in national policies and in the way of approach concerning the environment protection. In addition, the vast reorganization in industry and agriculture and the reduction of solid fuels extraction activities and of the raw material use have contributed to the improvement of the quality of environment factors.

Beginning with 1995, when the new environment protection legislation came into force, Romania adopted a series of strategic sector norms and documents, with a view to take into account the principles of sustainable development. These national strategies also include the conclusions and recommendations of European sustainable development strategies (Lisbon and Gothenburg) and of the 6<sup>th</sup> Environment Action Program, with a view to ensure the preservation, protection and improvement of the environment, the protection of public health and the sustainable use of natural resources.

In order to contribute to the development of the Romanian under-developed regions that are considered by the EU cohesion policy, Romania still has to significantly invest in the environment infrastructure, especially in the water, solid wastes and air quality sectors. In addition, Romania has to invest in the development of efficient environment management systems (especially in the water and solid wastes sectors), with a view to improve the quality of the services provided to the population and to create a competitive business environment. Viable management systems are also necessary for the protection or capitalization of natural resources.

The new European dimension also imposes a better quality of the environment, as a key requirement for the EU accession. Even though Romania has recorded a significant process since 1990, numerous efforts and resources are still necessary in order to meet the EU standards. For some of the fields that require the most important financial efforts for conformity and which cannot be implemented until the accession date, transition periods have been negotiated. These fields are: drinking water, construction/rehabilitation of used waters purification stations, the closing-down of non-compliant warehouses, the packing waste and packing management, and the control of industrial pollution.

## Public utilities

In Romania, the people's access to public utilities is still very limited, being much beyond the level of the European Union.

### A. Public services for the water sector

The percentage of the Romanian population connected to the centralized water and sewerage systems is only 52%, as compared to the EU average, i.e. 70% in the 10 new member states and over 90% in the 15 EU member states.

For the past 10 years, the water consumption has decreased due mainly to the introduction of water consumption measuring systems and the reduction of the industrial activity. In 2002, the supplied water quantity was of 1,349 million m<sup>3</sup>, 33.6% less than in 1995. Due to the unequal distribution of water resources across the country, insufficient regularization level of water streams, significant pollution of several domestic rivers, significant parts of the country do not have sufficient water resources during the entire year and problems occur especially during droughty periods or harsh winters.

Out of the total population of 21.7 millions, 14.7 million inhabitants (68%) are connected to the drinking water supply network, 11.3 million in the urban areas (98% in the urban population) and 3.4 million in rural areas (33% of the rural population). In 2002, 2,951 localities had centralized drinking water distribution systems, of which 265 are municipalities and cities (100%), while 2,686 are rural localities (17%).

The main problems that water and sewerage supply sector services are confronted with are presented in brief, as follows:

- lack of funds and long-term development programs that lead to low efficiency and reduced sustainability of the water and used water infrastructure;
- insufficient investments in the utility equipment and management that have led to a precarious condition of both water and wastewater networks and of treatment/purification facilities;
- inappropriate operation and maintenance services;
- high non-measurement percentage, due to losses, bad payers and to the lack of accounts transparency (financial status);
- inappropriate institutional frame and limited experience in promoting, managing and implementing large-scale investments;
- lack of training plans;
- outdated IT systems;
- unclear definition of the role and responsibilities of the involved parties/authorities;
- inefficient management regarding operation and personnel costs.

At the same time, in Romania there are 263 urban wastewater treatment plants, where only 77% of the total debit disposed of through public sewerage networks is treated, while 47 urban localities spill their wastewater without prior treatment.

Following the negotiations on Chapter 22 – “Environment”, Romania has been granted several transition periods in order to align itself to the relevant directives in the water sector. Thus, for the Directive on the treatment of urban wastewaters, Romania must align itself by 2015 for the construction of sewerage systems and of wastewater treatment plants in the urban establishments of more than 10,000 inhabitants, and by 2018 for populations between 2,000 and 10,000 inhabitants.

The necessary costs for the alignment with the European Directives in the water sector have been estimated to approximately €12 billion (according to the assessment made within the PHARE project

“Technical assistance for the environment cost assessment and the elaboration of investment plans in Romania”).

Important investments aimed at improving the water and wastewater infrastructure have been carried out in the most important municipalities, those having a population of over 100,000 inhabitants. They have benefited from support through the programs co-financed by the EU - ISPA, MUDP and PHARE. Nevertheless, these programs have only focused on the most important priorities with a view to align with the EU requirements during the transition asked for. Only two municipalities have service contracts with private operators.

Additional investments have been carried out in several small establishments through the SAPARD program. The main problems continue to exist with regards to small and medium establishments, where, up to now, limited investments have been carried out and where there is a reduced financial and institutional capacity for large-scale programs. Thus, investments and assistance are needed in order to build/modernize the water and used water infrastructure in order to provide public services at the requested quality.

## **B. Public services for the solid waste sector**

In Romania, the solid waste management was not taken into consideration prior to 1990. Even though certain progresses have taken place since then, important resources are necessary in order to improve the solid waste infrastructure and to develop an efficient solid waste management.

In most counties, the existent infrastructure complies only to a small extent with the provisions of the solid waste sector directives.

Of the 116 non-dangerous solid waste landfills, 11 landfills comply with the requirements of Directive 1999/31/EC, 4 landfills will comply with these directives by 2009, 101 landfills which are currently inappropriate will be closed down gradually (36 landfills will cease their activity on December 31<sup>st</sup>, 2006, 42 landfills during the period January 1<sup>st</sup>, 2007 – July 16<sup>th</sup>, 2009, whilst 23 landfills will be closed down by the end of the transition period of July 16<sup>th</sup>, 2017, by using solid waste “hydro-transport”-based installations).

The storage of non-dangerous industrial solid wastes will be carried out by July 31<sup>st</sup>, 2009 in the existent appropriate and inappropriate facilities or, at the same time, in appropriate urban non-dangerous solid waste disposal facilities. From 2009 only non-dangerous industrial solid wastes, for which treatment or disposal is not feasible will be disposed of using appropriate solid waste landfills.

At the same time, Romania is planning to reduce the volume of inappropriately stored solid wastes, from the estimated quantity of 3.75 million tons/year in 2004 to 2.2 million tons/year by 2013. In 2004, a volume of approximately 383,500 tons of industrial solid wastes was stored.

Following the negotiations on Chapter 22 – “Environment”, Romania has been granted a transition period until December 31<sup>st</sup>, 2013 to meet recycling targets. In order to meet these targets (25% and 50% respectively), as well as those specific for any packing category by 2013, Romania must develop new recycling and recovery installations.

In order to carry out a realistic packing wastes management, it is necessary to develop an appropriate sorting system for the selective collection of the wastes.

Of the 42 counties, 7 counties are currently implementing integrated waste management projects, co-financed through the ISPA program. Another 11 counties have built new facilities, especially waste landfills, within public-private-type partnerships.

Despite this, the solid waste production in Romania is still high (approximately 34.08 million tons for 2002); the packing waste recycling percentage continues to be low (approximately 20% of the total packing wastes in 2002); selective collection is implemented especially in pilot centres. Moreover, the most important problem is represented by the high number of old solid waste landfills, both in urban and in rural areas, that affect the environment and the public health and which, consequently, must be closed down, as they do not comply with the legal requirements.

On the other hand, the investment contribution in the public service infrastructure also aims at eliminating such differences in the sector between various regions.

## **Sector environment management systems**

### **A. Water protection**

The improvement of the public utilities services (as they have been presented above) in the water sector is closely tied to the efficient management of water resources, thus contributing to their sustainable development. The objective is currently affected by the following aspects:

- Limited water resources – the transport of water resources poses technical and economic problems; a national inter-connection system cannot be carried out;
- The water resources available in Romania are strongly affected by human activities;
- The capacity of wastewater treatment plants is insufficient;
- The insufficient drinking water distribution in water supply systems;
- The insufficient number of wastewater treatment plants, as well as the necessity of their modernization;
- The lack of a systematic approach in establishing investment projects;
- Combined sewerage systems;
- Lack of regional environment master plans;
- Inadequate management of sludge from wastewater treatment plants.

The main objectives regarding water protection in Romania, in accordance with the EU requirements, include the following aspects: the improvement of the status of water resources and of aquatic ecosystems; the protection of drinking water, the encouragement of the sustainable use of water and the reduction of flooding and drought side effects.

The quality of surface waters is especially affected by centre-like pollution sources (cities and municipalities, industrial installations, etc.). During 2004, the global river quantity, assessed on the basis of the 633 surveillance sections, was as follows: quality class I – 7.9 %; quality class II – 35.2%; quality class III – 33.2 %; quality class IV – 16.4 %; quality class V – 7.3 %.

Of the total river length analysed during 2004 (22,570 km), 2,515 km (11.1%) belong to quality class I, 8,566 km (38%) in quality class II, 7,323 km (32.4%) in quality class III, 3,212 km (14.2%) in quality class IV and 953 km (4.2%) in quality class V.

Nevertheless, the water protection field needs significant investments. For the past 10 years, the policies in this field have focused especially on the improvement of the water quality, more precisely on the reduction of centre-like pollution sources. Despite the fact that a certain improvement level of the river quality has been reached (a value decrease for quality indicators  $CBO_5$ ,  $CCO_{Cr}$ , heavy metals), the situation is far from satisfactory. The water nutrient content is still high, leading to the eutrophication of water streams and basins, which exposes natural receivers to important risks.

Even though progress has been made regarding the construction of wastewater treatment plants, most of them only ensure the mechanical and biological treatment; thus it is necessary to extend them to advanced purification stages (elimination of nitrogen and phosphorus), in order to comply with the requirements for sensitive areas.

Following the negotiations on Chapter 22 "Environment", the entire Romanian territory has been qualified as a sensitive area. This implies higher costs for the better treatment of wastewaters.

The works program for establishments larger than 10,000 inhabitants provides for the construction and rehabilitation of wastewater collection and treatment systems, by the end of 2015, for small and medium establishments whose impact might lead to the failure to meet the indicators for a *"better water state"*, as it is defined in the Framework Directive on Water. In addition, again by the end of 2015, all the establishments of over 10,000 inhabitants must be equipped with reduction installation of the nutrient concentrations.

After 2015, purification stations and measures have been envisaged for small establishments, and solutions will be identified for large surface and small population density establishments, where it is necessary to implement an individual approach on a case-to-case basis. Small treatment plants of individual solutions will not influence the achievement of the "good water state".

To conclude, we must create specific developed and operational water management systems. This implies investments in appropriate water and waste water facilities together with efficient operational systems.

## **B. Specific waste management systems**

Up to now, in Romania, the public solid waste services have focused on domestic waste disposal (as mentioned above). In addition, except for the counties where ISPA projects are being implemented, there is no integrated approach concerning the municipal solid waste management.

Before the current legislation was adopted, there had been public-private partnerships for the construction of solid waste landfills, for waste collection and transport, but not for selective collection. For the achievement of waste recycling targets compost facilities need to be developed and inappropriate waste landfill sites closed down.

Consequently, it is necessary for the existing waste facilities to be expanded in order to create efficient integrated waste management systems at regional/county level, as well as to take into consideration the waste categories that require specific measures. In this respect, special attention must be given to the following aspects:

- **Disposal and recycling of municipal wastes**

Municipal waste is mainly still stored, while the selective collection and waste recycling are insufficient. As for waste recycling and capitalization, the National Waste Management Plan provides the following targets for various waste categories:

- Material and energetic capitalization of about 50% of biodegradable wastes by 2013;
- Energetic capitalization of about 50% of the quantity of sawdust by 2013;
- Global capitalization of 50% and individual capitalization of 15% for plastic, by 2011;
- Recycling of 22.5% for plastic, by 2013;

- Recycling of 60% depending on weight, for paper and cardboard and of 50% for metals, by 2008;
- Recycling of 15% for wood, by 2011;
- Recycling of 60% for glass, by 2013.

Only six municipalities have developed systems of waste selective collection and of biodegradable waste composting. The treatment of biodegradable municipal waste is considered only at the level of pilot projects.

- **Packing wastes**

Special attention must be given to the prevention of packing waste generation, to ensuring their capitalization/recycling, as well as to the minimization of the risk posed by the presence of dangerous substances in packages. The separate collection, sorting, processing and final recycling of packing wastes will be carried out in such a way as to reach a packing waste recycling rate of 55.1% and a packing waste capitalization rate of 62% (785,225 tons) by 2013.

- **Dangerous wastes**

The management of dangerous wastes has become a global issue. This waste category has the greatest impact on the environment and on public health. An efficient waste management is a complex problem and requires a correct and methodical approach that aims, first and foremost, at their prevention. The prevention of dangerous wastes production must be planned in inter-dependence with raw material, finite products and involved technologies management.

Not only would the prevention of waste production reduce the waste management costs for the companies involved, but it would also save resources and energy, leading to much lower production costs. It is especially necessary to take environment protection measure within small and medium enterprises.

Romania does not have a well-developed service network in the field of waste management, which would ensure the collection and/or capitalization/treatment services for dangerous wastes.

In Romania, there is a small number of service providers for the management of dangerous wastes. These usually provide collection services, without including transport services, due to the insufficient transport capacity. The dangerous waste management transportation is provided by waste producers. Nevertheless, more than 89% of the total dangerous waste quantity is generally stored nearby the generating source, with minimum transportation costs, except for medical wastes, used oils and the wastes collected and transported in order to be treated/capitalized and/or to be finally disposed of.

Romania must develop a high dangerous waste management system that meets the following objectives:

- Reducing the dangerous waste storage possibilities in the same place as other industrial wastes;
- Developing collection and transportation services towards authorized treatment, recycling and/or final disposal of the wastes, to the interest of the industry;
- Regulating and controlling the collection and transportation activities, in order to ensure the safe transit of dangerous wastes;
- Avoiding excessive rules and regulations and the repeal of inappropriate regulations and control.

As far as *construction and demolition wastes* are concerned, in Romania, the current total quantity therefore is much lower when compared to EU member states. In general, this type of wastes is reused. Only a small percentage of wastes from constructions and demolitions is collected and stored, thus resulting in small quantities from this category.

In parallel with the country's economic development, the construction of new building, the reconstruction and renovation activities of existent buildings and the demolition of old buildings that cannot be renovated will lead to the considerable increase of the waste from constructions and demolitions, and their quality will greatly vary. For this reason it is necessary to promote investments for their reuse, recycling, and treatment in order to appropriately recover/dispose of them, by the strict separation of construction wastes from demolition ones and by the continuous improvement of processing and recycling schemes.

In order to avoid the ecological impact on soils and underground waters, we must ensure the collection of construction and demolition wastes in all regions (highly urban, urban and rural) and their use after pre-treatment in road modernization or other activities.

As far as *medical wastes* are concerned, hospitals must take measures for the minimization of the total quantity of this type of dangerous wastes. For the final disposal of dangerous medical wastes, the three existent private installations must be improved, while old hospital crematoriums will be gradually closed down, depending on the existence of authorized regional incinerators for dangerous wastes. In order to pre-treat dangerous medical wastes, specific mobile or immobile technologies will be implemented.

With regards to *electric and electronic equipment wastes* it is necessary to pay special attention to the development of a selective collection system, as well as to ensuring optimal storage, treatment, capitalization, recycling and disposal solutions, in order to have a rational ecologic management.

At present, in Romania, there are no recycling/capitalization solutions for activated glass, plastic and textiles resulted from the dismantling/treatment of electric and electronic equipments.

### **C. Conservation and improvement of natural resources**

During the last decades, the natural conditions and landscapes in Romania have been influenced by the evolution of economic activities, as well as by the economic growth of the past years. This has lead to an excessive exploitation of natural resources. Under these circumstances, many flora and fauna species are in danger and changes to natural habitats and landscape represent important indicators as to the deterioration of the environment.

Following the negotiations on Chapter 22 "Environment", Romania has the obligation to establish the Nature 2000 Network by the accession date. After this date, Romania must provide management and monitoring plans for all the sites to be included in this network.

This aspect refers to short and long-term activities and focuses, first and foremost, on the preservation and the efficient and balanced use of renewable resources (water, flora and fauna). The sustainable development is a necessity. The criterion of sustainable development takes into account permanent strategic objectives.

### **D. Air quality**

Despite major improvements, there is still a need for additional efforts aimed mainly at the improvement of the air quality, especially in urban and industrial areas, energy consumption which increased in the

Romanian economy and the change in the use of less polluting fuels and alternative or renewable energy resources when possible.

In Romania, there are only a few organisations that have developed self-monitoring systems for air polluting factors. Consequently, it is necessary to increase the awareness amongst polluters and promote their responsibilities. Enforcement process will for the new environment legislation will assist as well as implementation of a voluntary reporting and information dissemination system to those interested.

Taking into account the fact that many areas are still polluted by industrial sources, measures are necessary in order to improve the air quality, especially for the reduction of sulphate oxide nitrogen and dust emissions resulted from large burning installations. In addition, we will promote projects that aim at the rehabilitation of centralized thermal energy supply systems.

Through the implementation of Directive 2001/80/CE on the limitation of emissions of certain pollutant into the atmosphere resulting from the large combustion plants (LCP), Romania will achieve environment performances in accordance with the EU policy on the improvement of air quality. The measures undertaken in order to meet the set targets and objectives suppose the implementation of the best available techniques, specific for large combustion plants, for the desulphurization and reduction of dust and nitrogen oxides emissions from burning gases, the carrying out of the appropriate measurements for relevant pollutants in accordance with the CEN standards, etc.

As a general conclusion, Romania must make considerable efforts in complying with the internationally accepted environment principles, maintaining, at the same time, the historical traditions and taking into account the country's current social-economic status.

An efficient environment management is the basis for social acceptability and economic sustainability in Romania.

The protection of the environment is a key element in providing sustainable living possibilities both for current and future generations.

An investment programme for the improvement of environment management systems will help Romania become more attractive to the business investment. This will facilitate the economic development, especially in less developed regions, and thus it is necessary to take additional measures within the development priorities related to the Competitiveness and Regional Development.

## **3.2. OBJECTIVES**

### **3.2.1. General objective**

The global objective of this national priority within the National Development Plan is represented by the **protection of the environment quality, in accordance with Romania's social and economic needs, thus leading to the significant improvement of the quality of life by encouraging the sustainable development.**

In addition, this global objective is closely tied to the fulfilment of the commitments undertaken in the negotiation process for Chapter 22 "Environment", as a key sector for the EU accession.

### 3.2.2. Specific objectives

- **Improvement of life standards by providing public utilities services at the requested quality and quantity standards, for the water and waste sectors**
  - Development of water and wastewater integrated systems in 40 regions/counties by 2015;
  - Construction of integrated waste systems in 20 regions/counties and expansion of municipal waste infrastructure in other 20 regions/counties inhabitants by 2015.
  
- **Improvement of environment quality, focused on conforming at relevant Directives of European Union**
  - Improvement of water quality through:
    - the adequate treatment of wastewater for a minimum of 250 establishments with more than 10,000 equivalent inhabitants (i.e.), representing almost 62% of the bio-disposable charge by 2015;
    - ensuring the quality of drinking water, according to the European standards in all urban establishments, as well as in rural localities of more than 10,000 equivalent inhabitants, by 2015.
  
  - Improvement of soil quality through
    - closing down minimum of 80 municipal waste landfills which do not conform to EU standards and cleaning up the related areas, simultaneously reducing the stored waste, capitalisation of reusable waste, adequately separating and managing dangerous waste and preventing leaking out the surface water into the stored waste;
    - rehabilitating the contaminated sites with a high level of pollution.
  
  - Air quality protection in the most exposed areas, through:
    - revamping the public heating systems in the localities with a high pollution degree.
  
  - Improved natural resources management with a view to sustainable development:
    - establishing adequate management plans in the protected areas of priority national interest (Nature 2000 network);
    - carrying on works for protection against natural disasters, especially floods, in the most exposed regions.

### 3.3. STRATEGY

The strategic directions of Priority no. 3 of the National Development Plan – “Protection and improvement of environment quality”, are in accordance with Romania’s policy long-term objectives in the environment sector and are based on the European Strategy for Sustainable Development, as well as on the EU 6<sup>th</sup> Action Program on the Environment. The Lisbon agenda is also taken into consideration. Major infrastructure investments are necessary in the field of environment protection in less developed regions, in order to encourage the economic increase and the long-term convergence with the situation in the member states. The existence of an efficient infrastructure is one of the preliminary conditions for the development of the business environment and for the creation of new employment opportunities in the environment sector.

The strategic actions included in Priority no. 3 of the National Development Plan come as an addition to the environment measures included in Priority no. 6 on the Regional Development, Priority no. 1 on the Increase of economic competitiveness and Priority no. 5 on Agriculture and Rural Development. In

addition, the aspects related to the environmental education are included in Priority no. 4 on the Human Resources Development.

Within Priority no. 3 of the National Development Plan, there are the following **sub-priorities**:

- Improvement of living standards by providing public utilities services at the requested quality and quantity standards, for the water and waste sectors;
- Improvement of sector environment management systems.

### *3.3.1. Improvement of living standards by providing public utilities services at the requested quality and quantity standards, for the water and waste sectors*

#### **Development of water and wastewater infrastructure systems in less developed regions and decrease of differences between regions**

Following the negotiations on Chapter 22 “Environment”, Romania has undertaken a series of commitments that imply considerable investments in the water and wastewater sector, in all urban/rural villages and towns with more than 2,000 equivalent inhabitants, during a relatively short transition period, as follows:

- 2015 – alignment for sewerage systems and purification stations of used waters towns with more than 10,000 equivalent inhabitants.
- 2018 – alignment for sewerage systems and wastewater treatment plants in villages and towns with between 2,000 and 10,000 equivalent inhabitants.

In order to optimize investment and operational costs included in the above-mentioned commitments, the projects will be grouped (e.g. those located in the same hydro-graphic basin) and will include priority investments in order to comply with the relevant Directives water and used water.

In addition, another objective is represented by the people’s access to water and used water public utilities services, at the requested quality standards and at an acceptable tariff (lower than 4% of household income).

The projects to be financed within this priority aim at capitalizing on the previous experience from the MUDP, ISPA and SAMTID programs.

The targeted beneficiaries are municipality associations, created in order to implement the regional projects. A preliminary condition for the approval of the projects is the creation of the single regional operator that would cover at least the project area.

The main indicative actions considered in this respect focus on the expansion/improvement of the water and wastewater infrastructure in the targeted localities and the creation/consolidation of regional companies.

Works for modernising water infrastructure will take into account the land use territorial/regional planning. Special attention will be paid to the areas with poor operations for the supply of drinking water and sewerage systems, areas with reduced water resources and areas with polluted water resources, requiring priority rehabilitating measures.

## **Construction of integrated waste systems in less developed regions/counties and enforcement of the “hierarchy of waste”**

The aim of this strategic component is the improvement of solid waste management standards, in accordance with the hierarchy of waste (prevention, selective collection, capitalization and recycling, treatment and disposal, closedown of inappropriate landfills). Romania has specific commitments in this respect. The accepted transition periods in order to meet the European standards on waste management include:

- Non-dangerous solid wastes, located in urban areas – transition period until 2017;
- Temporary storage of dangerous industrial wastes – 2009;
- Non-dangerous industrial wastes warehouses – transition period until 2013.

In order to comply with the above-mentioned commitments, integrated waste management projects will be developed, in accordance with the National Plan and the Regional Waste Management Plan.

The projects in question will cover at least the main urban and rural establishments, at the county level, the beneficiaries being the local/county authorities.

The integrated waste management systems will include the following measures:

- Providing appropriate waste collection and transport facilities in the targeted localities;
- Construction of appropriate treatment/disposal facilities;
- Closedown of inappropriate landfills affecting the public health and the environment.

### ***3.3.2. Improving sector environment management systems***

#### **Development of specific water management systems**

The main objectives of this strategic component are:

- Decrease of water streams pollution, especially through the implementation of Directive 91/271/CEE on the purification of urban wastewaters and by providing an appropriate management of the sludge resulting from wastewater treatment plants;
- Access in specific regions to the public sewerage and water supply systems.

The first objective will be achieved by measures focused on the construction/rehabilitation of wastewater treatment plants that will ensure high-level treatment, in order to comply with the requirements set for sensitive areas (nutrient disposal) and for the appropriate sludge treatment and disposal. The main targeted beneficiaries are the municipalities with more than 10,000 equivalent inhabitants. In addition, the establishments with an equivalent population between 2,000 and 10,000 inhabitants will be eligible in well-defined cases.

The second objective focuses on the provision of support for the construction/rehabilitation/modernization of the water and used water infrastructure for specific areas that cannot be included in major regional projects (sub-priority 3.3.2). In this case, special attention will be given to the requirements of Directive 98/83/CE on the quality of the water used for human consumption. The targeted beneficiaries are the local authority associations in the specific areas.

The actions that must be taken by this strategic element are as follows:

- Construction/expansion of wastewater treatment plants to reach the appropriate treatment level, to improve the quality of water streams;
- Construction/modernization of water and wastewater facilities in specific areas.

## **Expansion of specific waste management systems**

This strategic component aims at expanding/creating waste management systems in counties where existent investments are limited to a waste warehouse and to the waste non-selective collection and transportation. The aim is to create a modern waste management system that would contribute to the minimization of the waste quantity due to be stored, by establishing an appropriate system that deals with each type of waste.

The actions in this respect will include the expansion of domestic waste management facilities, as well as the construction of appropriate facilities for dangerous wastes and other types of specific wastes.

The available recycling and capitalization measures will be also considered, including:

- Separate storage of contaminated and uncontaminated soils;
- Re-use of uncontaminated soils, without further treatment, in various construction activities;
- Avoidance of direct use of contaminated soils and their storage in special locations, with a view to their rehabilitation;
- Strict separation of wastes resulted from constructions from those resulted from demolitions;
- Continuous improvement of processing and recycling schemes;
- Separate storage, as much as possible, of various materials, such as metal or plastic, as much as the available space and construction capacity allows for it;
- Processing of wastes resulting from sorting stations, together with commercial wastes (for the qualitative capitalization of various materials);
- Processing of wastes resulting from demolitions through pressing or through classification and/or sorting technologies, in mobile, semi-mobile and stationary facilities.

The targeted beneficiaries are the country public authorities or municipality/county associations.

## **Improved management of natural resources within the context of sustainable development**

The main objectives of this strategic component focus on the preservation of the biological diversity, providing the sustainable use of natural habitats, of wild flora and fauna species, as well the ecological reconstruction of damaged systems.

In order to preserve the biological diversity, it is necessary to develop protected areas networks, in order to comply with the norms and percentages imposed by the European Union.

The following types of measures are taken into consideration in order to achieve this objective:

- Setting up administrative structures for natural and national parks, identified after 2007;
- Improvement of existing administrative structures;
- Development of databases and maps related to natural habitats, flora and fauna;
- Ecological reconstruction works in the areas affected by pollution;
- information campaigns on protected areas and their importance;
- information/awareness of local communities on the access opportunities to financial resources for the sustainable development of protected areas;
- infrastructure and appropriate endowment of visiting centres;
- setting a monitoring system of protected natural habitats and wild species.

Another strategic direction is focused on the promotion of preventive, training, protection and intervention measures in the case of natural disasters – flooding, drought, landslides and earthquakes, in

order to limit and remove the effects of the population and assets, in such a way as to ensure the normalization of the social-economic life.

The 2005 floods have emphasized both weaknesses of the techniques used for the protection against flooding and the management capacity to react to the phenomenon. The recent floods have also emphasized the vulnerability of the communities exposed to risks, manifested through their weak absorption capacity of the phenomenon effects and ability to go back to normal life afterwards. All these are arguments in favour of changing the perspective of the risk of flooding and moving from a passive to active approach in order to reduce potential damages and the vulnerability of populations in the areas where flooding is a real risk.

In this respect, **the national flood risk management strategy that will be updated with PHARE support** will mainly focus on the construction of dykes and dams, on the regularization of water streams, correlated with humid areas preservation measures. Special attention will be paid to the modernization and development of IT systems in order to develop early warning systems to signal to the population the risks and to draw flood risk maps and to include them general urban plans. The works for the elimination or diminution to the greatest possible extent of flood effects will be carried out in different stages, from the point of view of the financing and execution, depending on the flooding vulnerability of various basins or hydro-graphic areas, on the amount of budget resources, on the frequency and extent of the phenomena etc.

A separate area of intervention is aimed at the processing soil that is contaminated or land that is affected by pollution. In this respect, the following measures will be considered: decontamination of contaminated or damaged land, the decontamination soils polluted with heavy metals, the use of mining waste landfills, the detoxification and rehabilitation of soils polluted with oil and oil products and wastes through bio-remedy measures, the elaboration of reconstruction technologies of affected lands.

A complete inventory of the damaged/contaminated areas at the national level will be carried out during the first part of the 2007 – 2013 program period, financial aid being granted to the most urgent projects.

### **Improvement of air protection infrastructure**

The aimed objective is the improvement of the air quality in accordance with the requirements of Frame Directive 96/62/EC and of related directives: Directive 2001/81/EC on national emissions ceilings, Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants, Directive 2000/76/EC on the incineration of waste and Directive 2001/77/EC on the promotion of electricity.

The distinction between the interventions in the energy sector, between Priority 3 “Protection and improvement of the quality of the environment” and Priority 1 “Increase of the economic competitiveness and the development of knowledge-based economy” is based on the category that the end beneficiaries are part of. The financial support granted for this measure will focus on projects proposed by the general public, by the municipal sector or by public service operators.

This measure will focus on the application of burning technologies that are less damaging to the environment, in order to cut down emissions resulted from large and medium combustion plants, in accordance with the national energy strategy.

Romania still depends on traditional energy sources such as carbon fuels or natural gas, used for the population in large establishments that use heating and hot water services. In the medium and long term, the aim is to have the majority of the population connected to centralized systems, since most inhabitants cannot afford private installations.

The financial support will focus on modernization projects of the thermal installation, the rehabilitation and measurement of thermal networks that will contribute to the reduction of network losses, to the decrease of fuel consumption and to the increase of energy efficiency, thus contributing the reduction of pollutant emissions into the atmosphere.

The measures will be targeted towards the improvement of the air quality in the most affected areas, in the basis of a regional medium/long term strategy for public central heating services. In the cases where the most cost-effective alternative is represented by the use of regenerating or less polluting sources, for municipal thermal systems, or by the construction of combined systems that would generate bio-mass and bio-gas energy and heat, the projects in question will be the priority.

Special attention will be paid to the rehabilitation of large combustion plants that aim at the reduction of SO<sub>2</sub>, NO<sub>x</sub> and dusts and thus contributing to the implementation of the directives related to air, for which Romania has been granted transition periods.

### 3.4. COHERENCE WITH EU AND NATIONAL POLICIES

The EU environment policy is a key aspect within the delivery of the National Development Plan, as reflected in the statement of its global objective. Environment issues are a basic criterion for project selection. Special emphasis is laid on the preservation and rehabilitation of the natural heritage, of the cultural character and ecologic stability of the landscape, as well as on citizen awareness and involvement in the decision-making process, in compliance with the principles of sustainable development and with European standards. Special attention will be paid to the “the polluter pays” principle.

COHERENCE WITH EU POLICY		
EU policies	Reflection of the European policies in the NDP strategy	NDP sub-priorities
<p><b>The 6<sup>th</sup> Environment Action Plan</b> focuses in the environment component of the sustainable development strategy, whose main objectives are the protection and rehabilitation of natural ecosystems, as well as the preservation of biodiversity within the EU; the improvement of the quality of life and, hence, the reduction of the negative impact of pollution on the public health; the use of renewable energy resources within the context of sustained development; the achievement of an air quality level that does not have a negative impact on other environment factors and on public health; the reduction of waste amounts to be stored and the reduction of dangerous wastes etc.</p>	<ul style="list-style-type: none"> <li>- efficiency of waste management systems;</li>   <li>- sustainable use of natural resources;</li> <li>- air quality protection.</li> </ul>	<p>3.3.1 Improvement of life standards by providing public utilities at the requested quality standards, for the water and waste sectors</p> <p>3.3.2 Improvement of sector environment management systems</p> <p>3.3.2 Improvement of sector environment management systems</p>
<p><b>European Strategy for Sustainable Development (ESSD) - Göteborg 2001</b> – focuses on several key priorities: limitation of climate chances and increase of the use of energy resulted from regenerating resources; limitation of the negative impact on the public health; efficient natural resources management.</p>	<ul style="list-style-type: none"> <li>- Improvement of waste management standards;</li>   <li>- People’s access to water and used water public utilities services;</li> </ul>	<p>3.3.1 Improvement of life standards by providing public utilities at the requested quality standards, for the water and waste sectors</p> <p>3.3.1 Improvement of life standards by providing public utilities at the requested quality standards, for the water</p>

<b>COHERENCE WITH EU POLICY</b>		
<b>EU policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
	<ul style="list-style-type: none"> <li>- Ecologic reconstruction of damaged ecosystems;</li> <li>- Air quality indicators within legal limits.</li> </ul>	<p>and waste sectors</p> <p>3.3.2 Improvement of sector environment management systems</p> <p>3.3.2 Improvement of sector environment management systems</p>
<b>Directive 1999/31 on the landfill of waste</b> – has as main objectives the establishment of measures, procedures and recommendations for the prevention or reduction of negative effects on health and on the environment, determined by waste storage activities.	<ul style="list-style-type: none"> <li>- Improvement of waste management standards;</li> <li>- Efficient waste management systems;</li> </ul>	<p>3.3.1 Improvement of life standards by providing public utilities at the requested quality standards, for the water and waste sectors</p> <p>3.3.2 Improvement of sector environment management systems</p>
<b>Directive 94/62 on packaging and packaging waste</b> – The aim of Directive 94/62/CE is that of harmonizing the national measures on the management of packing and packing wastes in order to prevent or minimize their impact on the environment	<ul style="list-style-type: none"> <li>- Efficient waste management systems;</li> </ul>	<p>3.3.2 Improvement of sector environment management systems</p>
<b>Directive 91/271 on the urban wastewater Treatment</b> – focuses on the protection of the environment against the negative effects of evicted urban wastewaters and of wastewaters from various industry sectors (mainly from the treatment of food products).	<ul style="list-style-type: none"> <li>- Development of water and wastewater infrastructure systems;</li> <li>- Improvement of wastewater infrastructure systems;</li> </ul>	<p>3.3.1 Improvement of life standards by providing public utilities at the requested quality standards, for the water and waste sectors</p> <p>3.3.2 Improvement of sector environment management systems</p>
<b>Directive 98/83 on the quality of water intended for human consumption</b> – the main objectives are the protection of the public health against the side effects of any type of contamination of human consumption water and the insurance that such water is safe and clean.	<ul style="list-style-type: none"> <li>- Development of drinking water infrastructure systems;</li> <li>- Improvement of drinking water infrastructure systems;</li> </ul>	<p>3.3.1 Improvement of life standards by providing public utilities at the requested quality standards, for the water and waste sectors</p> <p>3.3.2 Improvement of sector environment management systems</p>
<b>Directive 2001/80 on large combustion plants</b> – aims at reducing or limiting emissions resulted from large combustion plants.	<ul style="list-style-type: none"> <li>- improvement of air quality.</li> </ul>	<p>Sub-priority 3.3.2 Improvement of sector environment management systems</p>
<b>COHERENCE WITH NATIONAL POLICIES</b>		
<b>National policies</b>	<b>Reflection of the national policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<b>National Strategy on energy efficiency</b> aims at identifying possibilities and means of increase of the energy efficiency, through the implementation of appropriate programs.	<ul style="list-style-type: none"> <li>- improvement of air quality by increasing energy efficiency</li> </ul>	<p>3.3.2 Improvement of sector environment management systems</p>
<b>Environment Act no. 137/1995</b> , with	<ul style="list-style-type: none"> <li>- Development of water and wastewater</li> </ul>	<p>3.3.1 Improvement of life</p>

<b>COHERENCE WITH EU POLICY</b>		
<b>EU policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
subsequent changes and additions – focuses on the water and aquatic ecosystems protection, on atmosphere protection etc.	infrastructure systems;  - Improvement of wastewater infrastructure systems; - Improvement of people's access to public water supply systems; - Increase of energy efficiency.	standards by providing public utilities at the requested quality standards, for the water and waste sectors  3.3.2 Improvement of sector environment management systems
<b>Water Act no. 107/1996</b> , with subsequent changes and additions – aims at preserving and protecting water resources, at providing drinking water to the population, at the progressive reduction of the pollution caused by the discharge of dangerous substances etc.	- Development of water and wastewater infrastructure systems;  - Improvement of water and wastewater infrastructure systems; - Improvement of drinking water infrastructure systems; - People's access to public water supply systems.	3.3.1 Improvement of life standards by providing public utilities at the requested quality standards, for the water and waste sectors  3.3.2 Improvement of sector environment management systems

### 3.5. CONTRIBUTION TO HORIZONTAL OBJECTIVES

#### 3.5.1. Equal opportunities

The environment protection sector is in line with both the national legislation and with the community acquis concerning the equal opportunities, by making sure that all citizens have the right to work and that they benefit from equal work loads, equal payment and special protection measures.

Priority 3 of the National Development Plan contributes to the creation of new job opportunities, which will be available for both sexes. The measures included in Priority 3 equally support the activities related to the employment of women and minorities.

The objectives related to the equality of opportunities can be found in all considered measures, amongst which:

- Balanced representation of men and women on Programme Monitoring Committees;
- assessment of the equality of opportunities in the planning stage;
- reporting measures in order to eliminate existent obstacles;
- setting project-level objectives;
- monitoring the fulfilment of set objectives;
- data collection.

The integration of equal opportunities policies within sector policies, as well as the development of understanding of equal opportunity will be promoted by common actions of the involved factors from the public and private sectors, including the civil society. These actions will provide the framework for the implementation of the policy on equal opportunities as a horizontal requirement.

### **3.5.2. Sustainable development**

The sustainable development represents a global concern. Romania is planning to achieve the three inter-dependent objectives of sustainable development: environment protection, social development and economic welfare.

The major principles of the sustainable development have been already identified within Priority 3 of the National Development Plan – “Protection and improvement of the quality of the environment”. The implementation of these policies is basically impossible without the extended public participation. In this respect, the National Development Plan strategy encourages a more active participation of the public in the decision-making process related to the environment protection area, on various levels.

The plan’s strategic framework focuses on the following directions:

- sustainable development of natural values and improvement of the quality of the environment;
- integration of environment protection policies within regional and sector policies;
- protection and preservation of the natural heritage, preservation of biodiversity;
- reduction of differences between regions and improvement of people’s access to public services;
- promotion of education on environment protection and information flow.

The strategic directions of the National Development Plan are set on the basis of the above-mentioned national priorities. The objectives are: the consolidation of the environment protection and the reduction of the negative impact on the environment.

The European Council environment policy is a key aspect which is clearly stated in the global objective of Priority 3. The emphasis is laid especially on the preservation and rehabilitation of natural resources, on the sustainable development of environment investments and on the citizens’ awareness on environmental issues, as well as on their involvement in the decision-making process. The “pollutant agent pays” principle will also be taken into consideration.

Environment investments are an important contribution to the solution of Romania’s social and economic problems: to the protection of the public health, to the improvement of the quality of life and to the encouragement of the economic development (e.g. tourism).

### **3.5.3. Information society**

The environment protection sector contributes to Information society development by means of the projects promoted in the field, which take into account both the elaboration of important databases for monitoring environment factors and the public’s awareness. All investment projects will be assessed in accordance with the information society development policy. The use of technology and of modern instruments will have a positive influence on the development of national IT&C services. Measures will be taken in order to promote the Internet use and access facilitation, as well as in order to provide equal access to relevant information for the entire population.

### 3.6. INDICATORS

Indicator	Reference year*	Final objective for 2013
<i>Water management (reference year – 2004)</i>		
Equivalent population connected to the centralised water and sewerage system (% of the total population)	52	70
Number of waste water treatment plants	340	702
Number of sewerage networks	644	1,207
Number of investment locations:	8,900	8,930
– to provide water sources		
– to protect against flooding	1,695	1,765
<i>Waste management and status of dangerous chemical substances (reference year – 2003)</i>		
Number of conforming municipal waste landfills	11	56
Number of nonconforming landfills to be closed down	-	175
Amount of inappropriately stored solid waste (million tons/year)	4.27	2.20
Packing waste recycling rate (%)	21	55,1
Packing waste capitalization rate (%)	21	62
<i>Atmosphere protection and control of industrial pollution (reference year – 1990**)</i>		
Pollutant emissions into the atmosphere:		
• SO <sub>2</sub> – (tons/year)	1,311,000	918,000
• NO <sub>2</sub> – (tones/year)	546,000	451,000
• NH <sub>3</sub> - (tons/year)	300,000	210,000
• COV(tons/year)	616,000	523,000
Number of installations regulated by Directive IPPC which do not operate according to its requirements, in 2004	716	83
<i>Nature protection</i>		
Surface proposed for protection (%) out of the Romania's total surface	6.8 (January 2005)	15

\* The year of reference is stated for each indicator, in accordance with the availability of statistical data.

\*\* 1990 is the year of reference according to the Gothenburg Protocol, ratified by Act 271/2003.

## **P4. HUMAN RESOURCES DEVELOPMENT, PROMOTING EMPLOYMENT AND SOCIAL INCLUSION AND STRENGTHENING THE ADMINISTRATIVE CAPACITY**

### **4.1. RATIONALE**

The analysis of the current situation in the field of human resources and employment and the SWOT analysis have identified a series of critical issues, such as:

- Relatively high levels of school/ early dropout;
- The absence of quality control and assurance systems in education and initial and continuous vocational training (EFPIC); EFPIC infrastructure is not adequate in rural areas;
- Insufficient development of the national competencies framework, as well as of the framework for certifying competencies and abilities by training providers in the system of continuous vocational training;
- Low level of adult participation to continuous training;
- Insufficient developed network of professional training providers (low geographic coverage, concentration in urban areas, insufficient number of professional training programmes);
- Low levels of transition programmes from school to the workplace;
- insufficient involvement of the social partners in specific programmes for human resources development;
- Low work productivity;
- Low mobility on the labour market;
- Pressures on employment caused by the privatization and reorganization process;
- Limited entrepreneurial culture;
- Insufficient integration of the Roma population and of other vulnerable groups in education on the formal labour market.

Human resources development and sustainable integration of the labour market are possible when **life long learning** is promoted as a principle and a general framework for the restructuring and developing of education and training systems, ensuring key skills and the coherence between formal, non-formal and informal learning frameworks. At the moment, co-ordinated continuous training system is not in place and the development of a coherent abilities framework applied both to initial vocational training and continuous training that would allow the certification of partial skills. This necessitates the implementation of a National Competencies Framework, by the end of 2010. In their present form, the formal initial education and training system is not yet ready to address the specific requirements of a knowledge based society and an European labour market. Schools are not yet a centre of continuous learning resources, but seen as providers of initial education, which limits the continuous learning possibilities of the adult population to the provision of continuous vocational training.

Ensuring an educated and competitive human resource in the European labour market requires the provision of equal access to high quality initial and continuous education and training. Quality assurance in education was mainly based on mechanisms that are specific to accreditation and external assessment and on training programmes for teachers, the internal quality insurance and management being operated only as individual initiatives of educational institutions. Human resources development in education is still approached with a limited vision only to developing provision for initial education and continuous training and almost exclusively, for teachers. For new jobs one must define the professional/occupational standards, certification mechanisms and one must create adequate education and training provision based on results obtained in the pilot projects.

A number of negative issues (high dropout rates, early school leavers and low participation in education of certain social and age groups) still persist in the initial education and vocational training formal system. These generate negative effects on the acquisition of basic skills necessary for the integration

on the labour market/in society and on human resources development in the context of lifelong learning. Therefore, although the rate of participation in education of the population between 15-24 years old is experiencing a soaring trend, from 36.96% in 1999/2000 to 46.88% in 2003/2004, the dropout rate in primary and elementary education is still at a high level, in the period between 2000 -2004 with an increase of almost 3 times from 0.6% in 2000/2001 to 1.5% in the 2003/2004 school year, higher in the rural area (1.7%). The percentage of early dropouts is far above the level of member states (EU-25–15.9%). The analysis has emphasized significant disparities depending on the residential areas in relation to participation in education: the gross participation rate was 89.3% in urban areas and 56.6% in rural areas for the 2002/2003 school year. This low rate in rural areas represents a critical point of the system, given the measures to put into place the mandatory 10 year education system. The main causes for this are the reduced educational provision, the physical and human infrastructure in rural and disadvantaged areas, as well as social causes that affect the capacity of families to support the collateral costs for their children's education. The persistence of this tendency significantly affects both the objectives of ensuring basic skills for all, and of promoting economic and social cohesion. Tackling these negative phenomena can be done by adopting some measures for providing not only access to education but also by developing educational provision and developing more flexible opportunities to "re-enter education", especially for socially and economically disadvantaged groups from a socio-economic viewpoint that are exposed to the risk of social exclusion.

The sustainable integration of young people into the labour market depends mainly on the capacity of the initial education system to provide relevant skills and abilities that are adapted to the requirements of the labour market. The high and rising unemployment rate amongst youngsters between the ages of 15-24 (indicator rose from 17.5% in 2001 to 21% in 2004) can be explained by the inadequate adaptation of the initial education and training system to the requirements of a under performing labour market as regards its capacity to create new jobs. While in absolute figures, the number of young unemployed people has decreased by comparison to previous years, this age group still faces large difficulties to enter the labour market. The low correlation of educational provision in high school and university education with labour market requirements can be explained by the insufficient development and capitalisation of partnerships between school and enterprises/local community in developing the curriculum and educational activities and in developing transition programmes from school to the workplace; absence of systematic studies to research and forecast the labour market; the insufficient development of monitoring system of the employment destinations of graduates.

Regarding the continuous vocational training, provision tends to focus on programmes for full skills or on programmes for developing professional skills and is mainly addressed to individuals, depending on punctual demands of the labour market. There is a low provision of programmes for skills that require large investments for the training providers. Because continuous vocational training must provide for the possibility of a rapid adaptation to the requirements for an ongoing change of the labour market, the diversification and increase in quality of the vocational training provision must be constantly reviewed. The promotion of partnership in education, training and employment becomes a condition for providing coherence between initial and continuous education and training and its relationship to the labour market.

Consultancy activities in the field of human resources management are mainly used by large companies. The current provision of such services is not adapted to the specific needs of small and medium sized companies that still do not have such a specific organisational structure. Romania has a low investment in continuous professional training, seen by many companies as more of an expense than an investment. In 2004, Romania had a low participation rate in continuous professional training activities compared to the EU-15 and NMS-10 average. The data regarding continuous professional

training (CVTS2)<sup>103</sup> indicate a participation rate of only 8% for employed persons, while the enterprises' investments in professional training compared to labour costs were 0.3% in 2002. The latest NAE report shows that, in 2004, only 2% of the unemployed people (including people from Counties and Bucharest) attended vocational training courses organised by NAE. The access to CVT is extremely low for people in rural areas, given that 36.1% of the employed population works in agriculture in 2004, according to Survey of the labour force in households (2005). In 2004, only 1.5% of the population in the age group of 25 to 64 years old has participated in education or training, compared to the EU-25 average of 10.6%, and placing Romania at a significant distance from the European objective of 12.5% for 2010; in this situation it is needed considerable effort for promoting long life learning.

The continuous vocational training (CVT) programmes do not have a modular and flexible structure that would stimulate the participation of employees and the interest of employers to promote CVT activities, leading to increase in the adaptability of the employed labour force. Setting up a structured vocational training system implies the commitment and active participation of the economic and social partners. Vocational training providers are, generally, small institutions, which are not specialised, rapidly adapting their training provision to the immediate needs of the market, and have no quality assurance mechanisms in place. In Romania, some quality assurance systems for CVT have been developed, for both the formal and non-formal/ informal contexts, but there are other issues that need to be improved at a national level and which need a considerable financial effort in the future.

The structure of education and initial vocational training programmes does not correspond to the level of **quality assurance**. The facilitation of the placing of graduates in the labour market, the improvement of transition rates from compulsory to the post-compulsory education and the reduction of the dropout rate can be supported by measures of **improvement of guidance and counselling services**. In the initial education and training system, the guidance and counselling network and activities are insufficiently developed, are not part of a separate approach of psychological and educational counselling and do not provide the necessary framework for defining customised training routes that would lead to a more adequate positioning of young people on the labour market.

The mobility within the labour market and the capacity of the Romanian economy to create new jobs are relatively low, especially in sectors with high added value. These contribute to ongoing and high unemployment rate. Promoting the **entrepreneurial spirit and culture**, both by supporting initial education and vocational training in obtaining management and entrepreneurial skills, as well through continuous professional training that could make entrepreneurship a career option for everybody, constitute an important solution for counterbalancing all the negative effects of the structural adjustment and industry restructuring process. These changes in policy direction will have the effect of generating economic and social alternatives and the improvement of the economic status of socially vulnerable groups. The potential of young researchers and graduates leaving education, notably University, is not capitalised through "spin off" or "spin out" initiatives, either due to the lack of some adequate financial instruments, or due to lack of entrepreneurial culture and spirit. The action for promoting the entrepreneurial spirit and culture (with the exception of those carried out in the formal education system) were focused on the creation of an institutional, legislative, financial framework favourable to the development of SME's and the private initiatives and stimulating for investments, whilst specific measures for human resources were considered of secondary importance.

**The labour market** in Romania has undergone significant changes between 1990 and 2004, especially shown by the reduction of the active and employed population, as a consequence of a sluggish economy and aging population. The reduction, in 2004, of the employment rate of older population by 5.7percentage points as compared to year 1999, was accompanied by important modifications in

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<sup>103</sup> Eurostat, Statistics in Focus, Theme 3 – 2/2002

different sectors, areas of activity, regions, form of ownership, age and professional status. These evolutions place Romania, in 2004, at a significant distance from the Lisbon 2010 objectives, i.e.: the general employment rate for work age population (age group 15-64) of 57.9%, at a distance of 12.2 percentage points from the 70% objective; the employment rate for women of 52.1% at a distance of 7.9 percentage points from the 60% objective; the employment rate for the 55-64 age group, of 36.9%, at a distance of 13.1 percentage points from the 50% objective. In terms of promoting flexible employment forms in Romania in 2003, the percentage of women working part time was 2.5 times lower than the EU-25 average. The structure of employment in activity sectors is different than the one in the EU-25 and to a large extent, to that of the NMS-10. In 2004, the share of the population employed in agriculture was 36.1% in Romania, representing a decrease by 1 percentage point compared to 2003. The value of this share in 2003 (35.7%) was 7 times bigger than EU-25 average (5.2%). The over reliance of employment in agriculture, as a consequence of the restructuring and undergoing technological changes in this sector, generates unemployment or precarious employment.

SME employment has risen significantly, from 25% in 1999 to 54.4% in 2004; but in absolute figures, this growth is modest and insufficient to compensate for the loss of jobs in the entire country. More than half of all unemployed people are long term unemployed (long term unemployment rate is 4.3%). Compared to 1999, the long-term unemployment rate increased, being in 2004 of 4.7%. In the same reference period, the long-term unemployment rate amongst young people registered high values, more than 10.7%, in 2004 reaching 14.3% and being 4 times larger than the long-term unemployment rate for adult population (3.9%). Comparing the figures of unemployment percentages on age groups, the highest value is registered by the rate of unemployment for the young people, the 2004 value was of 21%, 2.8% higher than the EU-25 average (18.2%). Starting with 1999, the rate of unemployment among young people registered values over 17.5%, this tendency is an expression of an insufficient number of newly created and attractive jobs for the young people.

The reduction of disparities insofar as employment rate and reduction of the negative social impacts generated by the growing tendency of the unemployment rate will be achieved by means of identifying and assessing all the labour market opportunities for the persons in search of a job, especially young people.

As part of the social dialogue, the **stimulating of initiatives for social partners** is also a field that needs to be strengthened. The actions of promoting economic growth and employment are not sufficiently developed in relation to equal opportunities, to meet the EU objective employment rate of 70% and to increase the percentage of employed women to 60%, by 2010. At the same time, the initiatives in the field of labour force employment, in terms of flexibility and security on the labour market, especially for promoting the active aging and participation of women on the labour market are insufficiently developed. Once the National Council for Adult Professional Development is turned into the National Authority for Skills and the sectoral committees were established, the involvement of the social partners both in the process of identifying professional development needs, and in defining, validating, evaluating and certifying professional skills, and developing information, orientation and counselling services acquire a new dimension. Nevertheless, the initiatives of the social partners need to be supported and promoted in order to answer a more and more stringent need of involving them in achieving the objectives with regard to life-long learning, full employment and social inclusion.

The process of reorganisation and modernisation of the **public employment service**, i.e. the National Agency for Labour Force Employment and its county agencies, started in 2002 and includes the decentralisation of employment services, the improvement and diversification of services provided to beneficiaries and to employers, to people looking for a job and to unemployed people that want to start a business. Even so, the rapid pace of changes on the labour market regarding the mobility of the labour force, the emergence of new skills, the need for developing the entrepreneurial spirit, require an

enhanced administrative capacity of the public employment service. In order to address the requirements for a dynamic labour market it is necessary to carry on the reforms and improve the quality and efficiency of the services provided, focusing on active measures and where possible preventive people becoming unemployed and especially entering long term unemployment, training of own personnel to increase the standards of employment services, the development and modernisation of vocational training centres for adults to be able to provide skills training and professional development to unemployed people that would facilitate their access to employment.

The social exclusion phenomenon affects **social groups that are facing the risk of social marginalisation**, the vulnerable groups being considered especially: children in the state care system, young people over 18 that leave care institutions, the Roma population, disabled people and ex-prisoners. All these disadvantaged categories face many problems related to their social integration or reintegration into the labour market. The groups are also affected by discrimination in relation to access to education which inhibits their labour market opportunities.

For children in care homes, the problems identified include the social reintegration of 'street children' with all the associated secondary issues; juvenile criminality; child protection against exploitation through work; prevention of children emigration and their protection. Young people over 18 that leave state care institutions face a lack of access to housing and reduced integration on the labour market, especially due to lack of adequate professional skills.

The Roma population faces a wide range of problems such as: poor education facilities that leads to low educational attainments, lack of skills and experience on the labour market, insufficient participation in the formal economy, large number of children, lack of housing and bad living conditions, lack of identity cards, a state of health that is worse than the rest of the population, lack of ownership of land for people living in the countryside. The Roma population is the victims of a genuine vicious circle and marginalisation due to the multiple lacks of conditions they suffer which fuel the prejudices and lead to discrimination and social exclusion. Their poor participation to education significantly reduces their chances of integration in the labour market.

The inclusion of disabled children in the school system is still poor within the 2003-2004 school year, about 30% of the disabled children (6-18 years old) integrated in public schools, although alternative measures to provide equal access to education were also promoted. The number of employed disabled people is low, both as a result of the number of jobs which do not correspond to the skills and needs of the disabled persons, but also due to their poor educational and professional background. There is still discrimination in employment on the basis of the disability, and the access to the physical environment and information is still reduced. Regarding disabled people in institutions, the results of evaluations show the insufficient number of specialised staff and lack of social services. People with severe disabilities that are in institutions are assisted by personal assistants for whom there are insufficient training programmes at a national level. Providing equal access to education and the increase of social inclusion for persons belonging to vulnerable groups has already started but it needs to be continued so that the performance of the labour market will have benefits in the future and eventually lead to the growth of social cohesion.

Families with more than 2 children and families with single parents represent another category that is facing a higher risk of poverty. Even the reduction of poverty for families with many children has been visible since 2003 (with a reduction of 6.1percentage points as opposed to 2002); this category still faces a major risk of exclusion from benefits of full participation in the social and economic life.

The risk of social exclusion is manifested mainly amongst women rather than men, in all stages of life, as a reflection of their low participation on the labour market. This poverty risk is especially higher amongst older women and single parents that are caring for children, and particularly affects women.

The analyses that were carried out on the labour market emphasise the existence of significant **gender inequalities**. The employment rate of women in the 15-64 years old age group is by 11.5 percentage points lower than the men employment rate, the same discrepancy also existing for the main age groups: 7.7 percentage points (pp) for 15-24 years, 12.6 pp for 25-54 years and 11.7 pp for 55-64. The salary of a Romanian women (taking into consideration the female population employed in all branches of the national economy) was between 82% and 86% of men's income, during 1999-2004. The analysis of different employees grouped on gross basic salaries on activities of the national economy in 2003, shows the fact that 72.9% of employed women have salaries lower than the gross average salary. This is because of two elements: women are employed mainly in occupations with low added values and the number of women is especially high in the jobs with low salaries.

**Social services**, a component of the social protection system, provide support measures targeted at some strictly personalised needs, and have as a result the quickest solutions with a higher efficiency for social risk situations. The current situation of the social assistance system can be characterised through a legislative framework that favours social inclusion and access to fundamental rights, such as social assistance, employment, health, education etc. At the same time programmes were developed in order to support families, children and other groups of disadvantaged people. Even with all the efforts that have been put into this, the current system still has a number of important issues that need to be remedied, such as: unequal development, the multiplication of institutional structures with similar responsibilities that generate confusions and lead to a fragmentation of the system; lack of resources needed by the population in order to cover all the needs in the field of social assistance and services; inability of the current social service system to solve the needs of people in difficulty, the existence of a low number of NGO's as main providers of such services.

The weakness of the administrative capacity endangers the social and economic development, and thus cohesion. Major progress insofar as the social and economic development may be registered only within a coherent political and legislative framework which allows for maximizing the human and physical capital investments. Given the requirements of a knowledge-based economy, which requires innovation capacity and efficient use of the already existing know-how and technology, these become more important. In this context the process of developing the human capital within the public administration is an essential support for the implementation of the structural reforms and for the process of adapting the administration to change.

The insufficient institutions and those that are poorly developed apply incorrectly, or with delay, the EU legislation and policies, affecting the process of reducing development disparities with the EU. Efficient public services will support economic productivity growth through faster procedures, improved services, etc. Thus, together with the improvement of the human capital, the development of the institutional capacity within the public sector is extremely important, especially in the poorly developed regions which need to develop and implement structural reforms aimed at developing and achieving an increased social and economic cohesion.

**Good governance** relies on efficient formal and informal structures being established in order to take and implement decisions. The central and local authorities are a group of 'governance stakeholders'. The other players with a role to play in delivery of good governance in Romania are the economic and social partners, the civil society, including the NGOs, as well as other research institutions, financial institutions, media, lobby institutions.

Good governance implies also involvement and transparency, common agreements, understanding and awareness, responsibility, efficiency and effectiveness, equity and law enforcement. In addition it is necessary to have efficient institutions with extremely professional staff, good partnership relationships with different stakeholders, positive attitudes with regard to business and enterprises, and an efficient administrative and institutional framework to support development. Good governance may be a major challenge especially for the less socially and economically developed regions.

Given the pre-accession context, the initiatives for the reform of the public administration (PAR) and those for good governance, have been taken into account separately. The PAR agenda supported under Phare and under other programs ever since the end of the 90's, aimed at modernizing, by means of the reform, the public function, decentralize/deconcentrate the authority to the local administration and introduce a modern initiative to assist drafting policies and monitoring. Although considerable progress has been made the Country Reports of the European Commission state that there is insufficient convergence with the different initiatives to achieve the maximum potential, among the reasons insufficient development of the coordination networks and structures aimed at supporting an integrated approach for the efficient implementation of the policies, delays in building the training infrastructure and poor development of the process aimed at developing public policies.

## 4.2. OBJECTIVES

### 4.2.1. General objective

The overall objective is **the development of human capital and the increase of its competitiveness on the labour market, by providing equal life long learning opportunities and the development of a modern, flexible and inclusive labour market that will lead, by 2015, to the sustainable integration within the labour market of 900,000 people.**

### 4.2.2. Specific objectives

- The development of initial and continuous education by promoting reforms and providing qualitative and relevant educational offers for the labour market, that would ensure equal life long learning opportunities and the improvement of employment chances;
- Human resources development in education by developing new professions and the diversification of initial and continuous educational provision for 40,000 persons in the education system;
- The development of flexible and personalized routes for learning and career by providing integrated information, guidance and counselling services for 1,000,000 pupils and students and for 100,000 people in the education system;
- The facilitation of the young people entering the labour market by promoting partnership in education and employment and development of transition programmes from school to work place for 10,000 graduates in order to increase their chances for employment;
- The development of education and vocational training of human capital by providing educational and continuous vocational training programmes that will provide the competences and skills required by the labour market for 1.1 million persons, out of which 400,000 persons face difficulties in integration/reintegration on labour market (young people, long term unemployed persons, low skilled workers, older workers, persons from vulnerable groups);
- The development of a modern, flexible and inclusive labour market that would allow the increase of chances for employment/sustainable integration on the labour market of 300,000 young people, 100,000 people from vulnerable groups;
- The promotion of entrepreneurial spirit and culture;

- The improvement of public services supply in order to achieve sustainable socio-economic development, close the disparities and ensure good governance.

### 4.3. STRATEGY

Initial and continuous education and professional training represent the essential elements for ensuring key competencies, knowledge and abilities that are necessary for training and developing an educated and competitive work force within the European labour market. In order to achieve these objectives, investments in initial and continuous education must be focused on: the development of the initial and continuous education system and provision; human resources development in the field of initial and continuous education; education and professional training beneficiaries. The full employment of the labour force will be achieved through investment in increasing adaptability, employment capacity and entrepreneurship, as well as the development of the public employment service. In promoting social inclusion, the investments will focus on the integration in education and on the labour market of vulnerable groups and promoting gender equality. The public policies' development cycle (drafting process and enforcement) will be taken into account for developing the administrative capacity and good governance by means of strengthening the administrative capacity at all levels, as well as by means of developing the local decentralized administration so as to be able to provide high quality and efficient public services.

Achieving the overall objective and the specific objectives of the national development priority „Human resources development, promoting employment and social inclusion and strengthening the administrative capacity” is achieved by actions grouped in four sub-priorities.

#### 4.3.1. Human capital development

The purpose of this sub-priority is the creation and development of life long learning opportunities with the aim of developing a competitive work force and of better capitalisation of the labour market, in a knowledge based society. In any type of society, human capital represents a key resource. The dynamics of changes imposed by a knowledge based society implies the capitalisation and development of human capital by updating and acquiring new knowledge and skills during the entire life. The actions that are carried out within this sub-priority involve the provision of the necessary framework for providing and acquiring knowledge and skills during the entire life, by diversifying learning provision, the development of flexible learning routes, the increase in the transferability of credits that are obtained in different learning contexts, etc. The investments made for this sub-priority will focus on: initial education system, learning disseminators (human resources in education), the content of learning (diversifying and quality assurance for initial and continuous education and training offers) and the continuous vocational training system.

**Promoting reforms in education in the context of life long learning** has as an objective, supporting the life long learning reforms through modernising and restructuring education and vocational training. Investment in the reform of the formal education system will create the necessary conditions to develop new flexible life long learning routes and also the mechanisms to ensure the transferability of learning between different learning contexts and an increase of the relevance of initial education for the labour market. The development of new jobs in education will be part of the reform system.

Some of the actions that will be implemented include the development of the National Competencies Framework, the development and implementation of mechanisms for recognising and ensuring the transferability of skills that were acquired in different informal, non-formal and formal learning contexts; the development of new professions in education; promoting reforms in education regarding the certifying system and pilot projects for testing the new regulations.

**The purpose of promoting life long vocational training** is to meet the needs for professional skills required in the immediate and future labour market. Coherent development of the current professional training system will contribute to an increase in the professional quality and mobility of the labour force as well as to the improvement of the operational flexibility of the labour market and support the job creation. The combination of options and individual abilities with the requirements of the labour market will contribute to encouraging the labour force to participate in the continuous professional training process.

This intervention area implies: the development of flexible and customised training routes, adapted to the requirement of personal and professional development of human resources, the development and modernisation of the professional training service provision, stimulating the participation of the labour force to continuous professional training.

**Quality assurance and management in initial education and training** is an intervention area that requires the development and implementation of systems. This work will improve internal evaluation procedures, quality management, assurance of initial and continuous education and training, professional management development and initial and continuous education of the training providers. The activity of institutions and education and training providers in the formal educational system also needs to be taken into account.

The main actions that are planned are: the creation and development of quality assurance and management systems in education and training; the development of vocational training programmes in the field of educational management and quality management; the development of monitoring mechanisms for the placing of graduates in the labour market and adapting educational provision according to the evolution of the labour market; the creation and development of mechanisms of quality assurance and management in education in the non-formal and informal learning contexts.

**The development of integrated education and training services for information, guidance and counselling for personal development in the national system** is looking at creating integrated information, guidance, counselling and quality assurance services and access to these services.

The actions planned will focus on the creation and development of information, guidance and counselling departments in educational institutions, as close as possible to the target group (mainly pupils/students) as well as the increase of their ability to provide integrated and quality services. Specific instruments will be developed so that information, guidance and counselling will become a coherent and systematic approach, starting in the seventh grade at the latest, for the entire duration of the education/training process and will continue with services of guidance and counselling later on in the labour market. The systematic nature of these activities in education and training will contribute to the development of flexible and customized training routes, reduction in dropout rates, improvement of transition rates between different levels of education and the facilitation of graduate placement within the labour market.

**Human resources development in education** has as an objective the diversification of initial education and training. The skills provided in these education and training programmes will provide, first of all the acquisition and development of skills described in the European Framework for Teachers' Skills. The actions planned for this measure look at human resources from two perspectives, as participants to the lifelong learning process and as knowledge disseminators. This area of intervention contributes to the development of human resources in education that will be able to provide high quality education focused on individual needs for the personal and professional development of students, to reduce the dropout rate and to increase the attractiveness of learning.

Guidance and counselling services for human resources in education are insufficiently developed, also operational specific instruments for defining professional and career routes for this occupational category do not exist. Actions will be correlated with specific measures to increase the career development opportunities for human resources in education.

The main actions that are planned are: the development of continuous training programmes for teachers and human resources in the field of education (including on the job training); development of initial education programmes for teachers and human resources in the field of education (e.g. Master degrees in teaching); development of continuous and initial educational programmes for new professions in education; research; the development of a network of service and instrument providers; providing access to quality services; career opportunities and career development services for human resources in education.

The objective of **the development and modernisation of initial and continuous educational programmes** is the increase of the attractiveness of educational programmes, the increase of quality and relevance of education to the labour market, the introduction of new technologies and new teaching methods. There is an emphasis on those components of the education system that are undergoing an integration process in an extended European context (cycle 2 and 3 of university education), that have a special impact on the personal development of the individual (early education) or in which the participation rate is reduced due to low attractiveness and low degree of diversification of educational provision (secondary education and continuous education).

The main actions planned are: the development of early education programmes; the development of provision in secondary education; the development of post-graduate programmes (Master and PhD); adapting the educational offer to the requirements of the labour market and local communities, promoting partnerships in education; using new technologies and modern teaching methods in education and the development of digital skills; the development of continuous educational offer – “School–community centre for continuous education and learning resources”; development of vocational modules and programmes for human resources in research sector.

The human resources development strategy will aim to create strong centres (“centres of excellence”) interconnected at international level, competitive centres represented mainly by the capital city and the regional centres, but also by specialized centres, supporting the human resources within the centres of excellence by establishing relationships with higher education, applied research and development to support the local economy. A minimum average level of the transport and telecommunications’ infrastructure has to be provided, first of all, when promoting these objectives, while their coordination and their integration would strengthen the structure of the poles and of the urbanized corridors at national and regional levels.

The investments for developing the necessary physical infrastructure in the initial and continuous education and vocational training system for creating the conditions for the development of human resources will be mainly financed under the activities provided in the strategy for Priority 6 in the NDP “Diminishing the development disparities between the country’ regions”. This investment will also contribute to the reduction of regional and intraregional disparities that were identified. Investments in equipment and ITC infrastructure (related to the connecting systems) will be financed under the measures in Priority 1 of the NDP – “Increase of economic competitiveness and the promotion of a knowledge based economy”.

### 4.3.2. Promoting full employment

The purpose of this sub-priority is the increase in employability and opportunities of integration in the labour market especially for young people and long term unemployed persons and meets the skill needs and permanent re-skilling needs of the labour force with a view to updating and adapting their skills in order to face the effect of ever growing competition on the labour market, the technological changes and the increase in the importance of knowledge in the value of production. The main measures to be undertaken are: the increase of the labour force and enterprises' adaptability; development of initiatives for social partners; improvement of the transition from school to the workplace and promoting an entrepreneurial culture in education and training, identifying and capitalising on all the opportunities of integration on the labour market; modernisation and strengthening of the administrative capacity of public employment service.

In view of **increasing the adaptability of the labour force and enterprises** support will be given for assuring, developing and maintaining the human resources, in order to meet the companies' requirements regarding the up-skilling of the labour force, these being essential requirements to ensure competitiveness in the process of changing economic and technological conditions required by the development of the knowledge based society. The adaptation of the staff's skills to the companies' needs for development shall support the increase of productivity and improve the quality of labour. These and the improved working conditions will lead to ensuring that 'on the job' health and security, especially for the highly risky fields and sectors of activity, and will lead to a substantial reduction of the rate of labour accidents and professional diseases, as well as to extending working life and reducing early retirement.

In order to improve the managerial skills and competences at all levels, *the promoting of entrepreneurial training* shall be supported. The implementation of entrepreneurial training programmes shall aim at assuring the entrepreneurial creativity, improving the managers and entrepreneurs' capacity to manage their own business and to adapt to competitiveness and technological changes' requirements.

**Promoting initiatives for social partners** is intended to develop a strong partnership culture, in line with European principles. Partnership is one of the key elements of the European Social Model and it plays an important role in the European Employment Strategy. From an institutional and legal point of view, social dialogue is in place. However it is still weak in spite of the achievements that were supported at a national level and through initiatives and community programmes, as there is a need to improve the dialogue education. By a concentration of the interests of social partners at all organisational levels the basis for a general consensus will be built, for developing and implementing employment strategies and policies at a central, regional and local level. The creation, extension and strengthening of social partnerships will contribute to the transfer of know how and the validation of the process of identification and capitalising on new opportunities of integration on the labour market.

The main activities will support the development of partnerships and administrative capacity development of the social partners. In this respect, programmes can be developed in partnership with social partners in order to train the specialised staff in trade unions and business associations, according to the requirements of the social dialogue, with direct effect in the growth of the expertise capacity of partners. The development of such programmes will be undertaken over several years, covering different sectors of activity and having as a result the development of the social bi- and three party dialogues, as well as an increase in the number of collective work contracts on a sectoral plan.

**Improvement of the transition from school to the workplace and the promotion of entrepreneurial culture in education and training.** Its objectives are the facilitation of the integration of young graduates within the labour market by supporting the education business partnerships in

developing programmes to aid the transition from school to the workplace, and the increase in the capacity of self-employment by improving the capacity of the initial vocational training and education system in acquiring management and entrepreneurial skills, that make entrepreneurship a future career option. The low rate of graduate entry into the labour market can be explained by the absence of transition programmes from education to the workplace and by the fact that the initial education system provides a culture that is focused on acquiring mainly academic / theoretical knowledge. The actions under this measure will provide a systematic approach to internships as part of the educational process and will prepare the future graduate for the labour market and his/ her relationship with the employer. The promotion of the entrepreneurial spirit and culture in the initial education has as an objective the increase in the contribution of the initial education and vocational training in order to acquire management and entrepreneurial skills, the development of continuous vocational training systems so that entrepreneurship will become a career option for all. The formal Romanian initial education and training system approaches entrepreneurial education as a part of the cross-cutting competencies at the level of high school education, but it is actually a less systematic approach. This is at a relatively low level compared to that in undergraduate education at the level of the EU member states. The actions carried out in the formal initial education and training system must be accompanied by extra-curricular initiatives and programmes for entrepreneurial education, as well as by specific initiatives of continuous training within the labour market.

The main actions are: the development of entrepreneurial spirit and culture in curricular and extra-curricular activities in the high school and universities, in partnership with the business environment; programmes of facilitating the transition from school to the workplace, including through development of internships and stages for pupils and students; the development of management and entrepreneurial skills with a view to supporting “spin off” or “spin out” initiatives of young researchers and graduates.

**The identification and valorisation of opportunities to assist integration into the labour market** will contribute to fighting long term unemployment, especially amongst young people and the integration in the labour market of non active persons, as well as the promotion of full employment. Therefore, the “tough core of unemployment” will be approached, i.e. long term unemployment. These policies will assist in tackling long term unemployment amongst young people which over the period 1999 to 2004 grew significantly, especially for young women.

Under this measure, according to Guideline 1 of the revamped European employment strategy, all opportunities of sustainable integration in the market place will be seized, both for unemployed persons and for non active persons, thus contributing to the promotion of full employment and increase of adaptability. This will be carried out through the following actions: the improvement of employment and prevention of long term unemployment; supporting the integration of young persons on the labour market; providing the conditions for implementing employment growth activities.

**Modernisation and strengthening of the administrative capacity of the Public Employment Service** will be supported both at a national, regional and local level, as a key instrument for the implementation of national employment policies, contributing to the improvement in access to employment and also to the increased rates of employment in the labour force.

Strengthening the administrative and institutional capacity of the Public Employment Service will take into account the needs of a modern labour market, the promotion of more adequate methods for the access to employment of people looking for a job, and especially of persons that face difficulties in re-entering the labour market. The Public Employment Service has a major role in monitoring the mechanism of regulating the functioning of the labour market, and it must address as efficiently as possible the needs and expectations of its clients: those looking for a job, facing the risk of becoming unemployed and employers seeking labour. It must also be able to provide job seekers and persons that

are exposed to the risk of becoming unemployed a complete set of services, customized assistance, correlated with the drawing up of a personal action plan, and achieving the most appropriate employment solutions. It must give importance to employers, it must be able to interact with them in a very efficient way and thus increase transparency within the employment market.

The main actions will be: the improvement in the quality and efficiency of the services provided (including better territorial coverage, especially in rural areas); the training of staff; strengthening of the infrastructure necessary to provide services and the development of an information management system.

#### **4.3.3. Promoting social inclusion**

This sub-priority contributes to the increase in the employment chances for vulnerable groups and groups facing the risk of social exclusion by promoting inclusive dimensions of the labour force and an initial and continuous education and vocational training. This will be addressed to fighting exclusion and social marginalisation. This will be achieved by facilitating access to education for children and young people, by promoting preventive actions, and for adults facing the risk of social exclusion. At the same time, the sub priority is looking at ensuring equal opportunities in relation to acquiring knowledge, skills and other necessary resources in order to compete effectively on the labour market, particularly within the developing knowledge based society. These persons will be assisted in developing their employment capacity, in developing their chances of finding a job, with a view to their life skills and integration in society. There will be actions carried out to prevent all forms of discrimination by tackling and solving a large number of problems, specific to each vulnerable group.

The main areas of intervention are: the integration into the labour market and fighting discrimination, promoting gender equality and fighting the social exclusion of women, the development of an efficient system of social services addressed to the reduction of the risk of social exclusion and marginalisation, trans-national initiatives in inclusive education and trans-national initiatives on the labour market.

Additional activities aimed at supporting social inclusion issues will be taken into account: increase the number of individuals working in the field of construction of housing for the vulnerable groups insofar as housing, heating system rehabilitation for the already existing housing stock – especially for the multi-storey housing built over the 1950-1985 period, as well as consolidating the multi-storey housing – especially those built before 1947, without earthquake engineering which is dangerous (1<sup>st</sup> level earthquake risk). Increased access to services and utilities (heating, running water, health utilities), development of rehabilitation programs and increased infrastructure quality (water, sewerage, roads systems) also represent an important component aimed at combating social marginalization of vulnerable groups in accordance with the priorities established by the Common Memorandum in the field of Social Inclusion.

**Integration on the labour market and fighting discrimination against vulnerable persons** will support the facilitation of access in these areas for vulnerable persons that are facing the risk of social exclusion. In Romania, these categories are Roma population, young people over 18 that are care leavers and disabled people.

These individuals, the other high-risk marginalized categories, as well as the sole family supporters, individuals located in the rural environment in search of a job, ex-prisoners will be helped to develop their employment capacity, to enhance their chances of finding a job, with a view to their integration in society. At the same time, prevention initiatives for all kinds of discrimination will be supported, that are specific to each individual vulnerable group. These will be done by developing and consolidating mechanisms that are specific to the social economy as a way of increasing the rates of employment of vulnerable groups and ensuring equal opportunities for integration and staying in labour market.

Developing an efficient social services' system aimed at reducing the risks of social marginalization and exclusion which will support the process of building and strengthening the infrastructure needed for a social services' network developed at community level leading to diminishing the risk of social marginalization and exclusion. As for the already employed vulnerable individuals, the process will aim at supporting and increasing the level of employment and to adapting these categories of individuals by introducing and using new IT methods and technologies in the social services' system, develop a social services' mix which would create new jobs, develop programs aimed to provide to staff working in the field of providing social services continuous development and development of new skills.

**Improving access to and participation in the initial and continuous education for vulnerable groups** will mainly be addressed to groups facing risks (the Roma minority, young people leaving the child protection state institutions, disabled people, population with low income, persons with special educational needs, population in rural areas). The purpose of the measure is to provide access to quality education to all in order to acquire basic skills that would support the integration of vulnerable groups in the society into the labour market. The measures regarding the participation in continuous education for people in rural areas will not include the continuous professional training programmes in agriculture, forestry and fisheries sectors. Other priorities include tackling school dropout, fighting social and professional exclusion and marginalisation of young people who dropped out of compulsory education without acquiring minimum skills to be employed ("second chance- type education"). These initiatives will be supported by accompanying actions specific to social economy with the involvement of the 'not for profit' sector.

The main activities that are taken into consideration are: the continuation and development of programmes for those segments of population that do not have access to basic education or that have dropped out of the educational system ("second chance- type education"); measures for providing access and participation to basic education, especially for the population in rural areas and Roma communities; the development of programmes for the integration of persons with special educational needs and with disabilities in the mass education, by training teachers regarding these special requirements and by improving the educational services for psychological and special assistance through teaching support staff; the development of distance learning for the targeted groups (together with the strategy for Priority 6 of the NDP "Diminishing the development disparities between the country' regions", and priority 1 "Increase of the economic competitiveness and the knowledge based economy"); the development of initial education and training programmes in non formal and informal contexts that are adapted to the targeted groups, including forms of alternative education.

**Promoting gender equality and fighting social exclusion of women** will lead to the facilitation of access for women to economic sectors that were less accessible to them and to the increase in their level of welfare. This will lead to the reduction salary gap and other differences that exist within the labour market between men and women. Actions will in time improve employment conditions of women in different economic sectors. This will be achieved through a process of supporting the integration and re-integration of women on the labour market through activities such as: facilitating access to professional development, counselling, support for managing independent activities; promote the modern employment methods, especially by means of using the IT technologies; facilitating access to social services (e.g. social care services for needy individuals); studies and analysis on the situation of women on the labour market; identify and eliminate the prejudice with regard to traditional professional categories (specially for women, specially for men); develop a system aimed at accessing information on programs and activities aimed at supporting women, as well as taking part in all these activities. The process of increasing women's involvement on the labour market will also be implemented by means of professional and family life re-conciliation activities, promoting shared-responsibility and equal distribution of family and parental responsibilities between women and men, facilitate access to child-care services.

The equalising of the work life balance of men and women will facilitate the prevention and sanction of all forms of gender discrimination. Other consequences of these actions will assist in the elimination of sexual harassment in the workplace, reduce forms of domestic and social violence against women including sexual exploitation and trafficking.

**Trans-national initiatives in inclusive education and on the labour market.** In order to promote social cohesion and to encourage a diverse and flexible labour market, trans-national initiatives will be supported, especially in order to test new actions to fight discrimination and inequalities for those seeking a job. European partnerships will be supported, both in view of identifying new opportunities for integrating back on the labour market, as well as for making exchanges and common professional training programmes.

#### *4.3.4. Develop the administrative capacity and the good governance*

This sub-priority aims at promoting and supporting improved public administration at the central and local levels, in order to become an important competitiveness, development, progress and cohesion factor. The actions will be targeted on two other important segments in the process of public administration strengthening: justice and public order and security.

**The development of public policy cycle** will be achieved through consolidation of the public policy cycle (formulation and implementation) and through capacity building at all levels.

This will focus on the following fields of intervention: develop the capacity to draft public policies, modernize the public administration by means of implementing adequate instruments, provide training and develop a system for the professional development of the public administration.

The process of strengthening the public policies' management cycle will also take into account the process of developing the capacity to draft public policies. These actions will include the introduction of new strategic planning mechanisms and develop abilities, so that policies may be drafted by the Government and the ministries within a strategic framework. Special attention will be given to the continuous development, policy design and drafting abilities by means of training and other methods. Policy management is an essential role of the governance which is reflected at all levels. There will be a close link between the decisions taken in this field and the enforcement of a modern policy management with regard to the process of decentralizing and providing public services.

The processes of modernizing the public administration will aim at modernize the management of the human resources employed within the administration, the remuneration, performance management and training systems. These interventions will align the budgetary and financial management to the new management tools of the policies and strategic planning. Efforts will be made to reform the rules of procedures within the Government and the ministries (simplify the organization and their administration, improve team working, develop a customer centred approach and consult the users. Modern services such as "one-stop shops" will be employed in an effort to modernise the public services.

The process of developing a decentralized local administration able to provide high-quality and efficient public services will aim to achieve fundamental change in the process of providing public services, in accordance with the EU objectives with regard to the local economic and social development, to a balanced regional development and to improving peoples' general living standards.

The decentralization and deconcentration process will be supported by means of a professional political and legislative, participation and consultative process aimed at involving all stakeholders, the Government (especially the MAI and MPF), the civil society, and the associations within the local public administration, and at taking into account the relevant international experience. It will also take into

account the fundamental reconfiguration of the system aimed at providing public services including an extended financial autonomy and close links between the public and private sectors within the process of providing services, in order to ensure a high level of efficiency and responsibility towards the citizen. This will imply enforcing a legal institutional framework, approved and coherent from a political point of view, a strong programme aimed at increasing the local capacity to implement the new responsibilities.

The main activities are: support for the efficient fulfilment of the duties allocated through the decentralization process (clear financial responsibilities and resources), improve the quality of the public services and develop the capacity to provide new services, develop the capacity to access and manage the internal and external development funds, especially the community funds.

These activities will aim for: defining the duties of the local administration in the process of providing (transferred or new) services, establish standards, signed partnership agreements (with the private sector, the communities and the line ministries), plan and monitor the agreements signed with the locally elected representatives. There will be a programme aimed at developing the technical and administrative capacities within the public administration in order to create/ strengthen the management of the process of providing public services.

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Further research will be undertaken in relation to the **spatial planning** and how it affects social issues such as unemployment, inequality on the labour market, extreme/severe poverty, school drop out, poor housing conditions, access to social protection services, living standards, internal and international migration analysed from the point of view of regional, zonal and community disparities. This research will assist in the diagnosis of the social environment and to identify new development possibilities to build a more cohesive and inclusive society. It will help identify the equipment and facilities needed for human resources development and the structures required to build a more competitive economy, the new skills development for the labour market, training, academic and research skills, scientific and technological parks. It will also provide data on the spatial distribution of competitiveness and human resources in specific geographical areas and measures to stimulate the labour market, the supplementary needs of the labour market, and to increase employment.

In the context of improving performance within local public administration, the issues related to territorial competitiveness will require procedures to ensure coherence between local economic development strategies, urban development, territorial planning and multi-annual investment plans. In addition coherence between the territorial partners and associates will be needed (e.g. economic clusters, zones/regions, functional urban areas). Facilitating the access to finance and investments, elaboration of the territorial plans, relevant information related to development projects, procedures for rapid approval, flexible regulations, and quality services will be important. These services will need to be linked to ensure development areas have easy to access and are effectively equipped. Support could be required to the local private sector and supplying local communities with general information on the development plans represent issues that will be managed by the local and national authorities through partnership with the relevant actors.

#### **4.4. COHERENCE WITH EU AND NATIONAL POLICIES**

The objectives and measures described in the priority „Human resources development, increase in employment and fighting social cohesion” were set starting from the needs identified in Romania in these fields. They correspond to the guidelines and principles that are to be found in European documents (The revised Lisbon Agenda, The Integrated Guidelines for Development and Employment 2005 -2008, The community strategic guidelines in the field of the cohesion policy, Action Plan: European Agenda for Entrepreneurship, Framework Strategy for Gender Equality and others) and they

support the achievement of the common European objectives: full employment; improvement of the adaptability of employed persons and of enterprises and the flexibility of the labour market; the increase in investments in the human capital through education and vocational training, promoting life long learning, the development of a flexible and inclusive labour market. These objectives and measures took into account the development measures set out at national level through the programming documents and action plans in the field of human resources development. In the general framework for promoting social and economic cohesion, the achievement of the objectives of the strategy related to the priority „Human resources development, increase in employment and fighting social cohesion” is based on the actions carried out in two key areas: initial and continuous education and vocational training (placed in the broader context of life long learning) and the development of a modern, flexible and inclusive labour market. The drafting of this strategy also took into consideration the cross cutting issues regarding equal opportunities, sustainable development and information society.

<b>COHERENCE WITH EU POLICIES</b>		
<b>EU Policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<p>Action Plan: European Agenda for Entrepreneurship, COM(2004) 70 final (11.02.2004) stipulates:</p> <ul style="list-style-type: none"> <li>- the need to introduce entrepreneurial education at all educational levels, as a horizontal approach or as a specific subject.</li> </ul> <p>Guideline 17: Implement policies for full employment, improve employment quality and productivity and strengthen territorial and social inclusion</p> <p>Guidelines 18-20: Attract and maintain a greater number of people on the labour market, increase employment offer and modernize social protection systems</p> <p>Guidelines 21-22: Improve adaptability of workers and enterprises</p>	<ul style="list-style-type: none"> <li>- promotion of entrepreneurial training;</li> <li>- revision of the curriculum;</li> <li>- development of teaching methodologies;</li> <li>- partnership programmes for entrepreneurship, at the level of high school and university education, that will allow the development of modules/ disciplines in order to get entrepreneurial abilities through the simulation method;</li> <li>- methodological training of teachers;</li> <li>- the development of initiatives and programmes in the field of entrepreneurship at the level of university education and the revision of curricula of scientific and technical universities, in order to increase the percentage of subjects such as entrepreneurship, and the setting up and management of the development stage of an enterprise.</li> </ul>	<p>4.3.2. Promotion of full employment</p> <ul style="list-style-type: none"> <li>- Increase in the adaptability of the labour force and enterprises.</li> <li>- Improvement of the transition from school to the workplace and the promotion of entrepreneurial culture in education and training</li> </ul>
<p>Modernisation of education and training systems in view of achieving the 2010 common objectives</p> <p>Com(2005) 141 final 2005/007 (CNS) Integrated guidelines for growth and jobs (2005-2008)</p> <p>Guidelines 23-24: Increase the investments in human capital through better education and skills</p>	<ul style="list-style-type: none"> <li>-strengthening and improving the internal and external evaluation mechanisms for educational units;</li> <li>-revision of performance standards;</li> <li>- training teachers, training of trainers, integrating teaching research in their training;</li> <li>- functional mechanisms that would ensure transparency of skills and competencies;</li> <li>- development of partnerships between educational/ training institutions and economic operators;</li> <li>- encouraging internships in enterprises;</li> <li>- improvement of monitoring mechanisms of graduate insertion on the labour market;</li> <li>-adapting university and post graduate curricula focused on scientific research and innovation to the needs of economic development</li> <li>- orientation and school counselling</li> </ul>	<p>4.3.1. Human resources development</p> <p>Quality assurance and management in education</p>
<p>The Statement of European Ministers for education and</p>		<p>4.3.1. Human resources development</p>

<b>COHERENCE WITH EU POLICIES</b>		
<b>EU Policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<p>professional training and of the European Commission, concluded in Copenhagen, November 29-30, 2002, regarding the strengthening of cooperation at an European level regarding education and professional training”</p> <p>„The Statement from Copenhagen” (The Council Resolution of 19 December 2002 with regard to strengthening the cooperation at European level in fields like education and professional training 2003/c13/02) stipulates:</p> <ul style="list-style-type: none"> <li>- strengthening cooperation at the European level in fields like education and professional training with a view to promote mobility and develop interinstitutional cooperation;</li> <li>- promote transparency in education and professional training, implement policies and systems for counselling and orientation at all levels of education and professional training</li> </ul>	<ul style="list-style-type: none"> <li>- stimulate participation of the labour force to in-service professional training;</li> <li>- develop and modernize the system of professional training services supply;</li> <li>- improve employment and prevent long-term unemployment</li> <li>- support young people’s access to labour market</li> <li>- improve the quality and the efficiency of the Public service for Employment</li> <li>- develop common programmes to promote employment</li> </ul>	<p>Promoting life long learning</p> <p>Identifying and capitalising on all the opportunities for integration on the labour market.</p> <p>4.3.2. Promotion of full employment</p> <p>Identifying and capitalising on all the opportunities for integration on the labour market.</p> <p>Modernisation and strengthening of the administrative capacity of the Public Employment Service</p> <p>4.3.3. Promotion of social inclusion</p> <p>Trans-national initiatives on the inclusive labour market</p>
<p>Integrated Guidelines for Development and Employment 2005-2008, COM (2005) 141 final 2005/007 (CNS) stipulates:</p> <ul style="list-style-type: none"> <li>- develop entrepreneurial culture;</li> <li>- improve attractively of employment, labour quality and productivity and reduce the percentage of the poor labour;</li> <li>- increase women participation and reduce the gender differences in employment, unemployment and remuneration;</li> <li>- promote an approach of the life labour through active ageing;</li> <li>- adapt to the needs of the labour market;</li> <li>- improve the adaptability of labour market and of enterprises;</li> <li>- increase investments in human capital for better education and competencies</li> </ul>	<ul style="list-style-type: none"> <li>- develop flexible and personalized means of training adapted to the requirements of human resources personal and professional development;</li> <li>- develop and modernize the system of professional training services supply;</li> <li>- stimulate participation of the labour force to on-the-job training;</li> <li>- promote the entrepreneurial training;</li> <li>- promote programmes that ensure, develop and maintain human resources;</li> <li>- ensure the conditions necessary to increase employment</li> <li>- training of the Public Service for Employment staff</li> </ul>	<p>4.3.1. Human resources development</p> <p>Promoting life long learning</p> <p>4.3.2. Promotion of full employment</p> <p>Increase of the adaptability of labour force and enterprises</p> <p>Identifying and capitalising on all the opportunities for integration on the labour market.</p> <p>Modernisation and strengthening of the administrative capacity of the Public Employment Service</p> <p>4.3.3. Promotion of social inclusion</p>

<b>COHERENCE WITH EU POLICIES</b>		
<b>EU Policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
	<ul style="list-style-type: none"> <li>-reduction of gender disparities on the labour market and the prevention of salary discrimination tendency for women;</li> <li>- increase in the participation of women on the labour market and the regulating of work life balance of men and women.</li> </ul>	Promotion of gender equality and fighting the social exclusion of women.
<p>The Cohesion Policy for the support of Development and Employment: EU strategic orientations 2007-13 , COM (2005) 0299 stipulates:</p> <ul style="list-style-type: none"> <li>- focus on knowledge, innovation and optimize human capital;</li> <li>- promote public and private partnership ;</li> <li>- facilitate innovation and promote entrepreneurship ;</li> <li>- increase women participation in employment.</li> </ul>	<ul style="list-style-type: none"> <li>- development of flexible and customised training ways, adapted the personal and professional development requirements of human resources;</li> <li>-development and modernisation of the training provision services</li> <li>- stimulation of the participation of labour force to continuous professional training.</li>   <li>- promotion of development and retention of human resources;</li> <li>-promotion of entrepreneurial training;</li>   <li>-support in the development of partnerships;</li> <li>-support in the development of the administrative capacity of social partners;</li> </ul>	<p>4.3.1. Human resources development</p> <p>Promoting life long learning</p> <p>4.3.2. Promotion of full employment</p> <p>Increase of the adaptability of labour force and enterprises</p> <p>Initiatives for social partners</p>

<b>COHERENCE WITH EU POLICIES</b>		
<b>EU Policies</b>	<b>Reflection of the European policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
	<ul style="list-style-type: none"> <li>- improvement in employment and prevention of long term unemployment</li> <li>- support for the integration of young people on the labour market</li> <li>- providing the conditions for implementing activities of increasing employment;</li>   <li>- training of staff in the Public Employment Service</li> <li>- improving the quality and efficiency of the services provided by the Public employment Service;</li>   <li>- equal opportunities for integrating and retaining vulnerable groups on the labour market;</li>   <li>- increase in the participation of women on the labour market and the regulating of work life balance of men and women.</li> </ul>	<p>Identifying and capitalising on all the opportunities for integration on the labour market</p> <p>Modernisation and strengthening of the administrative capacity of the Public Employment Service</p> <p>4.3.3. Promotion of social inclusion</p> <p>Integration on the labour market and fighting discrimination for vulnerable persons</p> <p>- Promotion of gender equality and fighting the social exclusion of women.</p>
<p>Common actions for development and employment: The Lisbon Community Programme, COM (2005), 330 Final stipulates:</p> <ul style="list-style-type: none"> <li>- increase employment and productivity and strengthen social cohesion</li> </ul>	<ul style="list-style-type: none"> <li>- improvement in employment and prevention of long term unemployment</li> <li>- support for the integration of young people on the labour market</li>   <li>- equal opportunities for integrating and retaining vulnerable groups on the labour market</li> <li>-development of an efficient system of strengthening and promoting the social economy.</li> </ul>	<p>4.3.2. Promotion of full employment</p> <p>Identifying and capitalising on all the opportunities for integration on the labour market</p> <p>4.3.3. Promotion of social inclusion</p> <p>Integration on the labour market and fighting discrimination for vulnerable persons</p>

<b>COHERENCE WITH NATIONAL POLICIES</b>		
<b>National Policies</b>	<b>Reflection of the national policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<p>Strategy on medium and long term in the field of professional training 2005-2010 (GD no. 875/28.07.2005)</p> <p>Common Evaluation Document of the Labour Force Employment Policy (October 2005).</p> <p>Technical Monitoring Report related to the priorities of the Common Document for the Evaluation of the Employment Policy , May 2004</p>	<ul style="list-style-type: none"> <li>- promote reforms in education;</li> <li>- develop the national framework of professions;</li> <li>- develop new professions in education;</li> <li>-develop and modernize the system of professional training services supplying;</li> <li>- create and develop insurance systems and quality management in education and training;</li> <li>- develop the network of service suppliers;</li> <li>- ensure access to quality services;</li> <li>- develop offers of initial education for academia and develop human resources in education;</li> <li>- develop offers of initial and on-the-job education for the new functions in the education field;</li> <li>- adapt the educational offers to the market and local communities 'demands;</li> </ul>	<p>4.3.1. Human resources development</p>

<b>COHERENCE WITH NATIONAL POLICIES</b>		
<b>National Policies</b>	<b>Reflection of the national policies in the NDP strategy</b>	<b>NDP sub-priorities</b>
<p>Technical Monitoring Report related to the priorities of the Common Document for the Evaluation of the Employment Policy, September 2005</p> <p>National Action Plan for Employment (2004-2005)</p>	<ul style="list-style-type: none"> <li>- promote partnership in education;</li> <li>- use new technologies and modern methods of tracking and develop digital skills;</li> <li>- modernize and rehabilitate basic infrastructure and ensure school equipment.</li> </ul>	
<p>National Action Plan for Employment (2004-2005)</p> <p>Common Evaluation Document of the Labour Force Employment Policy (October 2005).</p> <p>Strategy on medium and long term in the field of professional training 2005-2010 (GD no. 875/28.07.2005)</p>	<ul style="list-style-type: none"> <li>- support partnership development;</li> <li>- support the development of the administrative capacity of social partners;</li> <li>- develop the spirit and the entrepreneurial culture in pre-university and undergraduate education;</li> <li>- facilitate transition from school to labour</li> <li>- develop the managerial and entrepreneurial competencies;</li> <li>- improve employment and prevent long-term unemployment;</li> <li>- support the access of young people to the labour market;</li> <li>- improve the services delivered by the Public Service for the Employment.</li> </ul>	4.3.2. Promotion of full employment
<p>Joint Inclusion Memorandum - 2005</p> <p>Common Evaluation Document of the Labour Force Employment Policy (October 2005).</p> <p>Strategy on medium and long term in the field of professional training 2005-2010 (GD no. 875/28.07.2005)</p> <p>National Action Plan for Employment (2004-2005)</p>	<ul style="list-style-type: none"> <li>- ensure the access and the participation of vulnerable groups to basic education, including the population from rural areas;</li> <li>- develop social inclusion programmes in mass education for people with special educational requirements and with disabilities in the mass;</li> <li>- develop distance learning;</li> <li>- implement a system of gender indicators to identify the factors generating differences in treatment between men and women;</li> <li>- training in field activities related to women promotion to decision-making functions and to the political life;</li> <li>- awareness campaigns addressed to women, especially to those from rural areas;</li> <li>- promote and support the development programmes for flexible and even atypical employment;</li> <li>- introduce and use new IT methods and technologies in the system of social services ;</li> <li>- develop a mixed market of social services generating employment;</li> <li>- develop programmes for on-the-job training and for achieving new competencies for the staff involved in ensuring the social services;</li> <li>- promoting transnational initiative in inclusive education and on the labour market.</li> </ul>	4.3.3. Promotion of social inclusion

## **4.5. CONTRIBUTION TO HORIZONTAL OBJECTIVES**

### **4.5.1. Equal opportunities**

Equal opportunities policies are essential for economic growth and contribute to full employment. The elimination of structural inequalities between women and men will allow the fulfilment of the employment potential of women, whilst contributing to the social cohesion and feasibility of the social protection system. Applying measures and carrying out relevant activities provided in the strategy for this priority in the NDP in the field of gender equality will lead to the integration of gender policies in sectoral policies, the development

of a „gender equality” culture, by promoting common actions, with the direct involvement of all the social actors in the public and private sector, including civil society. These measures will provide the implementation framework of the equal opportunities policy as a horizontal priority. The increase of women’s participation on the labour market, encouraging the employment of women in mainly male dominated occupation will encourage a greater balance of men and women, provide access to women into management positions, promoting part time positions that will lead to the elimination of disparities between men and women, also improve salary levels. All of these will be supported through actions for the prevention and sanctioning of all forms of gender discrimination, work place sexual harassment, domestic and society violence against women, traffic and sexual exploitation. By implementing strategic priorities in the field of human resources development, equal opportunities will be promoted for other vulnerable groups on the labour market: disabled persons, young people, Roma minority, older workers looking for a job.

#### **4.5.2. Sustainable development**

The analyses indicate that the stimulating elements for sustainable development that need to be paid which have to be approached carefully are:

- highly educated population;
- increased innovative capacity;
- development of the physical infrastructure;
- activities generating increased added value.

The priorities of the strategy in the field of human resources development will lead to promoting safe and healthy work conditions and will contribute to ensuring the physical and mental health of the personnel, and to maintaining its work capacity. This will allow the employees and the employers to face the changes and growing demands on the labour market, as well as the competitiveness requirements. By achieving the strategic priorities in the field of human resources development, the new technology and the changes in the nature of demands and work conditions will have a positive impact on the labour force, the professional performance and eventually on labour productivity. The introduction of new environment friendly non-pollutant technologies will be facilitated through the acquisition by the labour force in Romania new abilities and professional abilities. This objective will be promoted through a series of actions in the field of sustainable education: the development of training programmes for teachers in order to get the necessary abilities for the inclusion of sustainable development in the teaching-learning process; the development of materials and tools specific to sustainable development; the development of specific national and international partnerships; the development of education for a democratic society, where sustainable development will have a distinct place; the development of environment protection education.

#### **4.5.3. Information Society**

The priorities of the human resources development strategy, through the emphasis placed on education and professional training, will contribute to providing basic and special competencies in the field of ITC by developing specific educational programmes and including ITC in the formal curriculum, introducing computers in educational institutions and on the labour market, promoting information techniques in education.

#### 4.6. INDICATORS

Indicator	UE-25	Romania	
		Reference year (2004)	Target objectives 2015
Participation rates of adults to education and training (% of the population in the age group 25-64) <i>(EC – Quality indicators of LLL)</i>	10.6	1.5	5%
Percentage of young people aged 19-24 that leave the educational system early, without continuing their education	15.7	23.4	10
General employment rate for age group 15-64 years, out of which: - young people (15-24 years) <i>(LFS, Eurostat)</i>	63.3%	57.9%	65%
	36.4%	29.1%	32.7%
Employment rate for women	55.4%	52.1%	58.05%
BIM employment rate amongst youngsters (15-24 years)	18.2%	21.0%	19.5%
BIM long term unemployment rate	4.0%	4.7%	4.5%
Activity rate of working population (15-64 years)	69.3%	63.2%	68%
Difference between the BIM unemployment rate for sexes (in percentage points)	2 percentage points (B 8.0%. F 10.0%)	2.1 percentage points (B 9%. F 6.9%)	2 percentage points (B 8.8%. F 6.8%)

## **P5. DEVELOPMENT OF RURAL ECONOMY AND INCREASING PRODUCTIVITY IN THE AGRICULTURAL SECTOR**

### **5.1. RATIONALE**

**Analysis of the rural space.** The analysis of the current situation in the agricultural sector in Romania indicates the need to increase the speed of the processes of restructuring and modernizing the industry, rural development and fishing, with due consideration being given to the economic and social importance of these sectors for ensuring integrated and sustainable development of the rural space. Taking into account the need to adjust the Romanian agricultural and food sector to meet the EU requirements, in view of the accession, by promoting a post-accession effective and viable economic and social sector, the strategy establishes the main lines of action for the development of this sector.

**Disparities between the rural and the urban area are specific social problems in the Romanian rural space.** In 2004, the rural population was 9.778 million inhabitants, representing 45.1% of the total population residing in approximately 13,000 villages, organized administratively in about 2,868 communes – a traditional local administrative organization.

The evolution of the rural population in the last decades registered a decreasing trend determined both by the negative rural population indicator, and the territorial administration changes – establishment of new towns. According to the NPTA Section IV during 1966-1988, – the localities network - has registered a decreasing process of about 30-50% in 704 communes, and 50% in 134 communes. As a consequence of the strong trend of depopulation, at present, a lot of demographic processes with negative impacts which affect the social and economical development have been registered: the population ageing (high percentage of the population over 60 years), ageing of the labour force, high mortality rates, (15.2‰ compared to 9.7‰ with high levels of child mortality and high variations between regions), as well as low birth rates.

In 2003, in the rural areas, the cash incomes represented 54.6% of the average monthly income per household (gross level), 20.3 % below the average at national level and 34.2% below the level registered in the urban areas. As regards the incomes structure, the biggest share was covered by the salaries (gross) and other salary type incomes (59.8%), the rest being represented by incomes obtained from undertaking various agricultural activities. In 2002, the relative risk of poverty in rural areas was more than double as compared to that in the urban areas: 42% in rural areas as compared to 18% in urban areas. The poor population in the rural areas represents 2/3 of the total poor population (source: The World Bank Study on the food and agriculture sector, 2003).

**The labour force** in the rural area work mainly in agriculture and that is one of the major constraints of the process of development of national economy. The percentage of persons that work in agriculture was 67.3%<sup>104</sup> in 2003, and 63.5% in 2004 as comes out of the Analysis of the Romanian Rural Space (ARRS) and the data provided by the National Institute of Statistics<sup>105</sup>. Worth mentioning in this respect is that an important part of the rural population over the pension age continues to work (e.g.: 44% of the population aged between 65 and 69 years in 2003). Therefore, the major problem within the industry is under-employment. This is directly related to the viability and economic size of the farm<sup>106</sup> and in most

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<sup>104</sup> The percentage is calculated in relation to the entire population that works in agriculture (subsistence farms, associations, commercial units)

<sup>105</sup> The analysis of the Romanian Rural Space 1998-2003 – carried out within the consortium coordinated by the research Institute for Agriculture Economy and Rural Development

<sup>106</sup> In general, most of the labour force in agriculture is involved in activities with small added value( due to the fact that farms do not have an integrated activity)

circumstances is related to subsistence farming. Retaining a stable and viable rural population needs measures to provide an optimum number of jobs in agriculture and related services.

Similarly, according to the data presented in the Social-Economic Analysis of the Romanian Rural Space, the level of unemployment in the rural area is higher than within the total number of unemployed in economy as a whole (22.1% on 2001, 31.2% on 2002 and 29.3% in 2003 and 35.3% in 2004). This is increased by the seasonality of work in agriculture a fact that has negative consequences on the real average duration of the employment in the rural area.

**Regarding the educational system** in the rural area, compared to the urban area it is firstly characterized by a lower level of education attainment. In 2004 the percentage of people who completed their education was 47.8%. More exactly, an increasing trend was registered regarding the number of persons with higher education studies (university degree) working in the rural areas had risen from 1.6% in 1999 to 2.6% in 2004, while the number of persons with initial education decreased in share from 58.7% to 47.8% in the same period. At the same time, the percentage of persons with medium studies working in agriculture increased from 39.6% in 1999 to 49.6% in 2004. This trend is mainly due to the process of de-industrialization of the large towns.<sup>107</sup>

The **structure of the agriculture land ownership** is very fragmented. Thus, according to the data from ARRS, in 2003 there were over 4.47 million individual households with an average land area of 1.7 ha; this has led and continues to lead to an impossibility of performing an efficient production, organization and management processes in the agricultural field. The excessive fragmentation of the land is seen as a major obstacle for the progress of technology used in agriculture in Romania, because the holders of subsistence and semi-subsistence farms are usually those who work most of the farm land, and, in the majority of cases, they do not have the financial capacity to invest in modern equipment.

**Average yields** for the main crops had shown an increasing trend in both the crops and the total production in 2001. In the past few years however, especially starting with 2003, the trend has reversed and caused mainly by unfavourable climatic factors (floods, drought) and economic ones (small prices given to producers for their animal and vegetable production, which do not cover the costs). Thus, during 1998–2003, the average production for wheat and rye were 2,048 kg/ha, compared to the average potential at country level of 5,500-7,000 kg/ha, and the average production for maize was about 3,042 kg/ha compared to a potential of 8,000kg/ha.

**The animal production.** During 1998- 2003, the beef represented 21.24% from the total meat production, the pork production represented 46.44%, and the poultry production had a share of 24.41%. Regarding pork, it represents a large part of the total production, during the analyzed period but the trend has been decreasing.

Following the cumulated analysis of these developments, the share of the food processing industry in the overall national industry decreased from 18.2% in 1998 to 13% in 2003. By branches, the biggest number of units is to be found in the milling and bakery (31.5%) and production, processing and preservation of meat products (18.1%).

Of the **market and products trading**, animal and food processors and traders accounted for 59.6% whereas the agriculture and food markets and fairs accounted for 40.4%; the data is showing the existence of a weakly developed agri-food chain.

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<sup>107</sup> Before 1990 in the big cities there was a very strong processing industry, big enterprises that needed strong labour force, that was taken from the rural area, after 1990, when most of these big enterprises went bankrupt, a reverse process of migration from urban to rural areas took place.

An analysis of marketing at various branches shows that they are poorly developed especially in the processing and distribution sectors, which is mainly the case for vegetables and fruits, but also for milk and milk products, the immediate effect of this being a disproportion between supply and demand. Mainly on the cereals markets the main problem is that of selling at low prices because of the existence of a chain of companies that – by their position of a monopoly in the field of storage and processing of cereals – they can impose small prices to the producers. In this context, since there is no organized form of association (groups/associations of producers), the small producers do not have a say as to setting the prices for their products.

In point of the **foreign trade** with food and farm products, it is to be mentioned that although in 1990 Romania was a net exporter of farm products, after that year, the reforms required by the process of transition to the market economy have had a strong impact on the farm and food sector, a phenomenon that led to the decrease in farm production and implicitly distortion of the farm and food trade balance, that has thus become negative.

In this context, it is necessary to **increase the processes of restructuring** and modernization of the farm sector, given the fact that, in all the regions of the country a main problem is that the gross added value of the primary sector (agriculture plus forestry and fish breeding) is lower than in the secondary sector (industry plus construction). The values of GAV (gross added value) in the primary sector reflect the very low level of productivity of farm work, due to the poor technology, to the agricultural land fragmentation, as well as to the improper management of private farms.

Similarly, as a characteristic of the rural area, **the social capital indicators** show that there are substantial disparities at a local level: thus, inhabitants in the rural areas have limited access to possibilities of finding a job, to health care, legal assistance, police and banks, than in the urban areas.

An important discrepancy between the urban and rural areas in Romania is also given by the **social and physical infrastructure**. This aspect, combined with the underdevelopment of rural areas, represents a significant challenge for Romania, but also an essential condition with a view to its integration into the enlarged Europe.

**Rural infrastructure** especially rural roads and the water supply system have had a significant impact on rural development in general, but also on the encouragement of non-farm investment, in particular. The lack of water supply networks and of sewerage affects the health of families in rural communities. In Romania, only half of the communes are connected to water supply networks, which means that only 1/4 of the rural population has access to these facilities (according to data in the Analysis of the Romanian Rural Space of 2000).

**Roads** - communal roads are still lagging behind; thus, in 2003, only 10.2% of the county and communal roads in Romania were modernized and 29.2% of them were surfaced lightly. Although in the past few years there has been a tendency of extending the length of public roads, the density of those with modernized infrastructure or lightly surfaced by territorial unit is still very low – 33.1%. Approximately 25% of the communal roads cannot be used in unfavourable weather conditions. This has consequences on the infrastructure of collection and transport – essential for perishable farm products – and implicitly on the access of farmers to the market; similarly, due to the fact that Romania has asphalted roads only in the villages located along the national or country roads, efforts to improve this situation will have to be made in the areas that are at relatively big distances from the national or European roads, as well.

In point of the **technical infrastructure** – both in the case of water distribution networks and in that of gas distribution pipes some progress has been registered, the percentage of these networks having gone up to an acceptable level (approx. 40% of the overall at national level). The analysis shows however, more efforts are necessary for further developing. In the same context, there is a very big gap between the urban and rural area in point of sewerage, the length of sewerage pipes in villages being in 2003 only 6.8% of the all country network.

With regard to **health infrastructure** there has been a significant reduction in the number of health-care staff at all the levels of this service for the rural population, and this has had direct effects on the living standards in the rural environment.

There are difficulties in point of **culture**, the libraries number at the rural area level decreasing from 9,388 in 1999 to 8,306 in 2004, and this has resulted in a reduction in the number of the people using these facilities.

The **level of information about the population**, in Romania there is low and lack of information renders the population unaware of the issues that affect their lives. There is also a shortage of information about the importance and need for protecting and conservation of the natural environment. This lack of information extends to local businesses and coupled with lack of resources prevents companies developments and the opportunities for change are limited. A possible effect is the growing risk of environment degradation. Reversal of this could be achieved

In this context, it is necessary to integrate informational actions and to develop the professional training in agriculture at national, regional and local level, through the agriculture consulting units.

These problems of a specific structural, organizational and informational nature of the communities affect inhabitants of the rural communities in Romania. These people do not have a developed entrepreneurial spirit, and fail to appreciate the need for an integrated approach to the specific issues of their community regeneration and require support measures to promote and organize local groups that should deal with the joint projects to support local inhabitants in rural communities.

In Romania, the 5 decades of the planned command economy and collective agriculture have changed social relations, mentality and conduct and have caused mistrust in the institutionalized forms of association and collaboration. On the other hand, the rural population (as well as the urban one) got used to depending on the government, and generally had a passive attitude of expectation of initiatives and decisions to be made for them and it also got used to the political fluctuation and fluctuation of public administration structures.

Even after the collapse of the planned economy the collective mentality has not changed, whereas cooperation in the rural areas has more often than not taken the form of small families and neighbourhood groups, to ensure subsistence, specialization of labour, consolidation of the land and risk reduction. Consequently, due to the lack of resources, these groups are still trapped into agriculture of subsistence.

**Forests and woods** account for 26.1% of the physical area of the country and play an important role in the economic and social development of the country. As to the structure of ownership, at the respective date, about 60% of the country's forests are owned by the state, and only 40% is private ownership. Under the new ownership law (Law no. 24/2005) the percentage of private ownership of the forests will increase to over 50%. In the forestry and wood processing sectors there are over 240,000 workers. Exports of wood and wood products are over 11% of Romania's total exports. Similarly, at present over

2 million ha of degraded farmland need forestation. The illegal deforestation is still very high. Reforestation of forests affected by natural catastrophes (especially by wind) and fire is a priority.

Creation of the protection forest curtains for the purpose of improving the environment for the farmlands is also essential in the coming period. According to the calculation made by specialists, there is need for about 670,000 ha of forest curtains throughout the country.

In point of the **fisheries**, in the period 1998 - 2003 production from fishing in Romania decreased, so that in 2003, this accounted for 63% of the production of 1998. the cause for the decrease in the fish production both in fresh waters and in sea waters is due mainly to the characteristics of the transition to the market economy (especially the lack of investment), as well as to the over fishing, water pollution, destruction of the habitat and also lack of reproduction matter. By comparison to 1990, production in this sector decreased five times because of lack of investments, degradation of environment and increase in production costs.

Thus, as it comes out, **the key problems facing agriculture, fisheries and the Romanian rural areas, in general** are:

- The numerous number of subsistence and semi-subsistence farms that are not viable, of an average physical area standing at only 1.7 ha;
- Poor productivity and quality of farm production, determined by the lack of financial resources, insufficient and inefficient use of resources, lack of staff conversant with modern farming technologies, lack or insufficiency of management and marketing knowledge, as well as inappropriate technical infrastructure (e.g. in 2000 labour productivity in agriculture was of about 28% of the level of labour productivity in the overall economy);
- The significant trade gap between imports of farm products and exports (there are mainly exports of products of poor added value);
- Lack of an organized market network, as farmers have to sell their own products or sell them to „intermediaries” at very low prices, this leading to a very big gap between gross farm products prices sold by the farmers to processors and the price of finished products;
- Weak basic infrastructure;
- The existence of large areas (about 1/5) heavily affected by factors of natural risks, such as: floods, land sloping, seismic risk, desertification, reduced water resources.

An important role in resolving some of these issues was played by the **SAPARD programme** for the pre-accession period; its general goals are the implementation of the acquis for the Common Agriculture Policy and related policies, as well as resolving the specific priority issues for the sustainable development of the farming sector and rural areas in Romania.

The SAPARD experience has created a precedent for the funds that are going to be received as of 2007, by creating the central and regional institutional capacity, imposing a certain financial discipline and promoting the concept of investments, by public and private participation.

## **5.2. OBJECTIVES**

### **5.2.1. General objective**

The general objective of the strategy for agriculture, rural development and fishery is **the development of an agriculture based on knowledge and private entrepreneurship**, capable of a uniform long term evolution that should ensure a decent living standard and the premises for achieving economic and social cohesion, at a national, regional and local level, as well as **protection of the natural cultural and historic heritage of rural areas in Romania**.

### 5.2.2. Specific objectives

**Beginning from the main lines of action in the second pillar of the Common Agriculture Policy and taking into consideration the specific conditions of agriculture and of the Romanian rural space, the specific objectives of the fifth Priority of the NDP 2007-2013 are:**

- Improvement of the rural infrastructure, until 2015, following the construction of 2,000 km of road and modernization of 5,000 km of communal roads, water supply by enhancement of construction work for 9,000 km of pipes, sewerage networks, and the construction of 1,600 km of pipes of this type.
- Increasing investments in farm and forestry, until 2015, to 5,000 investment projects can generate about 25,000 jobs concerning activities for processing industry.
- Reduction of the percentage of the aged population working in agriculture, in the rural area, until 2015, from 67.3% to 50%.
- Increasing to 9 ha the average size of the farms, until 2015.
- Increasing the fish production from about 8,700 tones /year in 2003 to 20,000 tones/ year in 2015.

### 5.3. THE STRATEGY

**The strategy is aimed at applying a multi-functional model of farm and rural development.** The basic principle in applying this model is to promote the development of the farming functions of the rural areas accompanied by the equal promotion of non-farming functions of these areas. This model is compatible with the economic and social policy of the European Union, whose main objective is **to narrow the gaps of development between EU regions**, and, implicitly, in **diminishing the development gaps** between the rural and urban areas.

The strategy for agriculture, rural development and fishery is based on the SWOT analysis of the farming and rural sector and is aimed at taking those measures that should resolve on the one hand the issue of rural infrastructure, and, on the other hand, the structural issues of agriculture.

All this will be resolved by reducing the number of staff that live on agriculture, a direct effects of all this being some lands will be made available which, in its turn, will lead to the aggregation and consolidation of viable farms. This will lead to increasing effectiveness of Romanian agriculture, to promotion of managerial capabilities of the farmers and orientation of farm activities towards profitable investment, including integrated projects.

Given the current conditions of the agricultural and rural sector and the limited funds available, it is necessary to relationally and effectively use them, distribute them fairly for rural development and fisheries, to priorities and closely selected actions.

In this respect, the following **sub-priorities** were identified:

- **Increasing the competitiveness of agriculture and food and forestry economy by adjusting the supply to demand of the market**
- **Raising the living standards in the rural area by diversifying rural activities**
- **Sustainable economic development of farms and forestry**
- **Promotion of local initiatives of a „LEADER” type**
- **Providing sustainable fishing and development of fish products.**

### 5.3.1. Raising the competitiveness of the agricultural and food, forestry economy by adjusting market supply to demand

Analysis of the rural area gives a clear image of the level of investment in the agricultural, forestry and fishery sector that is now characterized by a poor equipment of farms, mainly because of the low level of incomes and of the difficulties to access bank credits. The financial support for modernization of farms will lead to the cut down in the big production costs because of the use of the current equipment (obsolete physically and morally), to increasing the added value of production, thus allowing for effective and correct farming and forestry works. Improvement of the quality of the equipment used in farming and forestry will contribute to the protection, preservation and improvement of the environment, therefore to a sustainable management of natural resources.

Achieving these parameters will materialize in increased effectiveness and viability of farms, in growing incomes of farmers and holders of farming and forestry lands, of the income of the staff that work in these farms, in increasing occupational safety and raising the living standard in the rural communities.

The activities that are part of these sub-priorities are:

- **Creation and improvement of rural infrastructure at farm level** by building access ways to the farms and forestry farms (access to farms refers to those roads that link the farms to the closest road or the roads that are used jointly for access to the farming land), supply with electricity and providing a water management system at farm level (ex. construction, modernization of irrigation systems, drainage, water supply).
- **Modernization of farms** by bringing in new equipment in order to attain the quality standards imposed by the EU. The level of investment in agriculture is low and this triggers high production costs, as well as a poor quality of the products obtained and consequently poor effectiveness.
- **Increasing the added value of the farming and forestry production** by using a competitive system of processing and marketing of farm and food, as well as forestry products.
- **Increasing the economic value of the forests** by re-technologization of wood processing units, prevailing in the rural area, in order to increase the economic value of the forests.
- **Professional training in agriculture.** The increasing need for actions for professional development of the rural population, a fact that leads to non-observance of the standards of good practice in agriculture. Thus, with a view to increasing competitiveness in the farming and forestry sector and to adjusting it to the EU standards and requirements, there is need for enhancing the qualification of farmers and of other persons that carry out farming activities or related.
- **Support for settlement of young farmers.** An important measure for improving farm competitiveness is also to encourage young farmers to do modern farming by granting them facilities for settlement and supporting them financially to start their own business in farming and forestry.
- **Early retirement.** Considering the current situation of Romanian rural demographics. That is, the high percentage of the aging population in the agricultural sector, the measure of supporting young farmers should be correlated with another measure for early retirement. Thus, financial compensation will be given to aged farmers in exchange for giving up to younger farmers their farms or the right to work on them.
- **Granting of consulting services.** Organization of a unitary system for all the stakeholders in the market, in the trading of farm products and provision of management and farming and forestry consulting services represents a key measure on which the very success of accessing of funds and investments depends.
- **Improvement of production quality** and of **participation in quality schemes** pursuing the training of farmers and the other persons involved in farming activities with a view to increasing quality of production and participation in quality schemes.

- **Support for subsistence farms in order to become viable.** As compared to the European Union, most of the farms in Romania are small, fragmented, poorly developed and produce low yields. They are subsistence and/or semi-subsistence farms which means that those who hold them mainly produce for their own consumption and only a small part for selling. The big number of such farms that actually is a specific characteristic of the Romanian current farming requires that efforts be made for rendering them viable. Thus, support will be focused on those semi-subsistence farms that, on the basis of a business plan, will prove that they will become viable entities, competitive on the market, by improvement of the quality of products, of the marketing system etc. In this respect, support will be given for the development of semi-subsistence farms, for the purpose of increasing the economic viability of farms, increasing the income of farmers and reorientation of farm production according to market demand and supply.
- **Encouragement for the setting up and functioning of clusters of producers** by developing the specialized production, processing and trading networks, up to the community standards. Encouragement for clusters of producers to be set up, which is important in the current context of agriculture and economy in Romania, where predominant are small sized farms, that are not economically viable, have poor organization and are quite scattered. This situation explains the low level of the economic and social progress of the rural communities. If such a measure is applied than its result will be that farms of adequate sizes will emerge and this will contribute to the settlement of the rural population, to the creation of jobs for all categories of inhabitants, including for those in the under-developed areas (young people, women) as well as to increased attractiveness of life in the rural areas.

### 5.3.2. Raising the living standards in the rural areas by diversifying rural activity

This sub-priority pursues **to maintain and improve social and economic structures with a view to improving life in the rural area.** Promotion of balanced sustainable development, with a view to achieving economic and social cohesion of the country requires greater attention to the development of rural and fish breeding areas. Currently, the economic functions of these areas are considerably depending on the farming and fishery activities. The shortcomings in the technical and social infrastructure in the rural areas as well as the lack of adequate training of the human resources are important factors that hinder the economic development of the rural area.

The concept of sustainable development of the rural area relies on creation of proper conditions for progress and encouragement of the development of various sectors and of the business environment in these areas, with observance of the cultural and environment values.

In this way, the living conditions of the rural population are improved, whereas the development of services and investments will lead to the development of maintenance of the economic and social functions in these areas.

When we refer to alternative economic activities in the rural area, a problem that is granted special attention is to identify those activities that have indeed a real chance of development and to create jobs in sectors related to agriculture, in order to compensate for the decrease in employment in agriculture. For the time being the rural area continues to produce mainly primary farm products, whereas the activities up and downstream of agriculture are mainly located in towns.

The economic development of rural communities depends to a great extent on the same elements as urban development: well paid jobs, access to critical services, such as education, health, access to technology, transport and telecommunications and to a sustainable natural environment. The rural area offers additional advantages: lots of cheaper workforce, spaces for construction that are much cheaper,

a lower cost of living, less over crowding and a quieter life style. Thus, three aspects are essential for the rural economy to diversify: capital investment for developing business in the rural environment, orientation of the rural population to other domains of activity, as well, and the development of the basic infrastructure necessary for the development of other economic activities.

The development of businesses in Romania shows a big difference between the urban and the rural areas. If we compare the number of start-ups in the two environments we see major differences, thus, in the urban area their number stands at 28,902 as compared to only 4,739 in the rural area. This is explained by the lack of entrepreneurs and financing sources, low level of education and poor access to information, all this against a background of poor business environment. In conclusion, improvement of business conditions in the rural area is an essential condition for generation of alternative activities in the rural space.

Although currently the basic occupation of inhabitants in the rural area goes down to only farming activities, there have been signs of a reorientation of activities towards alternative sources of income. They are non-farming activities (like agro-tourism and traditional crafts), which could be a prerequisite for absorption of the extra work force and for ensuring economic and social stability in the rural areas.

Given the social and economic problems facing the Romanian rural area it is necessary to take integrated measures, which, once implemented, should provide continuity to the rural development process.

Therefore, in a first phase creation and maintenance of the infrastructure at an adequate level represent essential conditions for the economic and social development of the rural areas. The modern infrastructure is a condition for the capacity of rural areas to compete effectively for the promotion of internal investments. This contributes also to increasing the attractiveness of the rural areas in point of living areas and work places. The infrastructure for transport, telecommunications, electricity and water supply is essential for the development and attraction of new investments in the rural areas. In this respect, the domain of intervention of this sub-priority defined in broad lines to avoid the duplication with the other priorities.

This **sub-priority** will be carried out by the following **actions**:

- **Setting up of the basic services related to the small scale infrastructure** by building of communal roads that make the link between villages and/or between the commune residence and the subsidiary villages, telecommunications, transport of energy and water infrastructure as basic small scale services.
- **Development of non-farming activities** – actions meant to support the development of crafts (wood processing, leather processing, and traditional music instruments) that should absorb the surplus of labour force and to involve, to a greater extent, the young people in crafts, services, agro-tourism, cultivation/picking up of forest fruit, honey.
- **Creation and development of business in the rural space by setting up and development of micro-enterprises.** This measure pursues the setting up and development of micro-enterprises that represent sectors in the upstream and downstream of farming production and that provide new opportunities of jobs and also a market for the gross farm products.
- **Encouragement of activities in agro-tourism and rural tourism.** These activities are considered alternative activities that have an impact and will continue to develop in the Romanian space because of the beauty of the natural landscape, hospitality of the population in the rural areas and cultural heritage. An important role in the development of such an activity is *the setting*

*up of information centres; of an infrastructure for recreation that facilitates access to the natural areas but also promotion of tourist products (souvenirs, etc).*

- **Maintenance, restructuring and improvement of the historic and cultural patrimony in the rural area.** Although the Romanian rural space is shelter to a rich history and culture, it does not manage to harness fully these resources, and there is a paradoxical perpetuation of a state of precariousness. In this respect, there will be actions of renovation of the Romanian village, as well as of preservation and promotion of the historic and cultural heritage.
- **Promotion of information on a certain rural area and on local development strategies.** Diversification of rural economy depends to a great extent on the level of information and access to information of every inhabitant. This measure pursues to promote rural areas by designing of zonal studies and local strategies.
- **Training of the staff involved in the preparation and development of the rural development strategy.** It is very important that the staffs that work on the development of local strategies be adequately trained in order to come to the support of entrepreneurs, both with information and by providing consulting services. This is about the measures regarding the vocational education of businesses that are active in the domain that sub-priority 3.5.3. refers to but also about acquiring of the skills, including of an organizational nature, to prepare and implement a local development strategy.

### 5.3.3. The sustainable economic development of farms and forest areas

Under this sub-priority there are actions that pursue to ensure a sustainable management of farm and forest land, ensuring the continued use of these lands, and thus contribute to maintaining the viability of rural communities, to conservation and perpetuation as well as improvement of environment, to assuming and observing community restrictions of an ecological nature, to the decrease in and even avoidance of the process of depopulation of certain areas (for instance, the mountain area, the areas with natural handicaps).

Fulfilment of this section of the strategy will be secured by actions that are aimed at **the sustainable use of the farming and forest lands**, so that by continued development of farming lands following **the application of good farming practices** and elimination of the factors conducive to the intensive use of lands, a sustainable agriculture practice be ensured.

For all this to be fulfilled, it should take into account that there are a series of problems, from avoidance of depopulation of some areas down to avoidance of species of plants and animals of a community interest become extinct; everything however in the context of an integrated approach. All this because there are underdeveloped areas in Romania, areas with natural handicaps as well as areas that should be protected in order to preserve certain species of fauna and flora in their natural habitats.

Some of the **indicative actions** to be pursued are the following:

- **Financial support for farmers in the mountain areas.** The mountain area holds an important share of the total physical area of the country (33,7%), with a population representing 15.8% of the total number of inhabitants and whose basic occupation is related to cattle breeding and forestry. The potential of the area is given by the multitude of elements of the landscape and of the cultural and historic heritage. The inhabitants of the mountain area are however facing some problems related to the limited agricultural potential, due to the difficulty of taking care of the crops as well as of the climate conditions and altitude. In this respect, it is necessary to grant financial compensation to those farmers who work in these areas.

- **The financial support of farmers in areas with a natural handicap, other than the mountain area**, in order to avoid depopulation of the areas with salty lands and surplus of humidity and to encourage the use of farming lands located in these areas.
- **Financial compensation as part of the programme Nature 2000**. Since agriculture work is limited in some areas that are subject to ecological restrictions, like the need to protect and restore the climate for the preservation of certain species in their natural environment, to protect and restore biodiversity, introducing some areas in the pan-European ecological network „Nature 2000” requires financial compensation of farmers in these very areas for the additional expenses caused by these specific conditions, thus contributing to the establishment of sustainable management structures.
- **Payments for agro-environment and the well being of animals**. Another important aspect that relates to the zonal issues is that of the agro-environment and the well being of animals, an aspect that presupposes supporting the farmers for using the agricultural lands with methods that are compatible with environment protection and improvement, conservation of the landscape, of the natural resources, of the soil and genetic diversity. In Romania, due to some aspects, like practicing of intensive agriculture, (that has led to the decrease in soil fertility, on biological and genetic diversity, as well as to the growing risk of pollution of environment) it is now necessary for farmers to be supported financially in order to become aware of the importance of such aspects and of practicing an ecological agriculture, the more so as Romania has a substantial ecological potential.
- **Granting of bonuses for the reforestation of farm or non-farming lands and for the organization of agro-forestry system on farming lands**. The development of forestry leads to the improvement of the quality of life, following a sustainable management of forests. Forestry, by its nature, is a rural activity benefiting the local communities: with the development of plantations, that will create related services, with the processing industries, but also with the protection and enrichment of the environment. Consequently, this support refers particularly to giving bonuses for the creation of agro-forestry systems that combine the extensive agriculture systems with the forestry ones.<sup>108</sup>
- **Restoring the potential of forestry production by measures for prevention of natural catastrophes and fire**. Considering the risk of devastating floods or landslides with negative effects on localities, infrastructure and economic activity, it is important to start reforestation work and create best systems of forest protection curtains that should prevent such disasters or mitigate their negative effects.

#### 5.3.4. Promotion of local initiative of a „LEADER”type

This community initiative has the role of mobilizing all the stakeholders in the rural area to draw up and implement local development strategies with a view to preserve the rural and cultural heritage, develop the economic environment and improve the organization capabilities of the local communities.

In this context, it is necessary to create public-private partnerships in order to implement development strategies as well as exchange and dissemination of information, to encourage the setting up of local organizations and support them for encouraging local communities and their participation in the initiatives that are aimed at developing them.

Encouraging the setting up and testing of new approaches for the sustainable and overall development of rural areas should be considered, as part of the programme that opens the way to using the non-used

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<sup>108</sup> The agro-forestry systems are those systems of land processing where the trees are planted on the same land where agriculture is also present.

reserves of civic actions, will contribute to the rapid development of these areas. Implementation of the measures included in this programme will contribute to the improvement of spatial development and rural infrastructure, including of the resources related to economic, social and cultural functions.

This sub-priority will pursue **the encouragement of local initiatives** that should allow an increase in the rural communities' capacities to develop business initiatives based on partnership, as well as projects for the protection of the cultural and natural local heritage. The involvement of local communities in drawing up and promoting the territorial organization planning documents will also be encouraged and supported.

Consequently, this type of local initiatives will meet exactly the specific requirements and needs of the local stakeholders in a certain rural area. In this way, the "bottom to top" approach will give the possibility to each representative of the rural area, together with the community, to benefit from the knowledge necessary for developing the various activities that it is interested in.

These strategic elements will be implemented by LAG-s (Local Action Groups) following actions that are included in sub-priorities 5.3.1, 5.3.2 and 5.3.3.

### **5.3.5. Providing sustainable fishing and development of aquaculture**

Having in view the current situation in Romania it is necessary to modernize and financially support the restructuring of activities in the field of aquaculture, of fish processing and of diversification of fish products in agreement with the requirements of consumers and with the quality standards and food safety. These actions are necessary to meet the domestic needs but also to support domestic production, given the impact of the emergence of the single market.

Considering the issues and the current condition of fishery and aquaculture the following **domains of intervention** were identified after the process of analysis:

- To develop aquaculture, fishing in the inland waters, processing and marketing of fish products;
- To modernize and adjust the fishing fleet;
- To ensure sustainability of fishing in coastal areas;
- Actions of a collective interest.

**The development of aquaculture, fishing in the inland waters, processing and marketing of fish products.** The promotion of revamping of the aquaculture units, the fish processing units and the organization of the fish products market to develop effectively and sustainably the production capacities in fish breeding, units reducing the disturbing impact on environment, diversification and preservation of the biological heritage of cultivate species and of fish products.

The sustainable exploitation of the water livestock by practicing of rational fishing is a necessity for improving the quality of life of the communities of fishermen, conservation and rehabilitation of the sea and fresh water fish stock, training and professional development of the labour force and provision of alternative job opportunities.

The aspects presented above lead to the need for setting up of an integrated and sustainable management programme for the coast area: opportunities for alternative incomes of the inhabitants in the coast areas, creation of the specific infrastructure, training of qualified staff, provision of necessary equipment for exploitation and processing as well as encouragement for partnerships to be set up.

For this purpose the following measures shall be taken:

- To modernize the fish breeding units and thus increase production, maintain the work places and reduce the pressure of fishing in the natural fishery basins;
- To set up intensive and super-intensive fish breeding units in order to increase labour productivity and best use of the physical areas, consideration being given to the negative impact on environment;
- To develop related activities with a view to consolidating fish breeding units and create job opportunities;
- To take measures that should ensure safety of food and public health;
- To improve labour conditions and train the staff in order to provide continuation of fishing and fish breeding, to raise the level of training and provide labour safety and protection;
- To develop fishing in the inland waters by involving the fishermen in the management of the livestock and the rational use of this stock;
- To modernize and expand the current processing units and start up new ones in order to increase job opportunities and diversify the products obtained according to supply and demand;
- To carry out pilot projects in order to test new technologies, more efficiently use the spaces for the growth, processing and automation of works in fishing and fish breeding.

**Modernization and adjustment of the fishing fleet.** One of the prerequisites for sustainable fishing is to renew the fleet and modernize the existing fishing ships, to fit them with proper equipment for safety of navigation, to ensure conditions for increasing the quality of fish products and provide selective fishing tools. The actions to be taken in order to modernize and adjust the fishing fleet are:

- To modernize fishing boats and ships in order to secure safety of navigation, improve the labour conditions and retain the fish caught;
- To adjust the fishing efforts by temporary or definitive withdrawal of the fishing ships, in order to reduce the pressure on stock.

**The sustainable development of coast fishing areas.** This measure will have in view the sea environment protection that in its turn will help the rehabilitation of the productive potential, marketing of sea resources at a local level and promotion of the public-private partnership in the local communities. It is worth mentioning that an essential condition for influencing and encouraging fishermen to observe the rule that ensures the sustainable exploitation of fishing resources is also to provide adequate conditions for fishing.

The indicative actions meant to ensure sustainable development of the coast fishing areas are:

- To support the local authorities to draw up and implement local development strategies with a view to retain and develop jobs and achieve economic and social development of the areas that depend on fishing;
- To restore the productive potential after disasters in order to remove the effects of natural catastrophes and pollution.

**Actions of a collective interest.** Some of the actions are:

- To modernize the harbours in order to provide ease of docking, unloading and repair of the fishing boats, and the provisions of the berths for taking on fuel, water and electricity supply.
- To set up wholesale markets. Currently no fish market exists and the fish is sold in an uncontrolled way, at prices that are not regulated by supply and demand. In order to keep track of the amounts and liberalize the prices it is necessary to set up these units of first sale where the products should be sold by bidding, according to the trade norms.
- To carry out marketing studies and take part in fairs and exhibitions with a view to promote fishing products, increase fish consumption and identify new markets.

- To protect the areas of natural reproduction and feeding of the breeds. Areas of natural reproduction and feeding of the breeds contribute to the partial rehabilitation of the fish stock in the natural water basins and in this respect it is necessary to carry out studies for the identification and protection of these areas.
- To improve the trade system, including the use of e-commerce by improvement of the adequate infrastructure.
- To monitor the market by carrying out of studies and investigations in order to prevent unbalancing of the balance of supply and fixing of prices.

As for **spatial development**, the main objective derives from the complexity of the rural areas and consists in promoting domestic development, based on diversity and competence, of the rural areas in order to increase their competitiveness, and improving living standards of rural population, while protecting the environment. Keeping in mind Romania's features, the relation of the rural area with the urban area, as well as the demographic evolution of the rural area and the occupational features will be taking in consideration for the following approaches:

- the territorial approach of the small and medium towns should strengthen the aspects of regional development, in order to provide the rural population access to that services for which the urban population already has;
- promotion of the rural-urban partnerships in order to support the rural areas in caring out investments for infrastructure , the activities diversification, access for transport infrastructure and knowledge.

These kind of partnerships are an advantage for the rural areas within the metropolitan areas and the big cities, which are a stimulating element.

- Setting up the rural development poles as regional development poles, in order to increase the competitiveness of the rural area
- Improve the living standards of the rural areas in order to increase their attractiveness
- Promote the use of the natural and cultural heritage within the rural development strategies, especially the tourism one
- Implement a sustainable agriculture

#### 5.4. COHERENCE WITH THE EUROPEAN UNION AND NATIONAL POLICIES

COHERENCE with the EU POLICY		
EU Policies	Reflection of European policies in NDP strategy framework	NDP Sub-priority
The European strategy for agriculture and rural development stipulates that it is necessary to increase competitiveness of agriculture by restructuring	Investment for modernization of farms Growing added value of farm production	5.3.1. „Increasing the economic competitiveness of food and agriculture, as well as of forestry by adjustment of supply to the market requirements ”
	Diversification of rural economy Development of small capacity infrastructure	5.3.2 Increase the life standards in rural areas by diversifying rural activities
	Agricultural work which are environmental friendly	5.3.3 Developing an sustainable farm development

<b>COHERENCE WITH THE NATIONAL POLICIES</b>		
<b>National policies</b>	<b>Reflection of national policies in NDP strategy framework</b>	<b>NDP Sub-priority</b>
<p><b>Encouragement of transformation of rural households in commercial family farms, creation and consolidation of the middle class in the rural area</b> G.D. no. 562/2005 for approval of the Program for supporting farm associations and producers in the mountain area to purchaser proper, new equipment, with funding from the state budget</p>	Development of semi-subsistence farms	<b>5.3.1.</b> „Increasing the economic competitiveness of agriculture, food and forestry by adjustment of supply to market demands.”
<p><b>Development and modernization of villages</b> Law no. 231/2005 on encouragement of investments in agriculture GD no. 934/2005 for the approval of the Methodological norms of application of Law nr. 231/2005 on the encouragement of investment in agriculture Joint order no. 143/ 610/ 2005 of MAFRD and MAI on the definition and characterization of rural space</p>	Rehabilitation and development of the village, preservation and improvement of the rural area by maintaining, rehabilitating and improving the historic and cultural heritage	<b>5.3.2.</b> „Raising the living standards in the rural areas by diversifying rural activities”
<p><b>Encouragement of investment in the rural area</b> Law no. 218/2005 on the encouragement of absorption of SAPARD funds by the guarantee funds taking over the risk. Law no. 231/2005 on the encouragement of investment in agriculture by setting up a fund including the allocations from the state budget with this destination at the disposal of MAPDR</p>	Modernization of farms	<b>5.3.1.</b> „Raising the economic competitiveness of food, agriculture and forestry by adjusting the supply to the market demand.”
Processing of the traditional certified products and/or certified ecological products in the farms”.	Diversification of economic activities in the rural environment	<b>5.3.2.</b> „raising the living standards in the rural areas by diversifying rural activities”
<p>Law no. 347/2004 of the mountain GD no. 1779/2004 for approval of the Strategy for a sustainable development of mountain area Support for investment for farmers in mountain areas Stipulation in the law of localities that are integrally or partially in the mountain area.</p>	Support for the less favoured areas	<b>5.3.3.</b> „Sustainable economic development of farms and forest areas”
G.D no. 548/2003 on the responsibilities of MAPDR as a ministry that coordinates the Programme for the achievement of the National System of forest curtains of protection and composition, the functioning and responsibilities of the county analysis units in carrying out the annual programme for the setting up of forest protection curtains.	Agri-environment measures	<b>5.3.3.</b> „Sustainable economic development of farms and forest areas”
Order MAPDR no. 511/2005 for the approval of the Programme for the enhancement of the national forest stock in 2005.	Afforestation works	<b>5.3.4.</b> „Promotion of local initiatives of the <i>LEADER type</i> ”
G.D. no. 826/2005 on the approval of „: the project of reconstruction for removal of the effects of floods – continuation „ developed through the National Forestry Regie – Romsilva (approval of further financing that started in 2000 with the support of the European Investment Bank.	Combating of natural catastrophes	<b>5.3.4.</b> „Promotion of local initiatives of <i>LEADER type</i> ”

## **5.5. CONTRIBUTION TO THE HORIZONTAL OBJECTIVES**

The elements of the strategy for agriculture, rural development and fishery will have a special impact both in the agriculture sector and in the other branches of the economy, indirectly; similarly, one can refer also to the impact on the rural environment, and, indirectly on the urban environment.

### **5.5.1. Equal opportunities**

The actions in support for agriculture, rural development and fisheries are in conformity with the community acquis regarding equal opportunities.

Thus, these measures promote the support for the young population, for the aging population to ensure on the one hand the encouragement of young people to settle in the rural area and revitalize rural economy, and, on the other hand, support for the aging population to live on without continuing to work in farming, following the implementation of early retirement measures.

Other measures support the underdeveloped areas, in the sense of a decrease in the risk of depopulation, but also financial compensation of activities that require higher costs.

### **5.5.2. Sustainable development**

The elements of this strategy have been such developed as to approach three major issues – economic, social and environmental – in order to complete each other and materialize in the sustainable development of the rural area. In this respect, the measures under sub-priority 5.3.3 pursue to ensure sustainable development of the rural areas, following the integrated implementation of the actions meant to improve the management of farmland that will rationally use the local resources that will help modernize the farms and develop the basic services in the rural area.

Measures to inform the population and put into practice environment friendly practices, of consolidation of the contribution of organic agriculture, but also of encouragement of initiatives for environment protection are prerequisites for sustainable development, as provided for in Priority 5 of the NDP.

The effective and correct capitalization of the forestry stock of Romania by forestation of the idle land and setting up of forest curtains leads to sustainable development, both of the rural space, and of the entire national territory.

### **5.5.3. Information society**

Given the fact that this strategy pursues also purchasing of IT equipment necessary for an effective management of the farm, in point of implications on the information society, these actions will lead to easing of work and an increase in confidence in this equipment.

## 5.6. INDICATORS

Performance Indicators	EU - 25	Romania	
		2003	Targets 2015
Average size of farms (ha)	15	1,7	7
Number of farms (thousands)	397,15	4.484,89	1.153
Percentage of persons working in agriculture (%)	5,2	34,1	16
Percentage of aged persons who work in agriculture * out 5 of whom	( 55-64 years) 18,4	(50-64 years) 53,3	30
Contribution of agriculture to GAV (mil. EUR)	157,567.81 (Eurostat)	5.653,43 (Eurostat)	12.000
Percentage of organic agriculture (%)		0,4	10
Development of rural infrastructure:			
- roads			2.000
- sewerage	-	-	5.000
- water supply			9.000
			1.600
The fishery products (tons)	-	8.700	20.000

\* The structure by age groups available from the NSI does not correspond to the age group structure from Eurostat to highlight certain aspects related to this indicator.

## **P6. DIMINISHING THE DEVELOPMENT DISPARITIES BETWEEN THE COUNTRY' REGIONS**

### **6.1. RATIONALE**

The aim of this development priority is to arrest the deepening of the disparities between the country's regions as regards the development and to diminish these disparities by the end of the 2007–2013 period. This will be achieved by creating the necessary conditions to stimulate and hasten growth in the lagging behind regions. Through the implementation of this priority is intended the diminishing of the differentiated territorial impact of the economic growth process, lead by the market forces.

The regional development strategy is complementary to the other National Development Plan priorities, both through the intervention fields and the strictly territorial – regional approach, which envisages the diminishing of the possible territorial effects of the other NDP priorities that could lead to the deepening of the development disparities between regions. The priority is to contribute to the improvement of the economic performances of the regions and to the increasing of their participation to the general development of the country. This will be achieved by supporting the regional and local business environment, the capitalization of the tourism and cultural potential, the extension and modernization of the regional/local transport, education, health infrastructure, the stimulation of the economic growth potential urban centres development.

The priority will contribute to the achieving of the NDP global objective, respectively, the diminishing of the development disparities between Romania and the average of the Member States of EU. This goal will be accomplished through the implementation of projects that respond to the needs and opportunities of each region, and within the regions, of different areas.

The detailed strategy that follows is based on the European principle of subsidiarity, meaningly it was elaborated on the basis of the Development Strategies of the regions that were drawn-up at regional level in wide working groups partnerships.

The strategy reflects the Regional Development Policy of Romania, accordingly to the Regional Development Law (Law no. 315/2004) and the process of decentralisation as this is detailed in the Framework Law regarding the Decentralisation 339/2004 and other relevant laws. Also, the strategy takes into consideration the Community Strategic Guidelines for Cohesion for the 2007 – 2013 period and the Lisbon Agenda.

This priority derives from the key problems identified within the socio-economic analysis of the NDP:

- The increasing of the development disparities between Bucharest-Ilfov Region and the other regions
- The unbalanced development between the East and the West of the country, respectively between North-East, South, South, South West and West, North-West, and Centre Regions.
- The chronic under-development is concentrated in North-East Region, at the border with Moldavia and in South Region, alongside Danube
- The existence of important intraregional disparities which reflects the mosaic structure of the economic development: within the regions coexist underdeveloped areas with relatively developed areas
- The massive decline of the small and medium towns, especially of the mono industrial ones, generated by the industrial restructuring
- The Low level of attractivity of the most of the regions

- The Socio-economic decline of many large urban centres and the diminishing of their role in the development of the adjacent areas;
- Insufficient experience in the management of the regional/local development programmes.

### **Unattractiveness of the regions – poor regional infrastructure for transport, health and education**

The unattractiveness of regions represents an increased risk because of the following factors, which are self-reinforcing each other: ageing population, strong dependence on a limited number of low added value and poorly innovative sectors, lack of basic conditions to attract investors, insufficiently qualified and decreasing labour force. The current problems, but also the potential ones that are raised by these factors, are different in each region, that impose a timely approach adapted to regional/ local needs but also to the existing growth potential.

Regional and local road network have not benefited from significant modernization works due to insufficient funds. The negative consequences of this underinvestment has led to poor inter and intra county networks which has inhibited attracting investment and contributed to diminishing regional level attractiveness for investors. The modernization of the adjacent road infrastructure network will quantify the weak economic areas, so far “undiscovered” by investors.

As related to the social assistance infrastructure (old peoples’ homes , social canteens, day centre for young, etc) is poorly developed and of inadequate quality that makes that the social services provided to be insufficient and of low quality.

The educational infrastructure up to university level is in a precarious state. In rural areas the education infrastructure situation is even worse than in urban areas with many schools having no access to the electric network (43 units) and water supply (2,805 units). The situation of education infrastructure deteriorated even more due to the severe floods that affected Romania during 2005.

A significant number of hospitals (to be identified but over 400) need rehabilitation and modernization as well as medical equipment. Within hospital service there is a special problem related to the cover age and quality of emergency services.

This precarious situation in the rural areas is mainly due to the lack of transport and communications systems, or of the low maintenance, lack of sanitary equipment, lack of permanent medical personnel and an inadequate hygiene education.

During the year 2004<sup>109</sup> a study was carried out on the emergency response service and the results of this evaluation was that the emergency services lack the capacity to deal with major incidents and that this lack of capacity is mainly due to lack of proper equipment and materials but also to the need of improved organizational measures.

The data provided by the General Inspectorate for Emergency Situations illustrate the poor facilities at its territorial units.

The consequence is that the civil population is vulnerable in front of major disasters/accidents because with the present facilities and it is impossible to respond quickly and efficiently in an emergency, increasing the lost of human lives and material goods.

The aspects relieved show the necessity to improve the general level of regional attractiveness by creating balanced distributed economic opportunities and adequate investments in transport, health and education infrastructure.

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<sup>109</sup> TAIEX “Expertize mission in the candidate country – Evaluation Report - Romania”

## **Low development of the regional and local business environment**

The gaps within entrepreneurial development of different country's regions, measured by the number of enterprises at 1000 inhabitants, declined in the last year. Compared with UE countries, in Romania are 2.5 times fewer commercial societies at 1000 inhabitants, with an unequal distribution among Regions. For example, with 24.34 enterprises/ 1000 inhabitants, Bucharest-Ilfov Region, has 3 times more commercial societies compared with North East Region, the least developed region.

Regarding the SMEs density (SMEs number/ 1000 inhabitants), there are large discrepancies among the country's regions, especially between Bucuresti-Ilfov Region and the other regions, of 35.8 SME/1000 inhabitants in Bucharest Ilfov Region compared with 10.9 SMEs/1000 inhabitants in North East Region in 2003.

The economic activities in the rural areas are weakly developed and diversified: only below 3% from the total number of SMEs was acting in the rural areas, the most of them being micro-enterprises involved in handcraft activities. One enterprise out of six, specialized in non-agricultural activities is acting in rural areas, but their productivity is much lower in urban areas.

Regarding the infrastructure for business support, this is insufficiently developed and a large part of this is not functional. The most industrial parks, 28 at national level in 2004 are concentrated in South and Centre Regions, both with 9 industrial parks each. Only half of these are operational, generally the brownfield sites.

Business incubators, an important component of business infrastructure, with a major role in encouraging small entrepreneurs are also weak represented in some of the regions, or within these in some areas.

The difficulty in gaining access at finance, the weak business infrastructure, poor utilities, lack of space and ICT are the major problems with which are confronted the most of industrial parks, business incubators, and the other business support structures, such as technological and scientific parks, technological transfer centres, business consultancy centres, business associations, etc.

The precarious situation of entrepreneurial development in many regions, also a consequence of the insufficient development of the business support infrastructure, imposes, within the general context of the sixth PND Priority and the Lisbon Agenda requirements regarding stimulation of economic growth and creation of sustainable new jobs, the necessity to improve the regional and local business environment.

## **Low quality of regional and local tourist potential**

Romania has a wide potential for tourism development, but, in present, the contribution of tourism to the national economic growth is only 2.19% of GDP in 2003.

All Romanian Regions have potential for tourism development, with a large diversification of tourist resources, distributed in all Regions. This would allow for the development of tourism in the mountain, on the coast and spa resorts, cultural heritage, rural and ecotourism, adventure holidays etc. The main problem is the low quality of the potential product, due to an under investment and developed of the tourism infrastructure and to a poor information about the diversification of the tourist offerings.

The distribution of the resources that represent Romanian tourism potential is characterized by an interesting particularity: the majority of the main tourism resources are located within socio-economic underdeveloped areas. This is the reason why the stimulation of this economic sector could lead to the revitalization of these areas, by integrating them within the tourist circuit, and eventually in the economy.

In the last 10 years, the old style traditional tourist accommodation decreased in most of the Regions, with values between 22.7% in South-West Region and 4.3% in South Region, excepting Bucharest-Ilfov Region (+25.5%) and North-West Region (+5.2%). This was caused by multiple factors out of which the most important decline of the nationalized static accommodation (especially tourist villas) and the change of use of some accommodation. However, over all the total number of accommodation units increased in the last 10 years by 25%, especially because new accommodation was developed in rural, agri-tourist and urban pensions, large hotels and hostels.

Since 2001 both domestic and foreign tourist numbers have been recording a positive trend, due to a more efficient tourism promotion, an improvement of tourism products and services quality and also to the diversification of services “packages”, especially in agro-tourism, ecotourism and mountain tourism but also due to an increased international tourism.

The diversified tourism potential of the Regions, the positive trends of tourist flows recorded in the last 4 years and the international tourist market requires the further investment to capitalise on the the existing cultural and tourist potential.

### **The socio-economic decline of numerous urban centres**

A characteristic for the urban network in Romania is represented by the numerous small and medium towns (90% from the total), with urban functions insufficiently designed and scarcely infrastructure. The industrial restructuring after 1990 affected initially the mono-structural urban centres that lost or are on the verge of losing the urban functions, and afterwards were also affected the big industrialized centres.

In many cases, it can be noticed a weak integration of the economic systems at regional level. The economic links between the urban centres and their rural hinterland are weak, historically their development was independent one from another. Also, there are few and limited connections between the urban centres even in the same regions. As a consequence, even now, there is evidence of regional labour markets, which partially explains why a major closure in an large industrial town causes the migration of labour either back to the rural areas or directly to Bucharest or abroad. There is also more evidence of structural underdevelopment of many urban centres situated in different parts of the country. Many towns register losses of economically active population. The worst aspect is the fact that it can be noticed an emigration trend of the educated population.

The economic decline of urban centres and ongoing degradation of life quality in urban areas generated a more intense process of urban population migration to rural areas. As a consequence, urban population at national level decreased from 12.4 million inhabitants in 1995 to 11.6 million inhabitants in 2003, a unique process in EU.

The quality of life in urban areas is influenced by poor infrastructure and urban services, both quantitative and qualitative.

From the total of 276 towns and cities that Romanian urban network recorded in 2003, only 182 (66%) were connected to natural gas network and 158 (57%) to the thermal energy system. By towns' categories, considering the population size criteria, there are discrepancies between large, medium and

small towns, the last ones being worst affected, recording a trend of diminishing the urban functions and even of ruralization.

In 2002 within towns with a population less than 30,000 inhabitants, 31% of total housing were not provided water supply, 33% were not connected to sewerage system, 82% were not connected to thermal energy system and 44% were not connected to natural gas network.

Neither the situation in the medium-sized towns (with a population between 30,000 and 100,000 inhabitants) was much better, because 22% of total housing did not have access to water supply, 13% were not connected to sewerage system, 47% were not connected to thermal energy system and 29% were not connected to natural gas network.

Regarding basic urban infrastructure, large cities have a better situation (over 100,000 inhabitants), but even in this case not all the housing were connected to the all basic urban infrastructures: around 5% of them did not have access to water supply, 8% were not connected to sewerage system, 30% to thermal energy system and almost 15% to natural gas network.

Urban road infrastructure is hardly developed, since in 2003, from the total length of 23,441 km of urban streets at national level, over 40% were not modernized.

It is worth mentioning that the different existing infrastructure are obsolete, since the considerably reduction of public expenditures after 1990 did not allow further investments in their replacement and modernization.

Besides the disparities in infrastructure, between towns and cities as mentioned above by categories of population size, there are also disparities within large cities, caused by the high level of attractiveness of some areas of these cities compared to others, not necessarily peripheral.

Many of the Romanian urban infrastructure networks are substandard however these areas have the potential for economic development. Some could form the centres for regional development, and they can fulfil a wide range of urban functions, especially through the potential they have to develop the service sectors and to benefit from the dynamic of SMEs development and to become transport nodes or regional gateways. This potential can be capitalized so that the cities to become again attractively for business environment and population. The last evolutions show a great interest of the investors to use the former industrial bases and areas for new types of activities. The rehabilitation of the former industrial sites and the providing of spaces for new socio-economic activities could support the diversification of the economic activities of the cities and towns and contribute to the strengthening of their territorial economic role.

In this context it is necessary the supporting of the urban centres in order to allow them to act as engines of the economic growth and to contribute to the balanced territorial development of the country.

### **Insufficient experience in the management of the regional/local development programmes**

Romania has begun a process of decentralizing the administrative responsibilities towards the local authorities. This process implied not only a clear realignment of the delivery of municipal services (drinking water, waste waters, solid waste, heating at county level and local transport), but also new responsibilities in educational field and in providing health and social protection services.

Within the process of administrative decentralization, in the context of accession to EU, to the local public authorities and regional organizations are delegated more and more attributions and

responsibilities in the elaboration and implementation of the development regional/local strategies, in conformity with the European principle of subsidiarity.

The massive process of decentralization and reform through which the responsibilities of the local authorities became more and more numerous, created institutional capacity problems, at all levels, existing difficulties in accomplishing the programming/planning attributions for the development and implementation of projects. As a consequence, the new administrative responsibilities impose the adequate training of the whole public administration: central, local and of the regional units for increasing the administrative capacity for planning, programming and implementing the regional development projects, co-financed from European funds, after accession. This supposes a good knowledge of the regional economic problems, but also of the European norms and realignment of the delivery of services.

Hence, it results also the necessity for development at all levels, national, regional, local of the capacity of planning, programming and management of socio-economic development programmes and projects.

## **6.2. Objectives**

The overall objective of the national strategy for regional development was defined in coherence with the socio-economic and SWOT analysis, which identified the regional development problems that Romania must tackle.

### **6.2.1. General Objective**

The objective of this priority is represented by the more accelerated economic growth of the lagging behind regions, to diminishing the development disparities between the Regions and within the Regions.

This objective will be carried out by a differentiate allocation of funds per regions, depending on the development level, respectively, indirect proportionally with the GDP/capita realized and through a strong coordination with the actions implemented within the other NDP priorities. The regional strategy will give priority to the lagging behind Regions which have to utilize local and regional resources, against sectoral strategies which have not a regional approach but they have an obvious regional impact.

The implementing of this priority will lead, eventually, to the diminishing of the interregional disparities and also of the disparities within the regions, between urban and rural environment, between urban centres and adjacent areas, and within towns, between the areas attractive for investors and the unattractive ones, by supporting a better use of the regional synergies, including urban-rural.

In this respect, the main instrument is a different financing of Regions and accordingly, the lagging behind Regions will get proportionally more money than the most developed Regions. The purpose is to allocate funds to those fields of intervention, measures and projects which have a strong and direct influence through regional development, such as:

- Increase the competitiveness of Regions, as locations for businesses
- Support for regional/local infrastructure
- Rehabilitation of urban centres with economic growth potential

### **6.2.2 Specific Objectives:**

For the accomplishment of the general objective of the regional development priority, the strategy is articulated on several specific objectives, namely:

- **The improvement of the general level of attractiveness and accessibility of the regions** through construction and/or rehabilitation of about 4,000 km of roads, 1,500 school units and 150 hospitals by 2015;
- **Increasing the competitiveness of the regions as locations for businesses** through development and improvement, by 2015, of 200 business support facilities and supporting 1,500 micro enterprises
- **The capitalization of the tourist and cultural potential of the regions and increasing the contributions of these fields to the regions development**, through the rehabilitation, by 2015, of 200 tourist and cultural sites and increasing tourism revenues by 1.25 %
- **Increasing the socio-economic role of the urban centres** through construction/rehabilitation, by 2015, of 400 ha/km public spaces and implementation of 20 integrated projects for urban development
- **Socio-economic integration of borders areas and increase attractivity and accessibility of Romanian Regions within European territory**, through enhancing cross-border, trans-national and interregional cooperation.

### 6.3 STRATEGY

The general strategy of this priority has the aim to achieve the general objective and the specific objectives by completing the national and sectoral interventions with specifically regional and sub-regional actions in order to sustain and generate economic growth. Through a better coordination will be ensured the complementarity between sectoral and regional actions for obtaining a synergy effect. The coordination will be done at programme level, through a clear definition of the fields of intervention within different programmes and projects, using comparable eligibility criteria and a coordinated process of decision-making.

The actions addressed to the regional needs will be aimed at those areas and localities that, even if they are in economic and infrastructural decline, have development potential. Actions will focus on urban areas which could act as engines of economic growth for regions and sub-regions. It will also be considered the need to make the cities capable of actions and to develop it as sub-regional centres in order to serve adjacent areas (communities) and larger rural areas. This will be realized through prioritizing actions in accordance with the regional socio-economic analyses and similar socio-economic environment analyses of urban localities. The actions will focus on urban areas that can act as engines of regional and sub-regional economic growth.

Romanian needs of regional development, revealed by economic and social analyses can be tackled through economic and social infrastructure investments, rehabilitation of disaffected sites, tourism, business infrastructure and services, regeneration and urban development.

In order to maximize the investments impact in the 2007-2013 period it is necessary to ensure investments complementarity within regional programme through effective coordination and correlation within the sectoral programme investments.

To this aim, it is important to further facilitate the development of locally integrated development projects fostering links among the various counties of the same region and better target policy delivery in every region and locality. For this reason, preference will be given to initiatives and projects that derive from territorial planning that envisage the cooperation between several communities and local authorities, municipalities, counties, including cooperation between local communities from less developed areas with those in more developed areas.

In order to address the specific problems of regional development the allocation of resources by the regions and the development priorities will be based on transparent and objective criteria such as population size, income, unemployment, and level of infrastructure endowment. Objective criteria will also be provided for the selection of urban areas. Two important selection criteria will be used: 1) severe problems and 2) growth potential of urban areas. Specific integrated urban regeneration/ development programs will be then implemented in strict and close co-operation with the municipalities involved. The selection of specific measures within the selected priority areas will be based on the recommendations formulated by local authorities in the framework of regional partnerships created under the coordination of the Regional Development Agencies.

Regional and local development plans will represent the main instrument to prioritizing and coordination of interventions.

The fields of intervention under the sixth regional priority are defined by the decentralized local authority responsibilities. This priority will become for the local administrations an important multi-annual financing framework of investments that will be complemented by the other NDP priorities, including those that even if address local authorities still need a national programming framework.

The operationalisation of the NDP priorities regarding the balanced development of all countries regions will be realized through an integrated approach, based on a combination of public investments in local infrastructure, active policies to stimulate business activities and supporting capitalization of local resources in the following sub-priorities:

- **Improvement the regional and local public infrastructure**
- **Strengthening of the regional and local business environment**
- **Regional and Local Tourism Development**
- **Sustainable Urban Development**
- **Promotion of territorial cooperation**

### *6.3.1. Improving the regional and local public infrastructure*

The implementation of this sub priority envisages creating similar conditions among regions, in infrastructural endowment mainly in transport and social infrastructure and access to basic services, as well as exploiting local development potential through quantification of existing material, human and environmental resources.

Throughout this sub-priority, mainly will be achieved specific objective 1, which envisages the improvement the general degree of attractiveness and accessibility of the Regions and potential for regional growth.

#### *Transport infrastructure*

Improved connections between regions and different areas to the national and European roads and for a decrease in travelling time, for ensuring economic growth and environmental sustainability, it is necessary to extend and modernize county and local road networks. The development of these road networks could ensure both economic cooperation between regions and/or between localities, together with an increase of population and workforce mobility, favouring the development of regional labour markets.

Through these investments it is envisaged both to extend and create links between the regional/county road network and the national, European (TEN-T), international road networks, complementing thus the

investments in transport infrastructure under the second NDP Priority “Development and modernization of transport infrastructure” and improving the transport and communication links between the main regional centres as well as between these and the neighbouring areas.

Modernization works will be carried out on the local, regional and interregional infrastructure and there will be links to national road and rail arteries, to create the basic conditions to allow regions lagging behind to attract investments in the next period. Alongside with the qualification of the labour force, the investments in the regional infrastructure will contribute, on medium term, to the setting up of new employment opportunities in rural areas and areas lagging behind, together with the increase of labour force mobility.

Improving the interregional infrastructure, as well as ensuring the basic infrastructure at local and regional level, will create, on medium term, the conditions to increase the convergence grade of regions by diminishing the disparities between regions and stimulating the development of areas affected by industrial restructuring and of rural areas. The increase in the educational level and the improvement of professional training in rural areas will increase the occupational level of the population located in these areas, contributing also to the increase of labour force mobility.

A better transport infrastructure and a higher educational level mean implicitly the increase of the possibility to attract investors in areas with low development and to create new jobs.

As for the indicative actions the achievement of this objective will be realized by supporting investments in areas that are in the responsibility of the local authorities and are not covered by the large national programmes. These will include: county and communal roads, ring roads and by-passes, roundabouts, traffic management systems and intersections, overpasses, underpasses of the railways, access roads to industrial parks, regional interest airports.

As a condition for eligibility, the transport infrastructure projects will have to be defined in an adequate Spatial Development Plan and to be complementary to the TEN-T projects. These projects aim at improving accessibility by modernising and/ or building roads of regional/local importance and thus stimulating economic activities, developing economic cooperation relations between regions and localities, increasing population and labour force mobility, stimulating the setting up of regional markets, development of tourism, supporting in this way the achievement of wider regional development objectives, considering the strong synergy with other components of the strategy.

### *Health and social assistance infrastructure*

Another important component of the regional and local services is the health infrastructure, consisting mainly in hospital units, relatively equally balanced at territorial level. Since 2003 this infrastructure has been in the responsibility of the local authorities.

The emergency medical system is in a precarious stage at the level of each development region. It is very important to develop a regional emergency hospitals network that would be able to ensure and solve severe cases in each of the development regions, saving thus time and human lives. The ambulance and the SMURD system (which operates only in 8 out of the 41 counties) have to be improved with investments in both vehicles and equipment at the level of each development region.

Besides the improvement in the quality and living standards, investments in medical care have a direct impact on competitiveness, productivity and social cohesion. By supporting the maintenance and the extension of life duration of the economically active labour force, the economic contribution of citizens is

maximised and the economic dependency rate is reduced. It is expected that a proper access of the population to quality health and social services infrastructure, even in marginal areas – urban and rural – will create a proper environment for economic re-launching of regions with a lower level of development.

To implement the indicative actions in the field of health it will be followed the operationalisation, at regional level, of the national strategy in the field of health by rehabilitating, modernising the basic infrastructure, as hospitals and dispensaries, with accent on rural areas, where most of these units function in improper conditions threatening patients health.

As for the social assistance infrastructure the eligible actions aim at building and/ or rehabilitating, modernising and supply of equipment of different type to support the social assistance infrastructure for developing the activities.

### *Public safety for emergency situations, natural and technological disasters infrastructure*

Romania is a country with high disaster risk (earthquakes, floods, etc.) it is also important to develop the emergency services to ensure public safety, and cope with natural and technological disasters at regional and local level. At the same time, the support for these systems will have an important contribution to the hospital emergency intervention system.

The indicative actions that can be undertaken in this area of intervention are: improving the capacity of basic and advanced intervention in case of mass accidents (major traffic accidents, rail accidents, terrorist attacks, etc.), improving the capacity of intervention in case of natural disasters (floods, earthquakes, fires) and technological disasters (chemical and nuclear accidents); improving integrated communication systems at local, county and regional level.

### *Education infrastructure*

The pre-school and pre-university education infrastructure is also a basic component of services structure for urban centres and rural areas, this being a vital one for regional and local competitiveness. Although efforts have been made in the last year, the education infrastructure of all types is largely deteriorated, also due to the serious floods from 2005.

This is why the indicative actions envisage investments in schools and kindergartens that are in the responsibility of the local authorities. These investments aim at rehabilitating the preschool and pre-university infrastructure and to improve the qualification level of children. In the short term these efforts will be concentrated mainly in rural areas acting also as instrument to fight school drop out that is increasing in these areas. Another action to combat school drop out will be the creation of educational campuses that ensure access to compulsory education that was extended from years 8 to 10. The investment will envisage investments at high school level and TVET schools.

Investments will be oriented to rehabilitate buildings and to modernise / equip laboratories, classrooms, libraries, and utilities. Taking into account the need to be more and more oriented to an informational society; it is necessary to develop the basic educational provision with IT systems. It is aimed to equip school with IT units ensuring the modernisation and the increase on the pre-university education quality. Actions that will support education infrastructure will be complementary to those established in the fourth NDP Priority “Human resources development and increase of employment level and combating social exclusion”

### *6.3.2. Strengthening of the regional and local business environment*

This sub-priority will mainly pursue the specific objective regarding the increasing of the regions competitiveness as locations for business. This specific objective was established based on the socio-economic analysis that lead to the regional and local economic development needs identification, by supporting the entrepreneurial environment and improving the regional and local business and services support infrastructures.

Local and regional economies in Romania have few if any facilities to stimulate innovative and joint ventures at the local level. This is complex area for development and depends on several national factors not included within the local authorities control sphere, but it is also recognised that there is insufficient correlation between the R&D institutions active at the regional/local level, and the needs of the local business communities. As a consequence, the local authorities will propose, within the framework of their local and regional development competencies, specific initiatives aimed at fostering such R&D partnerships and tailoring them to local needs and priorities.

This sub-priority has a spatial dimension relevant to regional and locally generated needs which must stimulate regional/local resources for the development and exploitation the scale economies at regional level through the creation of employment opportunities in areas lagging behind – eg mono-industrial areas highly affected by the industrial restructuring, marginal/disadvantaged areas, high unemployment rate areas, high problems pollution areas, areas with active, dynamic local community preoccupied by their own locality development, areas with high level of poverty community index and with an imagine less favourable outside the area. The potential of these areas consist mainly in handicraft customs and labour qualifications for different jobs (buildings, textiles, confections, wood processing, herb and forest fruits processing).

The fact that this sub-priority addresses areas with significant problems of development, distinguishes this NDP priority from the actions foreseen in the first NDP Priority “Increasing competitiveness and developing knowledge based economy”. Sub-priority 1.3.1 “Increase of economic competitiveness by enhancing market access of enterprises, especially SMEs” does not have a territorial dimension and will tackle the support for SMEs in high-tech sectors of the national economy and are developed national interests services, with horizontal character, for facilitating the SMEs access on international markets..

In order to achieve this sub-priority objective investments will be supported those investments in creating and/or developing business supporting infrastructure of regional/local interest (industrial parks, business incubators, etc), supporting and modernizing regional and local business (young micro-enterprises and start ups), as well as developing of the business support services.

Within the measures of **business support infrastructure** are envisaged actions such as: creation and/or improvement of business support structures (renovation and buildings, rehabilitation of the internal road networks of industrial parks, etc, creation and/or rehabilitation of utility networks, ICT, “broadband”), creation of regional business networks, production and RDI, regional technology relay centres, rehabilitation of decontaminated industrial sites and their preparation for another types of economic activities.

The provision of financial support measures to young micro-enterprises and start-ups will contribute to this objective achieving, so that these structures should have access at using also modern methods and technologies for production (e-commerce, e-business, equipment, systems for storage and distribution of goods) and modern management methods of resources.

An important group of actions refers at **development of business support services**, such as: creation of relevant databases for enterprises, regarding certain research results, economic data bases systems and other statistics relevant to the enhancement of businesses, services that connect businesses at IT and

innovation results, diversification services for business (marketing, project management, finance, advertising).

Supporting the clusters' creation and development will allow the local authorities to implement local industrial development initiatives based on the promotion of geographically concentrated and locally specialized (clusters) industries, including appropriate business support infrastructure namely: industrial parks, business parks, technological parks etc, implemented based on a consistent zoning strategy, as well as a decontamination and rehabilitation strategy of derelict industrial sites.

### *6.3.3. Development of regional and local tourism*

This sub-priority is mainly addressing the cultural and tourism potential of the Regions. Through this sub-priority the specific objective is the improvement of tourist and cultural assets of regions and increasing their contribution to tourism and the regions' development that has been identified in the Regional Development Plans and strategies.

Tourism represents a potential for economic growth, since it creates employment opportunities, through **capitalization of natural and cultural assets specific to every development region**, mainly marginal areas which are economically and socially disadvantaged. Moreover, tourism creates economic diversification opportunities at local level, as a result of capitalizing the incomes collected at local level.

The capitalization of tourism attractions from different areas of country could contribute to the economic growth of certain areas of the country, by encouraging the appearance and development of local enterprises, converting areas with low economic competitiveness in attractive areas for investors. This target will be achieved through the improvement of infrastructure and tourism services, diversifying the tourism offerings and the development of eco-tourism, spas, cultural and historic tourism.

The interventions aims are to regaining the domestic market and to attract foreign tourists thus increasing incomes from them. Improving the quality of infrastructure and tourist services, diversifying the domestic offer and developing eco-tourism, spas, and cultural and historic tourism will achieve this aim. In short term, the most important opportunities for tourism development are provided by cultural and natural resources, such as spa resorts, areas of particular beauty, areas which offer the possibility to participate in winter sports, historical centres etc. Therefore, for a better exploitation of these opportunities is essential to transform locations with tourism potential in tourism products, development of a firm market, that is able to promote these products, but also creation and development of roads infrastructure, connected to national transport network (road, rail, airway) capable to ensure an easy accessibility to tourism areas.

Meanwhile, it is of critical importance to preserve what remained of the cultural heritage of the various regions of the country that was brutally damaged in the last decades: historical buildings, monuments, museums, theatres, and historical masterpieces. These cultural preservation initiatives proposed by local authorities will have to be accompanied by a consistent territorial planning that should preserve (and where possible restore) historic sites and areas in towns and villages, maintaining the traditional architectural style and conserving medieval historical areas.

Tourism activity generates demand for a wide range of goods and services, further purchased by tourists and tourism companies, including goods and services made by other economic sectors (buildings, food & beverage, handicraft industry).

Family businesses and micro enterprises can produce and trade goods (handicrafts, souvenirs) and services (guide system, folk spectacles), either as main activity or additional activities, using local raw

materials and labour force, increasing hence occupancy opportunities at local level. Also, tourism has high potential in generating cooperation between local enterprises, between these and enterprises that activate in other economic sectors, as well as in cluster creation. Tourism has also an important impact on reducing the disparities regarding unemployment rate on gender, by offering flexible working patterns.

Moreover, the competitiveness of tourism attractions, based on natural and human assets, less exploited now, could be substantially increased. Priority will be given to initiatives with high concentration rate, that allow the development of scale economies, as well as the initiatives that are not affected excessively by seasonality problems. In order to minimize the seasonality effects, it is envisaged to extend the tourism season by organizing festivals, seminars, conferences, exhibitions but also by applying discounts, low-cost services, attractive to aged population, which have a more availability to travel in extra season.

The development of tourism has to take into account the principle of sustainable development, with the aim of preserving natural and cultural assets, but also of reducing human pressure on environment, that cannot be avoided in terms of large scale tourism. The capitalization of tourism attractions is in many cases limited by the quality of environment infrastructure that represents a key obstacle in tourism development. The increasing number of tourists that are expected will increase pressure on the environment. The pressure on environment has to be diminished in the regions with a special natural heritage, in order to assure its capitalization in a sustainable way. This process could be realized by practicing a controlled tourism in protected areas through a balanced distribution of tourists in all periods of the year (thus reducing the seasonality effect).

In correlation with the objective of infrastructure development, it is very important to develop the services related to the promotion of tourism attractions, an also those related to the accommodation spaces. The support for the entrepreneurs that activate in small and handicraft industry will contribute at increasing both the tourist numbers, and the profit obtained from tourism activity.

Investments in tourism and culture will allow regions to use advantages provided by the tourism and cultural heritage in order to improve their competitive advantages in sectors with high added value and high qualitative and cognitive content, both on traditional and new emerging markets.

The main indicative actions aim at investments in tourism infrastructure rehabilitation and development, creating proper infrastructures in spas, winter sports, eco tourism fields and developing alternative forms of tourism, including niche tourism, based on the regional strategies, actions for sustainable protection and promotion of natural and cultural , designing national parks and other protected areas in order to facilitate tourists access, developing of tourism areas and tourism traditional resorts, of special importance, of historical centres in cities with significant tourism potential, with the aim to capitalize the existing tourism development potential at regional/local level, including cultural and environmental assets.

#### *6.3.4. Sustainable urban development*

This sub-priority corresponds to the specific objective regarding the increasing of economic and social role of urban centres established based on the identified need to support urban centres in order to allow them to act as economic growth engines and to contribute at a balanced territorial development of the country.

By addressing exclusively the urban areas, the actions (streets, urban transport and brownfields) foreseen to be supported within this sub-priority, are complementary to those supported through the other sub-

priorities: “Improvement of regional and local public infrastructure” (that includes measures related to improvement of county roads network, and “Strengthening of regional and local business environment” (that includes measures regarding the rehabilitation and preparing for other economical/industrial uses of the large industrial sites, situated outside the urban areas) and also to the second NDP Priority “Development and modernization of transport infrastructure” and the third NDP Priority “Protecting and improving environment quality” (integrated project for water and waste management).

This sub-priority will focus on a comprehensive approach, in order to increase the economic and social role of urban centres in regions development. There will be supported those towns and cities that have economic growth potential, aiming to strengthen their role as regional/local urban centres that can spread development to the surrounding areas, that will be reflected in a balanced territorial development and an increased economic and social cohesion.

As for the indicative actions the achievement of this sub-priority will be materialized through a double approach: on one hand, there will be supported integrated regeneration and revitalization actions of urban areas with problems and derelict areas, and on the other hand distinct actions of development and reconstruction of public urban and utility infrastructure, transport and public urban services.

**The support of integrated action for community development** aims at regeneration of towns or parts of cities through concentrated investments in these areas with economic and social problems that makes them unattractive for investors and for which were identified the following necessities: refurbishment of abandoned buildings, rehabilitation of historical, cultural and industrial heritage, rehabilitation and recuperation of abandoned sites, renewal of public urban infrastructure, etc. These types of actions will be completed with the extension of recreation areas and sports facilities, improvement of social infrastructure, support the business initiatives (business start-up), combating unemployment, etc. The implementation of these types of projects will lead to the economic regeneration, increase the occupation level, fighting social exclusion and improving life quality in urban areas in which these integrated projects will be carried out.

Another field of intervention envisages the improving of the urban population mobility, through the extension and modernization of urban public transport, the renewal of transport fleet with ecological vehicles, building stations and inter-modal terminals. Rehabilitation of streets, replacing old public utilities and improving public urban services represents another set of measures aimed at improving life quality and environment of towns.

In order to counterbalance the effects of industrial restructuring, there will be supported actions for the rehabilitation of the derelict industrial sites and preparing them for new uses. Also, investments that allow the integration in the economic and social circuit of unused or underused urban areas will be supported. The aim of these investments is the capitalization of these areas to the benefit of town, by recovering them for new uses such as public spaces, social centres, sport and/or educational facilities.

By supporting actions such as those mentioned above, it is envisaged to increase the attractiveness of the area and increasing life quality of urban population, with the aim to stop the current decline of urban population.

This priority aims at supporting local authorities in the implementation of community development integrated projects, based on coherent urban strategies (Urban Master Plan) – integrated to County Master Plans and Regional Master Plan – or of projects regarding rehabilitation of public urban infrastructure and related utilities, urban transport and public services.

### *6.3.5. Promote European Territorial Cooperation*

This sub-objective links to the specific objective with regard to the social and economic integration of the border areas and the increase in the activity and accessibility of Romania's regions within the European territory.

Taking into account Romania's geographic position, and the length of its internal and external borders within the EU structure of the European territorial cooperation is extremely important, both politically and economically.

On the other hand, Romania's estimated vicinity to the external EU border will substantially contribute to ensuring the sustainability, security and the well being of its regions.

Out of the three components of the territorial cooperation, Romania will continue to focus its resources on the cross-border cooperation. One of the key challenges of the cross-border cooperation programmes is to maintain the advantage and the dynamism of the cooperation already existing on the EU internal borders (Hungary, Bulgaria), and at the same time to support the development of the external borders. The spatial dimensions insofar as cross-border cooperation focus on interventions in view of ensuring the correlation of the cross-border spatial development strategies and the coherence of the investment interventions and programmes, as well as creating the links between the key areas of development and harmonizing spatial development.

Out of the eight development regions, six (counting 19 counties) are involved in cross-border development programmes, while the entire country will be eligible for the trans-national and interregional cooperation programmes.

This sub-priority will be implemented by means of promoting activities in the field of cross-border, trans-national, and interregional cooperation.

#### **Cross-border Cooperation**

- Develop physical infrastructure systems (improve the transport infrastructure, the information and communication networks and services, establish the interconnections between power, water and waste management systems);
- Strengthen the economic relationships between the neighbouring regions in order to support together the sustainable economic development of the area (develop cooperation in the fields of SMEs, tourism and border trade, promotion of local labour markets integration);
- Create the social and cultural connection between the communities and the inhabitants living on both sides of the border (develop the common use of health, cultural and educational infrastructure);
- Common solutions for similar and simultaneous natural threats (flood prevention, land-slides, land erosion, create natural and technological warning and control systems).

#### **Transnational Cooperation**

- Water management integrated cooperation (protection and administration of the Danube basin, shore areas, maritime resources);
- Develop the SMEs, R&D and innovation networks;
- Transnational activities in order to prevent natural and technological risks.

## Interregional Cooperation

- Support the process of exchanging information and best practices with regard to urban development, modernizing the public services, social inclusion, and entrepreneurship;
- Studies and correlation of data in common fields of interest.

The Romanian-Bulgarian border will become an internal EU border once the two countries will join the EU in 2007. But it is necessary to speed up the process of planning for the next programming period, especially establishing more appropriate management structures. It is expected only the implementation methods will change along this border, while the content and the geography of the future programs not to have major changes in comparison with the current CBC Phare programme.

It is expected that, due to Romania's accession to the EU, the Romanian-Hungarian border will be covered by only one programme over the next programming period. Thus, seen the responsibility that Romania will have on the external border of the EU, and possibly on that with Bulgaria, it has already been decided that the managing authority will remain in Hungary.

The cross-border cooperation with Serbia and Montenegro, Ukraine and Moldova is currently under development, as these will be the future external EU borders, representing 60% of the length of Romania's land borders which involves 12 counties out of the 19 border counties. The cooperation with Serbia and Montenegro will fall under the Pre-Accession instrument, whilst the cooperation with Ukraine and Moldova will fall under the provisions of the ENPI (European Neighbourhood and Partnership Instrument). This also implies a certain institutional structure for the cross-border cooperation management, and the managing authorities for the programs implemented on the EU external borders with the Republic of Moldova, Ukraine, Serbia and Montenegro, will be located in Romania. The content of the future programming document relies on the Regional Development Plans for the three development regions, North-East, South-West and North-West, in order to ensure the integration of all Romania's border areas within the national development strategy. The ENPI will fund, for the benefit of both parties, projects submitted together by the partners representing, on one hand, the Member States, and, on the other hand, the EU associated countries. This will mean the external and internal funding instruments are implemented only on one side of the EU borders.

As for the trans-national cooperation, following the recent division of the CADSES space, Romania's entire territory will be part of the Danubian – Balkans' Space (Southern CADSES), together with countries such as Austria, Hungary, Bulgaria, Slovenia, Greece and other regions from Italy and the Slovak Republic. The major subjects for project development in this area will be water management (especially for the Danube River), maritime security (the Black Sea), flood prevention, research and development, innovation and networks of SMEs.

One of Romania's major problems will be the efficient and effective organization of the management and the implementation structures in order to prepare the new generation of territorial cooperation programmes and projects which will bring about significant changes (the principle of leader partner, common budget and structures for each program).

## 6.4 COHERENCE WITH NATIONAL AND COMMUNITY POLICIES

COHERENCE WITH EU POLICY		
EU Policy	Reflection of the European policies in the NDP strategy	NDP sup-priorities
<p>Growth and Jobs – New Cohesion Policy orientations 2007-2013</p> <ul style="list-style-type: none"> <li>- Improving the attractiveness of Member States, regions and cities by improving accessibility, ensuring an adequate quality and level of services and preserving the environmental potential</li> <li>- Encouraging innovation, entrepreneurship and the growth of the knowledge economy</li> <li>- Creating more and better jobs, improving adaptability of workers in enterprises and increasing investments in human capital.</li> </ul>	<ul style="list-style-type: none"> <li>- Improving the transport infrastructure and related public utilities</li> <li>- Improving health and social services infrastructure</li> <li>- Developing and rehabilitating educational infrastructure</li> <li>- Developing business infrastructure</li> <li>- Support and modernise regional and local businesses</li> <li>- Developing business support services</li> <li>- Rehabilitating touristic areas, protecting the natural and cultural heritage</li> <li>- Developing business environment in tourism field</li> <li>- Supporting community integrated projects</li> <li>- Developing public urban and utilities infrastructure</li> <li>- Rehabilitating brownfield areas and developing new activities</li> </ul>	<p>6.3.1 Improvement the regional and local public infrastructure</p> <p>6.3.2. Strengthening of the regional and local business environment</p> <p>6.3.3. Regional and Local Tourism Development</p> <p>6.3.4 Sustainable Urban Development</p>
<p>White Paper – European Transport Policy underlines the importance of the road infrastructure rehabilitation and the importance of a safe and environmental friendly urban transport</p>	<ul style="list-style-type: none"> <li>- Improving the transport infrastructure and related public utilities</li> <li>- Developing public urban and utilities infrastructure</li> </ul>	<p>6.3.1 Improvement the regional and local public infrastructure</p> <p>6.3.4 Sustainable Urban Development</p>
<p>The Commission's Communication on "Sustainable Urban Development in the European Union – A Framework for Action" defining four interdependent goals:</p> <ol style="list-style-type: none"> <li>1) A greater prosperity and employment in urban areas by enhancing the role of towns and cities as poles of regional growth;</li> <li>2) Support for social integration, fairness and the regeneration of urban areas;</li> <li>3) The protection and improvement of the urban environment as a means of improving the quality of life, protecting human health and safeguarding local and global ecosystems (including sustainable transport systems, renewable energy sources and rational energy management);</li> <li>4) Contributing to systems for sound urban and local management</li> </ol>	<ul style="list-style-type: none"> <li>- Supporting community integrated projects</li> <li>- Developing public urban and utilities infrastructure</li> <li>- Rehabilitating brownfield areas and developing new activities</li> </ul>	<p>6.3.4 Sustainable Urban Development</p>
<p>European Charta for SMEs</p>	<ul style="list-style-type: none"> <li>- Developing business infrastructure</li> <li>- Support and modernise regional and local businesses</li> <li>- Developing business support services</li> </ul>	<p>6.3.2 Strengthening of the regional and local business environment</p>

<b>COHERENCE WITH NATIONAL POLICY</b>		
<b>National policies</b>	<b>Reflection of the national policies in the NDP strategy</b>	<b>NDP sup-priorities</b>
Law no. 203/2003 regarding the creation, development and modernisation of European and national interest transport network.	- Improving the transport infrastructure and related public utilities	6.3.1 Improvement the regional and local public infrastructure
Law 84/1995 regarding education republished in December 1999	- Developing and rehabilitating educational infrastructure	6.3.1 Improvement the regional and local public infrastructure
Decision 1088/2004 regarding the approval of the National Strategy regarding health services and Action Plan to reform the health sector	- Improving health and social services infrastructure	6.3.1 Improvement the regional and local public infrastructure
Government Decision 1280/2004 regarding the Government strategy for supporting the development of SMEs 2004-2008	- Developing business infrastructure - Support and modernise regional and local businesses - Developing business support services	6.3.2 Strengthening of the regional and local business environment
Law 346/2004 regarding stimulation of SMEs setting up and development	- Developing business infrastructure - Support and modernise regional and local businesses - Developing business support services	6.3.2 Strengthening of the regional and local business environment

## **6.5. CONTRIBUTION TO THE HORIZONTAL OBJECTIVES**

### **6.5.1. Equal opportunities**

The principle of equality of opportunity will be respected in the field of regional development and will be applied in the process of drafting, planning and implementing the programming documents.

In the field of regional development attention will be given to equality of chances especially by encouraging women participation of women to socio-economic activities and to the jobs created, supporting firms and creation/rehabilitation of infrastructure and services that contribute to the reconciliation between family and professional life, and also by ensuring equal access to new technologies, fact that will ensure socially disadvantaged groups to participate at knowledge based society. Moreover, equality of opportunity will be one of the selection criteria of the projects, and applicants that request financial assistance through ROP will have to prove that the projects correspond to the equal opportunity policy.

### **6.5.2. Sustainable development**

Sustainable development is approached in all community actions, the environmental protection being an important issue. The envisaged actions to be implemented under this priority have an important contribution to this horizontal objective. First of all, a better transport infrastructure contributes to a rationalisation of the flow of traffic, ring roads contributing to the diminishing of pollution level within the cities. In the same way the use of environment friendly urban transport as a means of reducing pollution. By supporting technological transfer between research centres and entrepreneurs is stimulated on large scale the use of non-polluting technologies. Actions under urban development sub-priority support the development of clean and aesthetic spaces; the rehabilitation of abandoned areas reduces the risk of appearance of derelict areas within cities.

### 6.5.3 Information society

The envisaged action under all sub-priorities will have a significant impact, on long term, on the information society, by promoting communication and safety systems, introducing new technologies in enterprises activity and promoting ICT in all levels of the educational system.

In the short term, the development of information society will envisage marginal aspects of the established measures, such as communications and information technology for business infrastructure and professional development institutions. On long term, the regeneration of urban centres and implementing urban marketing projects could have a more important impact on the information society.

### 6.6. INDICATORS

Indicator	Base-line level	Target objectives 2015
Weight of urban population within total population (%)	53.4 (2003)	57.0
Weight of population living in NUTS II areas with GDP/inhab with 15% lower than the national average (%)	43.4 (2002)	40.0
Increase of Regions accessibility to national roads (km)	-	4,000
Percentage of FDI attracted outside Bucuresti-Ifov Region (%)	46.1 (2003)	60.0
Increase of Tourism contribution to regional GDP (%)	2.19	3.45
Created jobs	-	70,000

## IV. FINANCIAL PROGRAMMING

The financial programming of the 2007 -2013 NDP seeks to build a general framework of the financial resources allocated in the reference period in order to sustain the investments for development in the field of intervention that are covered by the national development priorities in the NDP Strategy for 2007 – 2013, as well as their distribution on the six national development priorities. This way, there will be an improvement in the management of the budgetary expenditures in medium term, and within a stable, visible and predictable investment environment.

The programming of financial resources that are allocated for the achievement of the NDP priorities reflect the dual role of the NDP: a multi-annual planning instrument of the funding for the sectoral and regional national development priorities from national funds (state budget, local budgets, loans) and an instrument to support grants that are awarded to Romania by the EU as part of the cohesion policy and the Common Agriculture Policy (rural development component).

The sources considered for financing the NPD strategic objectives of the NDP are:

- *The EU contribution from the Structural Funds* (European Regional Development Fund, European Fund, Cohesion Fund), for the „Convergence” Objectives and the „European Territorial Cooperation” Objective and the public national co-financing (state budget, local budget, external credits, other public sources) and the respective private contribution.
- *EU Structural Funds type funds for agriculture, rural development and fisheries* (European Agriculture Fund for Rural Development and the European Fund for Fisheries) and the public national co financing (state budget, local budgets, external credits, and other public sources) and the respective private contribution.
- *Allocations that are exclusively from national and local public funds* for investments programmes for developments having similar objectives to the ones financed from the above mentioned community funds;
- *External credits for investments* granted by International Financial Institutions for sustaining objectives similar to the ones financed from the above mentioned Community funds (e.g. EIB, BERD, World Bank etc.).

The indicative financial programming of the 2007 – 2013 NDP led to a total amount of about 58.7 billion Euro, broken down for the 6 national development priorities of the NDP as follows:

### Overall financial programming of the 2007 -2013 NDP

- Millions Euro -

NDP Priorities	2007	2008	2009	2010	2011	2012	2013	Total
<b>P1. Competitiveness</b>	651,48	620,72	793,14	882,76	842,95	761,25	682,12	5234,43
<b>P2. Transport Infrastructure</b>	2094,99	2517,48	2465,25	2071,29	1819,84	1832,20	1853,75	14654,79
<b>P3. Environment</b>	753,18	898,70	1099,11	1160,45	1069,54	810,78	806,23	6597,98
<b>P4. Human Resources</b>	711,65	912,51	1297,08	1317,59	1313,22	1115,85	940,72	7608,60
<b>P5. Rural development</b>	1585,56	1757,72	2200,96	2335,49	2395,08	2445,15	2517,37	15237,32
<b>P6. Regional development</b>	1294,79	1280,99	1397,96	1336,37	1342,35	1344,55	1342,97	9339,98
<b>Total</b>	<b>7091,65</b>	<b>7988,12</b>	<b>9253,50</b>	<b>9103,95</b>	<b>8782,98</b>	<b>8309,78</b>	<b>8143,16</b>	<b>58673,10</b>

Source: Ministry of Public Finance

According to this financial allocation, the largest investments will be made for the implementation of Priority P2 „Development and modernisation of the transport infrastructure”, and Priority P5

„Development of the rural economy and the increase of productivity in the agriculture sector”, to which approximately ¼ of the total funding will be allocated.

There are two issues that need emphasising regarding financial programming: the first is national public resources, except co financing, where the amounts represent a forecast of the funds from the state budget and the local budgets starting from the actual investments revenues. The second refers to Community funds and the respective co financing, which are new additional resources that are allocated for different priorities.

Regarding Community funds, it must be emphasised that the allocation for each of the six development priorities is not decided through the NDP, but be subject to negotiations with the European Commission during 2006. The NDP financial programming only suggests indicative allocations that take into consideration, first of all, the existing funding needs for different fields, the economic and social impact that the investments from community funds have, the costly commitments that Romania has made during the negotiations process for accession (e.g. environment protection, transport, energy), the strategic directions that were proposed at the level of the EU for 2007-2013, as well as the models used especially in the new Member States, but not only, in the programming of these funds.

We should also mention that, besides the amounts that are provided in the overall table, a technical assistance programme will also be financed (financed through Structural Funds) that will assist in strengthen the administrative capacities of the structures involved at a central level in the management of Structural Funds and the Cohesion Fund, to the development of the Single Management and Monitoring System of Structural Funds, as well to the promotion of these funds at a national level. This programme is estimated at around 150 million Euro, and it will be co financed from the state budget.

The table below presents the structure for different financing sources of the planned allocations, for the entire period 2007–2013.

#### **The Structure for financing sources of the 2007 – 2013 NDP**

	<b>EU Funds</b>	<b>National Public sources</b>	<b>Private sources</b>	<b>TOTAL</b>
<b>Amount of financing (mil. Euro)</b>	25.287,23	28.276,03	51.09,85	58.673,11
<b>Percentage of the total NDP (%)</b>	43	48	9	100

Source: Ministry of Public Finance

**The EU Funds** represented by the Structural Instruments (The European Regional Development Fund, The European Social Fund, and The Cohesion Fund) and the Structural type funds for agriculture, rural development and fisheries (The European Agriculture Fund for Rural Development and the European Fund for Fisheries) provide 43% of the total investments in order to achieve NDP's strategic objectives. Their financial programming took into consideration the indicative allocations for Romania from the EU Budget for 2007 – 2013, as well as the specific rules that are part of the Community regulations for each of the 5 respective instruments.

The implementation objectives and mechanisms of these funds are relatively similar, even if they are subjected to different Community policies. The European Community regulations for 2007 -2013 provide for a tight framework for the disbursement and the achievement of complementarity between the interventions funded from structural instruments and the agriculture, rural development and fisheries funds. Because the support for market measures and direct agriculture aids have a different approach

than that of the above mentioned instruments, they were not taken into consideration in the financial programming of the NDP.

**The national public sources** are addressed, in relatively equal proportions, to the co financing of EU funds and to funding from sources that are exclusively national of similar investment programmes. The estimation of the co financing was done on the basis of the provisions of the draft general regulation regarding structural instruments, by taking into account some amendments that appeared during the negotiation of this document within the EU Council.

The co financing of investment projects from EU funds will be provided mostly from the state budget and external credits, the latter offering the reduction on a short and medium term basis of the state budget's effort. The contribution of local budgets will be relatively low given the limited financial means of local authorities. This way, the state budget will support an important part of the projects' co-financing having as final beneficiaries the local authorities.

Starting from the estimation of the co financing need from Community funds, real mechanisms of providing the necessary financial sources and an efficient and fast movement of financial flows that correspond to the community funds and to co-financing will be developed during 2006.

National public sources and allocations are in the same category and they fund multi-annual social and economic development that lies within the framework provided for in the NDP Strategy and that are similar to those that can be funded by Structural Instruments or by the Fund for Agriculture or Fisheries agreed by the EU. In this way it is ensured that the *principle of additionality* is followed when programming Community funds, and is in accordance with member state requirements to maintain the structural public expenditure at least at the same level as in the period prior to the respective programming period.

The financial programming of this investment category (programmes similar to those that can be funded from Community funds and that are funded exclusively from state budgets) started from the budgetary directions for 2007- 2009, on the basis of which moderate forecasts of the allocations until 2013 were made. Therefore, at a central level the line ministries have estimated the funds necessary for the investment programmes funded from the state budgets and external credits for the 2007- 2013 period. Most such financing is for transport infrastructure and supporting human resources, i.e. priorities P2 and P4 in the NDP.

At the same time, at the level of local budgets expenditures for investments in Education, Health, Culture, Religion and Youth, Public development services, Environment protection, Agriculture and services, Transport and communication, other economic actions such as the prevention and fight against floods and supporting regional development programmes were taken into consideration. Most of these investments were assimilated in Priority 6 of the NDP „Reducing the development disparities between the regions of the country”.

**Private sources**, representing 9% of the total resources for NDP, are addressed exclusively to the co financing of EU funds. In estimating this contribution the financial provisions of the new regulations for managing the five Community instruments were taken into consideration, as well as the limits imposed by the state aid regulations regarding the maximum intensity that is admitted for the public support.

In order to provide a sound and consistent methodological basis in the process of financial programming, in order to estimate the amounts corresponding for 2007-2013 the forecasts provided by the National Commission for Prognosis (regarding the exchange rate RON/ Euro and the inflation rate) have been taken into consideration.

The estimation of the financing of the NDP priorities and objectives on a 7 year period represents a difficult exercise and a challenge for the capacity for financial-budgetary forecast of the Ministry of Public Finance and other institutions that are involved in the drawing up of the NDP. When Romania joins the Community Budget, which was drafted for a 7 year period, this will mean that it has to develop such a forecasting capacity. Special emphasis should be placed on the continuous development of the budgetary management on the basis of programmes and multi annual projects, for the Community funds that are allocated and implemented within the national budget.

The mobilisation of such a high number of investment projects to address development is groundbreaking and will require significant efforts from the public institutions and future beneficiaries in order to be effective and generate economic development activities. At a national, regional and local level the planning and management capacity of investment programmes for development, including from a point of view of a sound financial management will need to be increased. A special note should be made regarding Community funds, whose contribution to the implementation of the NDP is about 43%, together with a substantial national co-financing, that should allow for the setting up of an efficient and effective management system of these funds and that will allow for a high absorption rate which will be of great importance for the success of NDP.

On the other hand, the massive capital flow in the Romanian economy will be taken into consideration very carefully in the process of establishing a mix of macro-economic policies for 2007-2013, so that the effects of these investments will not affect economic balances.

The achievement of the overall goal of the 2007-2013 NDP is conditioned by the allocation of the forecasted financial resources and their maximum use during the entire duration of the programming period.

## V. IMPLEMENTATION

The National Development Plan, through its Development Strategy sets out ambitious development priorities and objectives that can lead to the achievement of the overall objective – „a very quick reduction of the socio-economic development disparities compared to other EU members”.

Firstly, the provisions of the NDP should be implemented according to the strategy in an efficient, rigorous, transparent and financially correct manner. Secondly, there should be a tight inter-sectoral cooperation between authorities with responsibilities in implementing government policy in the NDP intervention fields, in view of a coherent and synergetic approach of the planned measures and actions. Thirdly, the financial sources used for putting in practice the NDP strategy must be provided at least at the level provided in the indicative financial programming.

According to GD no. 1115/2004, the NDP is a multi-annual strategic planning instrument that provides the orientation and stimulates the socio-economic development of the country. The NDP sets strategic guidelines and directions that public investments for economic development will be focused on during 2007-2013, in view of achieving a quantifiable target. There are a number of financial sources: budget resources, Community funds, private co-financing, external and internal loans.

Taking into consideration everything that was mentioned above, it must emphasise that the NDP provides the coordination for the large investment programmes for economic development. The investments that will be made on the basis of the NDP provisions will not be directly managed through the NDP, but on the basis of various programme funding sources for the investments.

The implementation mechanisms of the NDP are therefore a combination of these implementation regulations of the programming documents for European funds, of the national and local budgetary investments, grants that are awarded by international financial institutions etc.

The added value of the NDP is in the correlation and concentration of the investments made through the above mentioned programmes, in view of maximising the impact over the socio-economic development a national, regional and local level.

### 1. Use of external sources

**The Community funds** that Romania will have access to starting in 2007, as a member state of the European Union, will be a consistent support in order to accomplish the priorities and objectives of the NDP, as it is stated in the financial programming chapter.

#### A) Structural and Cohesion Funds

The Structural and Cohesion Funds are financial instruments that help the implementation of the economic and social Cohesion Policy within the EU. As a member state that is eligible for the „Convergence” and „European Territorial Cooperation” Objectives, Romania will benefit from a substantial allocation from these funds.

For 2007 – 2013, three structural instruments will be used:

- *The European Regional Development Fund*, that supports the reduction of inter-regional disparities and the development and convergence of the regions, through support actions in the fields of basic infrastructure, education and health infrastructure and the productive sector (industry and services);

- *The European Social Fund*, seeks the achievement of the objectives of the European Employment Strategy, by funding actions of preventing and fighting unemployment, development of the human capital and promotion of inclusion on the labour market.
- *The Cohesion Fund* finances mainly major transport, environment and energy projects (of European interest).

The programming, monitoring, financial management, control and evaluation principles and regulations of the Structural and Cohesion Funds are described in a package of 5 regulation proposals regarding the new generation of cohesion programmes for the period 2007-2013<sup>110</sup>. The technical discussions at the level of the EU Council regarding these regulations have not been finalised yet, but the basic rules have been set out.

Regarding the programming of structural and cohesion funds at a national level, this will be done through the National Strategic Reference Framework and the Operational Programmes.

The strategic programming is done through the National Strategic Reference Framework (NSRF), which will be negotiated with the European Commission and will represent the framework for preparing all the sectoral and regional operational programmes. As opposed to the Community Support Framework that was used during 2000- 2006, the NSFR will not be a management instrument of the structural interventions. Starting from the development guidelines set out in the 2007-2013 NDP, Romania will draw up the draft NSFR for 2007-2013 by March 2006 and will submit it to the European Commission as a basis of the negotiations that will take place until the approval of this document.

*The Operational Programmes* are documents which provide for the operational programming and set down the effective implementation of the structural and cohesion funds. The Operational Programmes set out the major intervention areas that are co-financed through the Structural and Cohesion Funds.

In Romania, the programming and implementation institutional system of the Structural and Cohesion Funds is under construction, starting from the provision of the Complement Position Document under Chapter 21 „Regional Policy and the coordination of structural instruments”.

The National Coordination Committee of the preparation process for managing Structural Funds (NCC), set up by GD no. 1200/2004, is the decision making collegial body that has the central role in this process. The presidency and secretariat of the NCC is provided by the Ministry of Public Finances, and the NCC members are representatives at a decision making level of the ministries that have the role of Managing Authorities and Payment Authorities. The NCC has the following responsibilities:

- To define the strategy and plan actions that are necessary for the preparation of the institutional framework for working with structural funds;
- To monitor the preparation process of the institutional, legal and procedural framework that is necessary in order to implement structural instruments;

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<sup>110</sup>

- Proposal for a Council Regulation laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund, COM (2004)492;
- Proposal for a European Parliament and Council Regulation on the European Regional Development Fund, COM (2004)495;
- Proposal for a European Parliament and Council Regulation on the European Social Fund, COM (2004)493;
- Proposal for a Council Regulation establishing the Cohesion Fund, COM (2004)494;
- Proposal for a European Parliament and Council Regulation establishing a European grouping of cross-border cooperation (EGCC), COM (2004)496.

- To coordinate international relationships between the structures involved in working with structural funds;
- To evaluate the process of readiness and functioning of the institutional, legal and procedural structures that is necessary to implement structural instruments;
- To report to the Romanian Government and to propose priority actions those are necessary in order to prepare the institutional framework regarding the activity under structural funds.

Government Decision no. 497/2004, republished, set out the structure of the Operational Programmes for the implementation of structural instruments and the institutions appointed as Managing Authorities, Intermediary body and Payment Authority.

The Ministry of Public Finance, through the Managing Authority for the Community Support Framework, has the role of national coordinator for the institutional, legal and procedural system for the programming and implementation for the structural instruments. A Certifying Authority and a Paying Authority (body that is making the payments will be set up in the MPF for all the three structural instruments.

### Operational Programmes 2007-2013

Operational Programme	Managing Authority	Intermediary Body	Fund
Increase of economic competitiveness	Ministry of Economy and Trade	- National Agency for Small and Medium Sized Enterprises and Cooperation - Ministry of Education and Research –The Research Department - Ministry of Communication and Information Technology -Ministry of Economy and Trade – Energy Department - National Tourism Agency	ERDF
Transport Infrastructure	Ministry of Transport, Construction and Tourism	-	ERDF + CF
Environment Protection	Ministry of Environment and Water Management	Regional Environment Protection Agencies	ERDF + CF
Regional Development	Ministry of European Integration	Regional Development Agencies	ERDF
Human Resources Development	Ministry of Labour, Social Solidarity and Family	- National Employment Agency - Ministry of Education and Research – Department of Education	ESF
Administrative Capacity Development	Ministry of Administration and Interior	<i>To be designated</i>	ESF
Technical Assistance	Ministry of Public Finance	-	ERDF
Cross border Cooperation <sup>111</sup>	Ministry of European Integration (with the exception of RO-HU)	<i>To be designated</i>	ERDF

A Monitoring Committee will be set up for each Operational Programmes, within three months from its adoption by the European Commission. At the moment the general implementation regulations and specific procedures for each Operational Programme are being drafted, according to the provisions of the new acquis in the field of Structural Funds and the Fund.

During the implementation of Operational Programmes, Annual Implementation Reports will be drafted and submitted to the European Commission. These reports will present the status of the achievement of

<sup>111</sup> An Operational Programme will be drafted for each border

the programme's objectives and the absorption of the allocated funds, compared to the planned outputs. These reports will be extremely useful in the evaluation of the implementation of NDP priorities.

## **B) The European Fund for Agriculture and Rural Development**

The European Fund for Agriculture and Rural Development is the financial instrument through which, in the European Union, the implementation of the measures regarding sustainable rural development is provided, together with the policy to sustain the market and the incomes applied within the Common Agriculture Policy, Cohesion Policy and the Common Policy for Fisheries.

The implementation of the rural development measures corresponding to the priority axis for 2007-2013 will be done on the basis of a strict definition of responsibilities between Member States and the Commission, by respecting the principles regarding complementarity, coherence and compliance, in a public-private partnership and by providing access to non-discriminatory access to development between men and women.

In Romania, the programming and implementation institutional system of the European Fund for Agriculture and Rural Development is at the moment being drafted.

The programming at a national level of the European Fund for Agriculture and Rural Development is undertaken by the Ministry of Agriculture, Forests and Rural Development through the National Strategic Plan and the Rural Development National Plan, in accordance with the new Strategic Directions for Rural Development of the European Commission.

According to the provisions of GD no. 374/2005, the structure within the MAFRD that is responsible for the implementation of ERDF is the Managing Authority for the National Rural Development Programme.

The programming, monitoring, financial management, control and evaluation principles and regulations of the European Fund for Agriculture and Rural Development are defined in Council Regulation no. 1698 of 20 September 2005, this being the strategic intervention framework for the rural development policy between 1 January 2007 – 31 December 2013.

## **C) European Fund for Fisheries**

In the European Union, the European Fund for Fisheries represents the financial instrument through which the Common Policy for Fisheries is implemented, having as main objectives providing a balance between existing resources and their exploitation, strengthening the competitiveness of the fisheries sector and the development/ modernisation of the fisheries' areas and utilities.

The reform of the Common Policy for Fisheries of 2003 provided for intervention measures that have determined a reorientation of the priorities towards the conservation and sustainable exploitation of fisheries resources, correlated with structural actions of the Community in the fisheries sector.

According to the provisions of GD no. 374/2005, the programming and implementation at a national level of the European Fund for Fisheries is the responsibility of the National Agency for Fisheries and Aquaculture, a unit that is subordinated to the Ministry of Agriculture, Forests and Rural Development.

The programming, monitoring, financial management, control and evaluation principles and regulations of the European Fund for Fisheries are defined in the Draft Council Regulation regarding the European Fund for Fisheries.

*The Coordination between Community funds.* According to the provisions stated in the Community regulations regarding the use of the above mentioned instruments between 2007 -2013, the complementarity of the interventions funded from structural instruments, on the one hand, and the rural development and fisheries funds, on the other hand. At a strategic level, the main role will be held by the CNC that has high level members that coordinate the programmes funded by the five financing community instruments.

**External Credits** from international financial institutions (e.g. European Investment Bank, European Bank for Reconstruction and Development, World Bank, the Development Bank of The European Council, etc) and can be found in the NDP Strategy will be used with two destinations:

- To provide the co financing needed for the Community funds
- funding multi-annual programmes/ important investment projects that are similar to those that can be funded through structural funds or from funds for rural development and fisheries granted by the EU, thus following the principle of additionality in the programming of Community funds.

The implementation regulations of these refundable funds will follow the provisions of the internal legislation and the financing agreements. In case these funds contribute to providing the national co financing of the projects that benefit from grants, the correlation of the management mechanisms will be provided.

## **2. Use of internal sources**

The allocation and spending of budgetary funds will be done according to the public finances legal framework, formed by the Law of Public Finances no. 500/2002 (the subsequent changes and amendments), the annual budgetary law, as well as documents that have appeared in order to apply this.

The public sources for implementing the programmes and projects that can be found in the NDP Strategy, coming from state budget, local budgets and other public budgets, will be used with two main destinations:

- to provide the co financing need of the Community funds and the external credit contracted from international financial institutions;
- funding multi-annual programmes/ important investment projects that are similar to those that can be funded through structural funds or from funds for rural development and fisheries granted by the EU, thus following the principle of additionality in the programming of Community funds.

The budgetary legislation stipulates the obligation of the main credit institutions to provide fully and with priority the necessary funds representing the national co financing for the programmes and projects together with any international funding (refundable and non-refundable).

In view of achieving an even tighter connection between the developing of policies and the allocation of budgetary funds, the compatibility with the strategic priorities and objectives of the NDP will represent a basic criterion in the analysis of programme and project applications representing public investments for development, in the process of budgetary construction.

Internal credits, as well as other financial instruments will continue to be used by public authorities for the financing/ ensuring co-financing of the investments projects.

*The private sources* taken into consideration in the financial programming of the NDP are addressed exclusively to the co financing of Community Funds.

Due to the existence of a number of sources of funding development (own resources, Community Funds, internal and external credits) there should be at a central and local level a rigorous prioritization of the multi-annual investment strategy. This should also ensure the coordination of different sources with a view to obtaining a maximum efficiency of the investments and the use of the appropriate and adequate funding for the project at the time of the investment.

### **3. Horizontal implementation rules**

In the implementation of programmes and projects that are part of the NDP strategic framework, compliance with the legislation and with the provisions of specific policies in horizontal fields will be ensured, as well as the state aid, public procurement, environment protection and equal opportunities between men and women.

*State aid.* Community regulations regarding state aid for the period 2007-2013, that will be directly applicable to Romania, as a member state of the EU, are at the moment under development. The Council of Competition is the institution that is responsible for the application of the competitiveness and state aid policy. The financing schemes and the relevant sections of the applications will be analysed by the Council of Competition taking into account the state aid regulations applicable during 2007-2013.

*Public procurement.* The new framework and secondary legislation in the field of public procurement will be finalised in 2006, and will be fully harmonised with the *acquis communautaire*. Starting with 2006, all public procurement tenders including those that are part of Community funded projects, will follow the procedures provided in the new legislation.

*Environment protection.* The Ministry of Environment and Water Management (MEWM) is responsible for the national policy in the field of environment protection, as well as for drafting the strategy and specific regulations regarding the development and harmonisation of such activities with the general framework of the government policy. MEWM coordinates the implementation of the government strategy in the fields of interest, representing the competent state authority in the field of environment protection. The representatives of the environment authorities (MEWM, Regional Environment Protection Agencies) will participate, where necessary, at the selection committees for projects that will be held at a national and regional level, as well as at the monitoring committees. The selection criteria and indicators for programmes/ projects will assess the issues regarding the impact over the environment.

*Equal opportunities between men and women.* The institution responsible for coordinating national policies regarding equal opportunities between men and women is the National Agency for Equal Opportunities between Women and Men (ANES). The representatives of ANES will participate, where necessary, the project selection committees that will be held at a national and regional level, as well as at the monitoring committees. The selection criteria and indicators for programmes/ projects will integrate, where possible, issues regarding equal opportunities.

### **4. NDP monitoring and evaluation**

The implementation of the previous drafts of the National Development Plans was not accompanied by a mechanism of monitoring and evaluation that would check the manner in which the provisions of the Plan and its results were applied in comparison with the proposed targets. The exception is the financial grants from the European Union, the use of which is strictly monitored and evaluated.

If the 2007-2013 NDP becomes an instrument of real concentration and prioritisation of the public development investments, whose overall and specific objectives for different national priorities are quantified through precise targets that meet the conditions for carrying out a periodic monitoring of its implementation.

Therefore, taking into consideration the strategic character of the NDP, an annual monitoring will be carried out, during 2008-2015, of the progress recorded, that is to be stated in the NDP implementation report. The coordination of the monitoring process is the responsibility of the Ministry of Public Finance will develop a methodology in this respect and will cooperate in this process with the institutions and bodies with responsibilities in the relevant intervention fields at the level of the NDP. The implementation reports will be discussed within the Inter-institutional Committee for drafting the National Development Plan and other consultative partners.

The ex-ante evaluation of the NDP was carried out in the Phare Project RO2002/IB/SPP/01 „Construction of the institutional capacity and the instruments compatible with the Structural Funds”, by independent external evaluators. MPF, through the Managing Authority for the Community Support Framework (MACSF) has a continuous dialogue with the ex-ante evaluators. The drafts to different sections of the NDP were submitted for analysis to the evaluators, during the drafting of the document. The Comments and recommendations received were analysed at the level of the MACSF and sent to the institutions involved in drawing up the NDP, in view of improving the documents. The final ex-ante evaluation report will be drawn up by the end of January 2006.

The same Phare project has also included an ex-ante evaluation component for the NDP impact over the environment that took into consideration a similar methodology to the one for a strategic evaluation of the environment and its conclusions can be found under Chapter VII of the NDP. The final report will be drawn up in January 2006.

Taking into account the implementation period of the NDP, an interim evaluation will be carried out in 2010. This will start from the elements identified in the annual implementation reports and will assess the progress recorded of the NDP during the implementation, the effectiveness of the strategy and the targets set out maintained their relevance for the second part of the implementation period. Following the evaluation, the opportunity of revision and updating the NDP will be analysed. The conclusion will also be the basis of the planning process for the next period.

The Ex-post NDP Evaluation will be carried out in 2015, after the closure of the NDP implementation period.

## VI. PARTNERSHIP

The principle of partnership in drafting the National Development Plan is a prerequisite for the development of realistic economic and social policies, based on a wide consensus, for the use of public development funds to be a success. Also, the involvement of partners and the integration of their opinions aim at making them responsible in the implementation of the NDP.

In Romania, the institutional and partnership framework for the drafting of the 2007–2013 NDP was set up under **Government Decision no. 1115 of 2004** on the drawing up of the National Development Plan. The partnership structures are:

- At national level: **the inter-institutional committee for the drafting of the NDP(CIP)** , made up of 80 members, decisions makers from ministers, other public institutions, regional development agencies, research and higher education institutions, representatives of economic and social partners. The plenary sessions and the meetings of the working groups can be attended by representatives of other institutions and organisations, depending on the topic of the meeting.
- At regional level: **regional committees for the drawing up of regional development plans (CRP)** - include, besides representatives of the regional development agencies, representatives of prefect's offices, county councils, de-concentrated services of the central public institutions, higher education and research institutions and regional economic and social partners.

CIP and CRP operate by means of working groups, which focus on specific issues, and plenary sessions, where central and regional institutions, as well as representatives of economic and social partners are equally represented.

The responsibilities of the Inter-institutional committee for drafting the NDP consist in approving the following documents:

- a) economic and social surveys and analyses made with a view to consolidating sectoral strategies and the national regional development strategy.
- b) Proposals of national priority development objectives, formulated by institutions in charge, with a view to including them in the NDP
- c) strategies worked out by ministers and other governmental institutions, aimed at reaching the development objectives of the NDP
- d) the multi-annual financial programming of the NDP priority development objectives, carried out by the Ministry of Public Finances based on the partners' proposals and the proposals to harmonize financial allocations
- e) the NDP draft that will be submitted to government for approval

The partnership structures created under GD no. 1115/2004 became functional when the drafting of the 2007–2013 NDP was initiated, in May 2004. They have been consolidated along with the process of technical consultations held at the level of topic working groups.

National working groups were set up under the coordination of the Ministry of Public Finance and the institutions designated as future authorities for the management of operational programs, in keeping with GD no. 497/2004.

Working group	Coordinator
Macro-economic analysis	Ministry of Public Finance
Increasing economic competitiveness	Ministry of Economy and Trade
Developing and modernizing transport infrastructure	Ministry of Transport, Constructions and Tourism
Protecting and improving the quality of the environment	Ministry of the Environment and Water Management
Human resources and social services development	Ministry of Labour, Social Solidarity and Family
Agriculture, rural development and fisheries	Ministry of Agriculture, Forests and Rural Development
Regional development and cross-border cooperation	Ministry of European Integration

The outcome of the activities carried out by the working groups set up at national level was the drawing up of the Consultative Documents for the 2007 –2013 NDP, including the main sections of the NDP (social – economic analysis, NDP strategy and indicative financial programming).

*The first plenary session of the CIP took place on October 14<sup>th</sup>, 2004, and focused on debating and validating the First Consultative Document, chapter: Analysis of the current situation. Also, the rules relating to the Organisation and Functioning of the CIP were presented and approved. The meeting brought together a large number of partners – over 100 representatives of the public administration institutions, of regional bodies and civil society. The committee informed the partners about the importance of the NDP and the way in which they can get involved in the process, and about methods of dissemination of information of public interest concerning the development of the 2007 – 2013 NDP and of the related documents. Based on the analysis of the current situation, the national development priorities for 2007 – 2013 were set.*

*The second plenary session of the CIP took place on March 17<sup>th</sup>, 2005 . The participants debated the Second Consultative Document on the 2007 – 2013 NDP, including the first development strategy draft proposal for 2007 – 2013 NDP. The meeting was an opportunity to highlight the role of economic and social partners and of civil society in working out development strategies, and the importance of regional partners' involvement in the debates of the working groups.*

The participants in the consultative meetings of the CIP working groups held in April – May 2005 debated the first two consultative documents for the 2007 – 2013 NDP and established the options for the development of Operational Programs, by bringing to the consultation table a large number of relevant partners. The goal was to consolidate and extend the working groups, for them to be also used in the drafting of operational programs on NDP priorities. In the future, these partnership structures will be involved in the programme monitoring stage. To that end, specific responsibilities and procedures are currently being defined.

The partnership meetings organised as part of the working group sessions on the drafting of the NDP and of the Operational programmes highlighted how important discussions with economic and social partners are, as they know better the real problems the society is confronted with and to which solving the funds used in the implementation of the NDP will fully contribute.

To that end, at the partner meetings organised between June–July 2005, the working groups discussed and revised the NDP strategy, making sure the proposed measures were prioritised according to the real needs of the social – economic partners, while observing the intervention domains of the structural

and cohesion funds. The NDP revision and finalisation process involved a number of inter-institutional meetings on specific topics (eg. SMEs, tourism), with a view to establishing the proper approach and avoid overlapping.

The institutions involved in the drawing up of the NDP, especially those functioning as management authorities or intermediary bodies, held consultations with partners in their field of activity: professional associations, employers' associations and trade unions, local and central authorities, decentralised services, regional development agencies, NGOs, representatives of the Academic and scientific research environment. The consultations ended in concrete proposals for the improvement of the NDP strategy and of the types of activities that can be introduced in the future operational programs.

The Ministry of European Integration held two types of consultations. The first type was consultation at national level, with regional participation, and aimed to reach the consensus of all partners involved in regional development on the RDP intervention fields. The second type was regional consultation with local participation, co-ordinated by regional development agencies. Based on those consultations, Regional Development Plans – containing social-economic analyses and regional development strategies – were developed and regional and local needs were identified.

Besides debates on the NDP strategy and operational programs, partner consultations were an opportunity for the partners to learn about structural funds, as it is likely that they will become members of the future Operational programme monitoring committees or project beneficiaries.

The financial programming of the 2007 – 2013 NDP, launched in June 2005, entailed regular meetings with a large number of institutions that run programs in the intervention fields covered by the NDP strategy. The aim was to correlate the financial planning of the NDP with the drafting of the national budget, in order to outline the budget effort for the co-funding of NDP priorities as well as investment programmes funded exclusively from the state budget, which ensure the observance of the principle of additionality.

CIP met for the third time on November 28<sup>th</sup> 2005 and analysed the *Third Consultative Document*, which included the revised NDP strategy and the indicative financial programming. The contribution of the partners attending the meeting was included in the final draft of the 2007-2013 NDP.

Taking into account the fact that the 2007–2013 National Development Plan covers a period of 7 years, crossing electoral cycles, as well as the need for political acknowledgement of the NDP priorities, in order to ensure the success of its implementation, two rounds of debates with political party representatives were organised on August 9<sup>th</sup> and December 15<sup>th</sup>, 2005.

The final draft of the 2007–2013 NDP was ready in December 2005 and submitted to all members of the CIP for revision. After that, the document was submitted to the Romanian government for approval.

In order to properly **inform about and promote** both the National Development Plan and the Structural and Cohesion funds, the Ministry of Public Finances developed some promotion materials. A NDP and SF logo was created, as a multiple-use communication tool and an effective means for promoting and informing, both internally (information about structural funds from the EU and international promotion of the NDP) and externally (external promotion of the national documents relating to strategic planning and financial programming).

In order to secure the safe use of the logo, procedures have been initiated to register it as mark for NDP and Structural Funds, in keeping with the legal provisions in force. The State Office for Inventions and Marks is currently going through the legal proceedings entailed by this process.

Using the logo, support materials for the promotion of information about the NDP and structural funds have been developed, such as personalised folders, pencils, posters, leaflets, CDs. They all have common graphical characteristics, to be easily associated with a representative image.

*Promotion leaflets* were an effective communication tool used to inform people about the 2007–2013 NDP. The Ministry of Public Finances developed and edited 5000 promotional leaflets aimed at disseminating information about the significance and importance of the National Development Plan, its content and the way in which it was developed in partnership. Leaflets are for all current and potential partners as well as for those who are interested in accessing EU structural funds in the 2007-2013 period of time. County councils, prefect's offices and regional development agencies got a significant number of such leaflets. In this way they had access to a large amount of relevant information, which they forwarded to their potential partners. Moreover, all county councils got posters and support trays, whose aim was to create an 'information environment facilitating the access to information about the National Development Plan and Structural and Cohesion Funds'.

One important action for the promotion of the NDP and the EU funds and for the implementation of a real transparency policy in using these funds was the creation of *a web page on pre-accession and structural / cohesion funds*. The web page was officially launched on October 12<sup>th</sup>, 2004 and promoted through media. It was an important step towards improving public communication on community funds management and promoting the role of the Ministry of Public Finance as coordinator of non-reimbursable financial assistance granted by the EU to Romania. The page can be accessed on the Ministry's address <http://www.mfinante.ro/fonduriUE> and it contains general and specific information about the institutional management framework of these funds, relevant legislation in force, the drafting of the National Development Plan and a description of EU structural instruments.

The section of the web page devoted to the National Development Plan was subsequently updated and graphically improved, to make sure it can be associated with a suggestive image, both attractive and useful to users. Also, partners and the public can use the e-mail address [pnd@mfinante.ro](mailto:pnd@mfinante.ro). In this way, any citizen or organisation can present its opinions and proposals concerning the NDP.

The information displayed on the web page was also written on *CDs with personalised covers*, which can be used on various occasions. This is yet another way of disseminating information among partners involved in the drawing up of the NDP and the management of structural and cohesion funds. Facilitating the access to information rendered the programming process more effective.

In July 2005, The Ministry of Public Finance, through the Community Support Framework Management Authority (MACSF), launched *the information campaign 'The National Development Plan 2007–2013 and Structural Funds'*. The purpose of the campaign was to inform about the NDP, the priorities it includes and the requirements of the structural fund management process, in order to secure a maximum rate of absorption of the funds allocated to Romania and the implementation of viable projects by potential beneficiaries of EU post/accession funds.

The campaign consisted in workshops held by representatives of MACSF and the Operational Programs Management Authorities in each of Romania's eight development regions. The workshops were attended by 1000 partners, relevant at regional and local level: representatives of local public institutions, NGOs, the business environment, research institutes, universities and the local media. The

participants were handed personalised materials with the Structural Fund and NDP logo (posters, folders, leaflets, pencils, CDs).

Other channels of disseminating information were 25 conferences, forums and workshops organised by various economic and social partners, local and central authorities, who invited MACSF representatives to give general presentations on NDP and structural funds, or specific presentations highlighting their relevance and effects on the fields of particular interest to the respective group.

The Ministry of Public Finance is the authority in charge of promoting structural funds and the 2007-2013 NDP at national level. The Operational Programs Management Authorities have responsibility for advertising and promoting Operational Programmes and their fields of intervention.

In conjunction with the development of Operational Programmes, the promotion of the structural funds' specific intervention fields will intensify, in order to ensure that potential beneficiaries of such funds are properly informed, both at national, regional and local level. In 2006, the promotion of the NDP will focus on increasing accessibility to relevant documents, awareness raising and the preparation of potential beneficiaries, in order to get a sufficient number of project proposals and to successfully implement the projects selected, for them to contribute to the local, regional or national economic-social development.

## VII. EX-ANTE EVALUATION

### 1. THE MACRO-ECONOMIC IMPACT OF STRUCTURAL AND COHESION FUNDS

Cohesion policy influences an economy through a combination of offer and demand channels. The effects of short term demand (Keynesian) are the consequence of political decisions to increase revenues and expenditures related to cohesion policy initiatives. Through multipliers' effects, they will propagate to all the components of domestic consumption (total investment, private consumption, imports, etc.), domestic output and national revenue. However, this analysis should not be confined to short term effects, but focus on the long term impact of cohesion policy, that is stimulation of potential offer.

This long term perspective is also taken into account when estimating the macro-economic impact of Structural and Cohesion Funds in the 2007 – 2013 period. A HERMIN model was used. The HERMIN model was implemented for the first time in Romania under an ACE-PHARE research programme between 1997–1998<sup>112</sup> and was subsequently developed for the Ministry of Public Finance in 2002 – 2003<sup>113</sup>. The current version of the model was adapted to the particularities of the Romanian economy, in order to be able to meet all the requirements stipulated in the guide on structural funds' ex-ante impact assessment, more precisely in Annex 1 of the European Commission document<sup>114</sup>.

The advantage of this type of model is that the effects of SCF can be measured not by merely summing up the effects, but by including the spill over and externality effects. The model is structural, founded on micro-economic grounds: the offer component includes the major mechanisms by means of which SCF influence the productive potential (direct externalities on output). Indirect externalities of the production factors (capital and labour forces) are also included.

However, the model has limitations, just like with any other tool of this kind, especially in the case of the Romanian economy, where statistical data are not very well correlated with econometric estimates. Because of this and the specific character of the transition period including short time frames and the lack of data on major variables, (such as those concerning capital and types of investments, investments in infrastructure, machines and equipment etc.) care needs to be exercised in the interpretation of the data.

#### *Cohesion policy impact assessment methodology*

##### **i) General structure of the model**

Hermin is an annual, multi-sectoral mode, which includes:

- Sector T – processing industry (products that can be traded on foreign markets);
- Sector N – market services (products that cannot be traded on foreign markets);
- Sector A – agriculture;
- Sector G – governmental services (or non-market).

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<sup>112</sup> ACE PHARE P96-6242-R, Macroeconomic and Structural Change in Transition Economies: Common Themes in CEE and EU Periphery Countries (coord.: Prof. John Bradley, ESRI, Ireland).

<sup>113</sup> Under BIRD grant „Building the Institutional Capacity for Macroeconomic Analysis (TF 023226)”. The development of the HERMIN model focus in particular on details of the fiscal block

<sup>114</sup> DIRECTORATE-GENERAL XVI, REGIONAL POLICY AND COHESION, The New Programming Period, 2007-2013: Methodological Working Papers Draft Working Paper.

The structure of the model can be regarded as being made up of three major blocks: *offer* (analysed for each of the four sectors), *absorption* and *revenue distribution*. The HERMIN model is based on conventional Keynesian mechanisms. The revenue and expenditure distribution sub-components generate the standard revenue-expenditure mechanisms of the HERMIN model. However, the model has some neo-classical features, associated in particular with the aggregate demand sub-component. Therefore, production in the processing industry is not simply generated by demand. It is also influenced by price and cost competitiveness, because companies are interested in production locations that entail minimum costs. Moreover, factor demand in the processing industry (T) and market services (N) is inferred using a CES production function, where the capital/labour force ratio is sensitive to relative factor prices. The incorporation of a structural Philips curve mechanism into the salary negotiation mechanism triggers supplementary relative price effects.

Corresponding to the three methods of GDP definition accounts: production, expenditures and incomes, in the HERMIN model:

- a) offer is generated by the production of the four sectors: processing industry (OT), market services (ON), agriculture (OA) and the public sector (or non-market)(OG);
- b) in terms of expenditure, desegregation includes: private consumption (CONS), public consumption (G), investment (I), stock variations (DS), export (X) and import (M).

National revenue is disaggregated into elements of the public and private sector.

## ii) Cohesion policy transmission mechanisms

The long term effects of the cohesion policy on economy – mechanisms:

- a) increased stock and better quality of the physical infrastructure, which is an input for the productive activity of the private sector;
- b) increased stock and better quality of the human capital, through investments in training, which is also a growth factor for the private sector productivity;
- c) financial assistance for private companies, aimed at stimulating investment initiatives, the development of research – innovation, the development of management and marketing systems etc., which eventually leads to increased factor productivity and lower production and capital costs.

In order to see the impact of Structural and Cohesion Funds, the used model included the direct (on output) and indirect (on production factors) externality mechanisms, which are analysed in detail in (Bradley J., Morgenroth, 2004)<sup>115</sup>.

As the labour market plays a major role in transmitting policy mechanisms, special attention was paid to the modelling of this sector, by taking into account salary policies and regulations on the labour market (taxation etc.), which influence the outcome of salary negotiations and indicators such as employment and labour force participation rate. Special attention is paid to the impact of cohesion policy on qualification levels in various sectors and on the training and development of human capital.

Moreover, the model is conceived so as to be able to draw attention to the *crowding out* policy, for instance in the case in which public expenditure can have a negative effect on the activity of the private sector due to higher taxes, interests and constraints on the labour market.

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<sup>115</sup> Bradley J., Morgenroth E. (2004) "A study of the macro-economic impact of the reform of EU cohesion policy", ESRI, Dublin, Ireland.

### iii) Aggregate funds

Cohesion policy programmes include a complex system of measures. In order to estimate the global effect of SCF, these measures need to be aggregated into categories of economic significance. More precisely, they must be relevant for the transmission mechanisms mentioned earlier. Therefore, funds are aggregated in three types of expenditure:

- investment in technical infrastructure;
- investment in improving the human capital;
- direct aid for investments in industry, market services and agriculture;

Potential funding sources:

- transfers from the EU, as subsidies for the public authorities;
- co-funding from public funds, as stipulated in SCF regulations;
- co-funding from private funds, as stipulated in SCF regulations;

The table below shows the SCF planning in Romania for 2007 – 2013, differentiated by the 3 categories of expenditure and the 3 funding sources established

#### FSC planning 2007-2013 for Romania, by expenditure categories and funding sources

- mil. EURO -

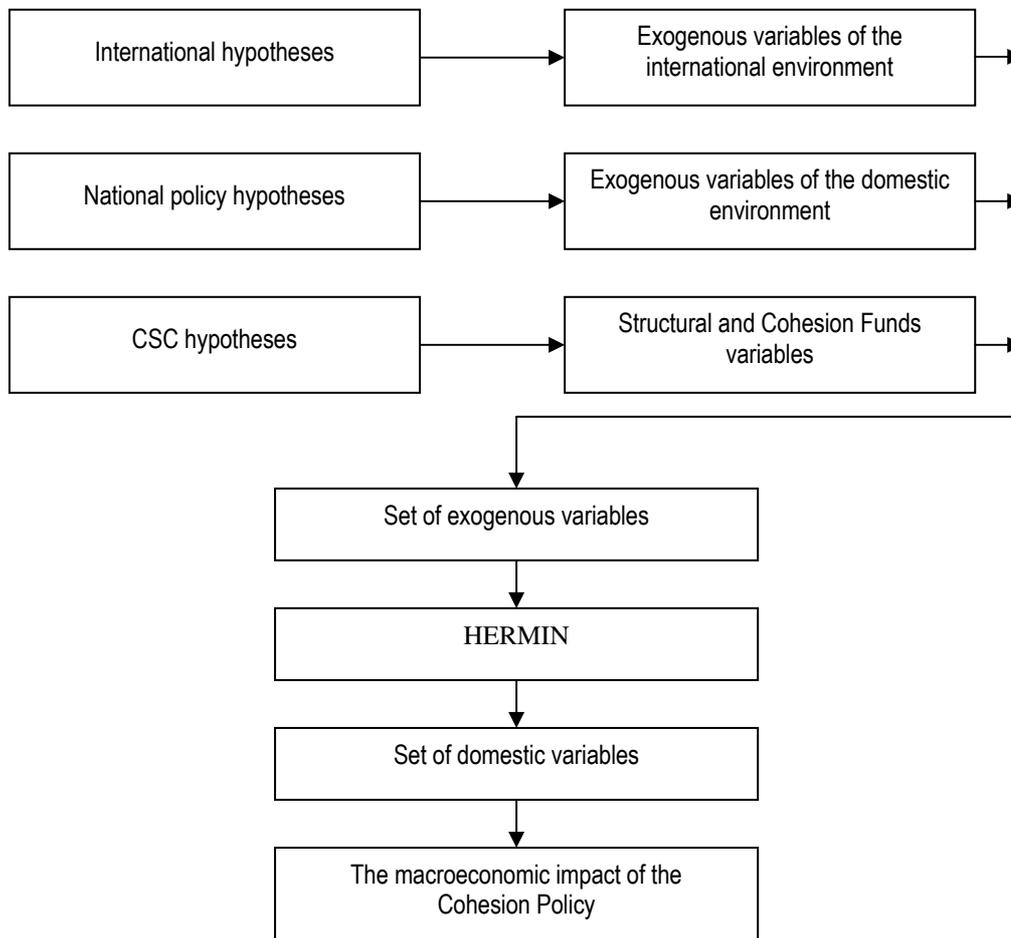
	2007	2008	2009	2010	2011	2012	2013	Total period
<b>TOTAL (without agriculture)</b>	<b>2,027</b>	<b>3,071</b>	<b>3,936</b>	<b>4,533</b>	<b>4,586</b>	<b>4,715</b>	<b>4,939</b>	<b>27,807</b>
GECSFEC	1,211	1,697	2,328	2,882	2,942	2,930	3,009	17,000
GECSFDP	708	1,242	1,424	1,403	1,368	1,520	1,674	9,338
GECSFPR	108	132	184	249	276	265	256	1,469
<b>Infrastructure</b>	<b>1,447</b>	<b>2,235</b>	<b>2,598</b>	<b>3,047</b>	<b>3,096</b>	<b>3,486</b>	<b>3,968</b>	<b>19,878</b>
IGVCSFEC	805	1,099	1,354	1,816	1,878	2,055	2,325	11,331
IGVCSFDP	606	1,092	1,182	1,136	1,101	1,304	1,505	7,927
IGVCSFPR	36	44	62	95	117	127	138	620
<b>Production sector</b>	<b>342</b>	<b>399</b>	<b>537</b>	<b>662</b>	<b>679</b>	<b>611</b>	<b>544</b>	<b>3,775</b>
TRIEC	220	256	347	420	429	390	349	2,410
TRIDP	55	64	85	105	108	95	85	597
TRIPR	67	80	106	137	142	125	110	768
<b>Human resources</b>	<b>237</b>	<b>437</b>	<b>800</b>	<b>824</b>	<b>810</b>	<b>619</b>	<b>427</b>	<b>4,154</b>
GTRSFEC	187	343	627	646	636	485	335	3,259
GTRSFDP	47	86	157	162	159	121	84	815
GTRSFPR	4	8	16	16	16	12	8	81
<b>AGRICULTURE</b>								
TRIA	708	955	1,206	1,284	1,320	1,358	1,397	8,228

EC= EU contribution ; DP= national public sources PR= private sources

## Results

### i) Scenarios and hypotheses

#### Policy impact simulation



There are two scenarios, termed as 'standard' in impact studies:

- **the basic scenario** ("with funds") – SCF expenditure at the level established in the NDP;
- **scenario 1** ("without funds") – it is assumed that there will be no SCF expenditure in the NDP (expenditure will be maintained at the level of the pre-accession funds). However, for the entire 2007-2020 period, pre-accession funds equivalent to those in 2006 are included.

The differences between the two scenarios (with and without structural fund input) can be interpreted as the macro-economic consequences of SCF.

An additional hypothesis is that after 2013, in all scenarios, funds will get back to the pre/accession values. The prognosis period stretches as far as 2020, in order to better emphasize the long term effects of structural funds.

### ii) Simulation results

Simulation results involve:

- **GDP** (GDP at factor cost, in industry, services, governmental sector);
- **expenditure** (private consumption, public consumption, total investment)

- **labour market** – unemployment and employment (total, in industry and services)
- **salary growth rate** (salary rates in the processing industry);
- **budget deficit**;
- **export and import.**

		2007	2008	2009	2010	2011	2012	2013
<b>GDP (growth %)</b>	base	6.8	7.1	7.1	7.2	4.8	6.4	5.9
	No SF	6.1	6.4	5.6	5.6	3.0	4.6	4.1
<b>Production – processing industry (%)</b>	base	6.2	6.3	6.7	6.8	4.2	5.8	5.2
	No SF	5.4	5.5	3.1	3.3	1.2	2.7	2.2
<b>Governmental sector (growth %)</b>	base	4.2	5.2	4.7	4.7	4.0	4.1	5.8
	No SF	4.0	5.2	4.4	4.3	3.9	4.0	5.5
<b>Services (growth %)</b>	base	9.2	9.5	9.6	9.9	5.7	8.6	8.7
	No SF	8.2	8.6	8.6	7.7	5.0	7.6	7.2
<b>Consumption (growth %)</b>	base	6.9	6.3	6.3	6.2	6.8	8.8	3.8
	No SF	6.2	5.8	3.8	5.4	4.6	9.7	4.7
<b>Investment (growth %)</b>	base	9.2	9.2	9.4	9.3	5.4	8.8	8.2
	No SF	8.2	8.2	7.7	7.6	4.5	6.7	6.2
<b>Governmental consumption (growth %)</b>	base	6.6	4.6	5.4	5.5	2.5	6.7	4.9
	No SF	6.2	4.8	4.1	4.4	1.9	5.8	4.2
<b>Exports (growth %)</b>	base	17.5	17.6	16.6	16.9	14.7	15.2	15.5
	No SF	16.2	16.3	16.2	16.4	14.4	14.9	15.5
<b>Imports (growth %)</b>	base	16.6	16.6	16.4	16.9	12.2	13.7	13.4
	No SF	15.1	15.1	13.7	14.4	14.0	15.4	15.4
<b>Budget deficit (% of the GDP)</b>	base	-2	-2	-2	-2	-3	-3	-4
	No SF	-3	-3	-3	-3	-4	-4	-4
<b>Unemployment (mil. people)</b>	base	0.709	0.591	0.881	0.731	0.954	0.894	0.875
	No SF	0.315	0.765	0.644	0.821	0.818	1.052	0.993
<b>Salaries in the processing industry (% , nominal terms )</b>	base	11.9	13.2	10.0	10.5	5.9	6.3	6.0
	No SF	11.1	13.2	9.6	10.0	5.2	5.2	5.2

According to the table below, due to the funds injection, in 2020 the GDP will be 25% bigger. The increase will be mostly generated during injection period 2007–2013, particularly in the beginning and end of the period covered by the NDP. In the ‘with funds’ scenario, the annual average growth rate of the GDP (2007–2020) is 1.6% bigger than in the scenario that does not include funding.

In the case of private consumption (CONS), the differences between scenarios are not so big. The annual real consumption growth rate in the ‘with structural funds’ scenario is only 0.52% bigger than in the other scenario.

Investments (I) will register bigger growth rates, with significant differences between scenarios (on average +1.71% in the 2007 – 2020 period in favour of the ‘with funds’ scenario). As a result, in 2020 investments will be 25% bigger because of the impact of structural funds. What is interesting is that after an inevitable diminishing in 2014 of the differences between the two scenarios (due to the elimination of structural funds hypothesis), still the differences in the long run grow constantly by 2020, when the difference registered in the last year of structural funding is even exceeded.

The labour market will be seriously affected by the funds injection as well. During the 14 years covered by the prognosis period, over 550,000 new jobs will be created in the ‘with funds’ scenario. This is a remarkable outcome if we compare it with the decrease in employment estimated in the ‘without’

scenario. Annual growth rates are estimated at – 0.25% in the ‘without funds’ scenario, and 0.42% per year in the ‘with funds’ scenario. Therefore, at the end of the period (2020), the net difference between the two scenarios will be 10% more employed population (L) in the ‘with’ scenario than in the ‘without’ scenario. On the other hand, unemployment rate (UR) in 2020 will stand at half the value that would have been recorded in the ‘without funds’ scenario.

Both in industry and services, real salaries (WT and WN) will raise 3 to 4 times during the prognosis period. The differences between scenarios, favouring the one ‘with funds’, will be maximum between 2007 (4%) and 2013 (6%). After that they will start to diminish, to regain some momentum in 2020.

Fund injection will significantly increase the budget deficit (GBORR) in 2007-2013, because budget expenditure will increase by 13.18% in nominal terms, while the growth recorded by revenues will be moderate (10 – 15% growth).

The benefits of fund injection will be better felt by the processing industry (goods that can be traded on foreign markets), whose output (OT) will increase more in the fund scenario - that is by 38% in 14 years - as compared to the service sector, where the supplementary increase for ON is estimated at 25%.

In the ‘with funds’ scenario, the effects of these phenomena will trigger a relative increase in the unit labour force cost in the T sector (ULCT) and a relative decrease of this cost in the N sector (ULCN).

Exports are considered to be dependent on international variables. Therefore, there are no differences between the two scenarios. On the other hand, though, imports (M) will be bigger (between 2.7% in 2020 and 5% in 2013) in the ‘with’ scenarios, as compared to the ‘without’ scenario, although differences don’t look significant.

**The macroeconomic impact of European structural funds**  
**The percentage difference between the values obtained in the ‘with funds’ and ‘without funds’ scenarios (%)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Consumption by population (CONS)</b>	1.48	2.68	3.86	5.01	5.66	6.08	7.83	8.26	7.72	7.48	7.13	6.75	6.61	7.08
<b>Budget deficit (GBORR )</b>	10.58	15.01	19.85	15.50	18.73	22.59	24.73	-9.74	55.21	-13.84	-7.21	-4.32	-5.00	-7.12
<b>PIB calculated through the expenditure method (GDPE)</b>	5.36	5.30	7.15	9.02	9.78	10.46	17.70	16.66	15.21	16.62	16.86	17.14	19.31	24.02
<b>GDP at factor cost (GDPFC)</b>	5.88	5.70	7.61	9.58	10.29	10.99	18.98	17.65	16.01	17.75	18.10	18.48	21.03	26.39
<b>Investments (I)</b>	10.49	14.04	15.70	17.48	16.28	15.90	22.56	12.47	11.13	14.79	15.21	16.18	18.92	25.15
<b>Employment (L)</b>	1.93	1.75	2.57	3.39	4.01	4.60	7.46	7.04	6.98	7.38	7.61	7.68	8.40	9.74
<b>Employment in N (LLN)</b>	0.66	1.31	1.94	2.54	3.12	3.66	4.57	4.50	4.45	4.40	4.40	4.34	4.28	4.21
<b>Employment in T (LT)</b>	7.70	5.82	8.54	11.23	13.09	14.29	25.87	23.96	23.75	26.20	27.33	26.73	30.09	36.27
<b>Imports (M)</b>	1.98	3.41	3.91	4.52	3.90	3.92	4.85	2.48	1.49	2.20	2.12	2.34	2.43	2.67
<b>Output in N (ON)</b>	6.40	6.41	7.94	9.87	10.20	10.71	18.78	18.09	15.24	16.72	16.19	16.66	18.72	24.59
<b>Output in T (OT)</b>	8.55	7.43	10.54	13.64	15.28	16.46	28.80	25.92	24.65	27.38	28.62	28.16	31.69	38.04
<b>PIB Deflator (PGDPE)</b>	0.11	1.58	0.64	0.28	-1.96	-2.28	-3.92	-7.04	-8.72	-7.40	-7.38	-6.72	-7.16	-8.89
<b>Unit labour forces cost in N (ULCN)</b>	-0.76	1.52	0.31	-0.21	-3.13	-3.42	-6.27	-10.82	-12.32	-10.43	-9.85	-9.06	-9.56	-2.63
<b>Labour unit cost T (ULCT)</b>	3.69	4.62	3.92	4.24	1.34	1.02	3.51	-1.01	-3.96	-0.99	-0.88	0.26	1.30	2.49
<b>Unemployment rate(UR)</b>	-23.42	-27.87	-42.59	-46.43	-47.48	-50.27	-59.08	-47.59	-45.68	-43.90	-42.24	-44.78	-47.27	-3.95
<b>Average salary N (WN)</b>	4.89	6.63	6.21	6.93	3.53	3.14	6.47	0.78	-3.27	0.14	0.34	1.68	2.97	4.46
<b>Average salary in T (WT)</b>	4.51	6.22	5.83	6.50	3.30	2.94	5.93	0.56	-3.25	-0.07	0.13	1.38	2.55	3.82

## 2. THE ENVIRONMENTAL ASSESSMENT

*This is a non-technical summary of the information provided under the main headings of the environmental assessment report of the Romanian National Development Plan (NDP). This report was commissioned as part of the assistance provided by EU Member States to the Romanian Authorities in preparation for her accession. The NDP is still evolving and has not been finalised; therefore, the observations here are based on the information made available in November and December 2005.*

*Romania faces a number of challenges in implementing her plan to achieve sustainable economic growth; such an ambition needs to be tempered with economic, environmental and social responsibility and accountability. Romania has this opportunity to make a concerted start on the road towards sustainable development.*

*The report recommends that the NDP adopt a more robust position on environmental protection by making a commitment to three specific high-level environmental objectives: improve environmental amenities, protect biodiversity and raise environmental awareness. These stepping-stones to sustainable development would be reinforced by each strategy adopting specific targets that would contribute to these objectives.*

### **Summary of the Romanian national development plan**

The strategic analysis of the current situation in Romania highlights a number of strengths, of which one is notable from an environmental perspective: *Romania has abundant natural resources*. This reflects Romania's unique heritage and justifies the need and foundation for sustainable development so that these resources may be used efficiently and effectively for the benefit of future generations. However, the advantage of this foundation is weakened because of high-energy intensity, particularly in the commercial and industrial sectors, insufficient and poor infrastructure networks, and poor environmental management.

The prospect of accession to the European Union with the associated expectation of rapid economic development are supported by the potential availability of gas and energy reserves; nevertheless there is a need to develop the potential of the renewable energy sector. Whilst the future looks promising, the threat of global climate change along with environmental degradation due to mismanagement of resources creates a need for a complete revolution in the country's business and commercial culture and ethics.

This revolution may only be achieved by embracing the principles of sustainable development at all levels of society; in this way economic growth will transform the quality of life for every citizen. Commitment to sustainable development is a prerequisite for accession; however this commitment needs to be channelled into positive action. Embracing the principles of sustainable development should help ensure the effective husbanding of resources through the adoption of appropriate environment management systems and techniques.

Further all groups and strata of Romanian society need to be included in this development and it is the purpose of the NDP to lay the framework for this by establishing a coherent and integrated strategy for a balanced and complementary development throughout the country that will fuel economic growth.

The challenge is to make this economic growth sustainable by achieving all-round improvements in the quality of life, to do this, and give the NDP a clear focus, a series of goals have been identified. These are to:

- Increase the productivity of Romanian companies so that they are closer to the EU average productivity rate (increase *economic competitiveness* of the business sector);

- Provide a modern network of transport infrastructure, through the selection of sustainable options (improve *transport infrastructure*);
- Protect Romania's unique environmental heritage and encourage sustainable development in accordance with Romania's social and economic needs (protect the *environment*);
- Develop Romania's human capital by developing a modern, flexible and inclusive labour market whose competitiveness is increased by providing equal life long learning opportunities (*human resources* development);
- Develop Romania's rural economy based on knowledge and private entrepreneurship that respects her natural cultural and historic heritage (development of *rural economy*); and
- Accelerate economic growth in those regions that lag behind the EU's average (promote the *balanced development* of all the regions of the country).

The NDP envisages that these goals will correspond to six Development Priorities (identified in the brackets above) that will be achieved through six corresponding Operational Programmes (*italicised* name in brackets) plus two horizontal programmes to support them with technical assistance and capacity building.

### **State of the environment in Romania**

The Ministry of Environment and Water prepares an annual State of the Environment Report (SOER<sup>116</sup>); this document provides a lot of information and background data. It defines Romania's environmental priorities as: climate change, unsustainable use of renewable and non-renewable natural resources, biodiversity loss and accumulations in the environment of persistent hazardous chemicals.

A review of the SOER and independent sources confirms that the main environmental issues are poor urban air quality, contamination of water resources, limited waste management and threats to biodiversity.

However, this assessment of the NDP would also emphasise the lack of environmental services and basic facilities, particularly in rural areas as the most damaging consequence of the lack of investment, poor management and irresponsible exploitation of resources since the Second World War. In rural areas, where 46% of the population live, cardiovascular diseases are rife and life expectancy lowest; this is largely due to poor sanitation and lack of potable water.

### **Existing environmental issues**

An analysis of the available data from the SOER, National Institute of Statistics (NIS) and Eurostat suggest that Romania faces six environmental issues. The NDP's strategies could be aligned to make significant positive contributions to tackling these issues. However, the positive contributions are counterbalanced by potential negative impacts that might accrue; therefore, there is a need to mitigate these impacts in the sector strategies. A subjective ranking of the issues results in this hierarchy:

*Water and soil.* Water is an abundant resource in Romania; however, there are four areas of concern, the latter also contribute to "quality of life".

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<sup>116</sup> The 2005 SOER has just been released using 2004 data; however it is not yet available in English so the data and statistics in this report come from the 2004 SOER.

- The past industrial legacy has resulted in large areas of contaminated land, which may be a cause of contamination to water reserves; there is little or no data on this subject, although a database is being compiled.
- Improvements in the standards of living leads to the inevitable result of increases in water usage; therefore, care needs to be taken to ensure that hydrology, water quality and ecological processes affecting wetlands are maintained.
- Eurostat states that only 54% of the population is connected to mains drinking water supply; the SOER estimates that access in urban areas is as 98% but only 33% in rural areas.
- Only 95% of municipalities with populations over 10,000 have wastewater treatment facilities, but the statistics give no indication of the number of people connected to sewerage systems. Over 10 million people (46% of the population) live in rural areas where the sanitation is rudimentary posing a significant risk of contamination to their domestic water supplies.

*Quality of life:* Romania has the second highest infant mortality (16.7 / 1000 births) and second lowest life expectancy (71 years) amongst EU member states and candidate countries. Mortality is the fifth highest with the main cause of death for both men and women as cardiovascular diseases, but both genders are nearly twice as likely to succumb to such diseases if they live in rural areas.

*Air & climate change with natural resources:* Romania has the lowest CO<sub>2</sub> emission levels amongst EU member states and candidate countries and is on track to meet her Kyoto commitments; however, other atmospheric pollutants, such as suspended particulates, pose significant health risks, particularly in industrial areas. The planned infrastructure development outlined in the NDP will be a drain on existing resources, particularly non-renewable energy and aggregates.

*Biodiversity:* Romania has the largest number of endangered species amongst EU member states and candidate countries; encroachment by development poses a significant risk to extinction of a number of species and the depletion of their natural habitats.

*Cultural heritage & landscape:* Romania has a large number of cultural and historic monuments and museums; however anecdotal evidence suggests that a lot of them are in poor state of repair and that associated tourism facilities are inadequate. Deforestation in recent years has aggravated the risk of flooding, which has the potential to denude landscapes and inflict serious economic damage.

These issues are used in the next section to justify the generation of three environmental objectives that could be used to emphasise the horizontal importance of the environment. These objectives and their relationship to the six issues or priorities are summarised in the table below.

High-level objectives	Links to environmental priorities: "issues"
Address the deficiencies in environmental services and amenities in the country, particularly in rural areas	Water and soil Air & climate change (with natural resources)
Protect Romania's unique biodiversity and environmental heritage	Biodiversity (Air & climate change with) natural resources
Raise the profile of sustainable development and move it up the commercial, political & social agendas	Cultural heritage & landscape Quality of life Air & climate change with natural resources

These high level objectives should be integrated into the NDP's mission statement.

## Environmental objectives

It is not an imperative to set environmental objectives within a NDP; however, in the context of Romania's wish to embrace sustainable development and to use the NDP as a tool to achieving it, it is

pertinent to present an environmental framework within which sustainable development might begin. Environmental objectives are often used as a stepping-stone to sustainable development, particularly where European funds are available to co-finance projects within the framework of a national development plan, or community support framework or single programming document, or in the future context, a national strategic reference framework.

It is proposed that the NDP's environmental objectives might be expressed as the need to:

- Address deficiencies in environmental services and amenities in the country, particularly in rural areas;
- Protect Romania's unique biodiversity and environmental heritage; and
- Raise the profile of sustainable development and move it up the commercial, political & social agendas.

These objectives were derived from an analysis of the baseline inventory and the 2004 State of the Environment Report (SOER) prepared by the Ministry of Environment and Water. Analysis of the SOER leads to a six "priority issues", which will contribute to meeting the objectives.

It is apparent that, with the exception of the environment strategy all other strategies have the potential both to contribute positively to the proposed objectives and have a negative impact.

To mitigate the potential negative impacts, the strategies need to make the opportunities for positive contribution clearer. The sections on sustainable development are weak and there are no indications of the resources necessary to assist in their implementation.

The strategies could be improved by assigning specific environmental objectives and by making it clear what resources are available to assist applicants.

### Significant impact of the NDP upon Romania

The activities foreseen in the NDP are likely to have a significant impact in the use of natural resources. The primary impact is likely to come from the use of energy; secondary impacts will from the use and depletion of raw materials in the construction of buildings, environment and transport infrastructure; and tertiary impacts from economic activities not associated with energy use such as pollution of water courses, solid waste generation and emissions from industrial processes.

The following table shows the links between the objectives, priorities and the strategies in the NDP.

High-level objectives	Links to proposed environmental priorities: "issues"	Potential for positive contributions from NDP strategies	Potential for negative impact from NDP strategies
Address deficiencies in environmental services and amenities in the country	Water and soil Air & climate change (with natural resources)	Environment, regional & rural strategies	Competitiveness, & transport strategy
Protect Romania's unique biodiversity and environmental heritage	Biodiversity (Air & climate change with natural resources)	Environment & rural strategies	Competitiveness, rural & transport strategies
Raise the profile of sustainable development and move it up the commercial, political & social agendas	Cultural heritage & landscape Quality of life Air & climate change with natural resources	Competitiveness, human resource development, regional & rural strategies	Competitiveness, human resource development, regional & rural strategies

Economic growth may be expected to lead to improvements in standards of living and increased expectancy of having more leisure time. Experience from both the new and older Member States shows that improvements in standards of living give rise to increased car ownership and use, higher water consumption and greater demands on energy.

### **Mitigation measures / recommendations for the NDP**

The NDP should incorporate three high-level environmental objectives into the strategies; these will become stepping-stones to sustainable development. Table C proposes how each strategy may do this. To achieve this each strategy needs to have specific environmental objectives, with specific time-period targets to be achieved. A set of high-level indicators will be monitored over the lifetime of the programme. It is strongly recommended that preference be given to actions that contribute to these objectives.

Introducing sustainable development into the NDP needs to be accompanied by the creation of a society with an environmentally aware culture. The human resources development strategy could stimulate the significant change required to raise environmental awareness in business, education and government through training teachers and environmental managers in managing authorities, businesses, colleges, schools and universities.

It is not enough to put specific environmental objectives into the NDP's sectoral strategies; they need to be managed. It is proposed that environmental managers be employed<sup>117</sup> in every MA and IB; they will be responsible for providing guidance to those seeking to access funds made available through the NDP. Such managers would help prepare guidance for applicants, attend Monitoring Committees and assess project applicants giving advice on how the environmental footprint of a particular project might be minimised.

Technical assistance (TA) needs to be used to stimulate interest and awareness. The European Commission particularly emphasises publicity; this could be used to raise the profile of sustainable development and increase awareness of the issues. It could also provide specific services such as assisting in the development of information systems, particularly Geographic Information Systems (GIS), which can enable environmental planners to estimate, for example, populations at risk from flooding, excessive noise exposure, mapping and planning habitat protection, and groundwater contamination, as well as calculating improvements in access times along new transport routes. TA should also be used to conduct professional surveys so that the baseline data sets are completed.

### **Methodology**

The methodology for this environmental assessment of the NDP has been adapted from methodologies developed in the UK for what is known as SEA. It was decided to conduct a qualitative environmental assessment rather than an empirical SEA because there were not sufficient resources available to perform a quantitative assessment and consultation. The stages in this exercise were to:

- Screen the NDP to determine whether an environmental assessment was necessary and scope the content of the NDP to determine the breadth of such an assessment,
- Establish a baseline of suitable data, and conduct an appraisal of the scale of likely impacts,
- Draft the environmental report with its recommendations and annexes.

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<sup>117</sup> These posts could be part funded through TA

The screening and scoping processes followed the methodology prepared by the Office of the Deputy Prime Minister in the UK; the screening confirmed that the NDP required an environmental assessment and the scoping eliminated the human resources development strategy from the analysis.

It is recommended that this report is widely circulated and used as a basis for consultation. The ideas expressed herein are intended to stimulate discussion and inform further debate about environmental priorities and how their objectives might be met.

## Monitoring

The purpose of monitoring is to assess the impact of implementing the NDP through observing and recording the predicted environmental effects. It will also be a mechanism for collecting baseline environmental data. Proposals for a new set of headline indicators are contained in Table C. These indicators should be incorporated into existing monitoring regimes wherever possible.

The monitoring period would be continuous for most data sets; collection could be either remote or periodic. It will be important to collect the data annually so that the baseline and time-series trends can be prepared. Although some of the data is already reported annually in the SOER, it might be more meaningful to report on a multi-annual basis.

High-level environmental objectives	Environmental issues	NDP Priorities						Headline Indicators
		Economic development	Rural	Transport	Environment	HRD	Regional development	
Address the deficiencies in environmental services and amenities in the country	Water and soil Air & climate change with natural resources	✓	✓	✓	✓	✓	✓	Number of days of air pollution incidents Electricity generated from renewable energy sources Population connected to mains water supply & modern waste water treatment systems Population served by waste management systems Distances travelled per person per year by mode of transport
Protect Romania's unique biodiversity and environmental heritage	Biodiversity Air & climate change with natural resources	✓	✓	✓	✓	✓	✓	Reported condition of nationally important wildlife sites Reported levels of damage to designated sites/species Extraction rates of minerals and aggregates Tonnes of economic fish stocks caught Volume of timber produced Percentage of listed buildings and archaeological sites 'at risk'
Raise the profile of sustainable development and move it up the commercial, political & social agendas	Cultural heritage & landscape Quality of life Air & climate change with natural resources	✓	✓	✓	✓	✓	✓	Electricity & gas use Carbon dioxide (CO <sub>2</sub> ) emissions Area of contaminated land Environmental awareness (activities or surveys) Amount/loss of greenfield / brownfield land & proportion available for reuse