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ANNEX I

GOVERNMENT OF ROMANIA

MINISTRY OF TRANSPORT

SECTORAL OPERATIONAL PROGRAMME TRANSPORT

2007 - 2013

Septembrie2014

Contents

Abbreviations and Acronyms

AADT	Annual Average Daily Traffic
ACN	Administration of Navigable Canals
AGC	European Agreement on Main International Railway Lines
AFDJ	River Administration of Lower Danube
AFER	Romanian Railway Authority
AIS	Automated Identification System
ACIS	Authority for Coordination of Structural Instruments
APDF	Fluvial Danube Ports Administration
APDM	Maritime Danube Ports Administration
ATFER	Romanian Railway Transporters Association
BCTDR	Central Bank for Road Technical Data
BMS	Bridge Management System
CBA	Cost-Benefit Analysis
CF	Cohesion Fund
CFCU	Central Finance and Contracting Unit
CFR	Romanian National Company for Railways
CIS	Community of Independent States
CSCT	Constanta South Container Terminal
CSF	Community Support Framework
DRDP	Regional Directorate for Road Maintenance
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EDIS	Extended Decentralised Implementation System
EIB	European Investment Bank
EMU	Electric motor Units
ENR	Etiage de Navigation et de Regularisation
ERDF	European Regional Development Fund
ERTMS	European Rail Traffic Management System
ETCS	European Train Control System
EU	European Union
EU 15	European Union up to May 2004
EU 25	European Union up to January 2007
EU 27	European Union at current state together (including Romania and Bulgaria)
SCF	Structural and Cohesion Funds
GD	Government Decision
GDFFA	General Directorate for Foreign Financial Affairs
GDP	Gross Domestic Product
GTMP	General Transport Master Plan
HR	Human Resources
IB	Intermediate Body
IBRD	International Bank for Reconstruction and Developemnt
IFI	International Financing Institution
ICT	Information and Communication Technology
INMH	National Institute for Meteorology and Hydrology
ISPA	Instrument for Structural Policies for pre-Accession

KAI	Key Area of Intervention
LAD	Least Available Depth
MARPOL	International Convention for the Prevention of Pollution from Ships
METROREX	Metro Transport Company in Bucharest
MEF	Ministry of Economy and Finance
MT	Ministry of Transport
NDP	National Development Plan
NSRF	National Strategic Reference Framework
PA	Priority Axis
Phare	One of the EC Pre-accession Instruments
PMS	Pavement Management System
PPP	Public-Private Partnership
PRAG	Practical Guide to contract procedures financed from the General Budget of the European Communities in the context of external actions
PSC	Public Sector Compensation
PSO	Public Sector Obligation
NCMNR	National Company for Motorways and National Roads
OP	Operational Programme
O-D	Origin- Destination
SNCFR	Romanian National Railway Company
ROP	Regional Operational Programme
SEA	Strategic Environmental Assessment
SIMIN	Integrated Meteorological Information System
SMIS	Single Management and Information System
SOP	Sectoral Operational Programme
SOPT	Sectoral Operational Programme Transport
SWOT	Strengths/ Weaknesses/Opportunities/ Threats
TA	Technical Assistance
TAC	Track Access Charge
TEN- T	Trans-European Network- Transport
TOR	Terms of Reference
VTMIS	Vessel Transport Management and Information System

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Introduction to the Operational Programmes in Romania

The European Economic and Social Cohesion Policy, defined under Article 158 of the European Union Treaty, aims at reducing disparities between the levels of development of the various regions and identifying the additional help needed to assist the least developed regions. In meeting these objectives, and in particular that of fostering real convergence, the actions supported with the limited resources available to cohesion policy should be concentrated on promoting sustainable growth, competitiveness and employment as set out in the renewed Lisbon strategy.

The new Cohesion policy is focused on three main objectives:

- Convergence,
- Regional competitiveness and employment, and
- European territorial cooperation.

The ***Sectoral Operational Programme - Transport (SOPT)*** is one of seven operational programmes under the "Convergence" Objective. Through increasing and improving the quality of investment in physical capital, it aims at speeding up the convergence of Romania by improving conditions for growth and employment.

The full list of Operational Programmes, is as follows:

Under the "Convergence" Objective:

1. Increasing Economic Competitiveness SOP
2. Transport SOP
3. Environment SOP
4. Human Resources Development SOP
5. Administrative Capacity Development OP
6. Regional OP
7. Technical Assistance OP

and under the "European Territorial Cooperation" Objective:

8. Hungary – Romania OP
9. Romania – Bulgaria OP
10. Romania – Serbia OP
11. Romania – Ukraine – Moldavia OP
12. Hungary – Slovakia – Romania – Ukraine OP
13. Black Sea Basin OP
14. South-East European Space OP
15. Inter-regional Cooperation OPs

The SOPT is the instrument that elaborates upon the objectives of the National Strategic Reference Framework (NSRF), establishing priorities, goals and the allocation of funds for development of the transport sector in Romania. The total budget of the SOP-T over the programming period 2007 – 2013 is about 5.7 billion EUR, which represents about 23% of the overall allocated funds for NSRF for Romania over the said period. Out of these, 4.57 billion EUR represent the Community financial support, while national co-financing will

amount to about 1.09 billion EUR. The Community funding will be provided by the Cohesion Fund and the European Regional Development Fund.

The SOPT uses as its basis the EU legislation (Reg. (EC) No 1080/2006, (EC) No 1083/2006, (EC) No 1084/2006) establishing the provisions applicable to the ERDF, ESF and the Cohesion Fund for the 2007-2013 programming period.

In addition the SOPT is coherent with the Community Strategic Guidelines on cohesion (Council Decision No 2006/702/EC), as well as with the relevant harmonised national legislation on transport policy, land acquisition, public procurement, public financing etc.

The focus of the SOPT 2007-2013 is the development of the national transport network, however in parallel to the SOPT, and for the same programming period, a Regional OP and a National Rural Development Plan have been developed. The coherence is also ensured between the SOPT and the Romania's National Spatial Plan (Law No 336/2006-Transport Section). The Strategic Concept of Spatial Development and Integration into the European Spatial Structures 2007-2025, which aims at integration with the EU spatial structure, is under elaboration at this momentand considers SOPT a reference document. All programmes integrate towards a common development strategy in order to achieve a coherent transport system providing for spatial cohesion and interoperability with the European Union transport systems for the national, regional (local) and rural transport networks.

The SOPT strategy is in line with the Governmental Programme for 2005-2008 and as a commitment from the Romanian authorities will also have to be in line with the next Governmental Programmes. All the investment funds drawn to the transport sector, including IFIs and commercial bank loans, will efficiently work towards achieving complementary objectives.

Objectives and elaboration of the Sectoral Operational Programme Transport

In accordance with the general objective, a key issue for the Romanian economy during 2007-2013 will be the development of transport infrastructure, which will have significant impact on increasing the economic competitiveness, facilitate the economic integration with the EU, contribute to the actual development of the internal market and allow for the development of the Romanian economy. It is aimed at creating the conditions for increased investment activity, the promotion of sustainable transport and spatial cohesion. The potential decrease of air pollution and noise especially in the cities and increase in the public transport usage which is considered environmentally friendly transport and facilitation of the modal shift of the transport towards a less pollution, such as rail, urban metro transport and water transport will have also a positive impact on the Romanian economy from the environmental and health point of view.

After modernisation, the improved transport infrastructure will directly lead to increased competitiveness of manufactured products and the provision of services, both in key sectors of the economy and within whole regions of Romania. The overall impact will be to generally improve the economy of Romania

More specifically, the modernisation of infrastructure will:

1. Provide needed capital investment expenditure in locations that are now difficult to access or which suffer excessive traffic congestion;

2. Lead to improvement of transport services offered to customers;
3. Allow development of improved logistics systems resulting in lower costs of supplies and deliveries;
4. Facilitate cooperation of producers and manufacturers;
5. Increase potential for accessing to new markets.

The SOPT builds on the results of the previous national development plans, including the previous analyses performed as well as lessons learned during implementation. It is not a analysis based solely on what has been concluded in past projects. The SOPT is based on a more detailed analysis and therefore provides a clearer picture of some aspects.

Key transport-related issues identified in Romania's National Development Plan were:

- Domestic transport, although diversified, has insufficient capacity for transporting freight and passengers, especially in certain areas and during certain parts of the year (summer season, week-ends);
- The transport infrastructure is insufficiently developed, and requires significant investment in order to meet European standards;
- Access to the West-European corridors, as well as to the Eastern and Southern Europe ones, is limited and made difficult by the low transport capacity and the quality of specific physical infrastructures;
- Romania's location at the crossroads of many roads connecting Eastern to Western Europe and Northern to Southern Europe, as well as the location of the country on the transit axes connecting Europe to Asia, points out the importance of a developed infrastructure;
- Romania's access to the Black Sea and the Danube River represents an opportunity and an argument to increase the level of transport on waterways, taking into account the low costs as compared to land and air transport.

The Romanian strategy for absorption of funds will be able to produce significant economic, social and environmental benefits. In addition, the strategy provides for implementation of the concept of a country-wide Romanian transport system development that will be internally coherent and interoperable with the European Union system.

Undertakings proposed for funding under the Cohesion Fund are concentrated within identified EU priority axes, which are of fundamental importance for creation of spatial cohesion in Europe. Operations to be funded under the ERDF component of the SOPT are targeting, in turn, an increased accessibility of the Romanian regions.

In addition, the General Transport Master Planning (GTMP) process for Romania is in progress and it will provide the basis for future development but will use the knowledge gained from the SOPT as the core criteria for the establishment of projects.

It would have been a more usual practice to produce the GTMP before the SOPT, but as this was not possible, the GTMP will integrate its results and create a direct link to the Transport SOP. In the absence of the GTMP, the SOPT concentrates on clear priorities and EU policies, such as development of the TEN-T, mode balancing and improvement of traffic safety.

The opportunity created within the ToR of the GTMP for its revision at regular intervals, will provide the flexibility to address the developing situation in Romania and assist the SOPT monitoring process.

The GTMP, and the system it will create, will have the role of improving sectoral statistics in order to offer appropriate tools for data collection, data organising, data analysing and interpreting, and evaluating decision alternatives.

In addition, the GTMP will guide the selection of projects, notably those below the threshold for major projects, towards the second half of the 2007-2013 period and will be a valuable tool in assessing the impact of the SOPT during its implementation.

When elaborating the SOPT proposals, a comparison has been made between the situation in the Romanian transport sector an that in the EU 15, EU 25 or EU 27 member states, as the EU has enlarged. The comparison shows that in EU countries the transport infrastructure projects have resulted in the provision of higher quality standards that are essential for Romania to be in line with, for the future efficiency of passenger and freight transport operations.

The SOPT mentions the requirement to take into consideration the lack of investment in transport infrastructure over many years. There has been limited infrastructure expenditure on new construction and the maintenance expenditure has been below the necessary level. Romania inherited a number of deteriorated infrastructure bottlenecks and conflicts with the settlement pattern and the environment. In this context the effort of the SOPT to modernise and develop the transport infrastructure will also be accompanied by sectoral measures aimed at ensuring the sustainability of investments.

In order to ensure a comprehensive understanding of the current position there have been many consultations with all relevant stakeholders during a series of presentations, working groups and individual meetings.

On the basis of the information gathered and the diagnosis of the transport sector data, a detailed development strategy until the year 2013 has been drafted to include the issues of new development and a recovery programme that will address the current and future challenges.

Structure of the document

This SOPT has been developed by the Ministry of Transport (MT), assisted by potential beneficiaries and in close cooperation with Regional Authorities. During the implementation process the SOPT will be managed centrally by the MT.

This document starts with an introduction of the current situation of the transport sector in Romania and provides a comparison between the situation in Romania and that of the EU countries at the various stages of expansion of the EU, in order to emphasise the general trend in demand for transport services and to provide focus for future action to be taken.

The SOPT then proposes the expected results of various interventions, indicates the allocation of the funds and defines institutional arrangements for the implementation of the assistance.

EX-ANTE EVALUATION SUMMARY

In accordance with Article 48(2) of the Council Regulation no.1083/2006 the ex-ante evaluation for the Sectoral Operational Programme Transport 2007-2013 has been carried out in the period August 2006 – January 2007 by PANTEIA Consultants and has been funded by PHARE programme. The basis for the evaluation has been the the April 2006 submitted version of the SOPT to the European Commission in Brussels.

The documentation sources taken into account in the ex-ante evaluation were the relevant EU and National legislation, the Lisbon Agenda, the National Strategic Reference Framework 2007-2013, Commission's working documents on ex-ante evaluation and indicators, the results of previous evaluations, the SOPT 2007-2013 and the other OPs as well as other relevant documents.

In addition interviews, debriefing meetings, workshops and surveys with and among stakeholders have been organised.

The ex-ante evaluation addressed the following main questions:

- *Relevance*: to what extent are the programme's objectives relevant in relation to the evolving needs and priorities at national and EU level?
- *Effectiveness*: how realistic is the programme in achieving its specific and global objectives by 2013 or earlier?
- *Efficiency*: how well are the resources (inputs) allocated with respect to outputs or results?
- *Consistence and Coherence*: are the proposed objectives and measures logically linked to the socio-economic analysis, are they mutually consistent (consistence) and are they well embedded in the regional, national and Community (e.g. Lisbon Objectives) policy objectives and interventions (Coherence)
- *Utility:* are the expected and unexpected effects realistic and globally satisfactory in the context of wider social, environmental and economic needs?
- *Sustainability:* will the effects obtained in the proposed programmes remain, even after the end of the programme without further public funding?
- *Management and monitoring arrangements*: how they may affect the achievement of programme objectives & contribute the chosen processes to positive results?

The ex-ante evaluation main conclusions can be summarised as follows:

The SOPT provides a relatively comprehensive overview of the needs related to the development of the transport sector in Romania. These needs have been translated into a strategy at the level of the Operational Programme as there still is no General Master Plan for the Transport Sector with definition of global objectives; specific objectives; list of priority axes and key areas of intervention. There is a certain logical coherence in this process. It goes without saying, however, that with a more reliable database, development of policy would be much easier and programme and project interventions would be more focused and targeted to implement this policy.

The Sectoral Operational Programme Transport is of high quality and certainly complies with the Community Strategic Guidelines for Cohesion Policy and the Lisbon Strategy for Growth and Jobs and the overall European transport policy as defined in the document "European Transport Policy for 2010, Time to Decide" and "Keep Europe Moving". The SOPT is also

derived from the Romanian National Strategic Reference Framework and is as such in congruence with Romanian policy.

The present state of the transport infrastructure and services, which may be qualified as of poor quality and not responding to the present needs, is a major obstacle to social cohesion and the economic development; e.g. it impedes competitiveness, movement of goods and labour, business settlements, investment, etc.

The upgrading of the transport system is considered urgent and requiring huge investments, but financial constraints require prioritisation based of the earlier sound diagnosis of the transport sector, clear objectives and an integrated strategy to achieve them.

The SOPT envisages contributing to the development of a more efficient, flexible and safe transport system, which will have a positive impact on the reduction of social and economic disparities between Romania and the EU Member States.

The SOPT therefore formulates as its global objective to promote a transport system in Romania, which will facilitate safe, fast and efficient movement of persons and goods with appropriate level of service at European standards, nationally, Europe-wide and between and within Romanian regions.

There is a certain balance between the various priority axes defined and the derived key intervention areas.

However, some issues do need very close attention in the implementation of the SOPT. The institutional capacity of the Managing Authority and the implementing agencies is still not sufficient to guarantee a successful implementation of the entire SOPT according to the planned timeframe. Experience from the implementation of the ISPA programmes has shown that the issue of lack of implementing capacity should not be underestimated. It is very important to address this issue as soon as possible.

Another issue is related with the concept of sustainability. The SOPT proposes an ambitious programme for implementation of a wide range of transport infrastructure projects in Romania. Large investments are foreseen; about five billion euro in a seven-year period. Construction of new transport infrastructure implies that adequate sums should be safeguarded for routine and regular maintenance. Therefore, it is important to establish proper mechanisms to guarantee sufficient funds for the purpose of maintenance works of transport infrastructure projects.

The Managing Authority was invited to give some thoughts on the further integration of the project implementation units for the projects financed out of the Cohesion Fund and the European Regional Development Fund within the ordinary state administration in order to avoid the building of a “state within a state”.

Public consultation in all stages of programme preparation, implementation, monitoring and evaluation is very important and will definitely contribute to a more successful programme.

The Managing Authority found the main recommendations of the ex-ante evaluation final report useful. In order to reflect their consideration, the SOP text has been improved with new

analysis and information, wherever relevant. However, efforts going beyond the simple improvements of the text will be made in order to ensure their fulfilment.

It is to be mentioned that within the ex-ante evaluation exercise and before the issuing the final version of the ex-ante evaluation report, the Managing Authority has been supported by the ex-ante evaluators with advice and recommendations in relation to analysis, coherence with other OPs, the strategy and indicators. All these recommendations have been taken on board, thus contributing to the increase of the programming quality.

Strategic Environmental Assessment

SEA has been launched and carried out in accordance with the provisions of the Government Decision No 1076/2004 for setting up the environmental assessment procedure of certain plans and programmes which transposes the Directive 2001/42/EC. It has been an important component of the ex-ante evaluation exercise during which the evaluators supported the process, including with the elaboration of the environmental report and organisation of public consultation.

SEA report underlines that the implementation of the objectives and priority axes of the SOPT will likely have significant environmental effects on the environment and recommends paying special attention to the selection of appropriate mitigation measures to offset the potential negative impacts of priority axes 1 and 2 (partially). Most likely positive effects are to be expected from carrying out measures planned under priority axes 2 (partially) and 3.

The MA for SOPT took on board the SEA recommendations and key mitigation measures proposed for SOPT are to be followed, namely:

- all projects should have EIA carried out with special focus given on alternatives to reduce any potential significant impacts on Natura 2000 and landscape fragmentation;

- priority support should be given to the investments that promote best available technologies;

- priority support should be given to the investments that promote minimization of energy consumption, increase energy efficiency and energy demand (e.g. oil and gas) and promote reuse of the natural resources;

- projects enabling public transport use and development should have a priority (e.g. rail versus road and measures aimed at public transport promotion);

- projects prioritised using the environmental section criteria proposed in the report should take priority in the overall SOPT funding.

In addition, an environmental monitoring programme will be integrated in the overall monitoring system of the SOPT. It will help signal the potential environmental problems that may result from the proposed projects under SOPT which have not been identified during the ex-ante assessments and will allow for prompt implementation of corrective measures.

Public consultations on both SEA report and SOPT have been carried out. The documents have been made publicly available and readily accessible through the MT website. The public has been announced through media channels about the opportunity to express opinions on the documents within 45 days. In addition, a public debate has been organised in January 2007 at the MT Headquarters.

1. ANALYSIS OF THE CURRENT SITUATION

Preliminary considerations:
The analysis of the current situation of the transport sector has been made in the absence of a revised Transport Master Plan. Considering this situation, the SOPT concentrates on the NSRF and its clear priorities and the EU policies, such as development of the TEN-T, mode balancing and improvement of traffic safety.

Furthermore, a detailed analysis has been performed by MT, based on the extensive range of studies available, including traffic census performed by CESTRIN in 2005, traffic counts on Corridor IV and Corridor IX, feasibility studies, and statistical data. This analysis presented in the SOP, also includes an inter-modal analytical part showing the market shares and the trends of different transport modes. In parallel, the elaboration of the General Transport Master Plan has been initiated in 2005 with a first phase related to the "Analysis of the current situation", performed with external support, which also recently presented similar results. The second phase of the Transport Master Plan, including the strategic approach on long term perspective, has been launched at the beginning of January 2007.

The macroeconomic and sectoral analyses in the NDP 2007-2013 represented the basis for forecasting the future economic development, and for estimating the traffic flows within various regions of the country, everything being correlated with the Strategic Concept for Spatial Development Integration into the European Spatial Structures 2007-2025. The macroeconomic analysis has helped to orient the interventions and support the synergy among sectoral interventions.

1.1 Recent trends in the transport sector of Romania

The main reasons for problems in the financing of the transport infrastructure in Romania stem from a number of key issues that define the most important changes that have taken place in the transport sector since 1990.

These include:

- Fundamental changes in the structure of the transport sector in Romania, from a State planned economy (command economy) to a market driven transportation demand economy
- Decline of the industries most likely to make use of rail transport
- Regional instability in the neighbouring Balkan countries
- Inheritance of an inadequate infrastructure and continued under-investment
- Under-investment in infrastructure maintenance
- A rapid increase in private vehicle ownership
- Decreasing usage of public transport
- Damage to road and rail infrastructure due to widespread flooding.

These have in turn led to:

- A significant reduction in the number of tonne-kilometres of freight by rail
- A change in the pattern of international traffic flows and under-utilisation of waterways for international bulk freight and container transportation
- Increased need for the construction of new transport infrastructure

- Increased reconstruction and rehabilitation needs of transport infrastructure
- A rapid increase in the volume of traffic on the roads

Consequent effects include:

- Increased road congestion, road vehicle operating costs and road journey times
- Reduced rail speeds
- A decline in the numbers of rail passengers
- Increased environmental degradation
- Reduced competitiveness and attractiveness of the Romanian market for investment.

In addition, there has been a relatively slow uptake of innovative ideas and technology, leading to reduced opportunities for taking advantage of alternative sources of finance that include PPP, road tolling and new modes of transport such as multimodal and combined transport.

As such, the SOPT is based on the assessment of the most significant trends in the transport sector. The SOPT is not dealing with individual projects but with a nation-wide strategy. The overall analysis of traffic evolution is considered sufficient for the SOPT purpose.

The traffic growth assumptions underlying the SOPT development are the following:
A global GDP evolution has been observed, to which elasticity factors have been assessed, for passenger and freight traffic.

The GDP growth forecast figures are:

	2005	2006	2007	2008	2009	2010	2011	2012	2013
GDP	4.1%	7.7%	6.5%	6.3%	5.9%	5.8%	5.8%	5.7%	5.7%

Source: National Commission for Prognosis

The traffic/GDP elasticity values that have been considered are based on average values recorded in the EU over the last years and namely:

- road freight: 1
- road passengers: 1.1
- air passengers: 1.3
- air freight: 1.2
- rail passengers: 0.8

Such link between traffic and GDP evolution clearly shows the interrelationship between economic development and traffic growth.

1.2 Road transport

Road network

The existing national public road network of Romania in 2004 is shown in the figures below and as a map in Annex D.2. The total length of the public road network in Romania in 2004 was 79,454 km. This represents a growth of about 9% since 1990, as shown in the table below.

Table 1-1 Public road network in Romania, 1990-2004 (km)

	1990	**1995**	**2000**	**2003**	**2004**
Motorways	113	113	113	113	228
National	14,683	14,683	14,824	15,122	15,712
County & Local	58,133	58,176	63,655	63,879	63,742
Total roads	72,816	72,859	78,479	79,001	79,454
Paved	16,592	17,608	19,418	20,368	20,880
Density (km/100 km^2)	30.5	30.6	32.9	33.1	33.3

Source: Statistical Yearbook 2004, National Institute of Statistics 2005

Of the 79,454 km total, 15,712 km (19.8%) are national roads and 63,742 km county and local roads. There are only 228 km of motorway. The network is made up of 20,880 km (26.3%) of paved[1] roads, 20,200 km (24.4%) of lightly paved roads[2] and 38,374 km (48.3%) of gravel and earth roads. Virtually the whole network of national roads is paved, while much of the network of county and local roads is only lightly paved or unpaved.

The overall density of public roads is 33.3 km/100 km^2. This is very low compared to the EU 25 average of 110 km/100 km^2, as shown in the table below, suggesting low accessibility to the road network. The distribution of roads throughout the country is largely uniform, except in the Bucharest-Ilfov region where there is a higher density.

Table 1-2 Comparison of road densities by region and country, 2002

Country	**Km of road / 100 km^2**	**Km of road / million population**
Romania	33.3	3,624
EU25 (2003)	110.1	9,388
EU15 (2003)	110.6	9,421
Bulgaria	na	na
Czech Republic	70.3	5,432
Hungary	145.7	13,366
Poland	117.0	9,879
Slovakia	36.2	3,301

Source: Eurostat Pocketbook: Energy, transport and environment indicators, 2005 edition

At the end of 2005, the motorway network length was of 228 km, having the following sections:

[1] Paved roads are surfaced with ashphalt or concrete, although their condition may not be good

[2] A lightly paved road is an earth or gravel road both graded and rolled that may have some surface binding material added.

- A1 Bucharest – Pitesti 113 km west from Bucharest
- A2 Fetesti – Cernavoda 17.5 km across the Danube between Bucharest and Constanta
- A2 Bucharest – Drajna 97.5 km east from Bucharest.

This represents a density that is significantly lower than in the EU25, both when considered in terms of density per 1,000 km^2 and per population. There is no motorway connection to the motorway network of the existing EU member states.

Table 1-3 Comparison of motorway densities by region and country, 2002

Country	**Km of motorway / 1,000 km^2**	**Km of motorway / million population**
Romania	0.5	5.2
EU25	13.8	121.6
EU15	16.5	140.0
Bulgaria	3.0	41.5
Czech Republic	6.6	50.8
Hungary	5.7	52.3
Poland	1.3	10.6
Slovakia	6.2	55.9

Source: Eurostat Pocketbook: Energy, transport and environment indicators, 2005 edition

Of the total National road network, 5,868 km (37.3%) are classified as European roads, particularly suitable for international traffic, but long sections of this network are not compliant with the conditions included in the "European Agreement on Main International Traffic Arteries (AGR)". Starting with 1st of January 2007, all the roads classified as being on the TEN-T are opened to vehicles compliant with EC Directive 96/53 on weights and dimensions, including trucks of 11.5 tonnes standard axle loads.

The external dimension has been taken into consideration: there is a very strong focus on the TEN-T network (more than 80% of the total SOPT funding). As such, and by definition, the TEN-T network is the network that ensures connectivity between Romania and the rest of the EU.

The analysis of the traffic data provided by the Corridor IV study, shows that, in 2005, transit traffic was representing about 2.73% of the total traffic, with a higher percentage when considering only heavy trucks, namely 11.39%. In any case, for the time being, such percentages do not qualify Romania as a significant transit country.

The total number of bridges on the national roads network is 3,286 with a total length of 138,568 m. Most of the bridges (95%) are constructed of reinforced concrete, the rest being metal structures and other types. Of these bridges, 94 (4,131 m length in total) are in need of urgent repairs and almost 50% are technically classified as marginally acceptable or of a lower standard.

The access roads from national roads to town centres and cities are inadequate and most towns located on National and European roads lack bypasses. Many National and European roads have insufficient capacity leading to congestion and consequently to increased travel time, vehicle operating costs, accidents and environmental damage.

Much of the national road network suffers from problems of low design standard and insufficient maintenance, both because of inadequate funding and inappropriate management procedures. Institutional restructuring of road maintenance has taken place in recent years; periodic maintenance and part of the routine maintenance have been subject to divestiture and commercialisation. However additional initiatives are necessary in order to address this issue.

In addition, national roads are vulnerable to flooding and landslides. Taking into account the low density of the road network, such natural events might have a strong impact at national level as the limited number of variant routes considerably reduces mobility; the region of Moldova was partly isolated during the floods in the summer 2005, while the Carpathians crossing along the Olt valley (located on TEN-T priority axis no. 7) was blocked several times during recent years.

Road and motorway construction / rehabilitation

In the early 1990s, following years of under-maintenance, the national road network was generally in an unsatisfactory to bad condition. The first priority was therefore to preserve the existing assets.

Since 1992, Romania has embarked on a large programme of national roads rehabilitation and upgrading to standards compliant with EC Directive 96/53 on weights and dimensions. This effort has been initially focused on the core national network, including the TEN-T links, and structured into a number of phases. Each phase includes rehabilitation of 500 to 1,000 km and is co-financed by IFIs (primarily the EIB), the State budget and the European Commission through the Phare and ISPA programmes. To date, phase IV is under completion, while phase V is at an advanced stage of tendering and contracting and phase VI is starting, the loan having been signed in December 2006.

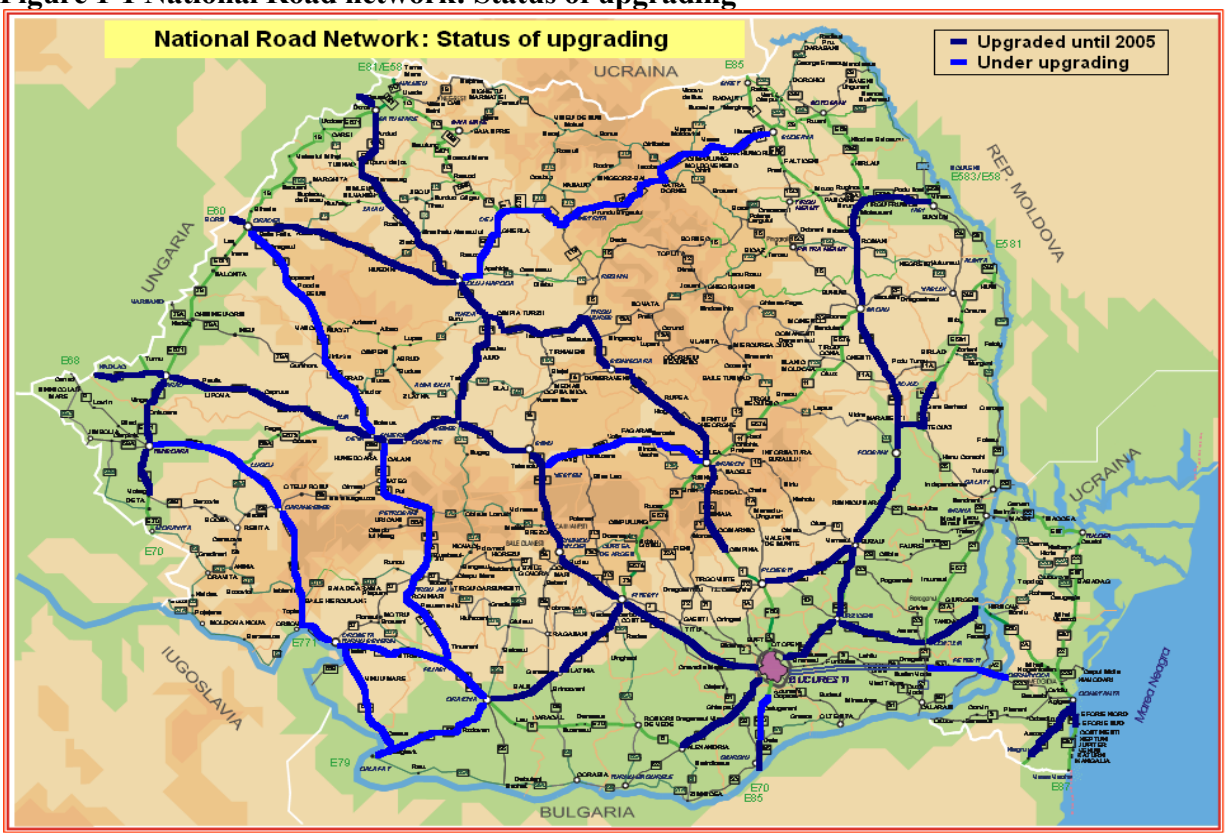
To date, about 3,000 km of the core network have been rehabilitated or are under rehabilitation. The rehabilitation programmes have had a marked impact on the improvement to the national road network and the SOPT priority is to ensure that this core work is completed first to demonstrate the cohesion to the continuing road rehabilitation policy and to demonstrate that the new program is the continuation from a firm base.

Beyond the benefits for road users and mainly the reduction of vehicles operating costs, a significant scope is to enable Romania to meet the commitments of the EU Accession Treaty, namely to open to traffic compliant with Directive 96/53 (mainly 11.5 tonnes / axle trucks):

- the whole of the TEN-T network by the date of accession and
- the entire national road network until the end of 2013.

The figure below shows the roads that had been upgraded / reconstructed to modern standards (i.e. in line with EC Directive 96/53) by the end of 2005. It can be observed the unsufficient connection between Moldova and Transilvania regions which would ensure the internal accessibility according to the regional needs. This strategic approach has been considered in the Strategic Concept of Romania's Spatial Development and Integration into the European Spatial Structures 2007-2025 on long term perspective.

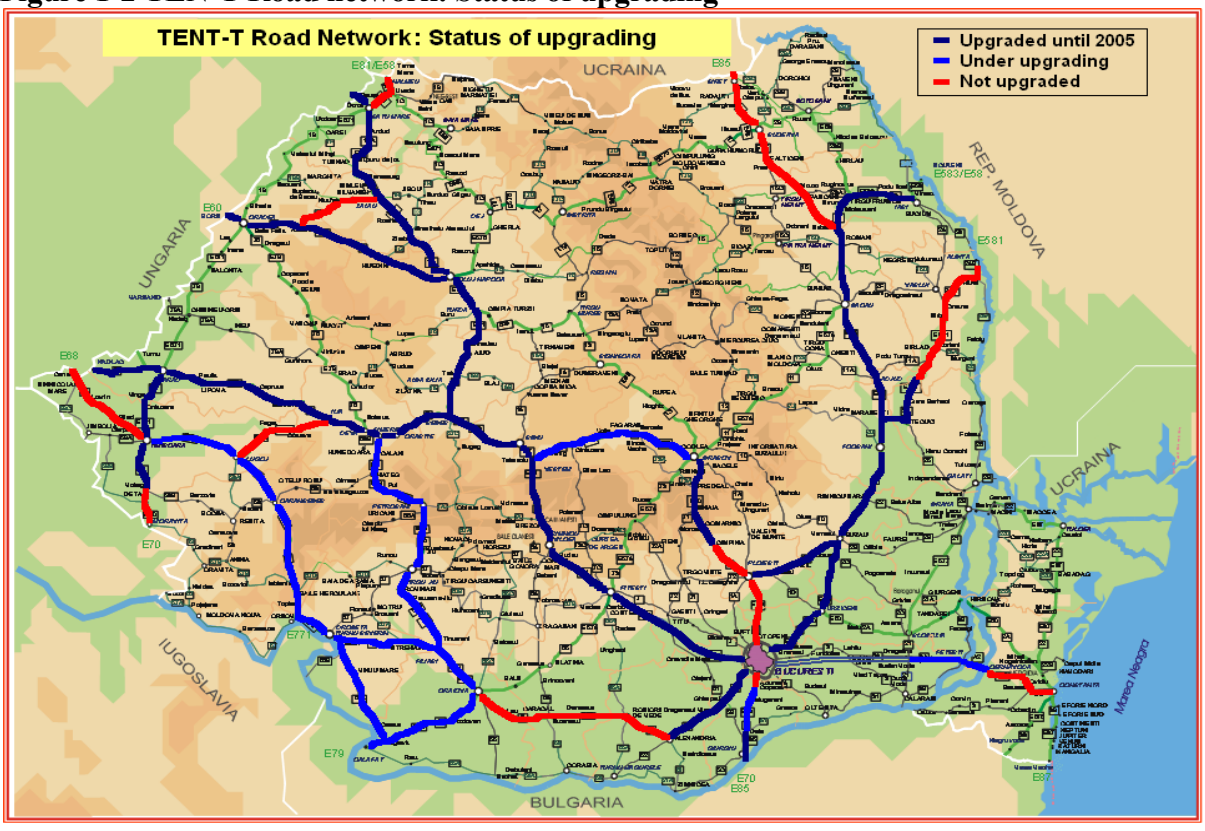
Figure 1-1 National Road network: Status of upgrading



Source: SWK Consortium, TA to MT, 2006

The following map shows the actual status of upgrading of the TEN-T road network.

Figure 1-2 TEN-T Road network: Status of upgrading



Source: SWK Consortium, TA to MT, 2006

Over the years, traffic has significantly increased on particular sections and several projects aiming at increasing traffic capacity have been launched. These can be grouped into: motorway construction and construction of bypasses around the main towns.

For motorways, the following projects have been launched:

- rehabilitation of Bucharest – Pitesti motorway,
- Bucharest – Constanta motorway, financed by the EIB, ISPA and the Romanian Government,
- progressive construction of the Pitesti – Sibiu – Nadlac motorway, along TEN-T priority axis no. 7,
- construction of Brasov – Cluj - Bors motorway, launched in 2004 and financed by the Romanian budget,
- construction of Bucharest – Brasov motorway, financed by the Romanian budget.

To date, the approach towards construction has remained traditional, namely using construction contracts. While the development of new methods, such as design-build-operate (DBO) contracts and public private partnerships (PPP), has been considered, no such initiatives have been successful to date.

Road maintenance

Road maintenance is a key to sustainability of any road infrastructure investment.

Since 1996, the National Company for Motorways and National Roads (NCMNR) has been obliged to concentrate on its role of planning, funding and control rather than on the execution of maintenance due to lack of available funding.

Maintenance of the national road infrastructure is organised under 8 regional directorates (DRDP) of the NCMNR. The divestiture and commercialisation of road maintenance activities started in 1996-1998 when only part of the routine maintenance and the management and control of periodic maintenance remained with the DRDPs.

The periodic maintenance activities and rehabilitation works are now publicly tendered for each intervention. Part of routine maintenance is now publicly tendered and contracted on an annual basis.

NCMNR developed a Pavement Management System (PMS) and a Bridge Management System (BMS), so as to plan and prioritise maintenance more efficiently.

The maintenance funding system has been under review and a new policy was introduced recently.

The previous Road Fund tax was included in the fuel tax, and was send directly to the NCMNR; now it was transformed into a tax which is directly paid to the State Budget.

A road vignette payment system (the vignette provides a vehicle with the right to use the national road, and motorway, network) started in 2002 with phased full implementation by 2008. The amounts collected by this means are now a direct revenue to the NCMNR for road maintenance.

In 2005 the vignette system was also extended for passenger cars and the total amount collected in 2005 from all road users was about 111 Meuro. Bridges crossing the Danube River are tolled and this toll revenue in 2004 was about 7.2 Meuro, also paid to NCMNR. In addition NCMNR also collects charges for overloaded vehicles.

The annual revenue to the NCMNR from these sources is therefore about 120 Meuro per year, and is supposed to cover most of the road expenditures. They have however to be compared to the required full cost of road maintenance, that is estimated to be above 200 Meuro/year for the national road network.

The NCMNR is therefore heavily reliant on the State budget, IFIs or commercial loans in order to fund the difference, which is:

- the need to fund the actual cost of maintenance
- to make provision to fund both rehabilitation and new construction costs
- to service its debt.

The cost of basic maintenance has significantly increased over the last few years, and is now in excess of 200 Meuro/year for current and periodic maintenance, without the cost of

rehabilitation. Rehabilitation costs represent the backlog of work not done in former years and over 60% of the national road network is in need of repair or rehabilitation.

If the current funding levels stabilise over the medium term, this backlog will progressively decrease.

While the fiscal policy, and in particular the maintenance funding, are in the process of being reformed, the organisation of maintenance is also being improved.

This includes:

- Establishing a more systematic use of the PMS and BMS in planning and programming;
- Introducing new contractual mechanisms, including multi-annual maintenance contracts or operation contracts;
- Providing that the new motorways receive adequate maintenance at all times to ensure their viability.

Road vehicle fleet

The road vehicle fleet consists of about 4 million motor vehicles, having grown from around 2 million in 1990. The breakdown of vehicles by broad category is shown in the table below.

Table 1-4 Evolution of road transport fleet 1990-2004 (million vehicles)

	1990	**1995**	**2000**	**2003**	**2004**
Motorcycles & motor bicycles	0.312	0.328	0.239	0.236	0.235
Cars & taxis	1.292	2.197	2.778	3.088	3.225
Buses & minibuses	0.028	0.042	0.041	0.042	0.043
Trucks	0.259	0.343	0.427	0.463	0.482
Total	1.891	2.910	3.485	3.829	3.985

Source: Statistical Yearbook 2004, National Institute of Statistics 2005

Car ownership is much lower than the average for the EU27, at 136 cars per 1,000 people. This compares with the EU25 average of 463, so it can be expected a rapid growth in car ownership over the next 10 years. In the recent years, the development of financing schemes (leasing and bank loans) has boosted the purchase of new cars. This increasing trend registered in the car owner ship, as well as the old vehicles, without exhaust emissions caused adverse effects, such as:

- air pollution especially in the urban areas, which account to 70% of air pollution in the cities since 1990;
- pollution from the old vehicles without exhaust emission control;
- poor air quality in the urban areas caused by the low fuel quality;
- noise pollution increment in the cities generated by cars.

Car ownership is expected to continue to grow at sustained rates in the medium term. Two main driving forces in the car ownership increase can be identified: the first one would be the GDP increase and the second one a “catch up effect”, leading to higher rates of increase while the overall car ownership rate is still low. Such effect can be observed in several countries: between 1990 and 2002, the car ownership has increased by 109% in Poland, 58% in

Bulgaria, 51% in the Czech Republic against 29% in the EU 15. This trend might, however, be influenced in the short term by a series of issues such as improved job opportunities abroad, access to credit in anticipation of higher earnings, greater demand for personal transport freedom and fiscal decisions by Government.

Freight transport on own account, also decreasing, still represents a major share of road freight: 65% of the total tonnes and 35% of the total tonnes-km in 2004, against respectively 71% and 53% in 2001. Transport companies are in a process of fleet modernisation and renewal, with an increasing share of heavy vehicles (over 12 tonnes).

Road traffic

Road traffic in Romania has increased from an average AADT of 3,200 in 1990 to 4,500 in 2005.

There was a steep rise immediately after 1990 when restrictions on the use of road for freight transport of over 50 km were lifted, while fuel and cars became more readily available.

A limited decline in average road traffic was observed between 1995 and 2000, resulting from the combination of two opposite trends (GDP decline and change in the modal pattern), while a significant average growth has occurred in the next period (2000 to 2005), based on high GDP increase. The road traffic share of heavy vehicles has fallen from about 30% in 1990 to 23% in 2005.

According to Romanian statistics, the number of serious road accidents has declined from around 9,000 per year in the early 1990s to 6900 in 2003. However, recent data (the Road Policy) demonstrates that the number of serious accidents has risen again by 5.3% between 2004 and 2005, and the number of people killed has risen during the same period by 8.2%.

Road traffic has grown at 2.3% per year on average since 1990, and at 3.7% per year since 2000. It is forecasted to grow at a similar rate to 6,800 AADT in 2015.

Table 1-5 Evolution and forecast of road traffic 1990-2015 (AADT)

	1990	**1995**	**2000**	**2005**	**2010**	**2015**
Total	3,077	3,767	3,709	4,150	4,957	5,917
Heavy vehicles[3]	850	799	698	917	1,110	1,256

Source: NCMNR 2005 Traffic survey

It can be observed that, between 1990 and 2000, the relative share of heavy vehicles in the total road traffic has been decreasing, due to the following causes:

- the passenger car fleet has been increasing at a much faster pace than the heavy vehicle fleet. This has resulted in a significant increase of passenger car traffic that gives an immediate distortion to the ratio between heavy vehicles and passenger cars, during this period;

[3] The definition of a Heavy vehicle as defined by NCMNR is any vehicle over 3.5 tonnes gross vehicle weight including minibuses, vans and what would be classified elsewhere in Europe as non HGV. Articulated HGVs may be double counted as trailers are recorded as separate vehicles in the survey data.

- the heavy vehicles fleet itself has been significantly restructured, with many of the smaller older vehicles being replaced with larger new ones, which again will distort the statistical count.

To date, the structure of the heavy vehicle fleet is seen to be comparable with the one in Poland where statistical data has been found to be quite reliable. It is therefore expected that Romania will follow a similar pattern but that restructuring of the heavy commercial vehicle fleet will continue at a slower speed than has been experienced in Poland.

It is likely however that, based on car sales predictions and the anticipated growth in the car ownership market in Romania, the passenger car park will continue to increase at the current rate, leading to a further relative decrease of heavy vehicle share in the total traffic.

A traffic survey is carried out across the Romanian national road network at a five year with the most recent survey being in 2005. The figures presented in Appendix 3 show the road traffic volumes on the national road network recorded in 2005 and the projected traffic volumes for 2010 and 2015. Although the development of a national transport model would enable the analysis to be refined, the figures presented tend to demonstrate that the traffic is concentrated along a limited number of routes, that almost correspond with the TEN-T road network.

This leads to the identification of two parallel priorities:
- increase traffic capacity on the TEN-T, so as to meet transport demand and prevent or reduce bottlenecks, and
- upgrade and maintain the remaining network, so as to ensure territorial accessibility.

Inter-urban passenger car traffic

Generally available statistics in Romania do not include data relating to the number of passenger car traffic and focus on public transport only. However, an analysis of data from recent studies carried out on Corridors IV and IX, suggests that inter-urban passenger car traffic may total 48.4 million vehicle-km per day or about 122.4 million passenger-km per day. This equates to 17.66 billion passenger car-km per year. It should be clarified that this figure does not include all short distance trips or trips made on local roads.

Using the results of other recent studies providing data related to traffic on county roads and linking the figures so obtained with the passenger cars traffic on national roads evolution, the following estimate may be made:

Table 1-6 Passenger cars traffic

Inter-urban passenger cars traffic (million vehicle x km)	1990	1995	2000	2005
out of which:				
On national roads	11,023	14,691	14,904	17,666
On county roads	2,415	3,218	3,265	3,870
Total	13,438	17,909	18,169	21,536
Inter-urban passenger traffic using passenger cars (million passenger x km)	33,595	44,774	45,422	53,840

Source: SWK Consortium, TA to MT, 2006 estimate

This constitutes about 75% of the total passenger traffic of land-based transport modes.

As mentioned above, car ownership is still low by comparison with the EU 25. It can therefore be expected that rapid growth in car ownership will be experienced over the next 10 years and that this will necessitate a total review of urban car use, the establishment of a car parking control system to include on and off road parking and the strengthening of the urban public mass transport system to reduce urban road congestion.

Inter-urban public passenger traffic by road

In accordance with statistical data, inter-urban public passenger traffic by road has declined from 780 million passengers in 1990 to 217 million in 2004, a decline of 72%. At the same time the number of interurban bus passenger-km has declined by 61%.

Travel by this mode appears to have stabilised since 2000. Such stabilisation reflects the development of public transport by mini-buses that has shown a very significant growth. It is however likely that this evolution is much higher than shown, as performance of transport by mini-buses does not appear to be accurately recorded.

Table 1-7 Evolution of bus and mini-bus passenger transport 1990 – 2004

	1990	**1995**	**2000**	**2003**	**2004**
Passengers (mil.)	780.7	413.5	206.0	216.3	216.5
Pass-km (mil.)	24,007	12,343	7,700	9,455	9,438

Source: Statistical Yearbook 2004, National Institute of Statistics 2005

As there are no clear records, the detailed causes of the decline can only be speculated upon:

- the main factor is the significant increase of passenger car traffic, partly replacing the use of public transport, especially in a society having been given a free choice after years of no choice;
- statistical data for year 1990 are likely not to be reliable during the transitional phase,
- in the early 1990s, interurban bus transport was performed by State owned companies, with a fleet in very poor condition; such services were not sustainable;
- current statistics are likely not to be reliable as owners and operators may not see the need for accuracy in the data for their own tax minimisation reasons.

Compared with the EU countries, the interurban bus and mini-bus passenger-km per inhabitant per year are by far the lowest in Romania. The average in the EU is around 1,000, compared with only 242 in Romania. In order to redress the balance the movement of people by public road transport will need to be made more attractive.

Table 1-8 Comparison of public passenger transport by road, by region and country, 2002

Country	Passenger-km / inhabitant
Romania	242
EU25	1,070
EU15	1,082
Bulgaria	2,158
Czech Republic	947
Hungary	1,840
Poland	762
Slovakia	1,531

Source: Eurostat Pocketbook: Energy, transport and environment indicators 2005

Currently, the statistics in Romania exclude data relating to the volume of passenger car traffic. Because of this, modal share statistics apply only to public passenger transport and not to overall passenger transport.

Road public transport passenger-km would constitute about 13% of the total passenger traffic of land-based transport modes (estimated total of about 71.9 billion passenger-km in 2004).

Road freight traffic

The method of surveying and recording road freight traffic changed in 1998 and data from previous years cannot therefore be compared with that for subsequent years as shown in the following table.

Since 2000, road freight has increased from 262.9 million tonnes to 294.2 million tonnes, an increase of 13%. At the same time, the number of tonne-km has increased from 14,288 to 37,220, an increase of 160%. This suggests an increase in average length of haul from 54 km to 126 km. Road transport accounts for 69% of the total freight transport by road and rail in terms of tonne-km and is increasing, demonstrating the consumer choice in a free market.

Table 1-9 Evolution of road freight transport 1990 – 2004

	1990	1995	2000	2003	2004
Tonnes (mln.)	1,934.4	616.0	262.9[a]	275.6	294.2
Tonne-km (mln.)	28,993	19,748	14,288[a]	30,854	37,220

Source: Statistical Yearbook 2004, National Institute of Statistics 2005

[a] Change in coverage and survey methodology

There are 20 heavy commercial vehicles (rigid trucks and articulated motive units) per 1,000 inhabitants in Romania, which is less than one third of the number in the EU25. Rapid growth in the number of commercial vehicles is therefore expected over the next 10 years.

Table 1-10 Comparison of commercial vehicle ownership by region and country, 2002

Country	Trucks and road tractors / 1000 population
Romania	20
EU25	63[a]
EU15	67[a]
Bulgaria	41
Czech Republic	34
Hungary	39
Poland	56
Slovakia	32

Source: Eurostat Pocketbook: Energy, transport and environment indicators 2005

However, in terms of tonne-km per unit of GDP, the amount of road freight transported in Romania is high, although this is more a reflection of the low GDP rather than the high volume of freight.

Table 1-11 Comparison of road freight transport by region and country, 2002

Country	1,000 tonne-km / GDP (EUR mln.)
Romania	898
EU25	193
EU15	176
Bulgaria	838
Czech Republic	923
Hungary	422
Poland	546
Slovakia	772

Source: Eurostat Pocketbook: Energy, transport and environment indicators, 2005

About 83% of the registered freight and passenger transport operators in Romania are owned by the private sector. In 2004, the private sector is performing about 94% of public road transport of passengers and 96.5% of road freight transport.

Road safety

The Romanian road network was developed as a result of the need to provide road links between towns and the new roads followed the original alignment. The resultant effect of this has been to create many linear villages and towns without a bypass, where all local and through traffic has to pass through the town centre.

Later, due to the lack of investment in secondary roads (mainly in rural areas) linear villages (villages along both sides of the road) have continued to develop along national roads resulting in the continuing situation where through traffic on national roads is in conflict with the daily life of the rural community.

According to Romanian statistics, the number of serious road accidents has declined from around 9,000 per year in the early 1990s to 6,900 in 2005.

Table 1-12 Evolution of road traffic accidents 1991- 2005

	1991	1995	2000	2003	2004	2005
Serious accidents	8,948	9,119	7,555	6,654	6,860	7,226
Fatalities	3,078	2,845	2,499	2,235	2,418	2,641
Serious injuries	7,789	7,716	6,315	5,538	5,594	5,868

Source: National Institute of Statistics, 2006

It appears that about 40% of the serious accidents occur on national roads, another 40% in urban environment, and the remaining 20% on other roads.

At the first sight, the number of deaths from road accidents would appear to be similar to other countries, at 11 per 100,000 inhabitants. However, if the low level of vehicle ownership and usage rate of Romania is considered, it may be supposed that the accident rate per million vehicle-km is significantly higher than in other countries.

Table 1-13 Comparison of road accident fatalities by region and country, 2004

Country	Fatalities / 100,000 inhabitants	Fatalities / 1,000,000 passenger cars
Romania	11	743
EU25	11	239
EU15	10	207
Bulgaria	12	484
Czech Republic	14	392
Hungary	14	564
Poland	15	528
Slovakia	11	458

Source: Eurostat Pocketbook: Energy, transport and environment indicators 2005 and SWK Consortium, TA to MT, 2006

Table 1-14 Top 5 black spots, 2001-2005

National Road	Accidents	Fatalities	Serious injuries
2/E85	124	62	80
2/E80	130	56	98
15	89	48	49
7/E68	119	38	105
65	57	35	30

Source: National Company for Motorways and National Roads, 2006

Road infrastructure priorities

The situation of road transport, as analysed above, leads to the identification of the following priorities as regards road infrastructure:

- continue rehabilitation and upgrading of the network, for which the following periods have been agreed during accession negotiations:
    - opening to heavy trucks of the entire TEN-T by beginning 2007,
    - opening of the entire network by end 2013.
- provide additional capacity where needed, and particularly along the TEN-T priority axes, with the construction of motorway sections and of towns bypasses,
- generally, improve road safety, while
- developing and improving maintenance.

1.3 Rail transport

The implementation of Council Directive 91/440 on the development of the Community's railways started in 1998, with the restructuring of the National Society of Romanian Railways (SNCFR). Its objective was the separation of the infrastructure management from the operating activity, both at administrative and institutional level. SNCFR was therefore divided into a national company, two national societies and two commercial companies having as main activities:

- management of railway infrastructure and ancillary assets;
- freight railway transport;
- passenger railway transport;
- ensuring of the financial accounting and legal services; this company, SMF, was dissolved in 2002 and its functions have been taken over by the other companies;
- management of the exceeding assets resulted from the SNCFR reorganisation.

According to the Romanian legislation in force, all above entities can be privatised, with the exception of the railway infrastructure management.

In addition, in 1998 a Railway Regulatory Authority (AFER) was established. This specialised institution has the main role of insuring the state inspection, traffic safety control, the rail register, licensing of operators, certification of products and services, as well as certificates for safety personnel working in the rail sector.

Rail Infrastructure

In 2004, the national railway network in Romania included 11,053 km of route kilometres[4] in operation (10,914 km standard 1,435 mm gauge, 78 km narrow gauge and 61 km broad gauge).

Of the total, 3,965 km (35.8%) were electrified, compared with 51% in the EU15. 2,965 km (26.9%) were double track, compared with 41% in the EU15.

The railway network decreased in length by 2.7% between 1990 and 2004, due to the closure of several little used lines.

Maps in Annex B show the existing rail network in 2005 and the route of the rail TEN-T network, highlighting the route of TEN-T priority axis no. 22.

Table 1-15 Railway network in Romania 1990-2004 (km)

	1990	1995	2000	2003	2004
Total	11,348	11,376	11,015	11,077	11,053
Electrified	3,680	3,866	3,950	3,965	3,965

Source: Statistical Yearbook 2005 and CFR

[4] This means there are 11,053 km of railway services between rail nodes, irrespective of the number of tracks at any location.

The railway density is above the EU15 and EU25 average in terms of density per population but is slightly below the average in terms of density per 1,000 km^2. Compared with neighbouring countries, it is below the average of all except in terms of density per 1,000 km^2 in Bulgaria.

Table 1-16 Comparison of railway densities by region and country, 2002

Country	Km of railway / 1,000 km^2	Km of railway / million population
Romania	46.2	504.7
EU25	51.2	450.6
EU15	48.1	409.3
Bulgaria	38.9	546.6
Czech Rep.	121.7	941.2
Hungary	82.5	752.5
Poland	65.2	551.6
Slovakia	75.0	680.6

Source: Eurostat Pocketbook: Energy, transport and environment indicators 2005

In 2004, the Romanian government has adopted a decision to reduce the excess railway track by dividing the railway network into two categories. The first category, about 70% of the total route network would be maintained in compliance with EU regulations and standards, in particular those lines should eventually be upgraded so as to become interoperable in the sense of EC Directive 16/2001. The latter 30% would be operated under lease agreements by interested public or private entities, further to a tendering process, or closed. The lines account for 2 percent of the freight traffic and 8 percent of passenger traffic.

The following map shows the core railway network, remaining under the direct operation of CFR SA, together with rest of the network.

Figure 1-3 Railway network: core network and secondary lines

Source: MT

Due to the significant state of usage of the rail network including associated structures, the maximum traffic speed is subject to dramatic restrictions on several routes. On about 27% of the network maximum speed is 50 km/h, while on another 39% of the network the maximum speed is 80 km/h. As a measure of the network deteriorating condition, the number of speed restrictions has been increasing over the last years, affecting 624 km in 2001, against 386 km in 1995.

It should also be noted that the railway gauge is inter-operable. Attention needs to be focused also on signalling communications and controls.

Railway Infrastructure Maintenance

The railway system suffers from a chronic lack of maintenance that has been evidenced for many years and the rehabilitation that will be required to recover the position to achieve acceptable levels of safety at speed is difficult to quantify with any accuracy at this time. Work continues to quantify the cost.

In 2001, 4,000 km of rail track were due for rehabilitation, representing about 30% of the network but this work was not provided with funding.

Also in 2001, out of 18,739 bridges and culverts, 2,700 had exceeded their normal working life, 615 needed urgent complete replacement while 10,403 were due for a major overhaul. It is seen therefore that insufficient maintenance was affecting over 73% of the bridges and culverts and that this jeopardised safety.

The effect of not conducting this work resulted in a 36% increase in the number of black spots on rail, from 195 in 1994 to 307 in 2001 and an increase of 44% in the length of track affected by speed restrictions (from 349 km in 1994 to 624 km in 2001) to the detriment of the quality of service level provided.

A similar situation was reported on track signalling, telecommunications and electric systems with over 7,000 km of overhead catenery line due for major overhaul, out of a total of 10,600 km (66%), as well as 66 out of 77 traction sub-stations that required complete refurbishment.

The main reason given for the lack of maintenance is the insufficient funding, particularly from the State budget.

The situation presented above is known at the governmental level and steps are taken into rectifying the situation. Additional information on the issue is provided under chapter 3 – Strategy, subsection 3.5 – Sustainability of investments.

Railway Operations

The railway services are predominantly operated by the State companies CFR Calatori (Passengers) and CFR Marfa (Freight), but the market for rail freight transport has been opened in Romania since 1998 with the first private operators starting business in 2000.

There are currently about 30 private railway undertakings licensed by the railway authority for rail transport operations. The scale of their operations remain small but, in 2003 the private freight operators carried 2 million tonne-km representing approximately 6.7% of the

total network task; and in 2004 the private operators increased their volumes to 3.2 million tonne-km representing 10.5% of the total freight moved for the year. Private passenger operations only started in 2004, mainly on the non-interoperable lines Most private operators operate under an association known as ATFER (Association of Private Rail Operators).

Access charges and State support

All rail operators have access to the network against payment of a track access fee. The system is non-discriminatory and designed to implement the requirements of EC Directive 2001/14.

The State is providing compensation for passenger services (PSC represent about 60% of the total State support to Railways), as well as support to the infrastructure company for investments. The budget support for infrastructure is however inadequate to cover the actual cost because of excess track and a backlog of deferred maintenance that has accumulated over the past decade.

All investments are funded by means of IFI loans and grants as well as the State budget. Most investment needs of CFR and CFR Calatori are covered by the State budget, including about 80-90% of their debt service payments. The total amount of the State support to the railways is about 0.7% of GDP.

Until recently, the access charge was much higher for freight than for passengers, partly because the State was actually unable to pay for the full cost of Public Service Compensation for passenger services and the freight company (CFR Marfa) cross-subsidized these services. This caused the track access charges to be much higher for CFR Marfa than CFR Calatori. In 2003, track access charges were Euro 3.6/train km for CFR Marfa and Euro 1.0/train km for CFR Calatori. This undermined CFR Marfa's competitiveness and in turn reduced CFR's revenue to maintain the track and pay for the employment and social taxes of its staff.

The track access charges for CFR Calatori increased from EUR 1.0/train-km to EUR 2.4/train-km in March 2004. From 2007, CFR Calatori is scheduled to pay a higher rate of EUR 3.6/train-km. Rail freight access charges will remain at EUR 3.6/train-km. This will result in a significant increase in the level of Public Services payments, but will help to focus on the need for further rationalisation of passenger services, and the refinement of a clear Public Services contract to cover only obligations deemed essential and affordable by the State budget.

Fleet and services

The fleet of CFR Calatori (passengers company) includes:

- 986 locomotives, of which 83% are older than 20 years and 140 are recently modernised;
- 3,175 carriages, of which 77% are older than 20 years and 492 are new or recently modernized and 79 recently purchased DMUs.

The CFR Marfa (freight company) fleet includes:

- 927 locomotives
- 55,000 freight wagons
- 2 ferry boats of 12,500 tdw each.

Most locomotives have an average age of 30 years and passenger carriages are on average 25 years old. This exceeds the industry accepted "norm" of a 20 year lifespan and results in low availability and utilisation resulting in uncertain service reliability for passengers.

In theory the capacity of the existing rail infrastructure is technically sufficient to satisfy the demand and in 2004, 99.4m passengers were transported by rail (of which 0.5m were international passengers), generating 8.6 billion passenger-km.

This amounted to 43.8% of the total number of passenger-km transported by public transport in Romania[5] and is estimated to constitute 12% of the total passenger movements by road and rail.

Table 1-17 Evolution of rail passenger transport

	1990	**1995**	**2000**	**2003**	**2004**
Passengers (mil.)	407.9	210.7	117.5	94.8	99.4
Pass-km (mil.)	30,582	18,879	11,632	8,529	8,638

Source: Statistical Yearbook 2004, National Institute of Statistics 2005

The rail passenger transport has declined for several reasons:

- greater attractiveness of private car that provides a door to door service against rail public transport point to point service;
- decreasing competitiveness against mini-bus services, in terms of journey time, frequencies and prices operating on similar routes.

The poor condition of the rail infrastructure has triggered a reduction of the operational speed while the level of comfort is affected by the ageing passenger fleet.

In the absence of the GTMP, MT, with the help of JASPERS assistance, is implementing a PHARE assisted study which has among its objectives a thorough needs assessment of the rail passenger service with an aim to develop a coherent procurement strategy.

In the mean time, MT's analysis shows that the train timetable seems not to be suited to the current needs, in particular because of the extensive use of large train units at low frequencies. It appears that the rail passenger company is primarily operating trains before meeting passenger needs; in other words, it is still not customer-oriented enough as remains the case in many other countries.

Compared with the EU15, EU25 and EU27, the rail passenger-km per inhabitant per year are lower in Romania. The average in the EU15 is around 800, compared to 400 in Romania. Only Bulgaria has less.

[5] It may be noted that national statistics do not include traffic data relating to private cars. Thus, modal shares quoted in official documents usually refer to shares in public transport rather than total transport.

Table 1-18 Comparison of rail passenger transport by region and country, 2002

Country	Passenger-km / inhabitant
Romania	390
EU25	773
EU15	812
Bulgaria	330
Czech Republic	646
Hungary	1,037
Poland	540
Slovakia	499

Source: Eurostat Pocketbook: Energy, transport and environment indicators, 2005

In 2004 over 72 million tonnes of freight were transported (of which 20.9 million were international and 0.7 million were in transit), generating 17 billion tonne-km. This figure represents 31% of the total number of tonne-km transported by both road and rail.

Table 1-19 Evolution of rail freight transport

	1990	1995	2000	2003	2004
Tonnes (mln.)	218.8	105.1	71.5	71.4	72.7
Tonne-km (mln.)	57,253	27,179	16,354	15,039	17,022

Source: Statistical Yearbook 2004, National Institute of Statistics 2005

Compared with the EU15 and other neighbouring countries, the amount of rail freight is very high in comparison with GDP, equalled only by Slovakia. It is currently more than ten times the amount transported in the EU but indications are that this will not be maintained.

Table 1-20 Comparison of rail freight transport by region and country, 2002

Country	1000 tonne-km / GDP (EUR mln.)
Romania	538
EU25	45
EU15	31
Bulgaria	440
Czech Republic	334
Hungary	174
Poland	349
Slovakia	538

Source: Eurostat Pocketbook: Energy, transport and environment indicators, 2005

The main advantages of passenger and freight rail transport are:

- Rail has greater energy efficiency than road transport;
- Energy efficiency is better for rail transport as energy consumption per transport unit is 10% of the consumption by road transport;
- It generates less environmental pollution with the quantity of air pollutants only 10% of that of road transport;

- For passengers, rail provides a wide social benefit due to the wide national spread of the rail network and it is considered safer than travel by coach or car;
- Rail has fewer accidents per passenger km and tonne/km than road transport;
- Although it could be said that water transport has advantage over rail, the limited services currently available by inland waterways make water borne traffic for passengers and freight advantageous in only a few specific circumstances.

During the past 15 years the market share held by the Romanian rail transport has fallen at a greater rate than that in the EU15. Romania is not a singular case as this has also occurred throughout Eastern Europe due to the economic changes such as the closure of some industrial facilities that produced freight suitable for rail (low cost bulk raw materials), along with the rationalisation and restructuring of transport patterns following the dramatic political changes in 1990. It is also due to the increased competitiveness within the road haulage industry.

Railway stations

The Romanian railway network encounters a number of approx. 1,100 railway stations (including halts) spread all over the country. Railways stations have a key role as part of the transport system, and are also part of the areas of public interest of each county or town of Romania. The current situation of many major stations is very poor (with premises not rehabilitated for a very long time, unheated, without any sort of comfort for the passengers).

The Romanian Government has launched an ambitious programme of rehabilitation of the railway stations. The proposed works take into account especially the improvement of the operating conditions in stations, and also the necessity of providing improved services for passengers.

Accordingly, the main objectives of these works are the rehabilitation of railway station buildings, with a special emphasis on entrances-exit zones, spaces designed for passenger services as well as commercial areas. This will also include improved access for disabled persons. The ultimate objective of the programme is to promote the transport by rail particularly against the by increasing its attractiveness particularly tackling the quality of the services for the passengers and the inter-connection with the urban transport in the locality.

The modernization programme for the railways stations will primarily focus on the most important 43 cities, mainly corresponding with the county capital cities, as well as on about 15 major nodes playing an important role in the rail passengers traffic.

Railway restructuring and modernisation

Significant financial support has been provided to the Railways, starting with the Railway Rehabilitation project that started in 1996, co-funded by the IBRD, EBRD and the Phare Programme.

Three main priorities can now be identified:
- consolidation of the railway restructuring process;
- improvement of the infrastructure;
- modernisation of the passenger services.

A framework for restructuring the railways comprises six key components:

- reduction of excess staff (about 10% of the number in December 2003);
- reduction of excess railway track (3,000 km, or 30% of railway route length in December 2003);
- implementation of fair, transparent, and competitive track access charges;
- rationalisation of passenger services, and refinement of a clear public services contract;
- transformation of the railways into a fully commercial business;
- private sector participation in the operation and management of railways, particularly in the provision of freight services.

Infrastructure as regarded upgrading the TEN-T rail network had been given special attention. It is estimated that 50% of the total rail traffic in Romania is on the TEN-T network representing some 20% of the total Romanian rail system length. The general objective of the rehabilitation and upgrading works, in line with the AGC requirements, is to meet speeds of 160 km/h for passenger trains and 120 km/h for freight trains, while implementing interoperability.

The TEN-T infrastructure rehabilitation programme started in 1999 with an EIB loan under which the Bucharest – Campina section (90 km) of the Bucharest – Brasov line has been rehabilitated. The Bucharest – Constanta line (225 km) is currently being rehabilitated under ISPA and JBIC funding, while ISPA – financed works on the Campina – Predeal section (40 km) are under tendering.

The market share of rail passenger services has been sharply decreasing with regard to passengers transport, in favour of private cars but also mini-buses services that are seen as providing better frequencies for lower costs.

The improvement of passenger services therefore implies:

- reform of the timetable by introducing higher frequencies (and smaller trains);
- improvement of the rolling stock so as to increase comfort and reduce operating costs;
- modernisation of the railway stations so as to increase attractiveness of rail transport.

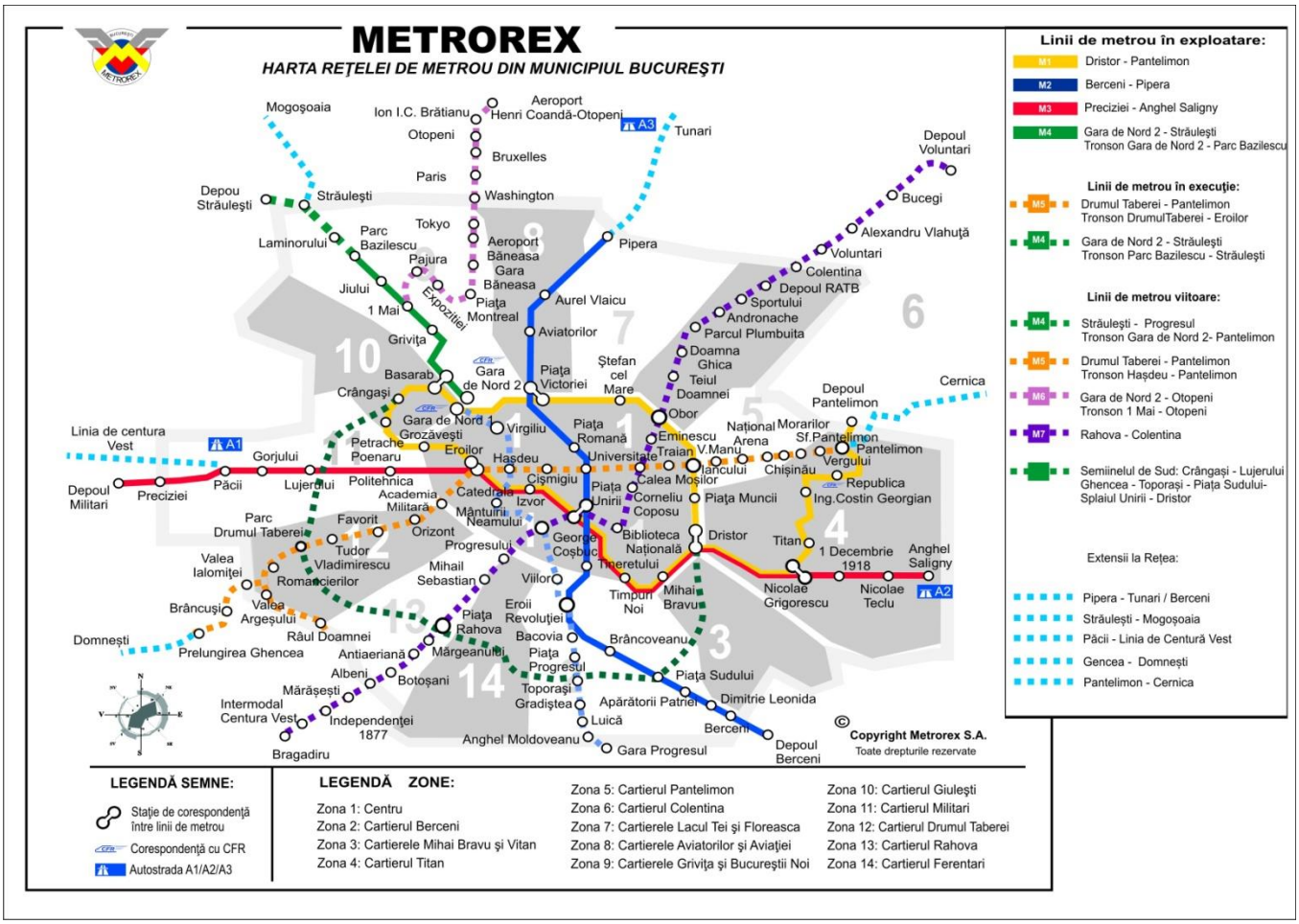
1.4 Metro transport

The Bucharest city area of 228 km^2 is crossed by a road network of around 1.820 km total length, occupying 8,5% of the urban area of the city. In total, the city has a road network of 5.340 streets, out of which 258 streets are very important for providing daily social and economic activities, enabling extensions of national roads or playing the role of main street for urban traffic. (*Source*: Urban transport network (public and private) 2011 – Municipality of Bucharest)

The ground public transport operator in Bucharest is *Regia Autonomă de Transport Public Bucureşti* (RATB). The system operated by RATB contains an extended network of bus, trolleybus and tram lines. The RATB network is one the densest in Europe, being ranked the fourth largest on the continent and carrying around 1,7 million passengers/day. (*Source*: Activity Report of RATB for 2011)

Also, the city is served by an underground public transport system which is keeping the topographic characteristics of the ground – concentric radial network configuration – with

a length of 69,20 km, distributed on 4 metro lines, 51 stations and 4 depots. The underground public transport system is operated by METROREX.



METROREX is a joint-stock company owned by the state, which performs activities of public and strategic interest. For these services, METROREX receives money transfers from the state budget to cover the differences between its own revenues resulted from the passengers transport activity and the total expenses, as subsidy to the related fare trip.

Built, equipped and put into operation in stages, on certain extensions, starting with 1979, the metro network is currently integrating 69,20 km double track, structured on 4 metro lines, 51 metro stations and 4 depots. The metro transport system is continuously monitored and coordinated by a Central Traffic Control, which subordinates some other six branch dispatching centres: lines, tunnels, stations, passengers' information, traffic control, electro-energetic, electro-mechanic and commercial.

Main technical characteristics:

- Metro Lines: 4
- Network length: 69,20 km double track
- Depots: 4
- Stations: 51
- Average distance between stations: 1,5 km
- Stations length: 135 – 175 m

- Stations average depth: 24 m
- Gauge: 1432 mm
- The automatic fare collection (AFC) system using magnetic tickets in service since 1995 and upgraded in 2000. From 2006, the AFC system was partially integrated with the RATB system by introduction of *contactless* tickets.
- Operating fleet: 25 IVA old metro trains and 44 new Bombardier metro trains

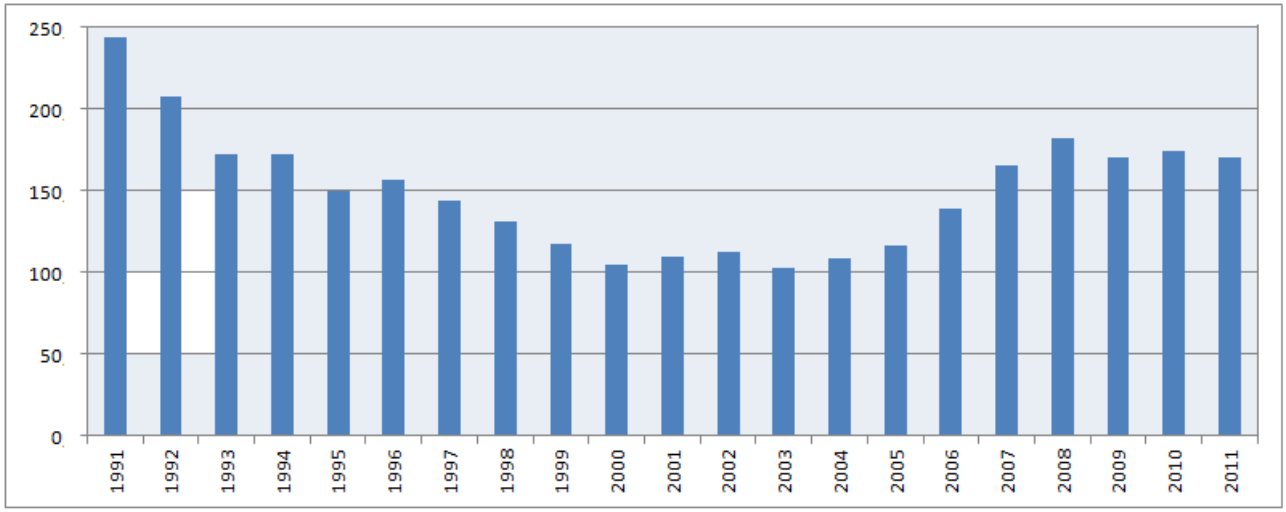
Although it covers only 4% of the Bucharest entire public transport network, by providing a high transport capacity due to its comfort, regularity and safety traffic conditions, Metrorex supplies transportation for about 20% of the total passengers using the Bucharest urban public transportation means.

Between 2007 and 2008, S.C. Metrorex S.A promoted and approved at the level of the Ministry of Transports the "Global Development and Modernization Strategy for 2008 – 2030".

To issue the metro development and modernization strategy, it was started from the identification of certain modalities of increasing the metro transport system contribution in Bucharest taking into account the expenditures diminishing and the performances increasing within the involved public transport specific conditions.

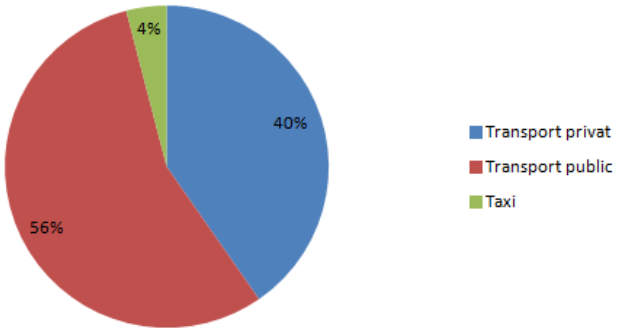
The transports strategy envisages the public transport prioritization, simultaneously with its development and modernisation components.

Currently, the Bucharest metro network carries, on average, over 600.000 passengers per business day, and over 16 million passengers per month (*Source*: Activity Report of METROREX for 2011)



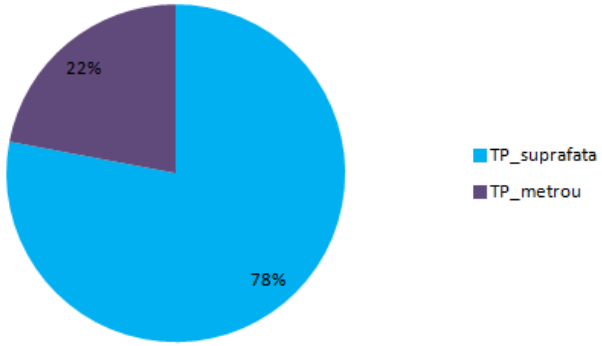
The development of passengers carried with metro (million passengers)
(*Source*: Activity Report of METROREX for 2011– including previous ones)

At the level of Bucharest city, in 2011, out of 3,8 million daily trips, 56% are made by public transport, 40% by private transport means and 4% by taxis. (*Source*: Processed in VISUM based upon input data)



Modal distribution at the level of BUCHAREST CITY
(*Source*: Processed in VISUM based upon input data)

Out of the 56% trips made using public transport, 22% are being made using the metro system, and the remaining 78% with the ground urban public transport. (*Source*: Activity Report of METROREX for 2011, and the Activity Report of RATB for 2011, respectively)



Market share between the two major urban public transport operators in Bucharest
(*Source*: Activity Report of METROREX for 2011, and the Activity Report of RATB for 2011, respectively)

Important traffic flows where congestion occurs and subsequently, its unpleasant effects (such as increased travel duration, discomfort, increased emissions and higher social costs resulted from the value of time) are recorded in the here below areas:

a. Bucureştii Noi district – Laromet, with the main traffic road on Bucureştii Noi Avenue (main entrance road in the city from Ploieşti and Târgovişte on national road DN1A);

b. Drumul Taberei district – Drumul Taberei Avenue main traffic road and roads located nearby influence area Timişoara Avenue and Ghencea Avenue / Calea 13 Septembrie.

As per the Strategy of Metrorex approved by the Ministry of Transports, in order to solve this situation, there were proposed the following solutions that could be realized in the actual programming period 2007-2013:

A. Metro Line 4. Extension from Parc Bazilescu to Străuleşti
B. Metro Line 5. Section 1. Extension Râul Doamnei – Eroilor (PS Operă),

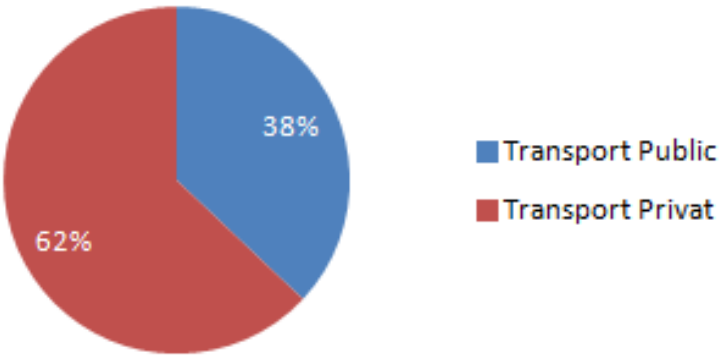
Projects impact evaluation:

A. The extension Parc Bazilescu – Străuleşti, as part of the METRO LINE 4, is included in the investment objective „Extensions of the Metro Network. Section I Sălăjan –

linia De Centură And Section I Gara De Nord – Basarab – Laromet", approved by the Government Decision no. 598/08.06.2011, for which it was awarded the works execution tender, ongoing contract, and the execution works started. Since there are no financial arrangements, the Metro Line 4 financing must be fully provided from the state budget.

In the area dedicated to the extension from Parc Bazilescu to Străuleşti of Metro Line 4, at the level of 2011, there had been already areas of congestion because Şos. Chitila and Bucureştii Noi Avenue were main access roads in town from the North-West part of Bucharest city (DN1A – Ploieşti and DN7 – Târgovişte). In view of 2015, under the hypothesis in which the metro line is not commissioned, the traffic flows will reach around 40.000 vehicles/direction/day. (*Source*: Processed in VISUM based upon input data)

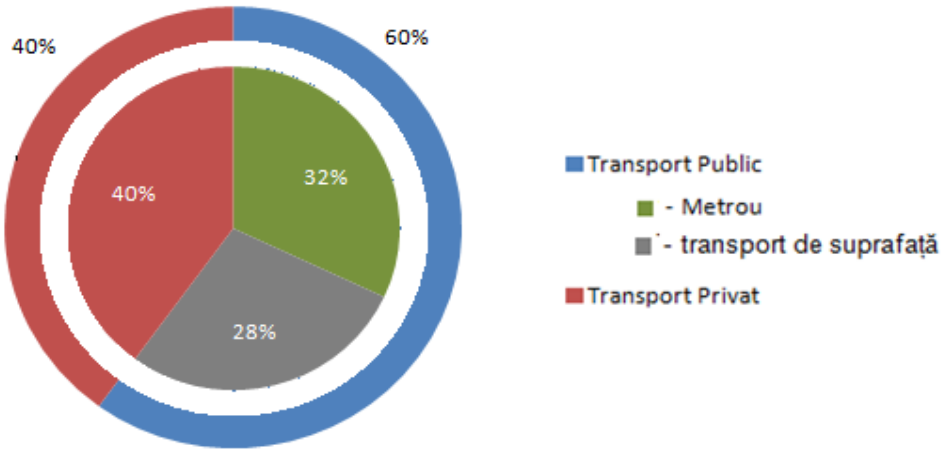
The modal distribution of daily trips within the reference area will be in favour of private transport due to low degree of service for inhabitants provided by the current public transport system, and also due to lack of specific arrangements for providing a safe and comfortable transfer between the private and public transport (Park & Ride facilities sustained by the road traffic flow typology). Therefore, only 38% of the total number of trips will be performed using public transport and 62% with private transport means. (*Source*: Processed in VISUM based upon input data)



Modal distribution within the reference area
(*Source*: Processed in VISUM based upon input data)

The metro extension with two more stations and construction of a Park & Ride facility at the end stop will serve not only the inhabitants in the area daily trips, but will also bring a plus of over 11 million passenger per year, and consequently, the metro line 4 would carry over 21 million passengers per year, avoiding road congestion on some of the most crowded streets in Bucharest city and meeting the need to travel of population, the quality and comfort requirements for a modern public transport, but will mainly contribute to the environment protection, by reducing the inter-city trips with private cars, and contributing to diminishing the pollution degree due to road traffic. (*Source*: Processed in VISUM based upon input data)

The modal distribution of daily trips within the reference area, after commissioning the Metro Line 4 – extension from Parc Bazilescu to Străuleşti, will be advantageous for the public transport because 60% of the trips will be made via public transport, and 40% via private transport means. (*Source*: Processed in VISUM based upon input data)



Modal distribution within the reference area
(*Source*: Processed in VISUM based upon input data)

Under these circumstances, Metro Line 4 – Extension from Parc Bazilescu to Străuleşti will bring major benefits in respect of serving population with transport of high capacity within the reference area, will increase the area accessibility and social inclusion, will contribute to road traffic reducing and encourage the public transport, will reduce the trip durations towards downtown involving positive effects upon the population life quality standards and environment, by developing a green transport system which will also contribute to achievement of objectives included in the Energy Efficiency Plan 2020 (European Union Directive 20/20/20) which establish the saving 20% of primary energy consumption, reduce CO_2 emissions with 20% and increase the energy portion from renewable sources with 20% until 2020. (*Source*: Processed in VISUM based upon input data)

Road traffic	To be reduced with 38%
Noise	To be reduced with 3%
CO_2 emissions	To be reduced with 39%
CO emissions	To be reduced with 45%
NOx emissions	To be reduced with 44%
SO_2 emissions	To be reduced with 39%
PM emissions	To be reduced with 44%

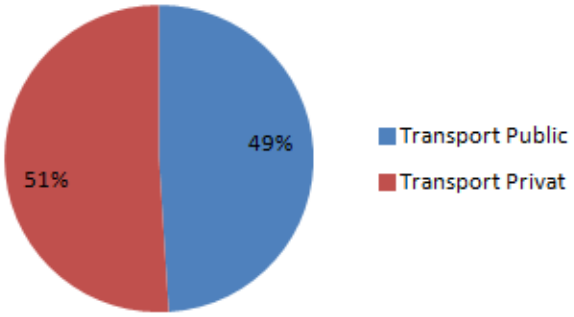
Advantages of Metro Line 4 – Extension Parc Bazilescu – Străuleşti
(*Source*: Processed in VISUM based upon input data)

B. For Metro Line 5 Râul Doamnei – Eroilor which it was awarded the resistance structure works execution tender, ongoing contract, and the execution works started. Metro Line 5 is to be financed under 2 (two) financing contracts signed with the European Investment Bankin 2009 and 2011, which is providing around 50% from the investment financing, and the remaining to be financed is needed to be provided by the state budget.

The extension of the section Râul Doamnei – Eroilor is included in the metro investment objective METRO LINE 5. SECTION 1. DRUMUL TABEREI – UNIVERSITATE, approved by Government Decision no. 1.419/11.04.2008.

In the area designated to extension 1 of Metro Line 5 (Râul Doamnei – Eroilor), at the level of 2011, there were areas of congestion. In view of 2016, under the hypothesis in which the metro line is not commissioned, the traffic flows will reach 30.000 vehicles/direction/day. (*Source*: Processed in VISUM based upon input data)

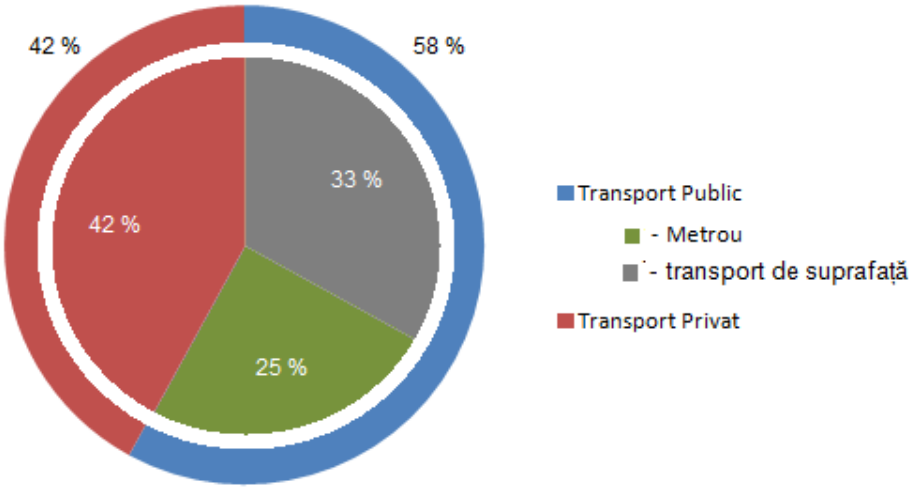
The modal distribution of daily trips within the reference area will be advantageous for the private transport due to reduced serving degree of population in terms of current public transport system and especially of high capacity public transport, as follows: 49% of daily trips will be made via public transport, and 51% via private transport means. (*Source*: Processed in VISUM based upon input data)



Modal distribution within the reference area
(*Source*: Processed in VISUM based upon input data)

This metro line will serve the daily trips of city population, carrying over 30 million passengers per year, mainly avoiding road congestion on some of the most crowded streets in Bucharest and meeting the travel need of population, quality and comfort requirements for a modern public transport system, that will mainly contribute to the environment protection, by reducing the inter-city trips with private cars, and diminishing the pollution degree due to road traffic.

The modal distribution of daily trips within the reference area, after commissioning the Metro Line 5, Extension 1 - Râul Doamnei – Eroilor, will be advantageous for the public transport because 58% of the trips will be made via public transport, and 42% via private transport means. (*Source*: Processed in VISUM based upon input data)



Modal distribution within the reference area
(*Source*: Processed in VISUM based upon input data)

Out of the 58% daily trips with public transport, 43% are being made by metro, the remaining 57% by ground transport, and it resulted that 25 % of the total trips in the area are to be made by metro (the 25% representing in fact the market share of metro at the level of the city). (*Source*: Processed in VISUM based upon input data)

Under these circumstances, Metro Line 5 – Section 1 – Extension 1: Râul Doamnei - Eroilor will bring major benefits in respect of serving population with transport of high capacity within the reference area, will increase the area accessibility and social inclusion, will contribute to road traffic reducing and encourage the public transport, will reduce the trip durations towards downtown involving positive effects upon the population life quality standards and environment, by developing a green transport system which will also contribute to achievement of objectives included in the Energy Efficiency Plan 2020 (European Union Directive 20/20/20) which establish the saving 20% of primary energy consumption, reduce CO_2 emissions with 20% and increase the energy portion from renewable sources with 20% until 2020. (*Source*: Processed in VISUM based upon input data)

Road traffic	To be reduced with 9%
Noise	To be reduced with 4%
CO_2 emissions	To be reduced with 11%
CO emissions	To be reduced with 12%
NOx emissions	To be reduced with 13%
SO_2 emissions	To be reduced with 14%
PM emissions	To be reduced with 9%

Advantages of Metro Line 5 – Section 1 – Extension 1: Râul Doamnei – Eroilor
(*Source*: Processed in VISUM based upon input data)

1.5 Air transport

Overview

There are 17 airports currently operating in Romania[6]. Of these only five recorded passenger traffic above 100,000 passengers per annum in 2005, four handled between 10,000 and 50,000 passengers and the remaining eight served fewer than 5,000 air transport passengers.

The location of the key Romanian airports is shown on the following map.

Figure 1-4 TEN-T Airports Romania

Source: European Commission

Eleven airports in Romania are located on the TEN-T by agreement with the EU.

They are ranked in the order of passenger throughput in 2005 in the following table:

[6] Aspects of the experience with liberalisation process of the air transport market within the transitional period of Romania for accession as full membership state of the European Union, February 2003

Table 1-21 Airport ranking by passenger number

Airport	passengers, 2005 (thousand)
Bucharest Henri Coanda	2,973
Bucharest Aurel Vlaicu	380
Timisoara Traian Vuia	336
Cluj-Napoca	199
Constanta Mihail Kogalniceanu	111
Sibiu	49
Iasi	42
Bacau	39
Oradea	29
Suceava Stefan Cel Mare	8
Arad	4
Total TEN-T Airports	4,170
All Romanian Airports	4,192

Source: Airport Statistics, MT

The TEN-T airports account for 99% of all air passenger traffic in Romania with over 80% of passengers concentrated at the two Bucharest airports.

Air traffic growth and prospects

Table 1-22 Romanian Air Traffic, 2000-2005

	2000	2001	2002	2003	2004	2005
ATMs[7]	59,464	62,082	66,030	72,648	81,563	105,781
Passengers, '000						
International	2,089	2,197	2,276	2,550	3,008	3,727
Domestic	274	294	334	351	384	466
Total	2,363	2,491	2,609	2,901	3,392	4,192
Freight & mail, tonnes	82,967	68,607	16,803	16,179	19,553	21,330

Source: Airport Statistics, MT

Air passenger traffic has been growing strongly since 1998 at an average rate exceeding 10% per annum. The growth has been enjoyed by both domestic and international sectors and has accelerated in the last few years following a strong recovery of the national economy and the proliferation of cheaper air travel alternatives. Domestic travel accounted for just over 11% of all passenger traffic at Romanian airports with much of it transferring to/from international destinations.

Romanian airfreight market is not significant in volume terms and is largely served by the gateway Henri Coanda Airport that handles around 80% of all air cargo in Romania.

[7] Air transport movements, commercial only

Airfreight growth has been rather erratic due to various external influences but has displayed an overall positive trend since 2000.

Following accession of Romania to the EU, continued rapid increase in international air travel may be expected, as has been observed in most new EU member states. The key drivers of passenger travel growth may be:

- Improved opportunities of working abroad and increased mobility of the workforce;
- Continued growth of the economy and disposable incomes;
- Increased interest for Romania for tourism and inward investment;
- Increased competition in the airline sector leading to increased frequencies and ranges of destinations and lower fares to customers.

From the environmental point of view, there are two main concerns arising from the air traffic:

- immediate surrounding of the airports: are air and noise pollution;
- the pollution of the stratosphere with GHG causing climate change and dimming.

It is estimated that the air traffic affects only 0.05% of entire population with noise levels up to 60db (A), being an issue to be considered when planning air traffic increase and increase of the capacity of the airports in the immediate surrounding of the city.

Review of main airports

Four Romanian airports (Henri Coanda, Aurel Vlaicu, Traian Vuia and Mihail Kogalniceanu) are part of the State public infrastructure and operated by commercial companies owned by the MT and having the status of concessionaires.

Other local airports operate under the administration of County Councils as independent authorities, Arad airport operates as a commercial society and Caransebes is in private hands.

Bucharest Henri Coanda Airport (previously known as Bucharest Otopeni Airport) is the main international gateway to the country and handled over 70% of all air passengers in Romania in 2005. The airport's air traffic statistics since 2000 are provided in the following table.

Passenger growth at Henri Coanda Airport has averaged around 10% per annum in the last seven years with a strong rebound in domestic traffic. The latter was driven by the decision by the national flag carrier Tarom to move its domestic base to Henri Coanda Airport in recent years.

Investment priorities

There is no national air transport development strategy in Romania at the moment. Most of the investment proposals have been put forward by the airports and reflect their own development objectives. It is envisaged that the General Transport Master Plan, due to be fully defined in 2008, will be the base for a robust prioritisation of the air investments.

Romanian air transport is currently dominated by Bucharest Henri Coanda, the country's main international gateway airport. Commensurate with its national importance, Henri Coanda Airport has been the beneficiary of most of the investment in airport infrastructure, especially

in the development of its passenger terminal facilities. The airport is expected to retain its leading role in the region although its market share may be further diluted by faster growing regional airports.

It is therefore important to ensure sustained growth of Henri Coanda Airport, as a regional and national economic engine, through investment in capacity improvements. There is sufficient passenger terminal capacity at the moment and further expansion is planned in the medium term with the extension of the terminal pier and a new passenger terminal. Investments are also required in upgrading of its airside infrastructure, especially runways and aircraft parking and manoeuvring areas, to maintain adequate safety levels.

Regional and secondary airports have not had as much focus placed on them as the national gateway airport. One reason may have been a limited passenger traffic and revenue generating potential to justify investment.

In addition, County Councils controlling regional airports may not have had available resources for capital investment in recent years. Following the past few years of sustained double-digit growth, regional airports are in need of capacity improvements as well as rehabilitation and modernisation of facilities.

There is generally an overabundance of regional airports in Romania, most of them with limited traffic base or growth prospects.

A review of this situation is required as part of the national master planning process to ensure that much needed investment is concentrated at the facilities and surface access connectivity of a few key airports.

1.6 Waterborne transport

The Romanian water transport network includes seaports, river ports, and inland waterways. Constanta is the major seaport and the largest on the Black Sea. It is linked via the Danube to Serbia, Hungary, and Austria, and then via the Rhine-Main-Danube Canal to the Rhine as far as Rotterdam on the North Sea.

The ports of Constanta, Midia, Mangalia, and Tomis are operated by the 100% state-owned joint stock company National Company Maritime Ports Administration Constanta (MPAC). MPAC is a member of EcoPorts, the European Intermodal Association (EIA), International Association of Ports and Harbours (IAPH), the International Association of Cities and Ports (IACP), and is a corresponding member of Inland Navigation Europe (INE).

The Danube – Black Sea Canal linking the port to the inland waterways is owned by the State and operated by the National Company for Navigable Channels Administration (Compania Nationala Administratia Canalelor Navigabile S.A), based in Constanta, formally a commercial company owned by the MT.

Otherwise, the water transport infrastructure is managed by:

- the National Company for Administration of the Danube Maritime Ports in Galati (Compania Nationala Administratia Porturilor Dunarii Maritime S.A.),
- the National Company for Danube River Port Administration in Giurgiu (Compania Nationala Administratia Porturilor Dunarii Fluviale S.A.),
- the Autonomous Agency for Management of the Lower Danube (Regia Autonoma Administratia Fluviala a Dunarii de Jos) located in Galati.

There is a closer linkage between water transport and water quality and preservation of water streams and habitats. Risks of water pollution may occur from boats, sewerage and waste management on the boats oil leakage in the places of fuelling and in open inland and marine waters.

Seaports

The seaports of Constanta, Mangalia and Midia are on the Black Sea, while Braila, Galati, Tulcea and Sulina on the Danube operate as river/sea ports. The maritime section of the Danube consists of 170 km length from Sulina to Braila.

Constanta Port

The Port of Constanta is the main Romanian port and the largest port in the Black Sea. It offers a link between the developed countries of Western Europe, and the emerging markets of Central Europe, with the raw resource from the CIS, Central Asia and Transcaucasus, and with containerised cargoes from the Far East.

Constanta has a strategic geographic location that has the potential to provide access to Europe from the Black Sea and a transhipment point between the maritime network and the road, rail and inland waterway networks. It is located at the crossing of TEN-T priority axes 7 (Road), 18 (Rhine/Meuse-Main-Danube inland waterway), and 22 (Rail) and thus has the potential to become an alternative gateway for the Central/East Europe – Asia corridor.

Its two satellite ports, Midia and Mangalia, are located nearby, and share functions with the main port.

Constanta is a multi-purpose port with modern facilities and sufficient depth to accommodate Suezmax vessels. It has direct access to TEN-T priority axis 18 via the Danube Black Sea Canal, potentially offering lower cost waterway transport links with Central Europe. It has good links to rail, road, river, air transport and pipeline modes. Its container capacity has grown with the development of a new Container Terminal on Pier II South, and it has Ro-Ro terminals allowing development of short sea shipping serving the Black Sea and Danube river-side countries.

The capacity of Constanta Port is approximately 105 million tonnes / year following the commissioning of the new Constanta South Container Terminal (CSCT), and it covers an area of approximately 1,312 ha of land and 2,614 ha of water. It includes a 29.83 km long network of quays with up to 19 m of water depth. It can accommodate ships with a maximum capacity of 165,000 DWT for dry bulk and 250,000 DWT for liquid bulk cargo.

Figure 1-5 Aerial photograph of Constanta Port

Source: Constanta port website

The condition of the infrastructure is deteriorating from age and in many cases equipment is operating 20 years beyond its economic life.

Nevertheless, throughput has increased rapidly in recent years, as shown below.

Table 1-23 Constanta Port Traffic 2000 – 2005 (million tonnes)

2000	2001	2002	2003	2004	2005
33.1	33.8	40.5	43.2	50.4	61.1

Source: Constanta Port Handbook 2005-2006

Traffic through Constanta, Midia and Mangalia increased from 50 to 61 million tonnes between 2004 and 2005. Maritime traffic increased from 39 to 47 million tonnes, while river traffic increased by 23% to 14 million tonnes. Constanta's new status as a container hub port for the Black Sea is reflected in the 56% growth in transit traffic, to 5.5 million tonnes in 2005. Container handling overall increased from 386,000 TEU in 2004 to 768,000 TEU in 2005, an increase of almost 100%.

Apart from containers (7.4 million tonnes), the main types of cargo handled in 2005 were iron ore (12.62 million tonnes), crude oil (8.68 million tonnes), oil products (5.29 million tonnes), and grain (6.01 million tonnes).

The main development and modernisation programmes implemented since 2000 have been:

- Completion of the rehabilitation of Constanta Port's North and South piers
- Completion of first phase of the new container terminal (Mol II S)
- Introduction of a modern VTMIS information system, improving high-level management of the port and linking it into the global ports system.

Three environmental projects were completed in the port in 2005, including commissioning of a new MARPOL vessel, provision of a new landfill site, and provision of a new incinerator for hospital and ship waste. Work on a waste-water treatment station will be completed in 2007. Also, in 2005, a new passenger terminal was built, as well as a new x-ray scanning station for containers and vehicles for Customs.

The number of vessels calling at the three ports increased from 5,277 vessels in 2004 to 5,511 vessels in 2005.

Two container stevedores operate at Constanta: Socep and DP World, which controls the new CSCT terminal. Of the 768,000 TEU handled by these two stevedores in 2005, some 60% was transhipped to other Black Sea ports, leaving about 310,000 TEU to be distributed inland by road, rail, or waterway. Waterway container traffic is almost inexistent, but rail has a share of about 45%.

Constanta South Container Terminal (CSCT), operated by DP World, has increased volumes by more than 450% in 2005 achieving around 560,000 TEU compared to 2004, when the volume was just under 100,000 TEU. The quality of the operation meets international standards.

CSCT handles a mix of local cargo and trans-shipment cargo for many other countries in the Black Sea region. Barge services linking Constanta and Belgrade have recently been initiated, and there are plans for a rail link between CSCT and Budapest.

Inland waterways

The Romanian sector of the Danube River, between Bazias and Sulina, has a total length of 1,075 km of which 320 km is entirely on Romanian territory. The remainder is shared as a State Border with Ukraine (55 km), Moldova (0.97 km), Bulgaria (470 km) and Serbia and Montenegro (230 km). In practice this means that rehabilitation projects on all but the section where Romania has sole responsibility, must be agreed and coordinated by both countries and put into effect at the same time.

Figure 1-6 Inland waterways and ports network

Source: European Commission

The Romanian inland waterway system is shown on the map above. It is focused on the Danube in the south of the country. It also includes the secondary navigable branches of the Danube and the Danube - Black Sea and Poarta Alba - Midia Navodari canals between the Danube and the coast in the vicinity of Constanta. In addition, there are various small branches, including in the Danube Delta, mostly used for leisure and local (low volume) freight traffic. The branches of the Danube offer an additional 530 km of navigable waterway.

The Danube is an international inland waterway that stretches from the Black Sea at Sulina in Romania via Belgrade in Serbia, Croatia, Budapest in Hungary, Bratislava in Slovakia and Vienna in Austria to its source in the Black Forest Mountains in Germany. It has a total length of 2,845 km. It is navigable as far as 2,411 km up to Bamberg from where it links to the Rhine via the 171 km long Bamberg/Kelheim canal.

In Romania, a section of 170 km between Braila and the Black Sea can handle maritime shipping. The remainder, also called fluvial Danube, can handle ships and barges up to 2,000 dwt. The whole Romanian section of the Danube is navigable, but transport is hindered by

seasonal low water levels and in 2003 traffic volumes declined sharply due to an unusually long low-water period in the summer.

The Danube is part of the TEN-T Priority axis no. 18: Rhine/Meuse-Main-Danube inland waterway axis and it provides Romania and the other countries through which it passes with major new opportunities for the development of water transport.

The Danube also acts as a natural barrier to road/rail transport. It has just three bridges on the Romanian section and two dams at the Portile de Fier I and II, although the construction of a fourth bridge is planned at Vidin - Calafat and there are several ferry crossings for vehicles and passengers.

Altogether Romania has 32 inland waterway ports with a total capacity of 52 million tonnes / year. Among these, thirteen are part of the TEN-T. Five river/sea ports namely Constanta, Braila, Galati, Tulcea, and Sulina have a total traffic capacity of approximately 34 million tonnes / year, and allow access to sea-going vessels of up to 25,000 dwt of capacity, 180 m in length, and a usual maximum 6.9 m draught (limited by the depth of the Sulina Canal).

Romanian river ports, under the responsibility of the company for Danube River Port Administration, have a total of 16,200 m of quays, of which some 20% are said to be over 60 years old and urgently in need of reconstruction, with another 65% in poor physical condition due to lack of funds for maintenance and repairs.

Maintenance issues

There are two Authorities operating under MT responsible for the required physical conditions for navigation:

- River Administration of Lower Danube (AFDJ) for the river and maritime sections of the Danube River
- Administration of Navigable Canals (CAN) for the Danube-Black Sea Canal and its branch canals

The main responsibilities include the need to assure the fairway with sufficient depth for navigation providing fairway marking and the thalweg survey. The Danube Commission Requirements are for a minimum 2.5m navigation depth, "Least Available Depth" (LAD) for ENR (94%)[8] water level, and current river management activity (mainly dredging) does not ensure that this minimal level is maintained in a number of critical spots. This has led to a cessation of traffic flow at certain times of the year. For the seagoing vessel section Braila – Sulina, a 7.3m depth is required and this is generally ensured. The Danube-Black Sea canals provide a guaranteed navigation depth of 6 m.

[8] „ Etiage de Navigation et de Regularisation"- the level above which the flow is situated for 94% of the time

A table with current and required efforts for dredging is as follows:

Table 1-24 Dredging of Danube River by Romanian Authorities

Section	Current situation		Estimates for 2m LAD		Estimates for 2.5m LAD	
	mil m^3	mil Euro	mil m^3	mil Euro	mil m^3	mil Euro
Bazias-Braila	0.8	2	1.75	4.4	4.6	11.6
Braila-Sulina	0.7	3.9	0.7	3.9	0.7	3.9
Danube-Black Sea Canals	0.34	1.2	0.34	1.2	0.34	1.2
Total	**1.84**	**7.1**	**2.79**	**9.5**	**5.64**	**16.7**

Source: Ecorys Report, 2006

Maintenance of the navigable channel, including dredging, on the Romanian / Bulgarian section is shared between the two countries: Romania is responsible for the Portile de Fier II – Turnu Magurele while Bulgaria is responsible for the Turnu Magurele – Calarasi section.

Fairway marking is performed on a monthly basis and it includes replacement of about 30% of buoys a month. Fairway marking annual cost is 3.0 mil Euro. Thalweg survey is important for identifying changes of the river-bed depth and alignment, which has particular applicability at bottlenecks and it is performed monthly at an annual cost of 1.1 mil Euro (Ecorys Report, 2006).

It is important to confirm that as the use of the river part of the Danube is free of charge, due to its international status, no revenues are collected and maintenance funding has to be ensured by the Romanian State.

Port infrastructure, including quays, building and navigation channels belong to MT through two authorities:

- Fluvial Danube Ports Administration (APDF);
- Maritime Danube Ports Administration (APDM).

Both APDM and APDF have suffered from the economic downturn of the last decade, however they have succeeded in maintaining essential port infrastructure, although not all of the desirable maintenance was possible. The current port development strategy aims at maintaining all ports along the Danube, irrespective of their size and current economic viability. Maintenance works for ensuring the good quality at quays and walls amounted to 2.5 Meuro from the own port funds and 3 Meuro from EU funds for the period 2001 to 2004.

Inland Waterway Traffic

The opening of the Rhine-Main-Danube Canal in 1992 linked the Rhine with the Danube, and thus created a direct 3,500km waterway transport route between the North Sea and the Black Sea.

In subsequent years, the canal generated new westbound traffic, but political instability in the Balkans and the related conflicts in former Yugoslavia led to stagnation and to a complete breakdown of freight traffic along the lower Danube in the 1990s. After the destruction of the bridge at Novi Sad, in 1999, navigation in this section of the Danube was blocked, creating a

major obstacle to the development of Danube navigation, until the waterway was reopened in October 2005.

Danube traffic recovered strongly in more recent years, as is shown in the table below:

Table 1-25 Inland waterway freight transport, 1990 – 2004

	1990	1995	2000	2003	2004
Tonnes (mil.)	12.0	14.4	13.1	12.8	14.6
Tonne/km (mil.)	2,090	3,107	2,634	3,521	4,290

Source: Statistical Yearbook 2004, National Institute of Statistics 2005

In 1995, the latest year for which comparative data is available, cargo traffic on the Romanian inland waterways accounted for 14.4 million tonnes and 3,107 million tonne-km, much higher than the new EU member states achieved in the same year: 2 million tonnes in the Czech Republic, Hungary and Slovakia, and 10 million tonnes in Poland. This suggests that the greater proportion of inland waterway traffic in Romania starts and ends within the country.

The Romanian figures are much lower when compared to other EU member states: 128 million tonnes in Belgium, 329 million tonnes in Holland, and 91 million tonnes in Finland. This is a matter of the size and capability of the networks, and the availability of large volumes of appropriate cargo.

During November, 2003 and February, 2004, the Romanian inland water transport fleet was subject to a thorough legal and technical investigation, according to Romanian standards and the EC Directive 82/714/CE. As a result, 279 ships from a total of 1,563 propelled und non-propelled vessels were denied reconfirmation of their nationality certificates, are to be repaired or scrapped.

Development and Modernisation Projects

The main development and modernisation programmes implemented since 2000 have been riverbank protection and flood control works for the Danube-Black Sea lengths and Poarta Alba-Midia-Navodari Canals.

Where the Danube River is under a “natural flow” regime measures for improving the conditions of navigation are required to ensure efficient and safe operation of the maritime standards section of the river, as well as improving the quality of navigation on Sulina Canal by rehabilitating and consolidating the riverbanks, and establishing topo-hyrographic measurement and signalling systems on the Romanian section of the Danube River. A ship traffic survey and management system is also under way on the Romanian section of the Danube River.

The “river standard” section of the Danube River from border crossing point to hydro-technical and navigation works of Portile de Fier II (km 863) provides appropriate conditions for navigation because it is under a “trained flow” regime, while the section downstream of Portile de Fier II is under a “natural flow” regime, creating difficult navigation conditions on some sections when water levels are low. An ISPA financed programme for improving navigation conditions on Calarasi – Braila section is in progress. Works are expected to start

in 2007. Another programme for improving navigation conditions on the Romanian-Bulgarian section of Danube River is due to be promoted.

The harbour administrations are in charge of maintenance of the port infrastructure and primarily the piers. Lack of related funding has however led to significant deterioration of these, sometimes up to a point where they cannot be operated any longer. The need for proper operation as well as the intended development of new, specialised terminals, is therefore driving a number of project proposals. Actual terminal operations are often concessioned to private companies.

As part of the TEN-T, the Danube has potential for the development of tourism in areas adjacent to the river and the Danube Delta, and for improvement of operations at river harbours, as well as being part of combined transport development. For this reason, projects aimed at ensuring that the Danube environment is not harmed by port operations are being put forward.

1.7 Intermodal and combined transport

Road freight transport is well suited to modern logistical chains and door-to-door services but imposes heavy environmental penalties. In "European Policy in the Transport Field – horizon 2010: time to decide", the European Commission planned to encourage more environmentally friendly transport modes and increase the efficiency of door-to-door freight transport chains, by using rail or waterway as well as, if necessary, air and road.

Overall, modal shares for Romanian land transport are shown below to provide a context for the discussion of intermodalism. The main demonstrated points are:

- Transport volumes are very much lower, even now, than in former times. There has however been strong growth since 2000, after Romania's economy steadied.
- Road shares increased rapidly after the end of the previous regime, and are still increasing
- Rail volumes recovered recently but share continues to decline
- Water volumes are recovering but share is less than half of its original level

Table 1-26 National Freight Transport Development, 1990 - 2004

Transport mode (million tonne-km)	**1990**	**1995**	**2000**	**2003**	**2004**
Rail	57,253	27,179	16,354	15,039	17,022
Road	28,993	19,748	14,288	30,854	37,220
River	2,090	3,107	2,634	3,521	4,290
Total	**88,336**	**50,034**	**33,276**	**49,414**	**58,532**
Market share by mode (million tonne-km %)					
Rail	65	54	52	30	29
Road	33	39	41	62	64
River	2	6	8	7	7

Source: MT

Water transport is a low cost mode for bulk movement of large volumes of cargo, but can only be used where a network exists, and for low-value cargo which does not require rapid transit times. Loading and unloading costs for non-bulk cargo make the waterway unsuitable for many types of modern freight, and therefore there are only specific instances where waterways are suitable for use as part of intermodal transport chains. Romanian river ports are also poorly equipped for intermodal transport.

The movement of maritime containers by rail between seaports and either intermodal terminals or private sidings dominates intermodal freight in Romania, as it does in most European countries. There are no facilities for movement of trucks by rail, and there is very limited movement of domestic freight intermodally.

There is some potential for the inland waterway movement of maritime containers, which is discussed in the waterway section, but the movement of freight vehicles by water, which has happened on the Austro-Hungarian section of the Danube, it is unlikely to have the same amplitude in the period under consideration.

Over 40% of containers moved inland from Constanta are carried by rail (rather than road or inland waterway) – a higher proportion than is usual in Western Europe. Most of these, about 80%, are however destined for private sidings rather than intermodal terminals, which is unusual in Western Europe. Rail movement is also carried out in general trains rather than block trains, which is also not usual in Western Europe, as these services are not regarded as economic, and do not offer the required quality of service.

Romania's network of intermodal freight terminals have been designed to a standard pattern. These terminals are owned and operated by CFR Marfa, the main rail freight company. They are serviced from marshalling yards, have two tracks under rail mounted gantry cranes, with storage rows for containers on a concrete paved surface under the crane.

The cranes are at or approaching the end of their working life, and, in most terminals, road vehicles must turn round before or after being loaded/unloaded, blocking the road for other vehicles. Terminals generally have no secure areas or lighting.

An Intermodal study[9] was done under EU funding and their preliminary findings have been considered within this report.

[9]"Assistance to Elaborate a Strategy Regarding the Positioning of Freight Logistics Centres (Freight Villages) on the Romanian Railway Network" undertaken by Halcrow

Figure 1-7 Typical terminal layout in Romania

Source: Intermodal study, 2006

Capacities vary despite the standardised design approach, and terminal capacities vary from 7,040 to 25,600 TEU per year, with an average of 16,800 TEU. None of the terminals is being used to these capacity levels and few are laid out flexibly enough to allow alternative freight to be handled.

As to their operation, there are agreed limits on minimum overall staffing levels, so that staffing does not necessarily reflect operational or business needs. There is no differential pricing by container type or size, and discriminatory pricing is practised against customers who arrange their own collection and delivery. There is no local marketing/sales function, and no individual bottom line accountability for individual terminals.

For the Intermodal study proposals for the development of a new system of terminal operation and management, a wide range of actual and potential customers were interviewed, and it was established that they were concerned about the inadequacy of existing terminal facilities, the inflexibility of terminal operations, traffic delays at the port of Constanta, and poor security both on terminals themselves and on trains.

They noted the poor availability of suitable wagons, long, uncompetitive transit times, a lack of tracking or other information on consignment progress, poor reliability of train services and connections, and non-existence of dedicated direct train services. Both public and private rail freight operators responded poorly to business enquiries.

Another problem that was highlighted, is the over-complicated documentation required by railway operators and/or customs authorities.

In the Intermodal study the evaluation of the economic context of their proposed development of five intermodal freight terminals noted that Romania is benefiting from steady growth in business investment and industrial production. Its regions have an important contribution to GDP, though Bucharest and the South are dominant, accounting for over 30%.

A survey of road movements at Constanta demonstrated the internal regional origins and destinations of export and import loaded containers as follows:

Table 1-27 Regional origins/destinations of export/import road containers (TEU –survey period)

Region	Export	Import	TOTAL	Shares %
Bucharest	84	961	1045	53
South East	169	171	340	17
South	102	84	186	9
North East	88	18	106	5
West	102	3	105	5
North West	63	10	73	4
Central	59	12	71	4
South West	36	-	36	2
Other	4	2	6	0
TOTAL	707	1261	1968	100

Source: Intermodal study, 2006

Taking into account the findings of the intermodal study it is obvious that an improvement of the infrastructure and/or suprastructure has to be followed by a revamp of the management system. Special attention will be given to this aspect when selecting the future investments.

Multimodal transport is an established environmentally friendly mod of transport due to a possibility to reduce the impact on air from the road to a much lesser impact of the rail transport.

The overall environmental benefits brought by this mode of transport, correlated with the result of the intermodal study determined MT to make promotion of inter-modality an objective within the framework of the NDP and the SOPT. However more analysis was required in order to set a prioritised inter-modality investment list. JASPERS assistance helped MT do this task. More information on the way JASPERS is involved in the overall SOPT project preparation phase can be found in Chapter 2 – Strategy, subsection 3.6 – JASPERS Assistance.

1.8 System review

During the 1990s, the Romanian economy has gone through a transition process towards market economy. This transition has been accompanied by a major restructuring of the transport sector, with the following salient features:

- decline of the heavy industry and related decline of rail transport,
- re-orientation of international trade, with an increasing share of the EU. Trade with the EU currently represents about 70% of the exports and 60% of the imports,
- elimination of regulatory restrictions to road freight traffic,
- privatisation of road hauliers and progressive alignment to market conditions,
- restructuring of the State-owned transport undertakings in the rail, air and naval sectors,
- rapid increase in private car ownership.

The Romanian transport sector is now considered as restructured. One direct effect is however that the modal split has quickly evolved towards the supremacy of the road sector, as highlighted by the two following figures.

Table 1-28 Passenger transport performance and modal share

	1990		1995		2000		2004	
	mil pass-km	share	mil pass-km	share	mil pass-km	share	mil pass-km	share
Passenger cars	33,595	38%	44,774	59%	45,422	70%	53,840	75%
Public road transport	24,007	27%	12,343	16%	7,700	12%	9,438	13%
Railway	30,582	35%	18,879	25%	11,632	18%	8,638	12%
Total	88,184	100%	75,996	100%	64,754	100%	71,916	100%

Source: SWK Consortium, TA to MT, 2006 estimate (passenger cars) and National Institute of Statistics

Table 1-29 Freight transport performance and modal share

	1990		1995		2000		2004	
	mil tons-km	share	mil tons-km	share	mil tons-km	share	mil tons-km	share
Road	28,993	36%	19,748	48%	14,288	43%	37,220	64%
Railway	57,253	61%	27,179	44%	16,354	49%	17,022	29%
Inland Waterway	2,090	3%	3107	8%	2634	8%	4,290	7%
Total	88,336	100%	50,034	100%	33,276	100%	58,532	100%

Source: National Institute of Statistics

The changes in the transport pattern have resulted in congestion on some road sections and have therefore led to the need to increase traffic capacity on such sections, while ensuring that the rest of the network is in a satisfactory condition.
Regarding the railway sector, the loss of traffic actually implies that there is over-capacity; this leads to the necessity of re-defining the core network and reducing infrastructure costs.

In the air sector, it appears that existing capacities are sufficient on the short term. However, high traffic growth is being recorded and this is likely to continue on the medium term.

In the maritime/naval sector, the capacity of Constanta port appears to be sufficient on the medium term but further modernisation is required, enabling an increase of efficiency. Traffic on the Danube is recovering and improvement of the navigation conditions shall accompany and facilitate this process.

Due to the specific modal role they occupy, air transport, as well as maritime and inland waterway transport are actually in a very limited competition with the other modes of road and rail. In addition, a significant share of rail freight transport offers a service to commodities for which the use of road transport would be considered uneconomic.

It may therefore be said that the main competition between modes is in respect of passenger traffic and freight containers.

Prospects for growth

The main driving force for development of the transport demand is currently considered to be the GDP growth.

Over the past period (1990 – 2005), the restructuring of the Romanian economy and of the transport sector has also played a significant role, driving the strong modal increase of the road transport activities against rail. However, it is considered that the transition period in both the overall economic situation and the transport sector is completed and Romania is now recognised as a functional market economy.

It should, however, be remembered that, if the demand growth is based on the GDP, there are various elasticity rates by modes of transport. These elasticity rates are likely to be similar with the ones registered in the EU over the last thirty years.

In addition, it shall be noted that Romania is a relatively small economy, with an increasingly important international trade. Over the period 2000 – 2005, Romania's international trade has grown from 24.4 billion Euros to 52.3 billion Euros, representing a 115% increase, while GDP was increasing by a cumulative 28% over the same period. In this regard, the growth of the activity in Constanta port and in airports has a similar trend.

The prospects for the future are therefore closely linked with the GDP, with typically:

- growth rates slightly lower than GDP for public road passenger transport, rail and inland waterway transport;
- growth rates higher than GDP for road transport;
- growth rates in line with international trade (much higher than GDP in the medium term) for air and maritime transport.

The evolution of Romanian GDP is summarised in the following table:

Table 1-30 Evolution and Forecast of GDP, Romania, 2000-2030

	2000-2010	2011-2020	2021-2030
GDP yearly growth rate	5%	4.3%	3.1%

Source: Energy and Transport Trends to 2030, published on DG TREN web site

Infrastructure projects implementation – Institutional capacity

Considerable experience has been acquired through the implementation of pre-accession and IFIs programmes, including strong progress towards the EDIS accreditation. The institutional and administrative capacity to manage and implement large infrastructure projects remains to be strengthened. The 2005 Comprehensive Monitoring Report issued by the European Commission states that: "*there are serious concerns in relation to the administrative capacity of the* ***institutional structures****, and in the area of* ***financial management and control****. Immediate action is required to strengthen administrative capacity across all concerned bodies at national, regional and local level, including in relation to the European Social Fund. The cooperation between the central and regional level needs to be clarified and considerably improved. The ability of Romania to guarantee sound financial management and control should be considerably strengthened to be ready by the date of accession.*"

Preliminary indications and conclusions confirm that there is insufficient institutional capacity for the management and implementation of the SOPT (source: *Technical assistance to the MT for Managing Structural instruments; Establishment of the institutional framework for the management of the structural instruments project- Assessment of the current situation – draft report)*. This calls for institutional strengthening through human resources development and technical assistance.

1.9 Environmental situation analysis related to the transport sector

Air – A slight improvement of the air quality was noticed during the period 1995-2004 due to a sharp reduction in the economic activities and retooling programs carried out in some sectors. On the other hand, due to the increase in numbers of new private and public vehicles, the main transport emissions (NOx, SOx, PM) also has increased, being an additional factor affecting air quality.

Biodiversity and habitats – Construction of roads and transport corridors has a direct and mostly irreversible impact on the ecosystems and biodiversity. At the moment, Romania enjoys one of the smallest segmentation of the habitats, which has the biggest value from nature conservation point of view. The implementation of SOPT projects will take into account the Natura 2000 sites network, which is under development and should be finalised in the next period.

Noise pollution – In and out side the cities, Romanian railway and road traffic are major sources of noise pollution. The percentage values of the population quota, which is estimated to be affected by the corresponding noise levels (Leq), per 24 hours 2 m far from the building frontage, vary from one noise source to other. So, the road traffic affects 32% of population with noise levels up to 55dB(A), 23% with noise levels up to 60dB (A) and 10.5% with noise levels between 65-75db(A). In the same time, the rail traffic affects only 5% of population with noise levels up to 60dB(A) and only 1.5% with noise levels between 65-75dB(A). Due to the intensification of the traffic in the urban areas as well as outside the towns and cities, the road noise traffic is likely to grow. The noise from air traffic will grow as well due to the increase in number of flights and passengers. So, special care in this matter will be taken in the SOPT projects implementation.

Waste – Though transport is not the major contributor to the water pollution, it's contributing to the quality of the water of the surface and indirectly to the underground water quality due

to soil pollution. Soil pollution from transport sector is caused largely by emission to the air by direct spills (oil, petrol and chemicals) and discharges on the road surfaces which are washed off with rain waters. Means of keeping road surface free from ice in winter time constitutes another source of soil pollution from the road transport sector.

1.10 Lessons learned from the PHARE and ISPA Programmes

Starting with 1991 the Romanian transport sector received aid from the European Communities in the form of the PHARE Programme mainly aimed to support its administrative capacity development, introduction of European standards and investments.

In addition, starting with the year 2000 the European Union extended its support for the Romanian transport and environmental sector through the ISPA facility, which was focused on investments in infrastructure development, connection with the European transport network and inter-operability.

The involvement, in the Romanian transport sector, of the pre-accession programmes PHARE and ISPA has been a good exercise in preparation for the implementation of post-accession funds due to the lessons learned from encountering different problems and applying solutions within the whole project cycle management.

The main issues and their mitigation can be presented using the following structure:

Administrative Capacity - In the pre-accession period there was a high level of fluctuation of the personnel involved in the management of EU funds, caused mainly by low salaries within the MT. This aspect had repercussions on the management and the implementation of the projects, mainly because of the delays in accomplishing the tasks of the projects, caused by the difficulties to recruit qualified people, the time needed and the associated costs like training new personnel, etc. In order to strengthen the institutional capacity for managing Community funds, the Romanian Government had undertaken a corrective measure in order to increase the financial motivation of the personnel involved in the management of these funds (Law 490/2004). The lack of qualification was also reduced by setting-up and implementing annual training programmes, followed by a proper evaluation. Leassons learned from the implementation of the EU projects also contributed to the improvement of the recruitment process, by increasing the personnel expertise, personnel number being determined based on workload analysis. Moreover, for the institutional capacity issue, a sound personnel policy, measures for administrative enforcement and a flexible and well-defined organigramme were implemented in order to ensure all functions in the system and their separation to avoid the conflict of interest, the overlapping of the activities and the proper flow of documents..

Management and Control - In order to improve the implementation process and facilitate communication procedure, manuals and guides were developed, which are now periodically updated. These procedures, with some modifications, would be applicable for Structural and Cohesion Funds as well. In order to avoid the conflict of interest, a separation of the tasks and functions within the agencies involved in the management of the EU funds was also necessary.

Moreover, the development of dedicated detailed procedure for each type of activity/function is envisaged as result of the experience gained from managing pre-accession funds.

During the PHARE and ISPA implementation, difficulties regarding the audit and financial control were identified. In order to improve the financial control process many concepts like, for example, the audit trail were integrated in the procedures.

The PHARE and ISPA experience in tendering/contracting also helped the design of the new public procurement law. Another lesson learned refers to the importance of well prepared tendering and contracting documentation and, also, to the necessity of having a mature project (land acquisition complete, technical project of good quality and dedicated personnel for each project management).

Programming - The programming process lacked coherence, consistency and a long term vision. The planning process began improving especially after transposing the *acquis communautaire* in the field of transport. The Community priorities and procedures gave a sense of direction for the future planning. There was also a serious issue regarding the qualitative and timely preparation of future individual projects which led to preparation of a large part of the current projects portfolio under ISPA. Also, the road works projects were suffering serious delays because of lengthy land acquisition process. This led to the current proposed change in legislation according to which the land acquisition would be possible from the preparatory stage of a project.

It has to be mentioned that the pre-accession assistance in the transport area wasn't limited to the PHARE and ISPA programmes implemented by MT. SAPARD programme, coordinated by the Ministry of Agriculture, Forests and Rural Development, also contributed to the development of the road transport system in the rural areas with an allocated amount (2000-2006) of about 753 million Euro, out of which 565 million Euro represented EU allocation. The development of rural road infrastructure represented 50% of the allocation given for Measure 2.1 – "Development and improvement of rural infrastructure".

2. SWOT ANALYSIS

Strengths	Weaknesses
Romania is located at an important point of entrance to the EU and has good potential for new multimodal transport links to neighbouring countries and to the Black Sea for international trade.	Lack of the General Transport Master Plan study.
Low cost skilled labour force with good basic education to meet transport infrastructure development demands.	Road network is underdeveloped throughout country and poorly maintained, creating high accident risk.
Prime location along key axes on TEN-T and on Corridor IX that provides good accessibility to neighbouring countries.	There are few motorways with almost no links to EU, development regions or neighbouring countries.
Well established and competitive, privately operated road freight and passenger services are available in most key locations.	Good private freight and passenger services on the road network do not operate in most rural locations.
Extensive railway network with innovative private operators providing local services.	Low maintenance investment of rail infrastructure resulting in speed restrictions and level-crossings are in poor condition.
Developed metro transport in Bucharest, providing good connectivity between all sectors of the Bucharest municipality.	Existing rail wagons and locomotives do not meet current customer demand and for freight, the few block train operations limit the effectiveness of intermodal operations. There is no coordinated contact with rail customers, no mode champion, inflexible pricing and excessive documentation.
Danube and other inland navigation waterways are well connected to provide new potential for low cost bulk freight, development of intermodal container traffic and leisure use.	Rail passenger numbers and freight volume by rail is in decline.
Constanta Port (the largest on the Black Sea) is on TEN-T and has adequate space for expansion and increased throughput with sufficient draught for the largest ships and shipping lines which are expanding their operations and trade routes.	Low investment in new construction and maintenance of fluvial and maritime ports infrastructure, including handling facilities.
Extensive water transport resources are developed that are suitable to low cost bulk transportation of low value commodities in an environmentally friendly mode, that require relatively little network development and maintenance and can provide a cost effective link in the development of new higher value intermodal transport systems.	Danube navigation for large vessels limited by depth and width of canals and river and with few bridges and ferries for transit by road transport, creates a natural barrier to trade.
Multimodal transport (road/rail) is an environmentally friendly mode and has a high share of the current Romanian inland container transport that provides a cost effective alternative to road transport.	Lack of investment in river management and services reduces the value of the waterways and leads to traffic loss to other modes.
	Multimodal transport initiatives are lacking for future development.
	A disproportion existed between the establishment of road and rail infrastructure in favour of rail.
	Safety issues in all modes but air transport.
	Lack of strategy for development of multi-modal transport, as well as of a well-functioning and integrated transport system.
	Insufficient coordination between the transport modes.
	Growing share of long-distance transport

	(transport of goods, raw materials, spare parts etc). Reduced usage of public transport. High contribution of transport to the air pollution. Exceeding noise limits in the cities. Transport infrastructure design and construction quality was not at EU standards so that significant investment is needed for rehabilitation to the EU standards. Lack of experiences in PPP in transport infrastructure. Insufficient institutional capacity for the management and implementation of the SOPT. It is proposed that improvement in institutional capacity should be addressed through technical assistance. Complicated regulation tools (often applied bureaucratically).
Opportunities	**Threats**
Sustained economic growth will lead to greater international trade. New opportunities to use EU funds for development of transport infrastructure, in all transport modes and further modernization of transport infrastructure and implementation of new technologies. The privatisation process will continue to attract investments in transport infrastructure and transport operations. The increased mobility within Europe will create the potential for economic growth in all economic regions. The strengthening of the business climate will result in improvements in manufacturing, agricultural and industrial sectors, leading to greater transport demand. The speeding-up the processes of transport sector's restructuring through concessioning, privatization, legal promotion of competition Potential to develop new cost effective and environmentally friendly bulk freight and container traffic by waterborne means, in addition to leisure traffic on the Danube River. Development of business travel and tourism through the increasing of customer demand for low cost air travel, to Bucharest and regional airports for trade development throughout the	International transit flows could choose to avoid Romania. Delays in implementation of reforms, restructuring and modernization of transport sector and sub sectors. Delays in carrying out priority projects. Projects preparation and feasibility studies as well as land acquisition issues, carried out during long periods of time. Higher costs because of the shortage of skilled resources and of experienced contractors and suppliers in Romania. Further decline of rail transport if rail service, cost and efficiency for both passengers and freight are not improved. There is a risk that if there is insufficient response to customer demand at Constanta for improved services then both rail and waterways transport will be deprived of opportunities to expand Increased efficiency of road transport operations through the building of new motorways would make the intermodal transport less attractive. Growing fleet of vehicles causing high greenhouse gas emissions. Construction of roads in green areas causing biodiversity degradation and increased usage of

country. Restructuring rail operational services (more block trains) for increasing the use of the cost effective multimodal transport modes for transit, international and domestic container traffic. The potential to provide greater access to Europe from the Black Sea countries and to create a cost effective transhipment point between the maritime network and the road, rail and inland waterway networks of Romania. Development of multi-/inter-modal corridors and logistic chains. Supporting the less polluting transport modes (by developing sustainable transport infrastructures) will contribute to the human health, the environmental improvement, and, at the same time, the economic competitiveness. Growing individual transport costs (internalisation of externalities). Plans and actions to phase-out vehicles without exhaust emission control. Further development of public transport systems. Plans and actions to phase-out sales of unleaded petrol. Adopting global environmental standards (ISO). New engines and techniques leading to improved energy efficiency and reduced air pollution.	raw materials. Further development of transport causing significant adverse environmental effects (habitant fragmentation, landscape degradation).

3. STRATEGY

The strategic objectives of Romania's National Strategic Reference Framework (NSRF) for 2007-2013 address promotion of competitiveness, development of basic infrastructure and development and effective use of human resources, and building an efficient administrative capacity.

The main objective for the transport sector in the NSRF focuses on the provision of an adequately developed, modern and sustainable infrastructure, appropriately maintained, facilitating the safe and efficient movement of persons and goods nationally and within Europe and contributing positively and significantly to the economic development of Romania.

The transport sector in the NSRF is fully consistent with, and promotes the Lisbon and Gothenburg strategies of growth, jobs and sustainable development.

3.1 Objectives

The formulation of the ***Sectoral Operational Programme – Transport (SOPT)*** objectives draws on the SOPT analysis of the current state in transport and the SWOT analysis, which were presented in the previous chapter with due consideration to the commitments Romania has made through the *Negotiation Chapter 9 Transport* as well as to the *Community strategic guidelines for the cohesion policy in support of growth and jobs, 2007-2013.*

The macroeconomic and sectoral analyses in the NDP 2007-2013 represented the basis for forecasting the future economic development, and for estimating the traffic flows within various regions of the country, everything being correlated with the Strategic Concept for Spatial Development and Integration into the European Spatial Structures 2007-2025. The macroeconomic analysis has helped to orient the interventions and support the synergy among sectoral interventions.

For the 2007-2013 period, the overall Romanian transport strategy focuses on clear national priorities and the EU policies, such as development of the TEN-T, especially TEN-T priority projects, mode balancing and improvement of traffic safety. This approach comes asa natural reaction to the political commitments as well as to the needs assessment done so far on the whole transport network prior to entering the programming period.

At a global level, the overall transport strategy is put in practice through the use of soft and hard objectives. Soft objectives refer to the transposition of the acquis communautaire in the field of transport into Romanian legislation, as well as to the technical assistance for the management and implementation systems, while the hard objectives refer to actual investment in the transport infrastructure, especially TEN-T and TEN-T priority projects. The bulk of financing available to the sector is used to achieve these objectives.

Until now, the main financing sources of the sector were the IFIs and commercial loans contracted by the state for the main beneficiaries, together with the pre-accession instruments, PHARE and ISPA, and the State Budget. The main interventions so far can be summarised as follows:

- Road rehabilitation packages (TEN-T focused), stages I to VI,

- Road rehabilitation on the Southern Branch of TEN-T axis 7, Lugoj-Drobeta Turnu Severin, Drobeta Turnu Severin – Craiova, including the direct link Simian-Maglavit, and Craiova-Calafat, with the bridge access infrastructure road/rail,
- Motorway construction on TEN-T axis 7 Bucharest-Constanta, as well as Bucharest-Pitesti motorway rehabilitation,
- Road by-passes construction programme,
- Rail rehabilitation on TEN-T axis 22 Bucharest-Campina and Bucharest-Constanta,
- Rail station rehabilitation,
- Road and Rail sector modernisation,
- TA for different institutional support and project preparation.

In order to maintain a coherent and concerted approach for the Romanian transport infrastructure development, the above mentioned interventions will have to be continued with every available financing, in particular through the SOPT 2007-2013.

The poor quality of transport infrastructure and services is a major obstacle to social cohesion and the economic development; e.g. it impedes competitiveness, movement of goods and labour, business settlements, investment, etc. The upgrading of the transport system is urgent and requires huge investments, but financial constraints require prioritisation based on the earlier sound diagnosis of the transport sector, clear objectives and an integrated strategy to achieve them.

As it was seen in Chapter 1, the sub-sectoral analyses identified a series of issues which can be summarised using the following characteristics:
- low mobility by comparison with EU averages,
- high costs of transport in economic terms (lack of efficiency),
- low speeds,
- lack of safety,
- need for additional capacity on main axes,
- unbalanced modal split,
- limited administrative capacity.

These characteristics will add to the basis of the strategy as it will be presented further on in this chapter.

Taking into consideration Romania's need for reducing the economic and social development disparities vis-a-vis EU member states' and that also an efficient, sustainable, flexible and safe transport system can be regarded as a necessary precondition for economic development, together with the commitment to develop the TEN-T and TEN-T priority projects, the global objective of the Sectoral Operational ProgrammeTransport (SOPT) is as follows:

Global Objective

To promote a sustainable transport system in Romania, which will facilitate safe, fast and efficient movement of persons and goods with appropriate level of service at European standards, nationally, Europe-wide and between and within Romanian regions.

Further, the specific objectives are:

i. **Promote international and transit movements of people and goods in Romania by providing effective connections of the port of Constanta, as well as transit transport from EU to the South through the modernization and development of the relevant TEN-T priority axes applying necessary environmental measures.**
ii. **Promote effective movement of persons and goods among Romanian regions and their transfer from the hinterland to priority transport axes by modernizing and developing TEN-T and national networks according to sustainable development principles.**
iii. **Promote the development of a balanced transport system of modes, based on the respective competitive advantage of each, by encouraging the development of rail, waterborne and intermodal transport.**
iv. **Support sustainable transport development by minimizing adverse effects of transport on the environment and improving traffic safety and human health.**

Caveats

This SOPT covers only transport projects co-financed by the CF and ERDF. It is not envisaged to include projects co-financed by third parties including IFIs. This does not imply that the respective projects are not coherent or concerted, but technically, the national public co-financing of SOPT will be ensured by the Romanian State. The support from IFIs and other Financial Instruments will be complementary to the SOPT operations, intervening in a coherent manner towards the same objective, with a special focus on Priority axes 7, 18, and 22.

This SOPT covers the financing of the first and second-wave transport projects for implementation during the budget period 2007 – 2013. It also covers the financing for project preparation during 2007-2013, which are scheduled for implementation during the next programming period 2014-2020.

The development of additional capacity on the TEN-T and TEN-T axes will be done with an approach that is compatible with sustainable development and tackles the issue of climate change. The development of Romanian TEN-T network will have a positive impact on the environment, by reducing transport generated CO_2 emissions. This is valid particularly in the case of road infrastructure, since increased capacity will lead to less congestion and reduced time travel thus helping reduce emissions. In addition, SOPT favours those modes of transport that are the least harmful to the environment, such as rail, metro transport in Bucharest, intermodal transport and the inland waterways and it is looking to maintain, if not improve, the current market share of these modes. Attention will be given to the connection with renewable energy sources in order to be able to reduce the environmental impact of energy consumption.

With the aim of ensuring sustainable development, the environmental aspects will be scrutinised within the selection process of the SOPT projects.

Romania needs connection with the other European countries. In addition, high transport costs (including time) arise due to lack of proper infrastructure and/or infrastructure in poor condition within Romanian territory. SOPT aims at reducing travel times and thus the costs to

access isolated areas within Romania and at ensuring proper connection to the rest of Europe through the main TEN-T axes.
Development of high quality infrastructure, especially motorways, among important traffic generators, will give due attention to improving connectivity with the secondary connection in regions. Moreover, the connectivity with the secondary network will be properly observed and dealt with in relation with the ROP.

The General Transport Master Planning (GTMP) process for Romania is in progress and it will provide a full picture of the sector and the perspective for future strategic development, tackling both infrastructure and services improvement. In addition, modernisation process is underway, notably through ISPA and PHARE projects, for the main transport beneficiaries (road and rail). Studies/actions for improving the management capacity of main transport agencies will also be carried out.

Next, while transport maintenance projects are not covered under the SOPT[10] they are known nevertheless to have important ramifications for the effective functioning of the Romanian transport system. In order to ensure that transport projects are effectively utilized to their design capacity, it is imperative that they are appropriately maintained throughout their design life. However, at times, in the haste to develop new projects, maintenance requirements may not receive their deserving attention without provision for sufficient allocation of funds. This could raise the risk of generating a further backlog of maintenance activities for SOPT projects over and above any existing backlog. Recognizing the risks, the Romanian transport authorities will ensure the monitoring of the adequacy of funding for infrastructure maintenance[11] across the Romanian transport system, on an on-going basis.

3.2. List of Priority Axes[12]

In order to achieve the objective of the SOPT it is proposed to allocate the relevant EU and State funds for transport towards the implementation of the following priority axes:

1. **Modernization and development of TEN-T core network aiming at sustainable transport system integrated with EU transport networks**
2. **Modernization and development of the national transport infrastructure aiming at sustainable national transport system**
3. **Modernization of transport sector aiming at higher degree of environmental protection, human health and passenger safety**
4. **Technical Assistance**

Each *SOPT priority axis* can be funded by either the CF or the ERDF but not both; and will be supported by one or more *operations*. For each priority axs, key areas of interventions were identified.

[10] The fact that transport maintenance projects are not covered in the SOPT and do not receive funding from the CF and ERDF should not diminish their importance. On the contrary it places even more burden on the State to ensure adequate maintenance funding for transport.
[11] See section 3.5.
[12] The reader should be warned of the risk of confusion in terminology which must be clarified. ***SOPT Priority Axes*** refer to major areas of financial intervention by the Structural and Cohesion Funds. On the other hand, ***TEN-T Priority Axes*** refer to the physical transport routes or corridors, which are located on the TEN-T (*Trans-European Transport Network priority axes and projects 2005, (Van Miert report; EC/DGTREN, 28 July 2005)* and have been given the highest priority for intervention by the EU and its member states.

The next table presents a brief outline of the list of priority axes and key areas of intervention.

Table 3-1

Summary list of SOPT priority axes and key areas of intervention

SOPT Priority axes	EU fund	Key areas of intervention
Priority axis 1 1. Modernization and development of TEN-T core network aiming at sustainable transport system integrated with EU transport networks	CF	**1.1** Modernization and development of road infrastructure located on TEN-T core network
		1.2: Modernization and development of railway infrastructure along the TEN-T corenetwork and the development of rail passenger transport, including metro transport in the Bucharest city
		1.3 Modernization and development of water transport infrastructure along the TEN-T core network and the inland navigable canals
Priority axis 2 Modernization and development of the national transport infrastructure aiming at sustainable national transport system	ERDF	**2.1** Modernization and development of national road infrastructure
		2.2 Modernization and development of national railway infrastructure and passenger service and development of the metro transport in Bucharest
		2.3 Modernization and development of river and maritime ports
		2.4 Modernization and development of air transport infrastructure
Priority axis 3 Modernization of transport sector aiming at higher degree of environmental protection, human health and passenger safety	ERDF	**3.1** Promote inter-modal transport
		3.2 Improve traffic safety across all transport modes
		3.3 Minimize adverse effects of transport on the environment
Priority axis 4 Technical Assistance	ERDF	**4.1** Support for effective SOPT management, implementation, monitoring, and control
		4.2 Support for information and publicity regarding SOPT

3.2.1. Priority axis 1: Modernisation and development of TEN-T core network aiming at sustainable transport system integrated with EU transport networks

Objective	This priority axis aims at enhancing the territorial cohesion between Romania and the EU member states, by significantly reducing travel times with improved safety and quality of service to principal destinations, domestically as well as Europe-wide, for both passengers and freight, along the TEN-T core network and the TEN-T ex-priority axes 18 and 22. The objective will be achieved through the development and upgrading of motorways and railway, and water transport infrastructure, with a view to improving the quality, efficiency and speed of transport services, door-to-door, and increasing volumes of freight and passenger traffic from eastern to western Romania. This Priority axis will focus on the development of motorways (TEN-T core network) and on upgrading rail infrastructure with a view to its inter-operability (ex-TEN-T Priority axis 22) and developing rail passenger transport, including via metro system in the city of Bucharest. Special focus will be given to inland water transport (ex-TEN-T Priority axis 18).
Source of funding	Cohesion Fund (CF) and the Romanian State budget.
Rationale	• The Romanian transport system across all modes is insufficiently developed and of inadequate quality as compared to EU member states impeding the quality, safety and O-D (origin-destination) travel time for people and goods. • Long distance Romanian and inter-European transit traffic is particularly disadvantaged due to lack of transport infrastructure at European standards across the TEN-T ex-priority axes 7, 18 and 22. The Danube navigation, as well as the rail and road priority axes require major improvements in their respective infrastructure to offer transport at European standards. • Improved infrastructure along the TEN-T priority axes would enhance the possibilities of increased traffic from Asia via the Black Sea, with Constanta being the principal entry port to Europe. • In accordance with the commitments made by Romania during the negotiation process for the *Chapter 9 Transport Policy* in the field of transport, implementation of projects for developing and upgrading the transport infrastructure on the core network is an absolute priority.
Key areas of intervention	**3.2.1.1 Modernization and development of road infrastructure located on the *TEN-T core network*** These operations will target construction of new motorways and construction of bypasses for cities located on, TEN-T core network. These operations will aim at completing the construction and preparation of the

	motorway projects on the core network TEN-T.
	3.2.1.2 Modernization and development of railway infrastructure along the*TEN-T core network and the development of rail passenger transport, including metro transport in the Bucharest city* These operations aim at making the railway infrastructure *inter-operable* along the TEN-T priority axis 22; also at improving the quality of rail service by modernizing the railway infrastructure and raising the maximum operational speed to 160 km/h for passengers trains and 120 km/h for freight trains. Another objective of it is for rail to retain its present market share of passenger traffic at 15%, while increasing safety level and reducing travel time. Similarly, the objective for freight is to increase its market share by becoming more attractive and more competitive, particularly against road transport through the provision of higher quality of service and speed based on modern European infrastructure standards. These operations will aim at rehabilitating/upgrading/modernizing TEN-T Priority axis 22 (Curtici - Constanta). The focus of the operations will be on the northern branch (Curtici – Predeal), while all necessary preparatory studies will be envisaged for the southern branch (Arad – Calafat), with the aim of starting the works in the next programming period. In addition to modernizing rail infrastructure and in order to ensure effective inter-operability, the project envisaged by this operation will include the introduction of ERTMS/ETCS level 2 systems. Romania will undertake to develop the ERTMS 2 in full cooperation with its neighbours. In the case of railway passanger transport, this operation will allow the preparation of the aquisition of rolling stock for passenger railway transport, with a view to enchance the impact of the newly modernized infrastructure funded by structural funds. Moreover, these operations will aim also to development of Bucharest subway city railway that connects key transport points for Bucharest transport system. The development of the railway capacity of Metro line will be realised through the infrastructure, installation, works, equipment and acquisition of metro trains. It is expected that the metro interventions will impact noise reduction, CO_2 emission reduction (5,5%), CO emission reduction, NO_x reduction (4,3%), SO_2 reduction (5,6%) and material particles reduction (4,5%)
	3.2.1.3 Modernization and development of water transport infrastructure along the *TEN-T core network[13]and the inland navigable canals*

[13] For the implementation of this priority axis special attention will be given to the requirements of the Water Framework Directive (2000/60/EC)

	This Key area of intervention addresses TEN-T Priority axis 18, which includes the River Danube along its full length, the Black Sea canal to the port of Constanta as well as Midia - Poarta Alba canal. It aims at developing the inland water transport infrastructure in Romania in order to increase its utilisation. Initiatives for the Danube river and canals are mostly intended to reduce the incidence of low water and therefore allow barge convoys to travel fully instead of part-loaded, and to increase average speeds by removing obstructions and reduce the need to wait for other vessels to pass. This will be achived mainly by rehabilitation of the loks and aimed atincreasing the flow of the river, creating a self-dredging effect to reduce bottlenecks and ensure the minimum river depth of 2.5m at times of drought. The conditions for navigation on Calarasi – Braila and Sulina Branch sections of the Danube will continue to be improved, the bottlenecks on the shared Romanian-Bulgarian Danube section will be addressed, and the Danube – Black Sea Canal banks will be strengthened and completed. Operations will include preparation of the acquisition of complex multifunctional vessels to ensure water depths and uninterrupted navigation. Also, JASPERS assistance will support both countries for the preparation of the working procedure for their cooperation in case of common projects decided to be financed on the Danube and to develop an institutional framework for common projects on the Danube. More information on the priority axis/key area of intervention in which JASPERS is involved can be found in Chapter 2 – Strategy, subsection 3.6 – JASPERS Assistance. These projects are intended to increase the competitiveness of inland waterway transport and increase its share against road and rail.

Indicator	**Unit**	**Baseline Year**	**Target Year**	**Target**	**Source**
Output					
Length of new TEN-T roads constructed-motorways	km	2006	2015	+ 372.945	SOPT Monitoring System
Lenght of TEN-T railway rehabilitated/modernised	km	2006	2015	209.185	SOPT Monitoring System
Lenght of TEN-Navigable waters open to navigation(minimum depth 2,5 m)	km	2006	2015	200	SOPT Monitoring System
Result					
Value of time savings for passengers and freight transported by new constructed and rehabilitated- road infrastructure	Mln.euro/year	2006	2015	628.1	SOPT Monitoring System
Volume of freight traffic shifted from road to inland waterways	Mln tonne-km/year	2006	2015	186.62	SOPT Monitoring System

Value of time savings for passengers and freight transported by rehabilitated - railways	Mln.euro/year	2006	2015	86.925	SOPT Monitoring System
Number of passengers shifted from road to rail[1]	Mln passenger-km/year	2006	2015	306.75	MT
Volume of freight traffic shifted from road to rail (including inter-modal terminals)[1]	Mln.tonne-km/year	2006	2015	1,719	MT
TEN-T priority projects realised-road infrastructure	%	2006	2015	80	SOPT Monitoring System
TEN-T priority projects realised-railways	%	2006	2015	43.85	SOPT Monitoring System
CO_2 eqivalent emissions - road infrastructure(national roads, motorways and by-passes)	Kt/year	2005	2015	653.163	MT
NO_x emissions- road infrastructure (national roads, motorways and by-passes)	Kt/year	2005	2015	5.954	MT
SO_2 emissions road infrastructure (national roads, motorways and by-passes)	Kt/year	2005	2015	0.016	MT
COV emissions road infrastructure (national roads, motorways and by-passes)	Kt/year	2005	2015	0.200	MT
Fine particulate emissions road infrastructure (national roads, motorways and by-passes)	Kt/year	2005	2015	0.201	MT
NO_x emissions -railways	Kt/year	2005	2015	+0.190	MT
CO_2 eqivalent emissions--railways	Kt/year	2005	2015	-113.251	MT
Fine particulate emissions- -railways	Kt/year	2005	2015	+0.016	MT
Total surface[2] occupied of protected areas[3]-motorways	ha	2006	2015	11.57	MT
Total surface[2] occupied of protected areas[3]—railways	ha	2006	2015	0.07	MT
No of protected areas[3] directly affected by SOPT projects[4]	no	2006	2015	2	MT
Rail market share	%	2006	2015	15	MT

The environment indicators are cumulated for Priority Axis 1and Priority Axis 2 and represents the evolution in comparison with the situation without projects implementation

[1] The indicators represent the cumulative effect of SOPT Priority Axis 1 and 2 (KAI 1.2 and KAI 2.2).

2 The surface occupied by transport infrastructure in addition to the situation without project Categories of protected areas:

a) Of national interest: scientific reserves, national parks, natural monuments, natural reserves, natural parks;

b) Of international interest: natural sites of universal natural heritage, geoparks, wetlands of international importance, biosphere reserves;
c) Sites of Community interest or "Natura 2000" sites of Community importance, special areas of conservation, special protection areas for birds;
d) County or local interest: established only on public/private administrative-territorial units, as appropriate.

[4] It includes road and railway SOPT projects

Priority axis 2: Modernisation and development of national transport infrastructure aiming at sustainable national transport system

Objective	This priority axis aims at modernizing and developing road, rail, water transport and air transport infrastructure on the national network mainly located outside the TEN-T priority axes and promotes appropriate balance among modes of transport. Its objective is to increase passenger and freight traffic with higher degree of safety, speed and quality of service including rail inter-operability; in light of the cohesion policy's objective of developing secondary network connections to the TEN-T priority axes in order to address effectively territorial cohesion Europe-wide as well as among Romania's regions. This area of intervention will also finance missing motorway links in the TEN-T Priority Axis no 7. The priority will envisage the developing of metro transport system of Bucharest This intervention will reduce urban traffic congestion based on the transport demands in the city of Bucharest with the aim to ensure reduction of urban traffic congestion by means of environmentally friendly transport system. In the pursuit of achieving this objective the SOPT will take full account of other OPs. Possible overlaps with other OPs have already been addressed and eliminated[14].
Source of funding	ERDF and the Romanian State budget.
Rationale	• The Romanian transport system across all modes is insufficiently developed with inadequate quality and poor maintenance as compared to EU member states impeding the quality, safety and origin/destination travel time for people and goods. • Long distance inter-regional movement of people and goods is disadvantaged due to lack of transport infrastructure at European standards across the national routes. • The Rhine-Main-Danube axis is a major freight route connecting the North Sea, Port of Rotterdam, to the Black Sea, in particular Port of Constanta.

[14] See Section 3.4

	• There is a high risk that the fast expanding and improved road transport infrastructure with modern motorways and the increased number of cars, will result in shift of passenger traffic from rail to road, thus skewing the balance of transport modes in favour of road transport and against rail.
Key areas of intervention	**3.2.2.1 Modernization and development of national road infrastructure** These operations aim at the modernization and development of national road infrastructure sections that are mainly located outside the TEN-T priority axes. Depending on the gaps caused by the lack of funding for motorways, this area of intervention will cover funding for motorways that are located on TEN-T Priority axes no.7.The objective is to increase passenger and freight traffic with higher degree of safety, speed and quality of service. Also to stall and reverse the recent trends in inter-urban bus passenger traffic which has declined by 72% in the last 15 years and is the lowest of the EU27 (1/4 of the EU average). Road infrastructure of national importance will be developed and modernized, allowing improved access to industrialized regions and population centres and generally to traffic generating nodes, as well diverting transit traffic away from population centres. To this purpose, the existing traffic flows as well as those forecasted for the programming period 2007-2013 will be taken into account. These operations will improve inter-regional accessibility and enhance regional development in Romania by facilitating the movement and therefore promoting the use of locally available supplies and raw materials to industrialized regions; by facilitating access for labour force to these areas; and by facilitating access for the rural population to services including health care in its area of competency and in coordination with the ROP objectives. Even though the area of eligibility under the ERDF and the SOPT does not limit interventions to the TEN road network, priority will be given to upgrading national roads and constructing by-passes on the TEN-T. This aspect will be reflected in the selection criteria proposed for the selection of individual projects[15]. As regards the development of transport infrastructure on Corridor IX as the main transport artery outside the TEN-T priority axes, it has to be noted that attention will be given through the SOPT, but also other financial instruments. The latest financing means include an innovative PPP approach for the Ploiesti – Focsani motorway, as main component of the Bucharest – Chisinau link. Another main transport infrastructure under construction in Romania in the next programming period will be Brasov-Bors motorway. It is to be noted that no Structural and Cohesion funds intervention is envisaged for its construction.
	3.2.2.2 Modernization and development of national railway infrastructure *and the development of metro transport in the Bucharest city* These operations aim at achieving rail inter-operability on the national rail

[15] Decisions on road infrastructure investment on the TEN-T network co-financed by the EU will be made in respect to the relevant EU Directives (including Directive 1999/62/EC, Directive 1996/53/EC and Directive 2006/38/EC)

	infrastructure mainly located outside TEN-T priority axes by modernizing rail sections, and by rehabilitating railway stations, bridges and tunnels. In the context of the introduction of ERTMS/ETCS level 2 systems, attention will also focus on the preparation of technical specifications for interoperability on the conventional rail network and other interoperability issues. The railway stations taken into consideration will be the major railway stations located in the county capitals of Romania. Considering the commercial nature of railway stations, revenue generation will be taken into account where relevant. These operations will aim also to development of Bucharest subway city railway that connects key transport points for Bucharest transport system. The development of the railway capacity of Metro line will be realised through the infrastructure, installation works, and equipment acquisition. .
	3.2.2.3 Modernization and development of river and maritime ports These operations aim at financing the modernization and development of Danube and Black Sea ports, with a view to increasing efficiency and attractiveness for users and raising traffic for this transport mode. In order to capitalize on the potential of offered by the Rhine-Main-Danube axis, the development of Danube and maritime ports, in particular port of Constanta becomes a major objective. This objective will be achieved by facilitating port operations and efficiency, increase container stacking and handling capacity, and increase vessel safety in the port of Constanta; and also by similar initiatives on other Danube ports subsequent to recommendations of an upcoming proposed study supporting the need for such initiatives (such as Calafat Port, for example). Where justified, for the common sector of the Danube, correlation/complementarity with Bulgaria will be assured. However, when deciding on the investment location, selection criteria (to be approved by the Monitoring Committee) will be applied, such as isolation, accessibility, traffic etc.
	3.2.2.4 Modernization and development of air transport infrastructure These operations aims at financing the modernization and development of selected Romanian airports, with a view to increasing efficiency and attractiveness for users and raising capacity utilization, as well as connecting effectively to Community and International points. This objective is consistent with the provisions of the *Community strategic guidelines for the cohesion policy in support of growth and jobs, 2007-2013,* in particular as it applies to the promotion of regional development with a special focus on improving the *connectivity* of landlocked territories to the TEN-T. Aid will be provided to the airports based on proper justification. This will include compliance with a set of criteria comprising at minimum: traffic, safety, isolation,

	economic viability and sustainability.

Indicator	Unit	Baseline Year	Target Year	Target	Source
Output					
Lenght of TEN-T national roads rehabilitated	km	2006	2015	302.796	SOPT Monitoring System
Lengh of new roads constructed - motorways	km	2006	2015	13.632	SOPT Monitoring System
Lengh of new roads constracted - national roads	km	2006	2015	100.535	SOPT Monitoring System
Railway stations rehabilitated /upgraded	no	2006	2015	+18	SOPT Monitoring System
Railway bridges/tunnels rehabilitated	no	2006	2015	98	MT
Ports rehabilitated	no	2006	2015	1-2	SOPT Monitoring System
Airports rehabilitated/upgraded	no	2006	2015	2	SOPT Monitoring System
Result					
Volume of freight traffic shifted from road to inland waterways	Mln tonne-km/year	2006	2015	187.62	MT
Value of time savings for passengers and freight transported by new constructed and rehabilitated roads-road infrastructure	Mln euro/year	2006	2015	182.384	MT
Number of passengers shifted from road to rail[1]	Mln passenger-km/year	2006	2015	306.75	MT
Volume of freight traffic shifted from road to rail (including inter-modal terminals)[1]	Mln.tonne-km/year	2006	2015	1,719	MT
CO_2 eqivalent	Kt/year	2005	2015	653.163	MT

emissions - road infrastructure(national roads, motorways and by-passes)					
NO_x emissions- road infrastructure (national roads, motorways and by-passes)	Kt/year	2005	2015	5.954	MT
SO_2 emissions road infrastructure (national roads, motorways and by-passes)	Kt/year	2005	2015	0.016	MT
COV emissions road infrastructure (national roads, motorways and by-passes)	Kt/year	2005	2015	0.200	MT
Fine particulate emissions road infrastructure (national roads, motorways and by-passes)	Kt/year	2005	2015	0.201	MT
NO_x emissions - railways	Kt/year	2005	2015	+0.190	MT
CO_2 eqivalent emissions--railways	Kt/year	2005	2015	-113.251	MT
Fine particulate emissions- -railways	Kt/year	2005	2015	+0.116	MT
Total surface[2] occupied of protected areas[3]-motorways	ha	2006	2015	11.57	MT
Total surface[2] occupied of protected areas[3]—railways	ha	2006	2015	0.07	MT
No of protected areas[3] directly affected by SOPT projects[4]	no	2006	2015	2	MT

The environment indicators are cumulated for Priority Axis 1and Priority Axis 2 and represents the evolution in comparison with the situation without projects implementation

[1] The indicators represent the cumulative effect of SOPT priority axis 1 and 2 (KAI 1.2 and KAI 2.2).

[2] The surface occupied by transport infrastructure in addition to the situation without project

[3]Categories of protected areas:

a) Of national interest: scientific reserves, national parks, natural monuments, natural reserves, natural parks;
b) Of international interest: natural sites of universal natural heritage, geoparks, wetlands of international importance, biosphere reserves;
c) Sites of Community interest or "Natura 2000" sites of Community importance, special areas of conservation, special protection areas for birds;
d) County or local interest: established only on public/private administrative-territorial units, as appropriate.

[4] It includes road and railway SOPT projects

Priority axis 3: Modernization of transport sector aiming at higher degree of environmental protection, human health and passenger safety

Objective	This priority axis aims at implementing the principles of sustainable development of the transport sector in Romania, as per the Cardiff conclusions of the European Council (1998) and the European Strategy for Sustainable Development (Gothenburg 2001). It will promote increased levels of safety, minimize adverse effects on the environment as well as promote intermodal and combined transport.
Source of funding	ERDF and the Romanian State budget.
Rationale	• Current trends show high fatality rates and property damage caused by transport accidents, particularly on Romanian roads, significantly in excess of European levels. Such accident levels compromise significantly *transport safety* at European standards. The forecast increases in traffic can only worsen an already unsatisfactory level of safety. • Unless measures are taken to ensure *balanced development of transport modes* based on the respective competitive advantage of each, through measures such as intermodal and combined transport, indications point to compromising the appropriate balance of transport among transport modes. • Present indications point to increasingly negative effects of transport on the *environment* unless measures are taken to reverse such trends.
Key areas of intervention	**3.2.3.1 Promotion of inter-modal transport** These operations promote intermodal transport and will implement projects to facilitate modal shift for freight, principally from road to rail/road or waterway/road. The provision or rehabilitation of relevant infrastructure (waterways and ports, rail track) is addressed by other operations: consequently, the promotion of intermodal transport refers mainly to the elaboration of fesability studies for terminal infrastructure or logistics centres for intermodal units, that could be financed in the 2014 -2020 programming period from European stucturale funds, in the locations considered priority by the General Transport Master Plan. It is expected to aid intermodal operations focussing on rail.
	3.2.3.2 Improvement of traffic safety across all transport modes These operations aim at ensuring implementation of European standards of safety and security across all transport modes including intermodal. A number of initiatives will be implemented under this key area of intervention including the following: <u>Safer roads</u> • Improved road/rail level crossings and construction of new road /rail over/under passes, • Horizontal and vertical signalling system,

	• Improving and developing the physical infrastructure, by taking preventive measures (e.g. road indicators, video cameras, linear villages etc). <u>Safer railways</u> • Electro-dynamic centralization (interlocking), automatic barriers, signalling, etc. <u>Safer water transport</u> • Improve vessel traffic management information system (VTMIS). With respect to the implementation of VTMIS on the Danube's common sector, Romania will provide Bulgaria with all available and relevant VTMIS information/data. Bulgaria on its part will need to invest in communications and computer systems in order to be able to receive it and make effective use. In this respect, the cooperation between both countries will be sought based on the JASPERS assisted procedural and institutional framework for the improvement of navigation on the common Romania-Bulgaria Danube sector.
	3.2.3.3 Minimise adverse effects of transport on the environment These operations include the introduction of efficient non-polluting/environment-friendly transport infrastructure initiatives, with European standards and requirements across all transport modes including inter-modal activities and in observance to the Kyoto Agreement. A sub-objective of these operations will be to mitigate the environment impact of past developments in the transport sector prior to the introduction of the sustainable development legislation in Romania. A second sub-objective will be the aid for the establishment of a management environmental system, which will include strategic analysis, assessment of specific impact for the transport sector, monitoring and mitigation measures and inter-institutional co-operation.

Indicator	Unit	Baseline Year	Target Year	Target	Source
Output					
New/Upgraded intermodal terminals	no	2006	2015	1-2	SOPT Monitoring System
Railway level crossings	no	2006	2015	112	SOPT Monitoring System
Kilometers of linear villages protected	km	2006	2015	36	SOPT Monitoring System
Environment protection projects	no	2006	2015	1	SOPT Monitoring System
Result					
Reduction in serious accidents (serious accidents /million passenger –km)	%	2003	2015	-20	National Statistics/Road Police
Reduction in fatalities(fatalities /million passenger -km)	%	2003	2015	-20	National Statistics/Road Police

3.2.4 Priority axis 4: Technical Assistance

Objective	Proper implementation of the structural instruments requires institutional support and strengthening of the administrative capacity in the coming years. This support and strengthening will need to come in the form of hiring and training additional personnel in both general administrative duties and technical aspects of transport project management within the MT and the beneficiaries, as well as promoting the understanding and appreciation of the role and purpose of the EU's contribution in developing the transport infrastructure of Romania. Having clarified the respective competencies of the OP for TA in the area of human resources, one of the sub-objectives of the SOPT will be the training of personnel on the technical aspects of implementing transport projects, as detailed below.
Source of funding	ERDF and the Romanian State budget.
Rationale	• Institutional capacity needs to be strengthened for the effective implementation of the SOPT. • The current level of training is inadequate for the effective implementation of the SOPT. • Publicity and promotion of the SOPT to the public-at-large, direct applicants and clearly sectoral stakeholders will increase awareness and knowledge about the SOPT interventions.
Key areas of intervention	**3.2.4.1 Support for effective SOPT management, implementation, monitoring and control** It includes preparatory , management, monitoring, evaluation, information and control activities of the SOPT together with actions to reinforce the administrative capacity for implementing the Structural and Cohesion Funds, including among others, the following: • Ensure adequate resources for administrative costs and relevant equipment. • Services associated with effective SOPT implementation, which will include: - support for preparatory, managing, implementing, monitoring, controlling, auditing, evaluation activities of SOPT etc. - support for managing and monitoring structures of the SOPT in implementing their tasks, including legal assistance for eg claims, etc. - training in preparation, selection, assessment and evaluation of projects and in management and monitoring of the projects implementation, including project management, management of legal issues and claims, cost benefit analysis and safety analysis etc.

	• Continuous updating and development of the General Transport Master Plan (GTMP) and other horizontal studies. • Support the management capacity of the key beneficiaries in order to ensure long-term sustaiability of the investments under the SOPT; complementarity will be assured with the TA components financed from other sources. • Support for preparation of transport sector planning for the next programming period eligible to be financed by EU structural funds and CEF, including support to horizontal preparatory studies. In line with the EU regulations, these activities can consist in the enhancement of personnel and seconded staff directly involved in the implementation of SOPT and financing their payroll, including social insurance, services for the Managing Authority and Monitoring Committee, support of management, monitoring and control, audit and evaluation of SOPT. In addition, they can provide for the procurement of ICT for management, monitoring, inspection and evaluation activities for the staff directly involved in the SOPT management and implementation, for publicity activities including web site for SOPT establishment and maintenance and organisation and participation in training and exchange of good practice in the management of the SOPT. The operations will be addressed to the management and monitoring structures and the staff of both the Managing Authority and Final Beneficiaries, involved in management and implementation of SOPT These operations will envisage the consolidation of the CNADNR SA and CNCF CFR SA administrative capacity in order to ensure a good implementation of the SOPT projects and the preparation of projects for the 2014 -2020 programming period. MT's efforts to pursue as far as possible the modernisation of the key transport agencies, CNADNR SA and CNCF CFR SA will be done through the support for the management capacity provided by the SOPT. A key element for supporting management capacity of main transport agencies is represented by establishment, as soon as possible, but no later than the end of 2007, of a Roadmap which will propose solutions in order to achieve: - Continuation of structure strengthening following EDIS and other audits recommendations, - Simplification of administrative systems and procedures, - Strenghtening of staff and efficiency including through staff increase and/or training, specialised assistance in key areas (legal assistance, claims etc.), externalisation of specific tasks, - Strengthened partnership with the users of transport infrastructure.

	The financing resources for the implementation of the Roadmap will be primarily provided by the SOPT, and in case of shortfall, by the State Budget or other sources available to the sector. These actions will be closely monitored by the Managing Authority for SOPT and the achieved progress and the planning of the remaining activities will be regulary reported to the Monitoring Committee. Technical Assistance funds will be set aside for evaluation needs. In addition, separate units are established for the CBA and Evaluation in the Managing Authority for SOPT.
	3.2.4.2 Support for information and publicity regarding SOPT It includes the following: • Information campaign promoting and explaining SOPT to beneficiaries, partners and the public. The aim of this activity is to support implementation of the Communication Plan drawn up by the Managing Authority. Various media, advertisements, brochures, posters, seminars and promotion materials will be used for the purpose of this operation. • Website promoting and explaining SOPT. This activity should include an information portal for the benefit of SOPT managing and implementing staff, beneficiaries, partners and the public for accessing SOPT information and providing feedback. • Establishment of a Unit in the Managing Authority to manage information and publicity activities and training of relevant staff and partners in communications skills. • Evaluation of information and publicity activities promoting SOPT and tasks implemented.

Indicator	Unit	Baseline Year	Target Year	Target	Source
Output					
Studies, evaluations, institutional support	no	2006	2015	12	SOPT Monitoring System
Committee meetings and relevant working groups	no	2006	2015	18	SOPT Monitoring System
Total number of editions of printed information or promotional materials	no	2006	2015	15	SOPT Monitoring System
Number of communication and promotion events	no	2006	2015	16	SOPT Monitoring System
Level of awarness	%	2006	2015	15	SOPT Monitoring

					System
Website hits	no	2006	2015	350,000	SOPT Monitoring System
Participant training days- MA	no	2006	2015	1,785	SOPT Monitoring System
Participant training days-beneficiaries	no	2006	2015	4,165	SOPT Monitoring System

3.3 Coherence and compliance with the Community and national policies

3.3.1. Coherence and conformity of SOPT with Community policies

Community policies	Community policy reflection in	
	SOPT priority axes	SOPT key areas of intervention
Lisbon Strategy: - Growth - Jobs Community strategic guidelines for the cohesion policy in support of growth and jobs, 2007-2013 Negotiation Chapter 9-Transport White paper, European transport policy (EC, 2001) - Balanced development across all transport modes - Elimination of bottlenecks - Safety in transport policy - Globalization of transport policy Trans-European transport networks (TEN-T) - priority axes and projects 2005 Conclusions of the European Council in Gothenburg 2001 EU public procurement provisions (Directive 2004/17/EC, Directive 2004/18/EC)	Modernization and development of TEN-T core network aiming at sustainable transport system integrated with EU transport networks Modernization and development of national transport infrastructure outside the TEN-T priority axes aiming at sustainable national transport system Modernisation of transport sector aiming at higher degree of environmental protection, human health and passenger safety.	Modernization and development of road infrastructure along the TEN-T core network Modernization and development of railway infrastructure along the TEN-T core network and the development of rail passenger transport, including metro transport in the Bucharest city Modernization and development of water transport infrastructure along the TEN-T core network Modernization and development of national road infrastructure Modernization and development of national railway infrastructure and passenger service Modernization and development of river and maritime ports Modernization and development of air transport infrastructure Promote inter-modal transport Improve traffic safety across all transport modes Minimize adverse effects of transport on the environment

Sustainable development

The sustainable development will be reflected in the reduced impact transport-environment and low pollution from transport activities.

Romania assumed environment commitments in the negotiation of the Chapter 9 "Transport policy" and in the international treaties and agreements signed by Romania and/or EU (UN Framework Convention on Climate Change from 1992, the Kyoto Protocol from 1997, the Geneva Convention on cross-border air pollution etc) and there will be a continuous cooperation with the environmental authorities.

Therefore there will be a particular focus on:

- elaboration of studies and data bases for green house effect emissions across transport modes, to be annually submitted to National Inventory of GHG;
- elaboration of critical thresh holds and loads in air pollution at national level and at cluster base and elaboration of emissions forecasts on social and economic basis;
- development of appropriate infrastructure for waste management for all transport modes;
- development of logistics for noise mapping, and mitigation action plans by transport authorities;
- Reduction of environmental impact of transport projects and activities.

SOPT will follow Romania's objective of reducing the emissions generating the heating effect by 8% as compared to 1989, during the first commitment period between 2008-2012, as a integrant part of the objective of reducing the global emissions generating the heating effect by at least 5% as against 1990 between 2008-2012[16].

The SOPT was assessed by strategic environmental assessment (SEA), according to the harmonised national legislation setting up the environmental assessment procedure of certain plans and programmes.

At the level of the SOPT, special attention is given to the principles of environment and sustainable development, which will be integrated in the implementation of all priority axes.

At project level, all projects for construction, extension or rehabilitation of transport infrastructure financed under the SOPT will be subject to environmental assessment procedures under recent Romanian legislation, fully harmonised with the relevant EU regulation in force.

In addition, for the major projects CBA and EIA, as well as relevant qualitative criteria will be taken into consideration in the selection of projects, the positive and negative effects on the environment being also considered.

For small projects, a qualitative analysis, including also the environmental effects, will be introduced in the selection criteria.

The evaluation of the SOPT will be linked with the set of monitoring indicators proposed by the SEA for SOPT, in particular with those indicators that will assess the issues of climate

[16] Kyoto Agreement, 1997

change. The effects taken into consideration by the CBA and other qualitative analyses of the projects will have to be correlated with these environmental indicators.

Sustainable development will also be reached by extending combined and intermodal transport with the related equipment and by using special vehicles with low energy consumption and high environment protection, by introducing highly performing vehicles from a technical and operational point of view, and creating the conditions for sound insulation (such as wooden protection curtains) to reduce noise levels for houses close to road and rail traffic.

Moreover, the concept of International Logistics Centres will be introduced in intermodal transport to improve the efficiency of road and rail transport, the use of electrical trains will be increased,. In addition, environmental protection will be enhanced by introducing modern electrical equipment for passenger railway transport, the extension of electrification of the railway network and the introduction of modern systems and technology for freight loading-unloading in the ports and harbours. Specific projects will be designed to introduce new technology to control and prevent pollution in the maritime and river transport sector.

Improving the conventional railway infrastructure and the rolling stock will lead to a more attractive and cost effective railway transport system. This is part of the main EU objective for 2007-2013 for revitalizing the railway transport sector system by offering a non-polluting alternative, which will be a safer alternative for both passengers and freight, as compared to other transport modes.

In the air transport field, the use of noisy aircraft will be discouraged, the intentions being to use modern noise monitoring systems in the airports, specific waste systems and take off/landing procedures aimed at reducing the impact on the residential neighbourhood.

Special attention will be granted to the provisions in the "Green Book for action against the noise"[17], by using modern noise control systems in the railway and road transport and eliminating noise emissions from the source to protect the public health against the noise.

In the field of sustainable development, correlation of the various efforts is very important, therefore complementarity will be ensured between the SOPT and other programmes.

Based on the Marco Polo programme on moving the freight traffic from road transport to other transport modes[18], and considering the EC request to continue the programme[19] in 2007-2013, the Romanian counterpart achieved the procedures in due time, by signing the "Memorandum for agreement between the European Community and Romania on Romania's participation to Marco Polo Programme", the operations regarding the intermodality and the combined freight will be encouraged and adjusted, as well as the development of the related equipment network.

Government programmes will support the renewal of the fleet (road vehicles, train sets, maritime shipping fleet, river barges and boats and aircraft), which is one of the ways to reach the objective of durable development. This operation, including regulatory and financial components, will have a decisive impact on reducing environment pollution (water, air, soil) and increasing the energy efficiency of transport.

[17] The European Commission Green Book for the future policy on noise, November 4, 1996
[18] Regulations 1382/2003 from July 22, 2003
[19] "Marco Polo" Regulation proposal by EC nr. COM (2004)0478 final

Additionally, the renewal will have a positive effect on the security of transport in general.

Equal opportunities

Equality of opportunity to groups sharing less than their fair balance of social advantages is a major issue affecting the evolution of the economy and the society in Romania. In the transport sector, men in particular are advantaged in finding a working place. This is why special care will be granted to this aspect and actions will be undertaken to keep the equality principle not only between genders but also with regard to vulnerable groups such as Roma, the disabled and immigrant population.

In many countries cultural differences have restricted some aspects of equality but by careful consideration of the issues and in some cases redrafting of employment law a gradual move towards equality can be made.

In many cases economic necessity has powered such change for the benefit of full employment and freedom for the individual.

Competition Policy and State Aid

This Operational Programme has been developed having regard to the Community rules on State aid. The provisions of Articles 87 and 88 of the Treaty in relation to state aid rules will be fully respected. Any public support under this programme must comply with the procedural and material State aid rules applicable at the point in time when the public support is granted.

Acting according to its competence set out in the national legislation, as the national State aid authority[20], the Competition Council has provided support to the OP Managing Authority in respect of State aid applicable rules and it is providing on-going operational advice and guidance, including the process of drafting normative or administrative acts by which state aid measures are instituted.

The Competition Council, acting as the Contact Point as regards State aid, between the European Commission on one side and Romanian authorities, State aid's grantors and beneficiaries on the other side, shall ensure the strict observance of the notification requirements. With regard to the block exemption regulations all information required by the relevant regulations will be provided.

Notifications of state aid measures, respectively information on state aid measures subject to block exemptions, are submitted for consultative opinion to the Competition Council. Subsequently, the Competition Council will submit these notifications/information to the European Commission, through Romania's Permanent Representation to the European Union. Authorities, grantors and state aid beneficiaries are obliged to provide to the Competition Council all the required information, in order to be sent to the European Commission. For those operations where the public financing constitutes aid, but does not fall under the above mentioned categories (e.g. "de minimis aid"), the relevant authorities will ensure compliance with the state aid regulations and procedures.

Within the programming period, the schemes designed by the granting authorities and/or ad-hoc aid will be submitted to the Commission, whenever the EC rules request an *ex-ante* approval from the Commission. Specific obligations with regard to individual notification of aid granted under aid schemes will be respected. The Competition Council cooperates with the authorities, other state aid grantors and beneficiaries and supports them towards an adequate implementation of the acquis communautaire.

Managing Authorities will have the full responsibility to ensure compliance with State Aid rules in the context of Structural and Cohesion Funds. The actual implementation will be the responsibility of the Managing Authority. Questions demanded of applicants, the guidance given, as well as the provisions of the financing agreement will ensure that the applicants understand the limitations on assistance given and provide sufficient information to highlight any potential problems and corresponding obligations. Procedures will ensure that compliance is checked during claim checks and on the spot checks during verification and certification.

The OP Annual Implementation Reports will detail the measures undertaken in order to ensure the compliance of all operations with State Aid rules with respect to the provisions of block exemptions (referring to: small and medium-sized enterprises, employment, training SGEI and transparent regional investment state aid), " de minimis aid" and other types of state

[20] Competition Law no. 21/1996, republished and the Government Emergency Ordinance no. 117/2006 on the national procedures in the field of State aid.

aid under notification obligation (such as: research, development and innovation state aid, regional state aid, risk capital, environmental state aid etc.) In addition, any information required by the Commission and by the World Trade Organization regarding state aid schemes, individual state aids or "de minimis aid" shall be provided according to the applicable rules.

Public procurement

The procurement of all contracts financed through the Structural and Cohesion Funds and corresponding national co-financing shall be done in compliance with EU legislation and primary and secondary national legislation implementing the EU provisions on public procurement[21].

In order to ensure coherence with EU procurement polices, the Romanian authorities transposed the Directives No 17/2004/EC and No 18/2004/EC, by adopting the Law No 337/2006 for approving the Emergency Government Ordinance No 34/2006 on awarding of the public procurement contracts, public works concession contracts and services concession contracts. The secondary legislation was also adopted.

To enforce the legal provisions, the National Authority for Regulating and Monitoring Public Procurement (NARMPP) was set up. This body has the role to develop public procurement strategies, ensure coherence with Community acquis, ensure conformity in the application of legislation, fulfil EU Directive obligations, monitor, analyse and evaluate the methods used for awarding public contracts, as well as advice and train personnel involved in procurement activities. The NARMPP has set up the framework for Romanian national procurement methodologies and is providing advice and support.

All public procurement contracts will be awarded in compliance with the new harmonised national legislation. The principles applied in contracting are: non-discrimination, equal treatment, mutual recognition, transparency, proportionality, efficiency of used funds and accountability.

The general procedures for concluding public procurement contracts are the open and the restricted tender. Only as exceptions, the competitive dialogue, the direct negotiation or offer request, the framework agreement, the electronic auction and the dynamic purchasing system are foreseen by the law. The General Inspectorate for Communication and Information Technology is the operator of the electronic system for public procurement (ESPP).

The contracts are published in the ESPP, in the National media and, where the relevant thresholds under Community Directives are applicable, in the Official Journal of the European Communities.

The eligibility and selection criteria make reference to the personal situation, the ability to exercise the professional activity, the economic and financial situation, the technical and/or professional capacity, quality assurance and environmental standards. The awarding criteria are: the most economically profitable offer or, exclusively, the lowest price.

[21] Compliance with original EU Public Procurement Law, namely Directives 2004/18/EC and 2004/17/EC of the European Parliament and the Council, as well as the relevant provisions of the EU Treaty will be ensured.

The NARMPP provides training, courses and seminars for the main purchasers from central and local level, including institutions involved in the management of the SCF and potential beneficiaries.

The ex-ante control system in the public procurement field has become functional through the Emergency Government Ordinance no 30/2006 and the Government Decision no 942/2006 for approving the methodological norms for EGO no 30/2006. In this respect, the Unit for Coordination and Verification of Public Procurement (UCVPP) within the Ministry of Economy and Finance has been appointed as the body responsible for ensuring ex-ante verification of public procurement procedures, including those carried out under the Structural and Cohesion Funds programmes.

UCVPP works together with the NARMPP and the Managing Authorities, on the basis of an agreement that clearly separates the verification functions in the field of public procurement for each structure, and also with any other public institution.

In order to improve the quality of the public procurement system and to ensure the compliance with the national legislation in the field, the Ministry of Economy and Finance, through its specialized structures at central and territorial level, verifies the process of contract awarding based on risk analysis and on a selective basis. For performing the task of verification, UCVPP shall appoint observers during all stages of the public procurement procedure. The observers will issue activity reports and if they detect inconsistencies during the procedure they will give a consultative opinion. The opinion will be sent to the NARMPP as well as to the authority hierarchically higher to the contracting authority. In case of projects financed through Structural and Cohesion funds, the opinion and the activity reports are sent also to the competent Managing Authority.

The contracting authority has the responsibility for the decisions made during the process of awarding public procurement contracts. The decisions made by the contracting authority are sent to the NARMPP and UCVPP.

This established system on the ex-ante verification procedure, as part of the entire management system of the SCF, is ensuring the efficiency and effectiveness of the use of the Funds by guaranteeing the compliance of the public procurement procedure with the national legislation and with the EU directives.

3.3.2 Coherence and compliance of SOPT with the national policies

National policies	National policy reflection in	
	SOPT priority axes	**SOPT key areas of intervention**
Law nr. 203/2003 (republished) on developing and modernizing the transport network of national and European importance and Law 336/2006 for approval of the National Territorial Planning – Section I – Communication ways Romanian modal transport strategies approved by Law National Strategic Reference Framework (NSRF) and National Development Plan (NDP) 2007-2013 Negotiation Chapter 9-Transport Governmental programme for the period 2004-2008 Law 3/2001 for ratifying the Kyoto Agreement Government Decision 321/2005 for reassessment and management of the environmental noise	Modernization and development of TEN-T core network aiming at sustainable transport system integrated with EU transport networks Modernization and development of national transport infrastructure outside the TEN-T priority axes aiming at sustainable national transport system Modernization of transport sector aiming at higher degree of environmental protection, human health and passenger safety.	Modernization and development of road infrastructure along the TEN-T core network Modernization and development of railway infrastructure along the TEN-T core network and the development of rail passenger transport, including metro transport in the Bucharest city Modernization and development of water transport infrastructure along the TEN-T core network Modernization and development of national road infrastructure Modernization and development of national railway infrastructure and passenger service Development of transport capacity of urban metro transport in Bucharest.Modernization and development of river and maritime ports Modernization and development of air transport infrastructure Promote inter-modal transport Improve traffic safety across all transport modes Minimize adverse effects of transport on the environment

3.4 Complementarity with other Operational Programmes and the operations financed from EAFRD and EFF and cooperation with the EU neighbouring states

The SOPT MA has addressed complementarity with other Operational Programmes,in cooperation with the respective Managing Authorities.

More specifically, and subsequent to an agreement between the Romanian competent authorities of the SOPT and ROP, it was established that:

- County roads will be within the scope of ROP; while European and national roads will come under SOPT;
- All motorways will come under the scope of SOPT;
- Urban transport infrastructure will be within the scope of ROP and will not be addressed in the SOPT, with the only exception of Bucharest metro;
- Communal roads will be financed from EAFRD;
- All airports will be within the scope of SOPT;
- TEN-T ports will be within the scope of SOPT; while other ports will come under the OPs for Objective 3 – "European Territorial Cooperation".

The SOPT will be consistent with and draw from the ROP and the NRDP analyses and recommendations to ensure that it responds effectively in its area of competency to the need for national, regional and local accessibility, including the access of rural population to services such as healthcare.

At the national level an operational programme for technical assistance (TA) has been established, for which the Managing Authority is the Ministry of Economy and Finance.

The technical assistance priority axis under SOPT aims to ensure specific support for the management and implementation of the SOP, including specific training of the personnel, as well as the information and publicity of the interventions financed through SOPT. Technical Assistance OP ensures the horizontal training on Structural and Cohesion Funds implementation, SMIS maintenance and development, as well as the general measures on information and publicity of overall SCF assistance.

The Ministry of Transport has quite an extensive cooperation with its EU neighbors, Bulgaria and Hungary. High level meetings are organised to assure a coherent approach of the transport infrastructure interventions on the EU territory and to assure the harmonisation of the sector policy.

The Romanian SOPT Managing Authority is ensuring close cooperation with the MAs for the SOPT from the two neighbouring member states. MT has inititated the preparation of a common implementation structure with regard to the improvement of the navigation conditions on the common sector of the Danube (European Grouping for Territorial Cooperation is considered).

3.5 Sustainability of investments

As it was underlined in the *Chapter 1 – Analysis of the current situation*, the sustainability issue with explicit reference to the maintenance of the transport infrastructure, more visible for road and rail infrastructure, stemmed from a number of factors related to the inheritance of an inadequate infrastructure, under-investment in the modernisation and development of old and new infrastructures, under-financing of infrastructure maintenance due to national budget constraints, rapid increase in heavy traffic (road specific) and changes in the climate with effect in high variance of temperatures and flooding.

In an effort to tackle the sustainability issue, the Ministry of Transport, together with the main infrastructure administrators are improving the Infrastructure Maintenance Programme, in particular for motorways, national roads and railways with focus on the management systems and financing.

The management systems refer, in case of the road infrastructure, to the Pavement Management System (PMS) and Bridge Management System (BMS), which envisage damage prevention through use of a systematic routine and regular maintenance. The railway systems, although more rigid due to their strict procedures regarding safety, are making use of the newest railway information systems and special utility rail vehicles in order to develop a more efficient maintenance system. Systems improvement has also included substantial reform of the way maintenance is actually carried out. Since 1996, maintenance of the national roads has gradually been contracted out, starting with periodic maintenance. This process has included commercialisation of former in-house works units. To date, about 80% of the total maintenance activities on the national road network, including routine and winter maintenance, are carried out by third parties. The process for the total externalisation of the maintenance has been launched and it is estimated to be finalised in 2007.

As regards maintenance financing, the situation over the last years has been significantly improving in the road sector, with the following amounts being used:

Year	2001	2002	2003	2004	2005
MEuro	159	172	312	241	447

Even if the figure for 2005 includes about 150 Meuro for a special overlay programme and for remedial works after floods, it appears that the trend of maintenance budgets is substantially progressing and has been for several years now well above the total needs, estimated at 210 Meuro per year[22]. It is mentioned however that long term solutions remain to be found so as to secure such funding, as part of the maintenance financing is currently ensured through loans.

The new approach to the financing of the transport infrastructure maintenance envisages new contracting methods, including multi-annual (minimum 4 years) maintenance contracts based on performance criteria. In this regard, the strategy envisage to introduce the maintenance performance based contracts for national roads and a programme has recently been launched, aiming at defining and implementing a pilot of output-based area-wide multi-year maintenance contracts with the objective of gradually expanding the coverage to the whole country within four years.

[22] Technical Assistance for the Romanian Fiscal Policy in the Road Sector – Prointec - 2006

The rail infrastructure maintenance financing levels over the last years also show a positive trend:

Year	2001	2002	2003	2004	2005	2006 (estimate)
MEuro	331	303	328	332	428	405

CFR SA, the rail infrastructure company, has also developed a programme with three main objectives:

- decrease the number of hazard locations and the proportion of sections on the main lines subject to temporary speed restrictions, through repair and rehabilitation of track infrastructure and signalling and electrification equipments,
- provide sustainable funding for railway infrastructure repair and rehabilitation, through a coherent multi-year rolling program. One of the objectives is to change the current "normative" planning into an actual prioritisation of works, based on assets condition and status assessment,
- improve the capacity within the infrastructure railway company to operate efficiently and effectively in managing railway maintenance and rehabilitation.

An additional fund of about 140 MEUR (180 M$) has been made available by EBRD through a Loan Agreement signed in 2006, for financing the maintenance of the road and rail (equal distribution) public infrastructure. The objective of the project is to assist Romania to reduce transport costs through improvement of the overall quality of its national roads and railways during the first 2 years of EU accession (2007-2008).

Even if the situation has been improving, it is a key priority for the Romanian authorities to finalise an overall coherent maintenance strategy, in order to ensure the sustainability of transport sector investments, with a particular focus on road and railway infrastructure. This will need to be accompanied by adequate financing resources.

Ministry of Transport will do all the necessary actions, within its functions, to earmark sufficient budgetary resources for the purpose of transport infrastructure maintenance, especially road and rail, so that progressively, within the current programming period 2007-2013, have the current backlog eliminated, and the revenue for maintenance increased, so that, by the end of the programming period, have in place a reliable funding system for sustainable transport infrastructure (roads in particular).

The Managing Authority for SOPT will closely monitor these actions, and the achieved progress will be regulary reported to the Monitoring Committee.

3.6 JASPERS Assistance

Joint Assistance in Supporting Projects in European Regions (JASPERS) represents the combined efforts of the European Commission, European Bank for Reconstruction and Development and the European Investment Bank, which has the purpose to contribute to the implementation of the European cohesion policy in the 2007-2013 programming period by increasing the technical experience and the financial resources available for the project preparation.

JASPERS support for project preparation is being used mainly for the projects already defined, by revising the Terms of Reference for technical assistances, which, in their turn, prepare supply and works contracts financed under SOPT. This type of support was mainly applied to Priority Axis 1, Key Areas of Intervention 1.1, 1.2 and 1.3, Priority Axis 2, Key Areas of Intervention 2.1 and 2.2, and to Priority Axis 3, Key Area of Intervention 3.2.

4. FINANCIAL PLAN

For the 2007-2013 programming period, Romania will receive from the EU under the NSRF around 19,213 million Euro (current prices), representing Structural Funds under the "Convergence" Objective and Cohesion Funds, out of which about 4,288 million Euro (current prices) are allocated to the SOPT.

Due to the specificity of the transport sector and the eligibility of the country as a whole and in compliance with Article 34 of the Council Regulation no.1083/2006, the SOPT will be co-financed by both European Regional Development Fund (~1,041 million Euro, current prices) and Cohesion Fund (~ 3,246 million Euro, current prices).

Table 4-1 Financing plan of the SOP Transport giving the annual commitment of each fund in the operational programme

Operational programme reference (CCI number): 2007RO161PO003
Year by source for the programme, in EUR

	Structural Funding (ERDF) (1)	Cohesion Fund (2)	Total (3) = (1)+(2)
2007	28,805,392	223,151,971	251,957,363
2008	122,249,222	319,099,620	441,348,842
2009	77,716,614	398,812,936	476,529,550
2010	214,078,466	515,554,203	729,632,669
2011	230,870,080	554,654,920	785,525,000
2012	245,489,974	596,207,451	841,697,425
2013	122,526,794	638,917,136	761,443,930
Grand Total 2007-2013	**1,041,736,542**	**3,246,398,237**	**4,288,134,779**

Note: All fundings are for regions without transitional support

Based on the objectives set by the strategy of the SOPT, five priority axes are envisaged. The first priority axis is co-financed solely by the CF and the remaining four are co-financed by ERDF.

The financial weight of the priority axes resulted following a bottom-up and top-down exercise performed at MT level. This exercise was used in order to elaborate an indicative short list of projects for the SOPT and thus an estimative financial allocation.

The bottom-up approach envisaged the development of a project database taking into consideration the eligibility under each priority axis. The project database was put together after consultations with the stakeholders. Each project was then ranked against a series of criteria. Each criterion was given a certain weight.

The overall ranking system had been set up so as to prioritise all projects against the general objectives of the SOPT taking into account the project own merits but also their contribution to the transport policy, in line with the Community Strategic Guidelines.

The top-down approach envisaged a split of the total financial allocation according to the weights that were assigned to the specific objectives of the SOPT versus the overall policy of the MT.

Priority axis 1 (~75% of the EU allocation) is by far the axis receiving the highest financial support. It is also the only priority axis co-financed by the CF. This priority axis is concerned with the construction of the motorway sections on the TEN-T core network, railway rehabilitation, including ERTMS II introduction on ex-TEN-T priority axis 22, as well as works for the improvement of the navigation on the ex-TEN-T priority axis 18.

Priority axis 2 (~21% of the EU allocation) concerning, among other, interventions for rehabilitation of national roads and construction of by-passes, rehabilitation of railway stations, and TEN-T railway bridges, tunnels, and services, development of Bucharest metro, rehabilitation of TEN-T ports and airports, is also receiving an important share of the funds.

The rest of the Priority axes concerned with the promotion of intermodality, improvement of safety across all modes and technical assistance receive together ~2.5% of the EU allocation to SOPT.

The national financial contribution to the SOPT is estimated at around 0,756 million Euro (current prices).

Table 4-2 Financial plan of the SOP Transport giving, for the whole programming period, the amount of the total financial allocation of each fund in the operational programme, the national counterpart and the rate of reimbursement by priority axis

Operational programme reference (CCI number): 2007RO161PO003
Priority axes by source of funding (in EUR)

	Community Funding (a)	National counterpart (b) (= (c) + (d))	Indicative breakdown of the national counterpart		Total funding (e) = (a)+(b)	Co-financing rate* (f) = (a)/(e)	For information	
			National Public funding (c)	National private funding (d)			EIB contri-butions	Other funding
Priority Axis 1 CF	3,246,398,237	572,893,806	572,893,806	-	3,819,292,043	85.00%	-	-
Priority Axis 2 ERDF	904,911,910	159,690,336	159,690,336	-	1,064,602,246	85,00%	-	-
Priority Axis 3 ERDF	107,740,833	19,013,088	19,013,088	-	126,753,921	85,00%	-	-
Priority Axis 4 ERDF	29,083,799	5,132,435	5,132,435	-	34,216,234	85,00%	-	-
Total	4,288,134,779	756,729,665	756,729,665	-	5,044,864,444	85,00%	-	-

* *The co-financing rates for all Priority Axes are calculated on a public cost basis.*

Revenue generating projects

It has to be stressed that the financial table of the SOPT identifies the maximum Community contribution and the national co-financing at Priority Axis level, and not at project level. It is recognised that the actual rate of financing at project level will be affected by the number of projects that will be implemented and by the restrictions stemming from state aid regulations or by the rules on **revenue generating projects**. These factors have been taken into account when the financial plan of the SOPT was drawn up.

The MA for SOPT is aware that in case of the revenue generating projects, the level of eligible expenditure at projects level could be significantly reduced by the application of rules, additional projects will have to be identified and implemented in order to observe the financial provisions of the programme.

Where the assistance entails the financing of revenue-generating projects, the eligible expenditure shall be calculated according to Art. 55 of the Council Regulation No 1083/2006.

In this respect, it is expected that revenue generating projects may appear under priority axis 1 "Modernization and development of TEN-T priority axes aiming at sustainable transport system integrated with EU transport networks", priority axis 2 "Modernization and development of the national transport infrastructure aiming at sustainable national transport system", and priority axis 3 "Modernization of transport sector aiming at higher degree of environmental protection, human health and passenger safety".

Major projects

Projects with global cost exceeding € 50 million are defined as major projects. Those are subject to evaluation and subsequent decision by the Commission. The Commission's decision shall define the physical object, the amount to which its co-financing rate for the priority applies and the annual plan of commitment appropriations of the ERDF or the CF. An indicative list of major projects, by key areas of intervention and by mode, is presented in Annex A.

Special attention will be given to the cost-benefit analysis.In assessing the transport projects, standard values will be used for: the discount rate (calculated on the basis of the social time preference); the value of time; value of safety (fatalities, injuries); vehicles operating costs; any other basic parameter required in order to perform a cost-benefit analysis for road, rail, metro, ports, waterways, and airport infrastructure and capacity development projects.

During the implementation of the SOPT, potential economic, financial, technical and/or social risks may be associated with the major projects. At the level of the project, risk management is provided by the cost-benefit analysis. Risk management criteria will also be taken into consideration in the selection process by the Managing Authority.

Categorisation

SOPT contains the indicative breakdown of funds allocation by categories (Annex B), in line with the provisions of Articles 37, par.1 (d) and according to the Commission Regulation no 1828/2006. The categorization represents the ex-ante estimation on how the funds allocated under SOPT are intended to be spent according to the codes for the dimensions 1 (Priority Theme), 2 (Form of finance) and 3 (Territory type) of the Annex II of the Commission Regulation No 1828/2206. This information will help the Managing Authority to monitor the

programme implementation by investment categories and to provide to the Commission uniform information on the programmed use of the Funds in the annual and final implementation report (ex-post information), according to Art. 67, Council Regulation no 1083/2006.

According to the NSRF, Romania is committed to contributing to the achievement of Lisbon goals and regards the principle of Lisbon earmarking as an important tool for monitoring at national and Community level the actual performance in gearing Structural and Cohesion Funds towards Lisbon-related areas of intervention.

The indicative level of Lisbon expenditure under SOPT is estimated at about 83% of the total allocation of EU funds, according to the categories listed in Annex IV of the Council Regulation no 1083/2006.

The indicative breakdown of the Community contribution by category in the SOPT is presented in annex C.

5. IMPLEMENTATION

5.1 Management

5.1.1 General Framework for SOP Transport Implementation

General Coordination of Structural Instruments. The Government Decision 497/2004 with the subsequent amendments and completions has established the management and control structure for the Management of Structural Instruments in Romania. This included the establishment of the Managing Authority for the Community Support Framework, which has become starting with May 2007, the Authority for Coordination of Structural Instruments (ACIS).

The coordination of the Structural Instruments will be managed as follows:

- **National Coordination Committee for Structural Instruments** was established under GD No. 1200/2004 and will provide strategic guidance and decision-making at political level.
- **Management Co-ordination Committee** will address management, administration and horizontal issues with relevance to the OPs.
- **Regional Coordinating Committees** will be established in the 8 Regions to assist in the co-ordination between Operational Programmes.

Managing Authority for SOP Transport. The Managing Authority is responsible for the effectiveness and correctness of management and implementation of the SOP assistance, in accordance with the respective EU regulations and the institutional, legal and sound financial systems that operate in Romania. The function of the SOPT Managing Authority was assigned to the MT, within the General Directorate for Management of European Funds(GDMEF). Details about those functions are presented in sections 5.1.2 and 5.3.3.

Certifying Authority. The Ministry of Economy and Finance is designated to fulfil the role of Certifying Authority for all OPs, being responsible for drawing up and submitting to the Commission certified statements of expenditure and applications for payment in line with the provisions of Article 61 of the Council Regulation no 1083/2006. The responsible directorate within the MEF is the "Certifying and Paying Authority" (CPA) built up on the National Fund office, making use of the pre-accession experience. The above-mentioned responsibilities will be performed by the "Certification Unit" within the CPA.

Within the CPA, there are two separate units, "Certification Unit" and "Payment Unit", each of them being under the coordination of distinct Deputy General Director.

Competent body for receiving the payments from the European Commission in respect of SOPT is the Certifying and Paying Authority, through the "Payment Unit".

The **body responsible for making the payments to the Beneficiaries** is the Certifying and Paying Authority, through the "Payment Unit".

Details about those functions are presented in section 5.3.2.

Audit Authority. An associate body of the Romanian Court of Accounts has been designated as Audit Authority for all OPs, in line with the requirements of Article 59 of the Council Regulation 1083/2006. The Audit Authority is operationally independent of the Managing Authorities, Certifying and Paying Authority. Details about this function are presented in section 5.3.

Beneficiaries. Beneficiaries are operators, bodies or firms, whether public or private responsible for initiating or initiating and implementing operations. In the case of aid schemes pursuant to Article 87 of the Treaty and in the case of aid granted by bodies designated by the Member States, the beneficiaries are the bodies that are receiving public aid.

MT will use the network of existing implementation agencies involved in pre-accession funds management that are under the jurisdiction of the MT and the focus of which relates to the operations of the operational programme. These are the following institutions:
- National Company for Motorways & National Roads (NCMNR)
- National Company for Railways (CFR)
- MT Agency.

Beneficiaries perform the following functions[23]:
- The initiation of operations;
- Responsibility for ensuring the implementation of the entire operation;
- Preparation of and compliance with the financial plan;
- Verification that expenditure has been paid for the purpose of implementing the operation and corresponds to the activities agreed;
- Verification of accuracy and eligibility of expenditure;
- Publicity.

5.1.2 Managing Authority for SOP Transport

In line with the Council Regulation nr.1083/2006 and Romanian legislation, the Managing Authority of SOPT has the following general management functions:

- Prepare the Operational Programme, in observance of the objectives and priorities set forth by the National Strategic Reference Framework and National Development Plan;
- Ensure the consistency between the Operational Programmes under the coordination of the Ministry of European Funds;
- Monitor the achievement of general results and the impact defined by the operational programme;
- Monitor the development of the administrative capacity of the structures involved in the execution of the respective Operational Programme, as well as the consolidation and extension of the partnerships throughout the planning process, as well as throughout all the implementation phases of the Operational Programme;
- Ensure the implementation of the respective Operational Programme in observance of the recommendations of the Monitoring Committees (see sections 5.1.1 and 5.2.1 for a description of the relevant Monitoring Committees), of the EU regulation and of the Community principles and policies, especially the ones in the fields of competition, public procurement, environment, gender equality;

[23] Based on the financing agreement signed by beneficiary and Managing Authority

- Develop and promote partnerships at the central level, as well as between the central, regional and local levels, including public-private partnerships;
- Analyze and propose amendments to the Operational Programme and forward the proposals regarding fund re-allocations within the Operational Programme to the relevant Monitoring Committees;
- Elaborate implementation procedures for the respective Operational Programmes;
- Prepare the appraisal and selection criteria for projects and approve the projects submitted by the beneficiaries;
- Ensure the proper information dissemination to citizens and the mass-media regarding the role of the European Union in the execution of the Programmes and raise the awareness of the potential beneficiary professional organization regarding the opportunities generated by the implementation of the Programmes;
- Is responsible for the efficient, effective and transparent use of the funds that support the Operational Programme;
- Set up the Monitoring Committee for the Operational Programme in observance of the principles of partnership, representation, equality of opportunity between genders; ensures the presidency and the secretariat of the Operational Programme Monitoring Committee;
- Participates in the annual meetings with the European Commission aimed at examining the results of the previous year;
- Performs other attributions, as set forth by the law.

In addition to these areas, and in relation to financial management, the Managing Authority will carry out the activities detailed in section 5.3.3.

5.2 Monitoring and Evaluation

5.2.1. Monitoring

Roles of the Monitoring Committee

The Monitoring Committee (MC) is the main co-ordinating and decision-making body of the SOPT. It is responsible for the quality and effectiveness of implementing the programme. The Monitoring Committee for SOPT will be set up within three months of the Commission Decision approving the SOPT and will draw up its own Terms of Reference.

The Monitoring Committee has the following roles and responsibilities:
a) it considers and approves the criteria for selecting the operations financed within six months of the approval of the SOP and approve any revision of those criteria in accordance with programming needs;
b) it periodically reviews progress made towards achieving the specific targets of the SOP on the basis of documents submitted by the Managing Authority;
c) it examines the results of implementation, particularly achievement of the targets set for each priority axis and the evaluations of the SOP;
d) it considers and approves the annual and final reports on SOP implementation;
e) it is informed of the annual control report, or of the part of the report referring to the SOP concerned, and of any relevant comments the Commission may make after examining that report or relating to that part of the report;
f) it may propose to the Managing Authority any revision or examination of the SOP likely to make possible the attainment of the Funds' objectives, or to improve its management, including its financial management;
g) it considers and approves any proposal to amend the content of the Commission decision on the contribution of the Funds.

Composition of Monitoring Committee

The Monitoring Committee is set up in accordance with the Member States institutional and legal arrangements, traditionally in the framework of partnership between national, regional and local authorities, economic and social partners and other competent bodies.

The Managing Authority establishes chairs and provides secretariat to the Monitoring Committee.

The composition of the SOPT Monitoring Committee will be indicatively composed of a Chairperson, Head of MA for SOPT, Ministry of European Funds, Certifying and Paying Authority, MAs of other OPs, representative environmental NGOs and other NGOs, trade unions, employer associations, academic circles and representatives of the EC, EIB and other observers. In particular, one position will be allocated for a representative of the Ministry of Environment and Sustainable Development in charge with environmental monitoring.

Transparency of information flows

Transparency is an essential principle of the operation of the Monitoring Committee. Therefore:
- in order to ensure that there is adequate information about its work, wherever possible the Committee should keep the media informed of the progress of the assistance packages for which it is responsible;

- contacts with the press should be under the responsibility of the chairman;
- appropriate arrangements shall also be made when important events are held in connection with the Monitoring Committee's meetings, such as high-level meetings or inaugural sessions; the Commission and its office in Romania should be kept informed of these arrangements;
- main conclusions of the meetings of the Monitoring Committee should be placed on the Internet.

Ensuring the transparency of Monitoring Committee business is an important component of the Secretariat's work. The Secretariat requires all members to submit written information on the procedures they have put in place to inform the groups they represent about the on-going business of the Monitoring Committee, as well as follow up reports on the implementation of these procedures.

Rules of procedure

The Monitoring Committee elaborates and approves its rules of procedure at the first meeting, based on the proposal of SOPT Managing Authority.

Rules of procedure include the following: objectives and tasks of the Monitoring Committee; composition; chair; secretariat; summoning meetings; minutes; papers; decision making process; process of changes to the rules of procedure.

Decisions of the Monitoring Committee are taken by consensus and the Chairperson should take all measures necessary to achieve consensus. A voting system may be used, but this can be less effective in securing genuine decision-making in partnership. Rules of procedures of the Monitoring Committee need to ensure that the decisions necessary for the implementation of the SOP will be taken, including decisions on reallocation of funds as needed.

Monitoring and reporting system

Monitoring is an on-going process and has an important role to play in the management of the operational programme, in confirming that it is making good progress, determining whether or not the programme continues to pursue the original targets and in identifying potential problems so that corrective action can be taken.

The OP monitoring system takes into account the needs of different user groups and different levels of the management structures. The potential users of information are the stakeholders who have their own areas of responsibilities and, therefore, their distinctive information needs, as follows:
- Beneficiaries;
- Managing Authorities;
- Monitoring Committees;
- Government of Romania;
- European Commission;
- External evaluators;
- Wider public and NGOs.

The monitoring system is based on a regular examination of the context, resources (inputs), outputs and results of the programme and its interventions. It is composed of a mechanism of coherent information including progress review meetings and progress reports providing periodic summaries which incorporate key information from the physical and financial

indicators. The purpose of the reports is to provide updates on achievements against indicators and milestones and they will be written in a standard format allowing for comparison between reports over time.

The core piece of information to be provided in the reports is related to indicators capturing the progress of the interventions vis-à-vis the goals set in the programming phase. In this respect, a system of indicators for each OP has been developed under the coordination of ACIS. Although adapted to the specific feature to the OP, the indicator system pursues the uniformity of the core data allowing information to be bottom-up aggregated at different levels of interventions (projects, key areas of intervention, Priority Axes, OP, NSRF), themes, sectors etc. The system will be detailed with guiding elements providing a common understanding throughout the stakeholders, such as a comprehensive list of monitoring and evaluation indicators, definition of each indicator, responsibilities, periodicity and ways of data collection and processing, as well as indicators tables to be generated by SMIS providing a clear picture of the interventions' context and progress. Whenever appropriate, the indicators will be broken down by different criteria (territorial, gender, target groups, size of the recipient etc.).

The use and improvement of the set of indicators as part of the monitoring system is a continuous task during the programming period. ACIS and the Managing Authority will check periodically the reliability of the information collected and will coordinate an on-going process of improving the functioning of the monitoring system. Evaluations and quality check of the monitoring system concerning its coverage, balance, and manageability will be carried out. The individual indicators will be assessed in terms of their relevance, sensitivity, availability and costs.

The Monitoring Committee will be consulted on the indicators system at an early stage of programme implementation as well as during the entire programming period in order to verify that:

- the indicator system as a whole has been set up properly, and
- the information is sufficient for its own work.

Although the monitoring system will be largely responsible for generating output data, some output, and most result data may require additional efforts (e.g. surveys, field work, collecting information from other organisations). On the other hand, official statistics generating context indicators will need to be supplemented with surveys, studies or other techniques of data collection and interpretation. The specific needs for complementary information and related planned activities will be included in the OP and NSRF Evaluation Plans that are described in Evaluation section of this document.

5.2.2. Evaluation

Regulatory framework

Evaluation of Operational Programmes is an activity inseparable from the overall OP management and implementation arrangements, as a tool for assessing the relevance, efficiency, effectiveness of the financial assistance deployed, as well as the impact and sustainability of the results achieved.

The requirement to conduct systematic evaluation activities of the Operational Programmes and the general rules for those activities are provided for in the Council Regulation (EC) No

1083/2006 of 11 July 2006, laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund (Articles 37, 47 – 49).

In accordance with Articles 47-49 of the Council Regulation no 1083/2006, three main types of evaluations will be carried out for SOPT:

- *An ex-ante evaluation*
- *Ongoing evaluations* (during the period of implementation of the OP)
- *Ex-post evaluation.*

Ex-ante evaluation. For the programming period 2007-2013, the ex-ante evaluation was carried out for all OPs by an external evaluator (a single contractor). The ex-ante evaluation has also included the Strategic Environmental Assessment, done in compliance with the requirements of the Directive 2001/42 on the assessment of the effects of certain plans and programmes on the environment. The management of the ex-ante evaluation contract was ensured by the ACIS through the Evaluation Central Unit in close cooperation with the Managing Authorities and other main stakeholders.

Ongoing evaluations carried out during the period of implementation of the SOPT shall be of three types – *a) interim, b) ad hoc* and *c) with a cross-cutting theme*, as follows:

The Interim Evaluation will aim at improving the quality, effectiveness and consistency of the assistance and the strategy and implementation of operational programmes. The interim evaluations will support the OP management process by analysing problems which occur during the implementation and propose specific solutions to improve the operation of the system.

There will be 2 interim evaluations of the OP: one evaluation to be carried out at the end of 2009 and one in 2013. The first interim evaluation will examine progress to date in implementing the OP, looking particularly at issues such as management of the OP, whereas the second interim evaluation will focus more on priorities, looking towards the next programming period.

Ad-hoc evaluations will be carried out where programme monitoring reveals a significant departure from the goals initially set or where proposals are made for the revision of operational programmes. Ad-hoc evaluations can also address either implementation or management issues of an individual Priority Axis or Key Area of Intervention, or can be "thematic".

Interim and ad hoc evaluations will be managed by the evaluation function of the Managing Authority and will be conducted externally, by independent evaluators.

Evaluations with a cross-cutting theme will be carried out where the evaluation is of a horizontal nature and completion of the evaluation demands involvement from more than one OP. These evaluations may examine the evolution of all or a group of OPs in relation to Community and national priorities. They may also examine particular management issues across all OPs. Evaluation with cross-cutting themes will be managed by Evaluation Central Unit of the ACIS and will be commissioned to external consultants.

Specific objectives, evaluation questions, tasks and expected results of interim, ad-hoc and cross-cutting evaluations will be defined separately for each evaluation to be conducted.

The ex-post evaluation shall be carried out by the Commission, in close cooperation with the Member State and the Managing Authorities, according to art. 49 par. 3 of the Council Regulation no 1083/2006.

The Commission may also carry out **strategic evaluations**, as well as evaluations linked to the monitoring of OPs, in accordance with art. 49 par. 2 of the Council Regulation no 1083/2006.

Institutional framework for evaluation

The national institutional framework for evaluation comprises 2 levels:

- an overall coordination level, ensured by the **Evaluation Central Unit** established within the ACIS structure, Ministry of Economy and Finance
- a functional level, composed of the **evaluation units established within each MA.**

The **coordination role** of the Evaluation Central Unit can be summarized as follows:

(i) Carrying out cross-cutting evaluations;
(ii) Providing capacity building activities to support and develop the operational capacity of the evaluation units established in the OP Managing Authorities.
(iii) Providing overall quality assurance activities to ensure the quality of all evaluations.

The evaluation unit established within the MA SOPT will be responsible for interim evaluations and ad hoc evaluations.

The evaluation unit will act in co-operation with the Monitoring Committee and will interact on a constant basis with the Evaluation Central Unit.

Evaluation Plan

The MA evaluation unit will draft an Evaluation Plan, which will comprise the indicative evaluation activities it intends to carry out in the different phases of the programme implementation, the indicative human and financial resources allocated for each evaluation activity, the actions aimed at capacity building, as well as the incumbent responsibilities. This planning shall be done in accordance with the Community Regulations on Structural Instruments; the methodological working papers on evaluation issued by the European Commission; the methodological working papers on evaluation issued by ACIS - Evaluation Central Unit.

The OP Evaluation Plan shall be subject of the Monitoring Committee approval.

In addition, an Evaluation Plan at NSRF level will be drafted by the Evaluation Central Unit of ACIS. The NSRF Evaluation Plan will aim at providing information for the strategic decision making process and will plan evaluation activities at macro socio-economic level. Possible evaluation themes to be included in the NSRF Evaluation Plan may be linked to the NSRF priorities (infrastructure, economic competitiveness, human resources development, administrative capacity and territorial dimension) or may concern the delivery system such as the horizontal ad-hoc external evaluation with a special focus on the implementation and process issues across the OPs as well as on the external coherence of the programmes with national policies that will be commissioned by the ACIS in 2008.

Operating arrangements

Each OP will have a Steering Committee, which should convene for each evaluation exercise. A Strategic Evaluation Steering Committee will be established also at the level of NSRF for evaluations with cross-cutting themes. The steering committee will fulfil, as a minimum, the following tasks: set the terms of reference for individual evaluations, facilitate the evaluator's access to the information needed to perform his/her work; support the evaluation work, particularly from the methodological standpoint; ensure that the terms of reference are observed; exercise quality control in relation to the evaluation performed.

Under the coordination of the Evaluation Central Unit, a follow-up mechanism of the evaluation recommendations will be set-up in the Evaluation Procedures Manual to be applied by the MA SOPT.

As concerns the availability for the public of the evaluation results, at least the executive summary of the evaluation reports will be made publicly available. The means of communication will be readily identifiable and accessible.

5.3 Financial Management and Control

The Ministry of Economy and Finance is designated to fulfil the role of **Certifying Authority** for all OPs, being responsible for drawing up and submitting to the Commission certified statements of expenditure and applications for payment in line with the provisions of Article 61 of the Council Regulation no 1083/2006. The responsible directorate within the MEF is the "Certifying and Paying Authority" (CPA) built up on the National Fund office, making use of the pre-accession experience. The above-mentioned responsibilities will be performed by the "Certification Unit" within the CPA.

Within the CPA, there are two separate units, "Certification Unit" and "Payment Unit", each of them being under the coordination of distinct Deputy General Director.

The **competent body for receiving the ERDF, ESF and Cohesion Fund payments from the European Commission** in respect of all OPs is the Certifying and Paying Authority, through the "Payment Unit".

The **body responsible for making the payments to the Beneficiaries for SOPT** is the Certifying and Paying Authority, through the "Payment Unit".

An associate body of the Romanian Court of Accounts has been designated as **Audit Authority** for all OPs, in line with the requirements of Article 59 of the Council Regulation 1083/2006. The Audit Authority is operationally independent of the Managing Authorities and the Certifying and Paying Authority. These functions are performed by the "Certification Unit".

Certifying and Paying Authority– shall be responsible in particular for:

1) *Certification of expenditure,* which means drawing up and submitting to the Commission certified statements of expenditure and payment applications in computerized form. Those functions are performed by the "Certification Unit".

It is certifying that:

- the statement of expenditure is accurate, results from reliable accounting systems and is based on verifiable supporting documents;
- the stated expenditure complies with applicable Community and national rules and was incurred in respect of operations selected for funding in accordance with the criteria applicable to the programme.

Within this purpose, the task of the Certifying Authority is to ensure that the received information on the procedures and verifications carried out in relation to expenditure and included in expenditure statements provides an adequate basis for certification, which entails:

- to verify the compliance of the claimed amounts with the SMIS database;
- to verify the correct calculation of the total amount of eligible expenditures;
- to take account of the results of all audits carried out by or under the responsibility of the Audit Authority/internal audit body or European Commission;
- to maintain accounting records in computerized form of expenditure declared to the Commission;
- to keep a debtor ledger.

2) *Receiving payments from the Commission* (responsibility of the "Payment Unit")

- to receive from the European Commission the amounts from ERDF, ESF and CF, as pre-financing, intermediate and final payment;

- to draw up and submit annually to the EC the provisional forecast of likely applications for payments for the current financial year and for the subsequent one;
- to return to the EC non-eligible expenditures, recoveries as a result of an irregularity or the funds that were not used, including interest of late payment.

3) Making payments to the beneficiaries of SOP Transport and SOP Environment and transferring the EU Funds to the paying units within the ministries that are Managing Authorities for the other OPs (responsibility of the "Payment Unit")

- to make payments to beneficiaries from the ERDF and CF and the co-financing amounts, for SOP Environment and SOP Transport;
- to transfer the funds from the ERDF and ESF to the paying units, for the other OPs.

Alternatively the transfer of funds could be switched from direct payment flows between the certifying and paying authority to beneficiaries to indirect payment flows (through paying units within the Managing Authorities) for SOP Environment and SOP Transport in order to adapt to implementation requirements.

The Managing Authority of SOPT is responsible for managing and implementing its Programme efficiently, effectively and correctly in line with the provisions of Article 60 of the Council Regulation no 1083/2006. The Managing Authority will work closely with the designated Certifying and Paying Authority in fulfilling the responsibilities of financial management and control to ensure that:

- Money is used most effectively to achieve the objectives of each OP;
- Use of resources is publicly accountable to the EU and the Member State;
- Budgetary control is effective so that commitment is sustainable within each OP and financial planning profiles are adhered to;
- Contracting is within budget;
- Procurement of goods and services under projects financed:
    - takes place;
    - conforms to EU and Member State rules;
    - represents value for money;
- Financial statements sent to the European Commission and other bodies are correct, accurate and complete:
    - correct - funds are applied correctly;
    - accurately – free from errors;
    - complete – all relevant items have been included;
- Payments to Beneficiaries are made regularly and without undue delay or deductions;
- Co-financing resources are provided as planned;
- Payments are properly accounted for;
- Irregularities are notified in line with EU regulations;
- Any sums wrongly paid out are recovered swiftly and in full;
- Unused or recovered resources are re-committed within the respective OP;
- De-commitment is avoided – particularly in relation to the n+3/n+2 rule;
- Closure of each OP takes place smoothly and on time.

Before submitting the application for reimbursement, the Beneficiary verifies the accuracy, actuality and eligibility of expenditure according to the national legislation on internal control.

Within the purpose of expenditure certification to the European Commission, checks are carried out on two levels:

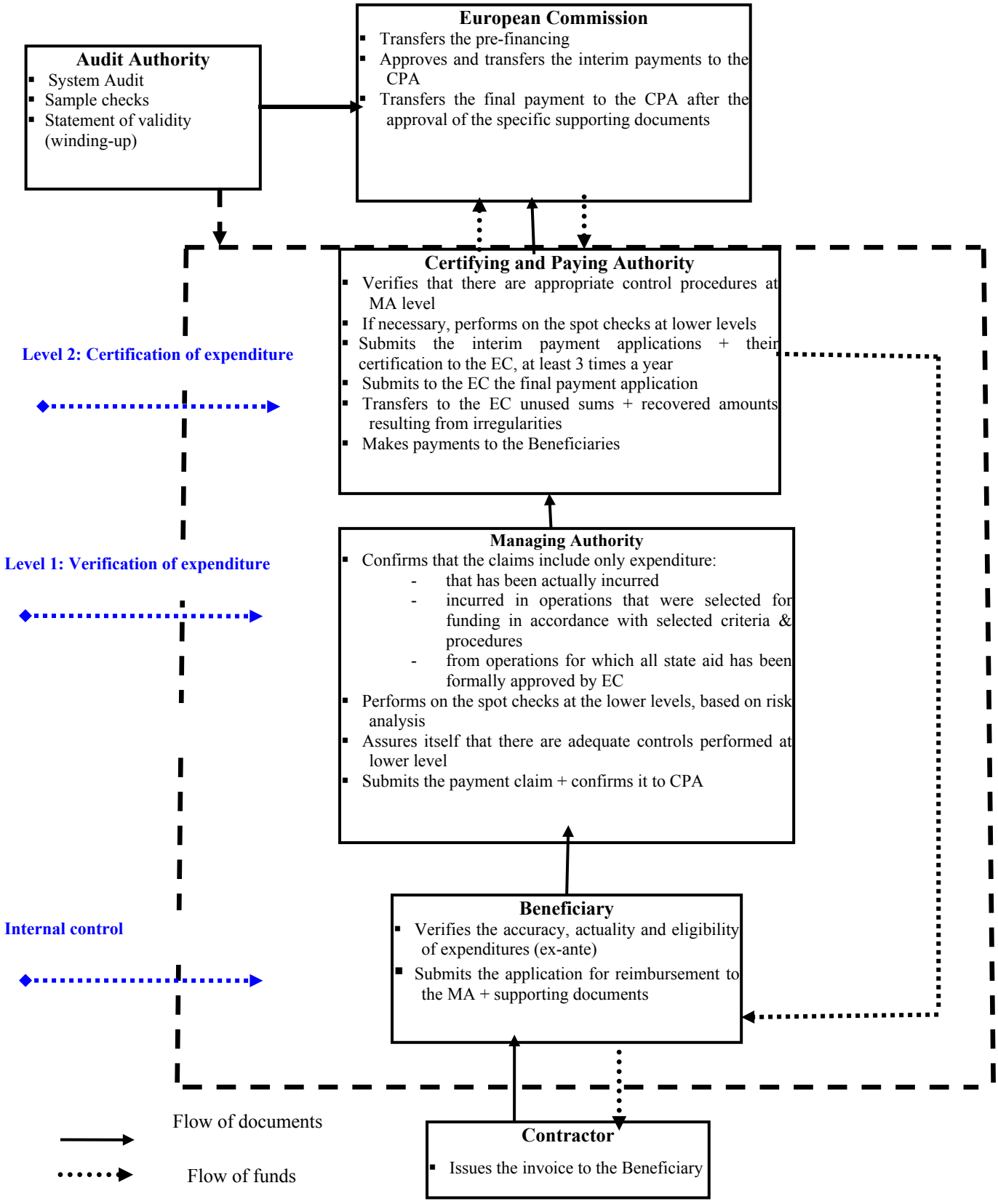
1) verification of expenditures at MA level;
2) certification of expenditure at Certifying and Paying Authority level.

Regarding the payment process at the Ministry of Economy and Finance level, it was taken the decision to have two payment flows:

a) direct payment for European Union financial contribution and co-financing amounts from the Certifying and Paying Authority to the beneficiaries, in the case of SOP Transport and SOP Environment,
b) indirect payment, through the paying units that are established near the Managing Authorities, for the other Operational Programmes.

The Financial flow of the SOPT is presented below:

Figure 1-8 Financial flow of the SOPT



Irregularities

The legal basis is represented by Commission Regulation no. 1828/2006 setting out rules for the implementation of Council Regulation no 1083/2006 and of Regulation no 1080/2006, the Council Regulation no. 2988/95 on the protection of the European Communities' financial interests and the Romanian Government Ordinance no. 79/2003 with subsequent modifications and completions which settles the ways of control and recovery of sums from non-reimbursable EU financial assistance.

The objective of this section is to describe the identification and reporting of any suspected fraud or other irregularity. This section will also deal with the importance of the immediate implementation of corrective action (including sanctions and launching of civil or criminal proceedings) deemed necessary as a consequence of the investigation of an irregularity.

Irregularities involving loss of EU funds of less than 10,000 Euro are not required to be reported to the Commission under Commission Regulation (EC) No 1828/2006 unless the Commission requests it.

Therefore, irregularities of over 10,000 Euro and all irregularities committed intentionally must be reported to the European Commission. These reports are aggregated and checked by the Certifying and Paying Authority and then are forwarded to the Fight Against Fraud Department (DLAF) for transmission to OLAF on a quarterly basis. The Certifying and Paying Authority receives the reports from the MAs and it must include any reports on irregularities within the Certifying and Paying Authority itself.

In order to allow a proper process of prevention, detection and reporting of irregularities, at the level of the MA, an irregularities officer is appointed. The irregularities officer appointed at the level of the MA prepares quarterly and ad-hoc reports and submits them to the Certifying and Paying Authority.

Any person involved in the implementation of the SOPT can report the suspected case of fraud to the irregularities officers of the Certifying and Paying Authority, MA, or to the Internal Audit Units of the Certifying and Paying Authority, MA, either formally or anonymously. The person reporting the suspected case will have no further involvement in the irregularity process for personal security reasons.

Suspected irregularities will be analysed and investigated by the competent services and the response will be sent according to the internal procedures of the competent authority and to the Romanian legal framework in force.

The irregularities officer takes action both from own initiative and on the complaints received. The irregularities officer carries out its activity based on the Irregularities Manual that will be prepared at the level of the MA.

Internal audit

Within all ministries involved in the implementation of the Operational Programmes have been established Internal Audit Units that are independent from the structures performing the tasks of Managing Authorities (or Intermediate Bodies) and are directly subordinated to the heads of the institutions concerned.

The methodological coordination of these Units is ensured by a special unit within the Ministry of Economy and Finance, namely the Central Harmonizing Unit for Public Internal Audit.

The attributions of Central Harmonizing Unit for Public Internal Audit

- Developing and implementing uniform procedures and methodologies based on international standards agreed by the European Union, including internal audit manuals and audit trails.
- Developing risk management methodologies.
- Developing the Ethical Code of the internal auditor.
- Endorsing the methodological norms on PIA, specific to the different domains of activity in the field of public internal audit.
- Developing a reporting system for the results of all public internal audit activities and elaborating an annual report.
- Verifying whether norms, instructions, as well as the Ethical Code are respected by internal audit services in public entities; it may initiate the necessary corrective measures in co-operation with the Head of the respective public entity.
- Co-ordinating the system of recruiting and training in the field of public internal audit.

The tasks of the Public Internal Audit Unit

Public Internal Audit Units within the institutions that implement Structural and Cohesion Funds have specific audit manuals for the European Funds.

According to the law, the tasks of the Internal Audit Unit are the following.

- Performing internal audits activities in order to assess whether the financial management and control systems of the public entity are transparent and comply with the norms of lawfulness, regularity, cost-effectiveness, effectiveness and efficiency;
- Informing CHUPIA on the recommendations not followed by the head of the audited public entity and of their consequences;
- Reporting periodically on the findings, conclusions and recommendations resulted from its audit activities;
- Preparing an annual overview of its activities in the annual report;
- Reporting immediately to the Head of the public entity and to the inspection unit in case of detecting any serious irregularities or fraud cases.

Audit Authority

Romania has established an **Audit Authority** for all Operational Programmes through Law no 200/2005, which will perform the functions established in the Article 62 of the Council Regulation no 1083/2006.

The **Audit Authority** is an associated body to the Court of Accounts, operationally independent from the Court of Accounts and at the same time independent from all the Managing Authorities and Certifying Authority.

In accordance with to the provisions of the Law no.200/2005, Article 14^2, the Audit Authority has the following responsibilities:

- system audit, sample checks and final audit;
- checks and external audit for the structural and cohesion funds;
- annual checks of the management and control systems;
- checks of the statements of expenditure, on the basis of an appropriate sample;

- carries out appropriate checks in order to issue winding-up declarations at the closure of the programmes;
- checks the existence and correct use of the national co-financing.

Assessment of the compliance of the management and control systems

As required by Article 71 of the Council Regulation no 1083/2006, an assessment of the compliance of the management and control systems for SOPT will be submitted to the Commission before the submission of the first interim application for payment or at the latest within twelve months of the approval of the OP.

5.4 Information and publicity

Requirements

European Commission Regulation (EC) No.1828/2006, sets out specific requirements for information and publicity measures for the Cohesion and Structural Funds, including the preparation of a Communication Plan for each Operational Programme (or one for all Operational Programmes, if the Member State so decides).

The MA SOPT is elaborating and will submit to the EC a Communication Plan, which shall include the information and publicity measures planned for potential and actual beneficiaries of the Funds and the public. The Communication Plan encloses the aims and target groups; the strategy and content of measures to be taken; an indicative budget; the bodies responsible for information and publicity; and how the measures taken are to be evaluated.

The Regulation also specifies information and publicity measures to be taken by beneficiaries to inform the public and acknowledge EU funding.

Aim and Objectives

Taking into account the above requirements, and the partnership and transparency principles in the programming process, the aim and objectives of the Communication Plan are defined as follows:

Overall Aim: to promote understanding and appreciation of the role and purpose of Structural Instruments, and the European Union's contribution thereto, in developing the transport infrastructure of Romania**.**

This overall aim is broken down into a number of specific objectives:

- *Specific Objective 1:* to inform the partners and final beneficiaries (existing and potential) involved in implementation of the SOPT of its priorities, measures and results and of their responsibilities for information and publicity.

- *Specific Objective 2:* to inform the public of the overall scope, importance and priorities of the SOPT in developing and modernising the transport infrastructure of Romania.

- *Specific Objective 3:* to inform the public of the specific measures and results of the SOPT and ensure the highest degree of transparency in implementation of the Programme.

- *Specific Objective 4:* through co-operation with the PR offices of ministries, managing authorities and partner institutions, to ensure that publicity concerning SOPT is effectively co-ordinated with other publicity for Structural Instruments and the National Development Plan.

- *Specific Objective 5:* to promote aspects of the SOPT which emphasise environmental protection and the development of equal opportunities.

- *Specific Objective 6:* to monitor and evaluate information and publicity activities to ensure they achieve the above objectives and conform to the rules set out in the EC Regulation on Publicity.

Target Audiences

The target audiences for information and publicity measures can be defined as follows:

- The *Internal Public:* Managing Authority staff, other MT directorates, other relevant ministries, management authorities and EU institutions, beneficiaries.

- The *Professional Public:* social and economic partners, other intermediate communicators such as the media, regional and local authorities, business organisations, trade unions, chambers of commerce, Members of Parliament and NGOs.

- The *General Public:* Members of the public and legal entities, including certain groups to receive specific information (passengers, drivers etc).

Before implementing the proposed measures, further research will be undertaken to identify the existing levels of knowledge and the information needs of each target group; to develop and test the messages and materials to be delivered to each; and to identify the most appropriate information channels for providing information to them.

An Information, Publicity and Aftercare (IPA) Unit will be established within the Managing Authority to manage all information and publicity activities.

5.5 Single Management Information System

Concept of the Single Management Information System

The Single Management Information System is a nation-wide web-based information system, supporting all Romanian organisations implementing the National Strategic Reference Framework and Operational Programmes. The system is addressing the needs of all management levels (Managing Authorities, Intermediate Bodies, Certifying Authority etc.) and through all the stages of the programme cycle (programming, tendering, contracting, monitoring, evaluation, payments, audit and control). SMIS main characteristic is that it provides its users with a single mechanism for assisting them in accomplishing their everyday tasks.

As a monitoring tool, SMIS is the main provider of information on progress regarding the implementation, at both project and programme level, allowing monitoring reports to be automatically generated.

The SMIS has been developed under the coordination of ACIS and in close cooperation with the representatives of all structures involved in the management of Structural Instruments. During the implementation period, the SMIS will be managed and further developed by ACIS.

SMIS design and functionalities

The SMIS design follows three main principles: data ***availability*** (data are directly available following the request of an authorized user); data ***confidentiality*** (data are provided only to those users authorized for accessing that specific piece of information); data ***integrity*** (data processing should occur only by authorized users under authorized means). As means for implementing the three aforementioned principles the system supports multiple users categorized into a number of user groups/roles. In that way user permissions are easily organized and managed and the access to information can be thoroughly audited and logged in a flexible way.

In order to provide an effective management tool, the functional model of the SMIS is based on a set of subsystems, which together reflect the broad range of functionalities the System is designed to perform, as follows:

- *Programming, w*hich allows the registration and the modification of the main information on the NSRF broken down at lower levels by OP, priority axis, key area of intervention and operation;
- *Project management* (registration and modification of the main information on projects, including the contracts[24]);
- *Monitoring,* which allows observing the progress in structural and cohesion funds implementation at all levels, where appropriate against targets previously set. It also allows automatically bottom-up aggregation of the *actual value* of the core data which are registered at lower levels of the System;
- *Audit and control,* which registers the control and audit findings and generates the audit reports;
- *Funds flow management,* which deals with payment request forecasts, inflows, project revenues, suspensions and recoveries of funds.

[24] A contract is a legal commitment concluded between the Beneficiary and the Grantee or Provider of the services, works or supplies necessary to implement a part of the project or the entire project.

Data will be introduced in SMIS at the appropriate level, based on clearly defined user rights profiles. The access to the system will be granted based on username/password, obtained from ACIS following a specific procedure which involves the heads of the institutions managing the Structural Instruments.

SMIS Coordinators' network

At the level of the Managing Authorities, Certifying and Paying Authority and Audit Authority, SMIS Coordinators have been designated, responsible for collecting and pipelining the needs of their institutions, concerning the improvement of the system and for up keeping the integrity and uniformity of the procedures followed in the implementation of Structural Instruments.

Among the SMIS Coordinators' tasks and responsibilities, the following can be mentioned:

- To act as an interface between OP MA and ACIS on the one hand and OP MA and IBs on the other hand, concerning SMIS issues;
- To collect and disseminate information from and within the institution they represent;
- To be the first line of help desk function;
- To be in-house trainers of users, including for the new employees.

Electronic data exchange with the European Commission, according to Art. 40-42 of the Commission Regulation no.1828/2006, will be done through an interface between SMIS and the System for Fund management in the European Community 2007-2013 (SFC2007).

6. PARTNERSHIP

The Partnership requirement ensures that the preparation, implementation and evaluation of OPs at different stages of programming within the timeframe for each stage are discussed and debated with stakeholders relevant to the sector including other OPs, beneficiaries, public authorities (i.e., regional, local and urban,) and other economic and social partners. In this context, the following initiatives took place:

- MT conducted a series of presentations on the initial draft SOPT to all ***eight development regions*** by means of a "Caravan" organised by the Ministry of Economy and Finance during the period September to December 2005 at which attendance was on average 100 participants per meeting.

- In early December 2005, there were a series of meetings organized by the MT with all ***political parties*** in Romania in order to describe the SOPT process and the obligations undertaken by Romania.

- On 9th December 2005 a public consultative meeting addressed to all relevant ***stakeholders*** was organized by MT. The meeting participants included:

    - The General Directorate of Territorial Planning of MT;
    - The Romanian Association for International Road Transports [Asociatia Romana pentru Transporturi Rutiere Internationale] (ARTRI) representing over 1,700 large transport companies.
    - The National Union of Road Hauliers from Romania [Uniunea Nationala a Transportatorilor Rutieri din Romania] (UNTRR) representing over 5,000 transport companies with up to 5 vehicles including buses and taxis.
    - Union of Rail Transport (ALFA, rolling stock mechanics)
    - Union of TAROM (Romanian national airline)
    - Regional Development agencies
    - EC Delegation
    - Romanian consultants in transport sector (INCERTRANS)
    - Romanian consultants in territorial planning (Proiect Bucuresti)

- Between December 2005 and December 2006 a number of meetings were held between MT and other ***relevant Ministries***.

- On 20th January MT held a meeting in Bucharest with ***SE Regional representatives of the RDA from Braila*** on regional policy coordination between the ROP and SOPT.

- On 3rd February 2006 at a meeting on ***ROP and SOPT*** between the Ministry of European Integration and the MT, chaired by the EC, it was confirmed that interventions in urban transport would be the responsibility of the ROP programme and not of the SOPT.

- During the period May – December 2006, MT organized an information campaign for SOP-T at the national and regional level. At the same time, the representatives of the ministry participated together with the MEF representatives at the information campaign for the NSRF 2007-2013, and in other seminars and conferences organized

by the institutions involved in managing Community funds. In details, the information campaign for SOP-T in the follow:

- 12 May 2006 – MT organized at national level a consultative forum for SOP-T.
- 23 May 2006 – The SOPT was presented during the *Conference "Modern Solutions for the management of the rail traffic and infrastructure"* organized by the Intercity Magazine.
- 26 May 2006 – MT organized in partnership with local authorities from Piatra Neamt a consultative forum for SOPT.
- 16 June 2006 - MT organized in partnership with local authorities from Timisoara a consultative forum for SOPT.
- 22 June 2006 – the SOPT was presented during the Conference *"Project Management Vision 2006"*.
- 22 June 2006 – the SOP-T was presented during the international debates: *"The Mechanism of co-financing for projects financed from structural funds in Romania - a European perspective"* .
- 28 July 2006 – the AM for SOPT, in collaboration with regional authorities, organized a consultative forum for SOPT.
- 1-4 August 2006 – the SOPT was presented during the NSRF 2007-2013 campaign organized by the MEF in Deva and Oradea.
- 22-24 August 2006 – a consultative forum for SOPT was organized at regional level, in Constanta, Calarasi and Craiova.
- 6 September 2006 - consultative forum for SOPT, organized at regional level, in Alba Iulia.
- 7-8 September 2006 - the SOPT was presented during the Seminar *"Finances for the rail sector"*, organized at Poiana Brasov.
- 13-14 September 2006 – the SOPT was presented during the Seminar organized by General Associations of the Romania Municipalities in Baia Mare.
- 21-22 September 2006 - the SOPT was presented during the NSRF 2007-2013 campaign organized by the MEF in Sibiu and Slatina.
- 25 September 2006 – during the Avangarde *Caravan "Programmmes for financing SMEs – Structural Funds 2007-2013 – 30 billion EURO from the European Union",* the representatives of MT presented the SOPT.
- 15-17 November 2006 - the SOPT was presented during the NSRF 2007-2013 campaign organized by the MEF in Bacau and Pitesti.
- 28 November 2006 – the SOPT was presented during the NSRF campaign organized by MEF at regional level, at Bucharest.
- 11-12 December 2006 – during the International Conference "Structural Instruments in Romania", the representatives of MT presented the opportunities of financing under Sectoral Operational Programme of Transport 2007-2013.

- Under the Strategic Environment Assessment (SEA), a Working Group consisting of the stakeholders, NGOs and other institutions was formed in order to help assess the SOPT, in addition public consultations took place through the use of the websites of the MT and Ministry of Environment and Sustainable Development and plenary public debates.

The partnership process of the SOPT brought something new in the programming system of the Romanian transport sector. For the first time an extensive consultative process has been undertaken in which debates took place among competent national, regional, local and other public authorities, and economic and social partners, and the public at large. Many opinions have been formulated and most of them were taken into consideration. As a result, the final version of the SOPT reflects the common point of view of all actors involved.

ANNEXES

ANNEX A

Indicative List of Major Projects

ANNEX A.1

Indicative List of Major Projects by Key Areas of Intervention

Major projects by key area of intervention*)

Key area of intervention	Ref	Name of project	Project location	Project description	Invest cost EUR m	CF EUR m	ERDF EUR m
1.1	RDA1	Nadlac - Arad		Motorway construction			
1.1	RDA2	Cernavoda - Constanta		Motorway construction	432.32	70.81	
1.1	RDA2	Constanta motorway bypass		Motorway construction	225.58	52.78	
1.1	RDA1	Arad - Timisoara		Motorway construction	388.22	124.4	
1.1	RDA1	Orastie - Sibiu		Motorway construction	745.56	510.27	
1.1	RDA1	Sibiu – Pitesti (part of)		Motorway construction	**)	**)	
1.1	RDA1	Lugoj -Dumbrava		Motorway construction	257.82	177.40	
1.1	RDA1	Timisoara – Lugoj		Motorway construction	257.82	175.17	
1.1	RDA1	Dumbrava - Deva		Motorway construction	894.53	408.29	204.89
1.1	RDA	Sebes - Turda		Motorway construction	900	765	
1.2	RLR	Border - Curtici – Km 614 (part of PP 22)		Railway rehabilitation	359.72	242.63	
1.2	RLR	Simeria – Coslariu (part of PP22)		Railway rehabilitation	795.92	532.18	
1.2	RLR	Coslariu – Sighisoara (part of PP22)		Railway rehabilitation	1,124.2	730.03	
1.2	RLITS	ERTMS II pilot		Intelligent Transport System	60.91	43.50	
1.2	RLR	Rehabilitation of Danube Bridges TEN-T 22		Railway Rehabilitation	67.02	47.87	
1,2	RLR	Development of the Metro Line no.4		Metro line development	175.87	149.49	
1.2	RLR	Improvement of public transport services on Metro Line 2. Berceni - Pipera		Railway Rehabilitation	276.52	189.55	
1.3	WT	Poarta Alba – Midia Navodari		Rehabilitation and improvement of canal works			
1.3	WT	Agigea – Cernavoda		Rehabilitation and improvement of canal works	**)	**)	
1.3	WT	Locks Modernization Equipments and Installation		Rehabilitation and improvement of canal works	105.5	55.48	
2.1	RDR	DN6 Alexandria – Craiova		National road modernisation	137.17		76.64

2.1	RDR	DN 1H Zalău-Alesd		National road rehabilitation	98.8		39.05
2.1	RDR	DN 24 Galați County limit-Vaslui-Crasna and DN 24B Crasna-Albița		National road rehabilitation	80.3		44.94
2.1	RDR	Brasov By-pass		National road modernization	92.87		53.10
2.1	RDR	Bacau By-pass		National road modernization	176.6		98.62
2.1	RDR	DN 56 Craiova - Calafat		National road rehabilitation	74.29		47.08
2.1	RDR	DN 76 Deva - Oradea		National road rehabilitation	207.52		142.96
2.1	RDR	DN 66 Rovinari - Petrosani		National road rehabilitation	88.18		54.86
2.1	RDR	Tirgu Mures By Pass		National road modernization	59.23		33.08
2.2	RLR	Gradistea Bridge rehabilitation		Railway rehabilitation	72.00		40.20
2.2	RLR	Development of the Metro Line no.5		Metro line development	111.77		100,10

Note: *) This is only an indicative list of major projects. The SOP-T establishes objectives, priorities and actions and not individual projects.

****) These projects are estimated to exceed the 50 mil. EUR threshold, however they present themselves as alternatives to the indicative SOPT project list.**

ANNEX A.2

Indicative List of Major Projects by Mode

Major projects by mode*)

Key area of intervention	Ref	Name of project	Project location	Project description	Invest cost EUR m	CF EUR m	ERDF EUR m
1.1	RDA1	Nadlac - Arad		Motorway construction			
1.1	RDA2	Cernavoda - Constanta		Motorway construction	432.32	70.81	
1.1	RDA2	Constanta motorway bypass		Motorway construction	225.58	52.78	
1.1	RDA1	Arad - Timisoara		Motorway construction	388.22	124.4	
1.1	RDA1	Orastie - Sibiu		Motorway construction	745.56	510.27	
1.1	RDA1	Sibiu – Pitesti (part of)		Motorway construction	**)	**)	
1.1	RDA1	Lugoj -Dumbrava		Motorway construction	257.82	177.40	
1.1	RDA1	Timisoara – Lugoj		Motorway construction	257.82	175.17	
1.1	RDA1	Sebes - Turda		Motorway construction	900	765	
2.1	RDR	DN 6 Alexandria – Craiova		National road modernisation	137.17		76.64
2.1	RDR	DN 1H Zalău-Alesd		National road rehabilitation	98.8		39.05
2.1	RDR	DN 24 Galați County limit-Vaslui-Crasna and DN 24B Crasna-Albița		National road rehabilitation	80.3		44.94
2.1	RDR	Brasov By-pass		National road modernization	92.87		53.10
2.1	RDR	Bacau By-pass		National road modernization	176.6		98.62
2.1	RDR	Tirgu Mures By Pass		National road modernization	59.23		33.08
2.1	RDR	DN 56 Craiova - Calafat		National road rehabilitation	74.29		47.08
2.1	RDR	DN 76 Deva - Oradea		National road rehabilitation	207.52		142.96
2.1	RDR	DN 66 Rovinari - Petrosani		National road rehabilitation	88.18		54.86
1.2	RLR	Border - Curtici – Km 614 (part of PP 22)		Railway rehabilitation	359.72	242.63	
1.2	RLR	Simeria – Coslariu (part of PP22)		Railway rehabilitation	795.92	532.18	
1.2	RLR	Coslariu – Sighisoara (part of PP22)		Railway rehabilitation	1,124.2	730.03	
1.2	RLITS	ERTMS II pilot		Intelligent Transport System	60.91	43.50	
1.2	RLR	Rehabilitation of Danube Bridges TEN-T 22		Railway Rehabilitation	67.02	47.87	
1.2	RLR	Development of the Metro Line no.4		Railway Rehabilitation	175.87	149.49	

1.2	**RLR**	**Improvement of public transport services on Metro Line 2. Berceni - Pipera**		**Railway Rehabilitation**	**276.52**	**189.55**	
2.2	**RLR**	**Gradistea Bridge rehabilitation**		**Railway rehabilitation**	**72.00**		**40.20**
2.2	**RLR**	**Development of the Metro Line no.5**		**Metro line development**	**111.77**		**100,10**
1.3	**WT**	**Poarta Alba – Midia Navodari**		**Rehabilitation and improvement of canal works**	****)**	****)**	
1.3	**WT**	**Agigea – Cernavoda**		**Rehabilitation and improvement of canal works**	****)**	****)**	
1.3	**WT**	**Locks Modernization Equipments and Installation**		**Rehabilitation and improvement of canal works**	**105.5**	**55.48**	

Note: *) This is only an indicative list of major projects. The SOP-T establishes objectives, priorities and actions and not individual projects.

****) These projects are estimated to exceed the 50 mil. EUR threshold, however they present themselves as alternatives to the indicative SOPT project list.**

ANNEX B

Maps

ANNEX C
Indicative breakdown of the Community contribution by category in the SOPT

Commission reference No: CCI2007RO161PO003
Name of the programme: **Sectoral Operational Programme Transport**
Date of the last Commission Decision for the Operational Programme concerned: __/__/__

(in euros)

Dimension 1 **Priority theme**	
Code *	Amount **
16	
17	1.138.897.478
18	100,000,000
21	1.784.303.926
22	472,105,258
27	2,500,000
28	38,388,388
29	
30	95,552,559
32	53,196,833
54	20,695,231
85	25,303,549
86	3,780,250
Total	4,288,134,779

(in euros)

Dimension 2 **Form of finance**	
Code *	Amount **
01	4,288,134,779
Total	4,288,134,779

(in euros)

Dimension 3 **Territory**	
Code *	Amount **
00	4,288,134,779
Total	4,288,134,779

* The categories are coded for each dimension using the standard classification.

** Estimated amount of the Community contribution for each category.