



**Government of the Republic of Macedonia**

**Operational Programme  
Regional Development  
2007 – 2009**

**Republic of Macedonia**

**30 October 2007**

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Annex 1 Overview of the Recommendations of the Ex-Ante Analysis

## GLOSSARY OF TERMS AND ABBREVIATIONS

|               |   |
|---------------|---|
| ADA           | Austrian Development Agency   |
| ADKOM         | Asocijacija na Davateli na Komunalni usluzi (Association of Public Communal Service Providers)            |
| BCP           | Border Crossing Point   |
| CARDS         | Community Assistance for Reconstruction Development and Stabilisation                                     |
| CDM           | Clean Development Mechanism   |
| CEB           | Council of Europe development Bank  |
| CEMT          | Conference of European Ministers of Transport   |
| CFCD          | Central Finance and Contracting Department  |
| CHP           | Combined Heat and Power   |
| Component I   | Institutional Development Component   |
| Component II  | Cross Border Cooperation Component  |
| Component III | Regional Development Component  |
| Component IV  | Human Resources Development Component   |
| Component V   | Rural Development Component   |
| CSG           | Community Strategic Guidelines  |
| DG            | Directorate General   |
| EAR           | European Agency for Reconstruction  |
| EBRD          | European Bank for Reconstruction and Development  |
| EC            | European Commission   |
| EEC           | European Economic Community   |
| EIA           | Environment Impact Assessment   |
| EIB           | European Investment Bank  |
| EU            | European Union  |
| FIDIC         | Fédération Internationale des Ingénieurs Conseils (fr.), International Federation of Consulting Engineers |
| FNRR          | Fund for National and Regional Roads  |
| GDP           | Gross Domestic Product  |
| GHG           | Green House Gas   |
| GTZ           | Gesellschaft für Technische Zusammenarbeit  |
| HDPE          | High Density Poly Ethylene  |
| HiPERB        | Hellenic Plan for Economic Reconstruction of the Balkans  |
| IBM           | Integrated Border Management  |
| ICT           | Information and Communication Technology  |
| IFI           | International Finance Institution   |
| IMF           | International Monetary Fund   |
| IPA           | Instrument for Pre-accession Assistance   |
| IPPC          | Integrated Pollution Prevention and Control   |
| IRU           | International Road Union  |
| ISPA          | Instrument for Structural Policies for Pre-Accession  |
| JICA          | Japan International Cooperation Agency  |
| JSC           | Joint Stock Company   |
| KfW           | Kreditanstalt für Wiederaufbau  |
| LEAPs         | Local Environment Action Plans  |
| LSG           | Local Self Government   |
| LSGU          | Local Self Government Units   |
| MIFF          | Multi-annual Indicative Financial Framework   |

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|--------|--|
| MIPD   | Multi-annual Indicative Planning Document  |
| MKD    | Macedonian Denar   |
| MoAFWE | Ministry of Agriculture, Forestry and Water Economy                                    |
| MoEPP  | Ministry of Environment and Physical Planning  |
| MoF    | Ministry of Finance  |
| MoTC   | Ministry of Transport and Communications   |
| MR     | Macedonian Railways  |
| NAO    | National Authorizing Officer   |
| NDP    | National Development Plan  |
| NEAP   | National Environmental Action Plan   |
| NIPAC  | National IPA Coordinator   |
| NPAA   | National Plan for Adoption of the <i>Acquis</i>  |
| NUTS   | Nomenclature of Territorial Units for Statistics                                       |
| OPRD   | Operational Programme Regional Development   |
| PE     | Public Enterprise  |
| PIP    | Public Investment Programme  |
| PPP    | Public Private Partnership   |
| PVC    | Poly Vinyl Chloride  |
| RD     | Regional Development   |
| SCF    | Strategic Coherence Framework  |
| SEA    | Strategic Environment Assessment   |
| SEA    | Secretariat for European Affairs   |
| SEE    | South East Europe  |
| SEETO  | South East Europe Transport Observatory  |
| SIDA   | Swedish International Development Agency   |
| SWOT   | Strengths Weakness Opportunities Threats   |
| TA     | Technical Assistance   |
| TEA    | Trans European Axis  |
| TIR    | Transports Internationaux Routiers   |
| ToR    | Terms of Reference   |
| UN     | United Nations   |
| UNECE  | United Nations Economic Commission for Europe  |
| UNDP   | United Nations Development Programme   |
| UNESCO | United Nations Educational, Scientific and Cultural Organization                       |
| USAID  | United States Agency for International Development                                     |
| VAT    | Value Added Tax  |
| VOC    | Vehicle Operational Costs  |
| WB     | World Bank   |
| WHO    | World Health Organization  |
| WWTP   | Waste Water Treatment Plants   |
| ZELS   | Zaednica na Edinici na Lokalna Samouprava (Association of Local Self Government Units) |



## EXECUTIVE SUMMARY

The Operational Programme Regional Development represents the programming document of the Republic of Macedonia for support of the European Union from a newly formed Instrument for Pre-accession Assistance (IPA). It aims to help national efforts to implement various measures to meet the European Union economic and political conditions and to comply with the Copenhagen accession criteria. IPA will also assist the candidate countries for preparing for the programming, management and implementation of the European Regional Development Fund, Cohesion Fund, European Social Fund and Rural Development Fund that will be made available to them upon accession.

The Operational Programme Regional Development (OPRD) has been drafted for the three year period 2007 – 2009 and creates a framework defining the fields of intervention and the conditions for granting support. The OP is linked with the objectives and priorities of the Strategic Coherence Framework 2007 – 2013, which is the basic instrument for programming of pre-accession assistance from the EU through the IPA's component III (Regional Development) and IV (Human Resources Development). The OPRD implements and describes in detail the Component III activities, by a series of defined priorities and measures focused on the transport and environment sectors.<sup>1</sup>

The Operational Programme Regional Development has been prepared in compliance with the national priorities specified in the National Development Plan for 2007 – 2009 and other available relevant strategic documents. It also includes compliance with IPA regulations and strategic documents, including the Multi-annual Indicative Financial Framework (MIFF) document which allocates funds per beneficiary country and per component and also the Multi-annual Indicative Planning Document (MIPD) of the Republic of Macedonia which specifies the strategy of IPA for the three year rolling period. The programme strategy embodied in this Operational Programme is fully consistent with the sectoral strategic priorities and is compliant with the Community Strategic Guidelines for Cohesion 2007 – 2013 and with other documents governing EU principles of sustainable development and with regulating external assistance.

The strategic objective of the Operational Programme Regional Development for the programming period 2007 – 2009 is to support the conditions for sustainable development through the improvement of the transport and environment infrastructure. In particular, the objective is focused on upgrading and modernisation of the road and railway infrastructure along the Pan-European Transport Network (Corridors VIII and X) and also upon establishing sanitation and waste disposal infrastructure. These actions will be in compliance with European Union standards, and are essential in improving the quality of individuals' lives and for achieving sustainable economic development of the country.

The above objectives will be achieved through the various defined priority axes and their measures. The OP has defined four priority axes:

1. Corridor X Motorway Completion
2. Upgrading and Modernization of the Transport Infrastructure

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<sup>1</sup> Part of the Component III is also support of the regional competitiveness. Due to limited volume of financial resources allocated for the first programming period 2007-2013, this sub-component has not been included in this operational programme where support of infrastructure is preferred. The programme for regional competitiveness will be drafted in the next programming period.

3. Improvement of Environmental Infrastructure
4. Technical Assistance

The largest investment arising from the programme is made in the transport sector, where 75% of the total assistance is allocated. The measures are focused on upgrading and modernisation of roads and railways, whereby the implementation of one major road construction project along corridor X is considered.

The priority of the environment sector is to support the building of infrastructure for wastewater collection and treatment and for waste disposal activities. The aim is to build infrastructure that is in compliance with the criteria defined by the legislation of the European Union. One major wastewater project has been considered for implementation within this programming period.

Important attention has also been given for the preparation of new projects that will form a pipeline of eligible projects in the transport and environment sectors' infrastructure development. The created pipeline will then form a sound basis for the implementation of the priorities in the forthcoming programming periods.

Along with the improvement of the infrastructure, the implementation of the programme will enable those responsible for programme implementation to improve their knowledge, skills and experience concerning programme management, and prepare them for the management of assistance applications in the next programming periods, where it is expected that more varied opportunities for financial funding support for regional development activities will occur.

## **PROGRAMMING BACKGROUND**

The strategic orientation of the Government of Republic of Macedonia is its full integration into the EU. In order to speed up this process the country should accelerate its overall process of transition. Experiences of the ten new EU member-countries confirm that the EU accession process is an extremely effective framework for accelerating the transition process of a candidate country and for making it resistant to the competitive pressures of the EU market.

In December 2005, Republic of Macedonia obtained the status of a candidate country for accession to the EU. Similar to the other former candidate countries, before their accession to the EU, Republic of Macedonia is entitled to receive pre-accession assistance. According to the recently agreed multi-annual financial framework of the EU for the period 2007 – 2013, the pre-accession assistance will be channelled through the Instrument for Pre-accession Assistance (IPA). As an official candidate country, Republic of Macedonia is eligible for all five components of the IPA Instrument, namely the support for transition and institution-building, cross-border cooperation, regional development, human resources development and rural development.

The Operational Programme Regional Development has been prepared as a multi-annual program that will put the EU assistance into the general framework of the country's development and will ensure that both the Macedonian and EU development priorities and policies are respected. In addition, minimum standards for implementation, management and financial control are specified in order to obtain financial support for the pre-accession funds.

The Operational Programme has been prepared in relation to the Macedonian National Development Plan 2007 – 2009 (NDP) and the Strategic Coherence Framework (SCF) covering the period 2007 – 2013. Other national documents and strategies have been included where relevant. The programme strategy embraces the period 2007 – 2013, with financial indications for the period 2007-2009.

The programme provides a structural approach with a short overview of related national issues and more detailed descriptions of the transport sector conditions (including the road transport and rail transport sub-sectors) plus a similar approach to the environment sector conditions (including the waste water and water management sub-sectors). An understanding of the medium term needs for the sectors is provided (including SWOT analyses) enabling the identification of the specific programme strategies, financial implication and ways in which the implementation arrangements remain in compliance with the established relevant EU structures.

## 1. CONTEXT, CONSULTATION AND COORDINATION

### 1.1 NATIONAL POLICY AND SOCIO-ECONOMIC CONTEXT

Republic of Macedonia is a small country, with 25.713 sq. km. and population of about 2 million. It is also a landlocked country, located in the midst of the Balkan Peninsula and bordering four countries:

- Greece in the South, an EU member state, with a border 246 km long,
- Bulgaria in the East, an EU member state, with a border 148 km long,
- Serbia (including Kosovo) in the North, with a border 221km long,
- Albania in the West with a border 151 km long.

The geographic location places the country at the crossroads of South-Eastern Europe, making it an important transit route for land traffic between Central Europe, the Aegean Sea, the Black Sea and the Adriatic Sea.

According to the NUTS classification there are eight NUTS III regions and 84 municipalities. The main cities and towns are widely distributed, with Skopje the national capital city, being located in the north east of the country. As a result, the country has a monocentric regional structure based on the dominance of the capital city Skopje that attracts about 40 % of the urban population. The other cities are less economically attractive to compete successfully with the capital city and attract sufficient industry and commerce.

Table 1 – Population

| Territorial units        | Population (2002 census) |       | Density (per km <sup>2</sup> ) | Area (in km <sup>2</sup> ) |       | Settlements |      |
|--------------------------|--------------------------|-------|--------------------------------|----------------------------|-------|-------------|------|
|                          | Number                   | %     |                                | Number                     | %     | Number      | %    |
| <b>Macedonia</b>         | 2,022,547                | 100.0 | 78.6                           | 25,713                     | 100.0 | 1,767       | 100  |
| <b>Pelagonia region</b>  | 238,136                  | 11.8  | 50.5                           | 4,719                      | 18.3  | 343         | 19.4 |
| <b>Vardar region</b>     | 133,180                  | 6.6   | 39.8                           | 3,346                      | 13.0  | 171         | 9.7  |
| <b>North-east region</b> | 172,787                  | 8.5   | 74.9                           | 2,306                      | 8.9   | 192         | 10.8 |
| <b>South-west region</b> | 221,546                  | 10.9  | 67.0                           | 3,280                      | 12.7  | 286         | 16.2 |
| <b>Skopje region</b>     | 578,144                  | 28.6  | 318.0                          | 1,818                      | 7.0   | 142         | 8.0  |
| <b>South-east region</b> | 171,416                  | 8.5   | 62.5                           | 2,741                      | 10.6  | 188         | 10.6 |
| <b>Polog region</b>      | 304,125                  | 15.0  | 123.4                          | 2,479                      | 9.6   | 184         | 10.4 |
| <b>East region</b>       | 203,213                  | 10.0  | 48.5                           | 4,188                      | 16.3  | 261         | 14.8 |

Source: National Development Plan 2007-09

Skopje region dominates with approximately 580,000 inhabitants (with 29% of the national population). There are only 13 towns and cities with a population above 50,000, 4 of which are in the Skopje region – there are no such large towns or cities in the Eastern region. The annual growth rate of 2.0% is typical in the recent years. Overall, the Skopje and Polog regions are experiencing higher growth rates than the national average and have higher average densities.

Illustration 1 – Map of the Principal Cities



In 2002 the country had a population of 2.022 million and by 2005 it had increased to 2.036 millions. In the recent past, socio-economic development has been characterized by an exceptional dynamism, but with misbalance of the development as well. Consequently, significant level of development has been achieved, affected by certain disproportions and collisions of individual segments of the development. The efforts of the Macedonian governmental policy are focused on the provision of stability of economic trends, revitalization of economic activities and strengthening of the EU integration processes.

The candidate country status for accession in the European Union and its membership in the World Trade Organization have created conditions for greater opening of Macedonian economy towards international global market, fostering of investments, strengthening of GDP and by all these – prosperity of the national economy.

The structure of economic activities changed substantially during the transition period. The share of industry dropped considerably, from around 45 % in the early 1990s to around 25 % in 2005. With a share of about 60 %, the services are now dominant in the structure of the GDP, with major contributions coming from trade, transport, and telecommunications. Agriculture still contributes with 12 % to the GDP.

Compared to 2004, when industrial production had a negative growth, in 2005 it was the major driving force behind intensifying economic activity. The forecasts for industrial growth in that year were for 5 % while actual figure was much higher (7 %). Although most of the industrial activities were growing, still the highest growth rates were registered in the traditional export oriented branches: basic metals (with a growth rate of 33.4 %), construction materials industry (21.4 %), food industry, petrol industry, production of electronic machines, etc. Other sectors of the economy also demonstrated high growth in 2005. This was in particular the case with trade (growth rate of 7.9 %), but also with transport and

communications (6.1 %), tourism (6.6 %) and the financial sector. The only industry which has shown a negative growth in 2005 was the construction industry, due to the delayed start of the construction of some large infrastructure projects<sup>2</sup>.

According to the preliminary data given by the State Statistical Office, quarterly data on GDP in 2006 have show a real growth of 3.1% in the first three quarters of the year. The growth was mainly the result of the growth in the service sector, where trade has increased up to 5.5%, while transport and communications up to 7.5%.

Growth of economic activity in 2006 led to a greater commodity trade, whereby export of goods grew by 17.5%, and import grew by around 16,5%. Such trends resulted in an increase of the trade deficit by 14% compared to the previous year.

### 1.1.1. DESCRIPTION OF THE TRANSPORT SECTOR

The geographic location of the country places it at the crossroads of South-Eastern Europe, making it an important transit route for land traffic between Central Europe, the Aegean Sea, the Black Sea and the Adriatic Sea. Republic of Macedonia is a small landlocked country located in the south-central part of the Balkan Peninsula. The favourable geographical location of the country has contributed to the development of international traffic on two Trans National Axes: North-South (Corridor X) and East-West (Corridor VIII) linked to the Trans European Transport Networks.

Road transport accounts for the largest share of total carriage of goods and passengers in the country. As indicated in the tables and graphs below, the share of transport in the national GDP over the past few years is stable and is within the range of 7.8% and 8.4%. The relatively poor quality of the road network contrasts sharply with the high relative importance of the road transport. However, the basic infrastructure of the country is relatively well established and it can be considered as a good basis for further modernization. Several significant transport routes connect with Central and Eastern Europe and with South and South-East Europe and beyond. Further development of the transport sector will contribute towards competitiveness of the national economy and balanced regional development.

Table 2 – Transport share in GDP<sup>3</sup>

| Year | GDP<br>in million denars | Transport share in GDP<br>in million denars | Transport share<br>in % |
|------|--------------------------|---|-------------------------|
| 2002 | 243.970                  | 20.493                                      | 8.4                     |
| 2003 | 253.454                  | 21.037                                      | 8.3                     |
| 2004 | 265.257                  | 22.282                                      | 8.4                     |
| 2005 | 284.226                  | 23.307                                      | 8.2                     |
| 2006 | 303.305                  | 23.658                                      | 7.8                     |

The transport system covers the following modes of transport:

- Road transport
- Railway transport
- Air transport
- Inland waterway transport

<sup>2</sup> Estimations as indicated in the National Development Plan 2007-2009

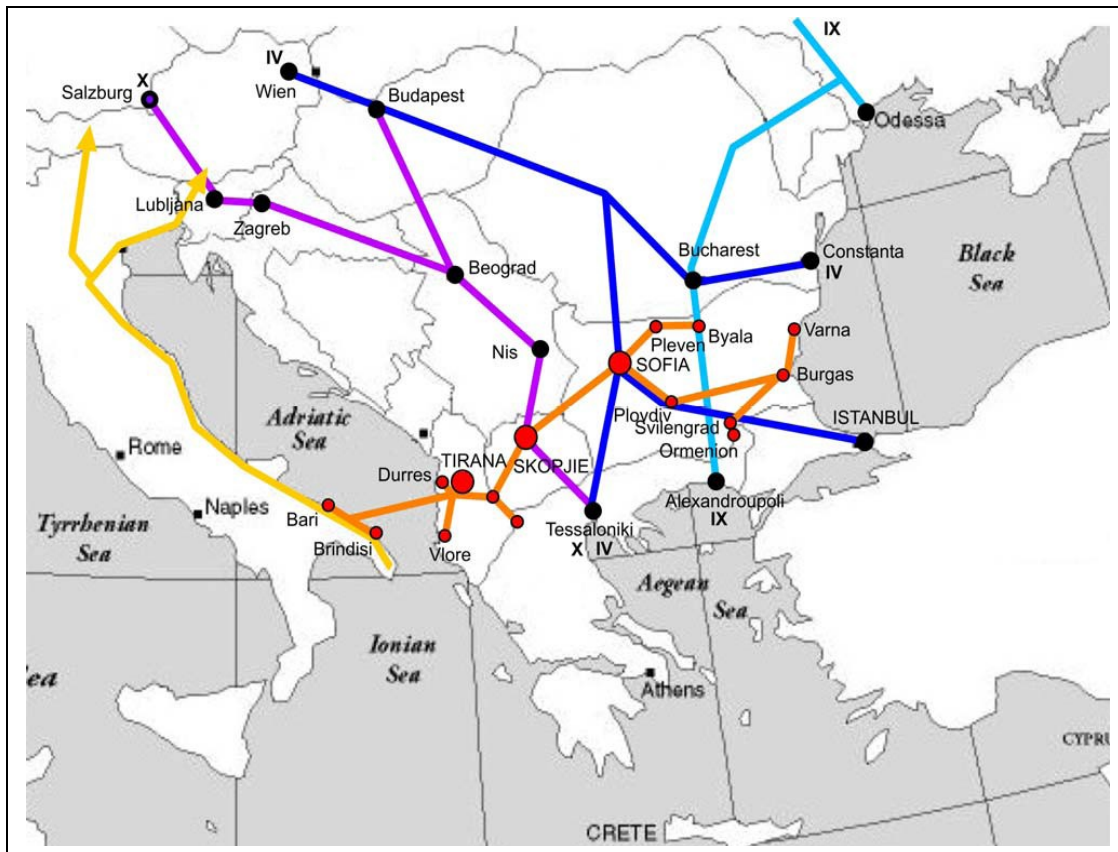
<sup>3</sup> State Statistical Office

- Pipeline transport
- Telecommunication and broadcasting services
- Postal services

In general terms the physical infrastructure consists of about 13.183 km. public roads, 699 km railways, and 2 international airports. The pipeline system consists of a gas pipeline and a crude oil pipeline. The gas pipeline is 156 km in length with a nominal annual capacity of 800 million m<sup>3</sup>, and the crude oil pipeline is 213 km in length and with a nominal flow of 360 m<sup>3</sup>/hour.

The two Trans National Axes (Corridors VIII and X) that cross the country are important because they support the easy movement of people and goods within the country and also provide connections to regional neighbours and further to all other European Countries.

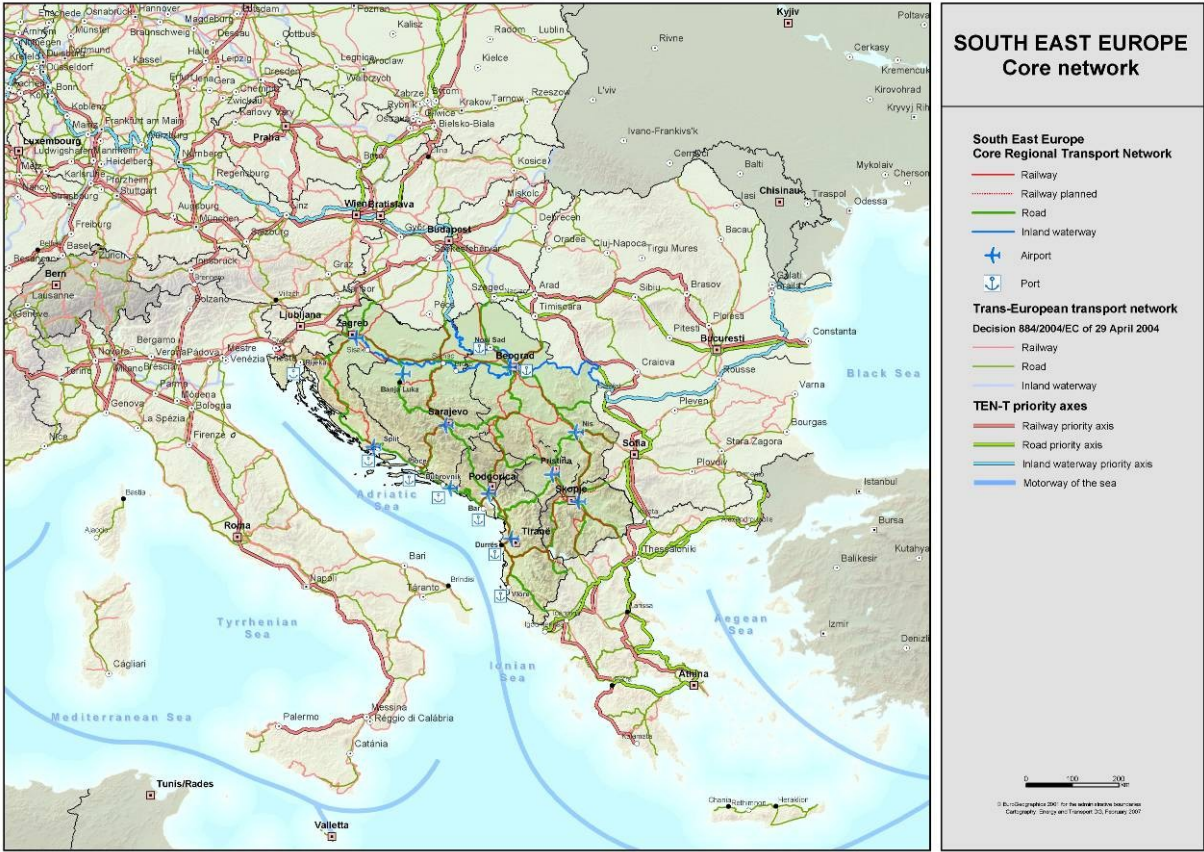
Illustration 2 – Transport Corridors in SEE Europe



The Commission's policy on the external aspects of the Trans-European Networks were established by the report of the High Level Group on the Extension of Major trans-European Transport Axes to the Neighbouring Countries and Regions (7<sup>th</sup> December 2005). The “Guidelines for transport in Europe and neighbouring regions” (COM (2007) 32 final) provide more recent indication about the direction followed by the EU policy regarding the extension of the major Trans-European Transport Axes to the neighbouring countries. It confirms the orientation already given by the Memorandum of Understanding (MoU) on the Development of the South East Europe Core Regional Transport Network. The signatories aimed the adoption of the first multi-annual plan in 2006, composed of an integral regional strategy and a short list of concrete priority projects and measures.

The core Network established by the technical secretariat of the South East Europe Transport Observatory (SEETO) is now defined as in the following map:

Illustration 3 – South East Europe Core Network



The development of the transport infrastructure has achieved good results in the recent period. However, it still has not achieved a level of development, which will meet the contemporary requirements of the society and the economy concerning the transport of the passengers and goods.

The main challenges regarding the financing of transport infrastructure arise from several important developments that have influenced the sectoral changes that have taken place since 1990.

These include:

- A gradual increase in private vehicle ownership
- Increased traffic on already established road network
- Decline of traditional heavy industries that had used rail transport
- Fundamental changes in the structure of the transport sector, from a state planned socialist economy to a market driven economy
- Inheritance of an inadequate infrastructure that acerbated by continuing under-investment
- Under-investment in infrastructure maintenance and protection



These have in turn resulted in:

- A decline in the numbers of rail passengers
- A gradual increase in the volume of road traffic with greater congestion, higher vehicle operating costs and longer trip times
- Adverse impacts on the Macedonian economy with less competitiveness and attractiveness to investors.
- Fluctuations in intensity of international traffic patterns
- Increased environmental deterioration
- Rail freight tonnage reductions
- Demand for investment in new transport infrastructures, in new construction activities and in reconstruction and rehabilitation
- Reduction in rail operating speed, with longer trip times

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 funding including PPP, road tolling and new modes of transport such as multi-modal and combined transport.

#### **1.1.1.1 National Transport Priorities**

The national priorities for the development of the transport sector are defined in the following national and regional strategic documents:

- Draft National Transport Strategy 2007-2017
- Public Investment Programme 2007-2009
- National Development Plan 2007-2009
- Road Investment Plan 2007-2012
- Final Report of the High Level Group 2005
- Five-Year Multi-annual Plan of SEETO 2007-2011

The Government recognises the importance of transport in the current phase of national development. The National Transport Strategy was adopted by the Government on 31.07.2007 determining the national transport development priorities for the period 2007-2017. The focus of the National Transport Strategy is on the following objectives:

- Promotion of the economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximize their efficiency
- Improvement of the safety of journeys by reducing accidents and enhancing the safety of pedestrians, cyclists, drivers
- Improvement of integration by making journey planning and ticketing easier and working to insure smooth connection between different modes of transport
- Protection of the environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimize emissions and consumption of resources and energy
- Promotion of the social inclusion by connecting distant and disadvantaged communities and increasing the transport network accessibility

These objectives will be achieved by:

- Modernisation and extension of the infrastructures on Corridors X and VIII to enable transport service delivery to be improved both in qualitative and quantitative terms
- Building modern transport infrastructures and facilities with enhanced safety features that, together with modern targeted safety awareness campaigns, contribute to safer and more secure transport
- Initiation of a public transport operators' forum to address ways to promote better integration between modes and thereby increase public transport patronage by providing easy and convenient ways to use the various modes
- More and better opportunities through improving the transport networks, to provide improved mobility for all, especially those in rural areas, to provide better access for goods and services, and particularly for those in the rural areas. These attributes then support improved social cohesion
- Better quality and more transport links that will enable improved access to health centres and facilities

The following topics related to the environmental sustainability are to be the outstanding areas where the national transport policy will focus its consideration:

1. Protection of water resources-The main objective is to reduce the transportation impact on the quantity and quality of the water environment. The considerations are also applied on the physical aspect of water bodies, including for example potential morphological alterations arising from disturbances to existing hydrological patterns by engineering works, dredging etc;

2. Protection of biodiversity- The main objective will be to preserve biodiversity at all levels and according to the protection of national environmental programs and strategies;

3. Improving the air quality- Transport is the major contributor to local air pollution, especially in terms of nitrogen dioxide (NO<sub>2</sub>) and particles. This includes effects on local air quality in terms of human health and biodiversity. The National Transport Strategy will be focused on improving the air quality through reducing emissions and pollution from the transport system. The Strategy promotes reduction of the overall traffic volumes which will positively assist in reducing the air pollution. In addition, measures are promoted for reducing the negative impact from the human activities associated with the construction of new transport infrastructure, including extraction of materials and energy use, which will be fully assessed at the design stage. The Strategy also encourages the introduction of demand management measures to reduce traffic flows, to prevent induced traffic from taking up the public transport road space, to promote use of alternatively fuelled vehicles and to include public transportation;

4. Improving the use of land- The Strategy promotes measures for reducing the negative impact from the human activities, especially the use of arable and agrarian land for the purpose of transport infrastructure. The measures will be in line with the particular institutional policy and the National Spatial Plan.

5. Reducing the negative climate impact-Reducing the energy consumption and CO<sub>2</sub> emissions and the associated impacts of climate change will be an important issue of the future sector development. The Strategy will support measures for reducing climate change effects through the inclusion of policies as to reduce the need for travelling and to promote sustainable travelling as well as measures on promoting use of alternatively fuelled vehicles.

*6. Protecting the existing material assets-* New developments in infrastructure require new resources and waste generation.. The use of material assets will be an integral part of environmental appraisal at the national and/or local level. Use of recycled or secondary made aggregates should be encouraged where possible.

*7. Protecting the landscape-*Both the physical and visual appearance of transport infrastructure can pose a major impact on the existing landscape. Transportation activities could have impact on the character and integrity of the landscape, in particular on areas designated at the national or local level on the grounds of their natural beauty. New infrastructure projects can have a significant impact on the quality of panoramas, specific views and the visual environment of sensitive areas. The strategy will promote protection on the character, diversity and unique qualities of the landscape. Environmental appraisal at the national and local level will determine how the infrastructure will fit with the landscape and will propose measures that will retain, improve and protect characteristic features and landscape patterns.

#### **1.1.1.2 Institutional Arrangements**

*The Ministry of Transport and Communications (MTC)* is the institution in charge of the transport sector in the country but several other independent bodies and public institutions are in charge of various areas of the transport sector. It is organized into 12 Departments that in turn are responsible for developing and implementing policies through 32 specialized Units.

*Fund for National and Regional Roads (FNRR)* is responsible for designing and implementing the Annual Programme concerning the planning, funding, construction, reconstruction, maintenance, and protection of the national and regional road network. FNRR for 2007 has its annual budget of about € 74.000.000. The investment budget for road construction, amounting to approximately 40% of the total budget of the FNRR increases every year. Most of the investments in the road network in 2007 are to be funded through loans, while the maintenance budget (approximately 20% of the total budget) is spent for maintenance of the national and regional road networks in the country carried out by PE Makedonijapat according to the annual contract signed with FNRR.

Other foreseen relevant expenses are 3% for administrative and operational costs for FNRR, 11% intended for local roads, 25% for returning of annuities and other transferred financial commitments and 2% for studies and designs.

Considering the year 2006, the annual programme of the FNRR was realised with 96%. In general terms, the investment side of the programme is realised with 102%, the road maintenance amounts with 96%, and operational expenses of the FNRR are realised with 101%.

*PE Makedonijapat* is a public enterprise that, in accordance with the Law on Public Roads, is competent and responsible for the protection and maintenance of the national and regional road network in the country. At present, it signs an annual contract with FNRR which governs its work and activities.

In this context, it is noteworthy to mention that institutions related to the road sector will be subject to further restructuring after preparation of the study for Road Restructuring Sector

(project financed under CARDS 2006). The purpose of road sector restructuring is to provide fair competition in the market for road maintenance in compliance with the EU practices. This will be achieved through restructuring the key players in the road sector in the country and re-orienting them towards the new conditions and provisions that will increase the governmental income through better quality construction and rehabilitation activities in the road network as well as improved competitiveness in international markets.

The results expected to be achieved are:

- New road sector legislation to be in place and harmonised with the EU legislation
- New toll collection system to be introduced
- Enhanced capacity of the Fund for National and Regional Roads to efficiently plan and manage road maintenance activities
- Open competitive market for road maintenance

*Public Enterprise Macedonian Railways* is currently under a restructuring process in order to become more responsive to the market. This will be achieved through the separation of the operational activities from the infrastructure activities. In accordance with the Law on Transformation of the Public Enterprise "Macedonian Railways" UnLtd Skopje<sup>4</sup>, the enterprise is completed by separation of the existing Public Enterprise "Macedonian Railways" UnLtd Skopje into two new entities:

- Public enterprise for railway infrastructure "Macedonian Railways" Skopje, and
- Joint Stock Company for Transport "Macedonian Railways Transport" JSC Skopje.

An Agency for Railway Transport is planned to be established in the first quarter of 2009.

### **1.1.1.3 Legal Framework**

Since 2002, the country commenced the process of harmonization of its national transport legislation with the EU *acquis*. Further regulation, regarding the drafting of secondary legislation in the transport sector as a whole is an on-going process. The approximation of the transport legislation is an important step towards implementation of projects that put in place EU requirements in the field of transport.

#### **1.1.1.3.1 Road Transport Legal Framework**

The management of the regional and national roads is regulated by the following laws:

**The Law on Road Transport**<sup>5</sup> regulates the conditions and the manner in which the transport of passengers and goods is carried out, both in the domestic and international road transport. It prescribes the terms for professional competency and financial stability, some of the conditions for access to the profession of transport operator, as well as the terms and procedures for acquiring a licence for carrying out transport of passengers and goods by road. Several bylaws arising from the Law on Road Transport have been adopted in 2007 and three remaining are under preparation.

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<sup>4</sup> Official Gazette No 29/05

<sup>5</sup> Official Gazette N0.68/04;127/06

**The Law on Public Roads**<sup>6</sup> regulates the conditions and the manner of construction, reconstruction, maintenance, protection, use, management, and funding of public roads, as well as the supervision of the enforcement of this Law. Among the most important issues, the Law regulates:

- Road categories; competencies; sources of funding and allocation of funds among the entities responsible for the road network;
- Adoption of medium-term and annual programmes for construction, reconstruction and maintenance of roads;
- Competencies for granting concessions,

**Law on Carriage of Dangerous Goods**<sup>7</sup> regulates the carriage of dangerous goods both by road and railway. It regulates the terms and conditions according to which the transport of dangerous goods is carried out (including preparation of the goods, loading, transport, manipulation which can occur during the transport, unloading, security during transport and adequately equipping the vehicle as well as training of staff).

**The Law on Road Transport Safety**<sup>8</sup> determines the conditions which have to be met by the vehicles engaged in road transport, as well as the devices and equipment which have to be provided in the vehicles, dimensions, overall mass and axle weight of vehicles; the conditions for obtaining a driving permit and the form and application form for the driving permit, verification and technical control of the vehicles, registration of the vehicle and the application form for the traffic permit etc.

**The Law on Mandatory Transport Insurance** governs the mandatory insurance for all types of transport based on the previously outlined Laws. Number of bylaws were adopted in order to regulate certain provisions in a more detailed manner.

In addition to the above mentioned legislation The Government has signed bilateral agreements with the Governments of 28 countries. Other relevant agreements to which the country is a signatory party:

- UN Agreement on the international carriage of perishable foodstuffs and on the special equipment to be used for such carriage (ATP);
- Convention on the Contract for the International Carriage of Goods by Road (CMR);
- Customs Convention on the International Transport of Goods under Cover of TIR carnets;
- UN and ECE legislation on the type-approval of motor vehicles;
- European Agreement concerning the Work of Crews of Vehicles Engaged in International Road Transport;
- Accession to the Vienna Convention of the UN (1968).

#### **1.1.1.3.2 Rail Transport Legal Framework**

**Law on Transformation of tMacedonian Railways** <sup>9</sup> determines the separation into two new entities, Public enterprise for railway infrastructure "Macedonian Railways" Skopje, and Joint Stock Company for Transport "Macedonian Railways Transport" JSC Skopje.

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<sup>6</sup> Official Gazette No.26/96; 40/99; 96/00; 29/02 and 68/04

<sup>7</sup> Official Journal of the Socialist Federal Republic of Yugoslavia No.27/90 and no.45/90 and Official Gazette, N0.12/93

<sup>8</sup> Official Gazette No.88/05

<sup>9</sup> Official Gazette No.29/05

**Law on Railways**<sup>10</sup> determines the organization of the railway system, the manner and terms of railway transport, the railway infrastructure status, the management, construction, reconstruction, repair, maintenance and protection of the railway infrastructure, and the funding and terms of providing services in the public interest. The Law also regulates in detail the development of the combined transport.

**Law on Railway Transport Safety**<sup>11</sup> determines the conditions for safe, suitable and unimpeded railway transport.

**Law on Contracts for Carriage by Rail** determines the rights and responsibilities arising from contracts for carriage of passengers and goods in the domestic and international rail transport, unless otherwise laid down in an international agreement. The Law is approved by the Government and is in a process of adoption by the Assembly.

#### **1.1.1.4 Road Transport**

##### **1.1.1.4.1 The Road Network**

According to the Law on Public Roads, the road network administratively is divided in national, regional and local roads. National and regional roads are under state responsibility (generally referred to as the main road network), and the local roads are under municipal responsibility. The national road network is of the highest administrative classification and importance as it is in concordance with Trans National Axes (Corridors VIII and X) and other important international links. The regional road network is of less administrative importance as it interconnects with the national road network and is of crucial importance to the municipalities.

The total length of the road network is 13.186 km, out of which 909 km are national roads, 3.781 km are regional and 8.496 km are local roads. The national road network consists of six (6) roads (M-1 to M-6). Most national roads consist of two traffic lane carriageways. Two of the national roads are in concordance with Trans National Axes (Corridors VIII and X) as well as European road network, M-1 (E-75) and M-2 (E-872) are in concordance with Corridors X and VIII respectively. Other national roads form part of important international links, for example, M-3 (E-65), M-4 (E-65), M-5 and M-6.

Traffic counts take place either on road sections upon one of the motorways (national network counts - automatic or manual), or upon regional road segments (regional network counts - usually manual).

Intra-Macedonian transport dominates the road freight sector while the remaining is distributed between international transport and transit transport. As far as passenger transportation is concerned, road transportation is even more dominant, as only negligible passenger trips are made by rail. Note that in 2003, the transport related energy consumption-21.2% of total final national consumption in the country was 96.4% consumed by the road transport sector, 2.5% by the air transport sector and 1.0% by the rail transport sector. This is a higher rate of dominance than typical of EU countries (for example, the EU-15 group of established members has 81.9% attributed consumption in the road transport sector).

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<sup>10</sup> Official Gazette No.64/05 and 24/07

<sup>11</sup> Official Gazette No( 40/07 )

#### **1.1.1.4.2 Evolution of Traffic Volumes**

As mentioned in the part *1.1.2.1. The Road Network*, the main road network is divided into national, regional and local roads. In the context of evolution of traffic volumes, the national and regional road network will be considered separately. The values are considered as yearly averages.

The general trend in road traffic volumes shows that the traffic volume on national road network, in the period 1995-1997 decreased at a yearly rate 4.4% and 3% respectively, followed by an increase that led to the highest volumes in the year 1999 (24%). On the contrary, a significant decrease by almost 14% occurred in 2000, which continued in 2001, when road traffic on the national roads decreased by 7,4% due to political instability in the wider Balkan area, but it was also connected to the significant turmoil within the north-western part of the country itself and the problems in Kosovo. In the period 2002-2005, the traffic volume has decreased at a relatively stable rate (0.4% yearly). The most recent available data for the year 2006 shows that road traffic volumes present high rates of increase on the national roads-19,3%.

In general terms, the traffic volume on the regional road network followed the traffic volume pattern of the national roads. The trend on regional road network shows that in the period 1995-1997 it decreased at a yearly rate of 1% and 3% respectively, followed by an increase that led to the highest volume in the year 1999 (17%). A significant decrease by 16% occurred in 2001. In 2002 the yearly rate of traffic volume increased to 7%. In the period 2004-2005, the traffic volume has had a relatively stable rate (0.4% yearly), and 2005 shows a decline in traffic volumes at a yearly rate of 6.5% The most recent available data for the year 2006 show that road traffic volume present high rates of increase on the national roads-16,5%.).

This situation may lead to the conclusion that traffic volume is currently growing and expected to grow further in the future, in accordance with the overall growth trends in the country's developing economy.

According to the Road Investment Plan Study, it is expected for the traffic to grow at an average rate from 18% to 30% on the national road network, and up from 18% to 40% on the regional road network.

#### **1.1.1.4.3 Road Maintenance**

The maintenance of national and regional roads is the responsibility of the public enterprise "Makedonijapat", and for local municipal roads the maintenance is often undertaken by local public companies. The winter maintenance activities account for about 35 % of the expenses and represents by far the major component of maintenance<sup>12</sup>. Periodic maintenance, including bridges, reaches 28% while the routine maintenance represents only about 20% of the total. Other expenses cover works mainly linked to the "road protection" and 18 % cover the toll collection.).

The Government through the Ministry of Transport is responsible for the adoption of the Annual Road Maintenance Programme that is developed by the Fund for National and

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<sup>12</sup> BCEOM, Regional Roads Project: Institutional and Road Planning Study, Final Report, January 2006, p. 87

Regional Roads. According to the budget annually allocated for Public Works, it varies from MKD 3.9 billions to 4.5 billions.

#### **1.1.1.4.4 Road Safety**

The rate of deaths in road traffic accidents is low if compared to average standards in EU countries. The accident rate is improving with lower rates in 2003 than in 2002 and 2000, although significant attention to road traffic accident reduction strategies remains necessary.

The available mortality data in 2004 shows that road traffic accidents account for 30-50% of all deaths at different age groups of children and adolescents (the proportion is increasing with age). The data for 2005 indicates that the number of road accidents increased significantly by 40% in relation to 2004, or from 2155 accidents in 2004 to 2830 accidents in 2005 with about 7000 people involved. The number of injuries in 2005 was around 4000. The estimated cost of accidents and related damages was approximately 1,5 million euros in 2005.

#### **1.1.1.4.5 Road Vehicle Fleet**

The vehicle fleet in 2003 was around 330,000 units, increased from around 250,000 units in 1990. Passenger cars dominate, with around 308,000, and the number of buses and coaches is only 2,500 and lorries only around 20,000 units. However, the poor statistics mask the condition and age of the fleet, with many elderly units seen in circulation, especially among the commercial vehicles. Older vehicles are typically less reliable and less fuel efficient than modern counterparts and sourcing suitable spare parts becomes increasingly difficult. However, they retain the attraction of lower acquisition costs, even when operating costs are higher.

Since 1990, the public transport fleet has not increased materially whereas the passenger car and commercial haulage fleet had expanded significantly. The significant quantum of petrol driven commercial vehicles still registered is reflective of the continuing use of older vehicles, as most modern commercial vehicles available are diesel powered. The increasing use of diesel powered passenger cars, however, is more typical of modern purchasing trends in EU countries.

It should be noted that within all classes of motor vehicles, over 80% of the vehicles are over 10 years old, with the attendant higher operational costs and inherent additional maintenance and repair costs associated with operating older vehicles. These characteristics tend to create higher than typical transport provision costs with the downstream transport supply unit costs also being high.

#### **1.1.1.4.6 Car Ownership**

Generally the degree of car ownership reflects the standard of living and the approximate level of economic development achieved by the country. The estimate of the future car ownership is an essential input data for the calculation of the future traffic volumes, and therefore closely related to the future per capita income estimated above.

Vehicle ownership (number of vehicles per 1,000 inhabitants) is low and relatively stable, as estimated for the period 1995-2001. Over this period the car ownership increased from 144



cars per 1000 people up to 153 cars per 1000 people. Since 2001 the car ownership decreased, reaching 123 (124) cars per 1000 people for the year 2003 (2004), whereas EU countries have high income per capita and high values of car ownership. Car ownership is forecast to grow by 2020 to 217-264 cars per 1000 people. Car ownership growth stimulates increases in private travel but reduces travel by public transport.

Increased prosperity will generate demand for greater ownership of cars and, in turn, greater volumes of private motoring. In addition, the gradual growth in population also directly influences transport growth, as the car ownership rate increases and the freight transport activities are then also greater.

#### **1.1.1.4.7 Public Transport Conditions**

The Public Transport Enterprise-Skopje provides the urban public transport in Skopje and operates 250-300 buses on 67 routes, 40 of which are suburban routes. Patronage is declining, having carried around 73 million passengers in 2001 but only 46 million passengers in 2006. In addition, there are two private operators that operate around 250 buses, mainly on longer-distance bus services. It is important that the operators and the sub-sector generally are aware of the various EU regulations governing vehicle construction and use, engine emission regulations and driver hours, rest periods and the use of tachographs are equally applicable to public transport operators as to freight sector commercial operations. There is however, some limited relaxation of regulations related to taxi operations.

#### **1.1.1.4.8 Freight Transport Operations**

The 2003 World Bank Study found that a large share of the international road transport in the SEE region has been undertaken by a large number of haulers from Romania, Bulgaria and Turkey. Many of these haulers are small in size. One indicator of the competitiveness of the operators from those countries *vis-à-vis* haulers from the remaining countries of SEE region is the number of TIR carnets issued by the IRU via the national associations of road transport companies. This was considered a reflection, at least partially, of the dis-aggregated nature and low quality of the haulage operators and their relative lack of competitiveness<sup>13</sup>.

The cost of road transport operations<sup>14</sup> in the SEE countries was estimated at approximately Euro 0.64 – 0.82 per kilometre for local firms, compared to approximately Euro 1 per kilometre for EU firms, working in the EU. Driver wages in the SEE countries tended to be only around 20% to 25% of driver wages in the EU. However, driver wages still amount to around 60-80% of total costs because of trade imbalances, small company size, high overhead costs, poor management, and low productivity, high repair and maintenance costs (reflecting the hidden unemployment and the cost of independent facilities), and also delays and parking fees at border crossings. Rising Macedonian driver wages may also make it more difficult for domestic operators to compete in international road haulage unless there is a significant improvement in management and asset utilization.

To obtain maximum benefit from improving the road transport physical infrastructure, it is important that national strategies for the road transport sector include the strengthening of the managerial, financial and tactical abilities of operators so that they compete effectively and contribute to lower transport production costs. In addition, Macedonian operators will be

<sup>13</sup> Acknowledged to be a major constraint to the implementation of such a system (see Arvis, 2004).

<sup>14</sup> Drawing on a number of earlier studies on international goods transport costs comparisons, NEA (2003).

exposed to EU regulatory regimes, particularly concerning vehicle condition, driver's hours and rest periods and also insurances. Therefore, it is vital that the sector has strategies in place to increase awareness of and adherence to the prevailing EU legislative standards and operational practices if Macedonian operators are to succeed in competing internationally.

Regarding the freight transport, it can be assumed that the freight transport in the EU-15 and EU-25 follows an almost identical pattern. According to the recent data there is great increase in this transport mode. The good geographic location at the intersection of European road and rail Corridors attracts heavy use of the road and rail networks for the transfer of goods, especially internationally. Both exports and imports have improved in recent years. On an annual basis, there was a 4% cumulative increase in exports in 2006, compared to 2005. In the first half of 2006, 55% of the total exported goods were destined for the EU, while 45% of the total imports originated from the EU. Road transport dominates in the movement of trade goods, and thus there is a heavy reliance on improving all-weather transport links to expand trade and to retain competitiveness in demanding markets.

Regarding the ongoing policies to modernize the road profession, the fleet and the capacity of actors, the conditions for receiving licences/certificates for professional competency and driving skills are provided in the Law for Transport in Road Traffic (Published in Official Gazette No. 68/04 and No. 127/06). The articles impose professional trainings soon to be realised in Training Centre already established by SIZ "Makedonija Soobrakaj" with authorization from the Ministry of Transport and Communications. The Training Centre is well equipped with technical literature, classrooms, premises and highly educated lecturers with great experience in mechanical engineering, law and economy.

#### **1.1.1.4.9 Road transport operators**

The commercial road fleet is estimated around 3500 trucks, out of which roughly 2000 are EURO3 or higher. The rest of the fleet is mostly devoted to internal transport operations.

Capacities for external operations are limited by CEMT agreement. In 2007, 662 bilateral agreements were distributed among Macedonian companies. Around 100 000 transport operations were performed with multilateral agreements. An important market should be open to Macedonian transport companies at the time of accession to the EU.

There are around 2000 transport companies. They are all private. The average size of the companies is between 2 or 3 trucks. The biggest company of the sector is Transkop Bitola MLZ Bogdaski, with 50 vehicles. It is a former state owned company, now a joint venture with a German partner. Globally speaking, the sector is in expansion with a development rate of the general turnover situated above 6% per year.

There are several transport companies associations, IRU members, managing the TIR Carnet operations in cooperation with the Ministry of Transport and the Customs.

The combined development of the two Corridors is of high interest for this sector. It would be considered as a logistic asset as the north/south route (to Greece and to Germany) and the East West Route (to Albania and south Europe) are in interconnection in Skopje, creating a natural logistic node for international transport.

There is an obvious need of logistics infrastructure (mostly warehouse, facilities, rail/road connections) especially in Skopje. There is only two identified logistic centre in the country, one in Stip (BIRKART logistics) devoting its activity to textile (70% of the textile companies are located around this area) and the other in Skopje (Deni International) providing grouping services.

There is, for the time being, no initiative from the public sector to promote larger projects (such as freight villages) and the financial capabilities of the sector to invest in such projects are limited. Private investments are surprisingly low in logistic support of trade oriented activities such as agriculture (and wine sector).

As a whole, the picture emerging of the sector is a dynamic network of small sized private companies, growing with the transport demand, but with a limited array of services. There is an obvious need of larger external investment in the sector to reach the point where companies will be able to provide international (or regional) services. Stronger support is desirable from the public entities (State, Municipalities, and Railways) to prepare projects in the field of logistic infrastructure (logistic areas, rail/road terminals).

#### 1.1.1.4.10 Investment needs in the road sector

Measures to address road transportation bottlenecks include both policy measures as well as investments in infrastructure. Among policy measures the most important are those associated with the management of the road transport demand, including taxation and pricing measures, as well as measures related to the organisation of the service providers. Within this context, it is of high importance to introduce competition in all those segments where infrastructure service provision is still monopolized. The investment needs for the road infrastructure projects in the year 2007 – 2009 is presented in Table 3. Investments for this infrastructure segment are forecasted to more than double in the 3-year period, from 71 million EUR in 2007 to 157 million in 2009. With a total volume of EUR 349 million in the period as a whole, road infrastructure is the activity area with largest “investment needs”.

Table 3 – Investment needs for road infrastructure 2007-2009

| Investment needs for road infrastructure 2007-2009 |   | 2007  |       | 2008  |       | 2009  |       | Total |       |
|--|---|-------|-------|-------|-------|-------|-------|-------|-------|
|  |   | mil   | %     | mil   | %     | mil   | %     | mil   | %     |
| <b>Ongoing projects</b>                            |   |       |       |       |       |       |       |       |       |
| Sections on Corridor VIII                          | M-4, Skopje Bypass  | 29,02 | 40,64 | 18,24 | 15,22 | 1,03  | 0,65  | 48,29 | 13,85 |
|  | Preparation of Main Projects for Corridor VIII                                  | 1,92  | 2,69  | 1,92  | 1,60  |       | 0,00  | 3,84  | 1,10  |
| Other national regional roads                      | Construction of Regional Road Kuklis-Bansko and Mokrino-Smolari                 |       |       | 0,35  | 0,29  | 0,73  | 0,46  | 1,08  | 0,31  |
|  | Construction of National Road Radovis-Strumica                                  | 2,07  | 2,90  | 2,86  | 2,39  | 3,01  | 1,91  | 7,93  | 2,28  |
|  | Maintenance of National and Regional Roads                                      | 21,00 | 29,41 | 21,00 | 17,52 | 21,00 | 13,34 | 63,00 | 18,07 |
|  | K-1- P —109 Majdan-Border with Greece   |       |       | 0,30  | 0,25  | 0,45  | 0,29  | 0,75  | 0,22  |
|  | Repair of the Roads System  | 11,79 | 16,51 | 10,44 | 8,71  | 10,44 | 6,63  | 32,66 | 9,37  |
| <b>Priority projects</b>                           |   |       |       |       |       |       |       |       |       |
| Sections on Corridor VIII                          | Construction of Section Deve Bair-Kriva Palanka                                 |       |       | 8,28  | 6,91  | 10,00 | 6,35  | 18,28 | 5,24  |
|  | Construction of Section Gostivar-Gorna Gonovica                                 |       |       | 6,00  | 5,01  | 8,00  | 5,08  | 14,00 | 4,02  |
|  | Construction of Section Gorna Gonovica-Bukojcani                                |       |       | 6,20  | 5,17  | 8,00  | 5,08  | 14,20 | 4,07  |
| Sections on Corridor X                             | Construction of new roadway and rehabilitation of Kumanovo-Tabanovce            | 3,80  | 5,32  | 3,80  | 3,17  | 3,80  | 2,41  | 11,40 | 3,27  |
|  | Construction of new carriage and rehabilitation of Demirk Kapija-Udovo-Smokvica |       | 0,00  | 21,52 | 17,96 | 36,51 | 23,19 | 58,03 | 16,64 |
|  | Construction of highway Veles-Prilep  |       | 0,00  |       | 0,00  | 14,82 | 9,41  | 14,82 | 4,25  |

| Investment needs for road infrastructure 2007-2009 |   | 2007          |               | 2008          |               | 2009          |               | Total         |       |
|--|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
|  |   | mil           | %             | mil           | %             | mil           | %             | mil           | %     |
| Other national regional roads                      | Reconstruction of Section Bitola-Medzitlija                   |               | 0,00          |               | 0,00          | 3,29          | 2,09          | 3,29          | 0,94  |
|  | Reconstruction and Rehabilitation of the Section Skopje-Blace | 0,11          | 0,16          | 1,55          | 1,30          | 4,17          | 2,65          | 5,84          | 1,67  |
|  | Reconstruction of Section Gradsko-Prilep                      | 0,82          | 1,15          | 0,82          | 0,69          | 0,82          | 0,52          | 2,47          | 0,71  |
|  | Reconstruction of Zirovnica- Boskov Most                      | 0,44          | 0,62          | 0,46          | 0,38          | 0,44          | 0,28          | 1,34          | 0,39  |
|  | Upgrading Section Bitola-Resen-Ohrid-Podmolje                 |               | 0,00          |               | 0,00          |               | 0,00          |               | 0,00  |
|  | Bypass Resen  |               | 0,00          | 0,90          | 0,75          | 1,73          | 1,10          | 2,63          | 0,75  |
|  | Strategic Rehabilitation of Carriage Ways                     | 0,43          | 0,60          | 15,17         | 12,66         | 29,22         | 18,56         | 44,81         | 12,85 |
| <b>TOTAL</b>                                       | <b>71,40</b>  | <b>100,00</b> | <b>119,83</b> | <b>100,00</b> | <b>157,45</b> | <b>100,00</b> | <b>348,67</b> | <b>100,00</b> |       |

Source: National Development Plan 2007-2009

In order to increase the effectiveness and efficiency of the road sector by identifying the most sustainable model for road concessions, including the identification of the technical, financial and legal issues, the Government has initiated procedures for developing concessions for road transport. This includes analyses and recommendations for amending the current legislation as regards concessions as well as identifying the economic validity and justification for concessions for the construction of the road infrastructure on the Corridors, through the preparation of feasibility studies and the development of the technical documentation.

#### 1.1.1.4.11 Condition of the Road Infrastructure along the Trans National Axes (Corridors VIII and X)

Corridor X is linking from Greece to Austria. Present average annual daily traffic of 15,000 is set to increase at 6% per annum to over 20,000 and to 40,000 by 2020. The E-75 is mostly four lane tolled motorway. A high proportion (25%) of it is regional or international<sup>15</sup>. Within the national territory, the relevant part of the Corridor X is in concordance with National road M-1 (international mark E-75), which crosses the territory in direction North-South. Within the country, the traffic volume on the Corridor X averages around 5.000 vehicles per day<sup>16</sup>. For 2007 it is foreseen a decrease in traffic volume of 7% while in the period 2008-2012 is foreseen an increase in traffic volume of 5% per annum, reaching approximately 6.300 vehicles per day for year 2012 and up to 10.000 vehicles per day by 2020-2025.

Concerning the construction of road infrastructure along Corridor X, of the 172 km long Corridor X passing in the North – South direction, 70,1% has been already constructed at modern highway standards with the remaining 29,9% being ready for construction. The latter include the Demir Kapija-Udovo-Smokvica and Kumanovo-Tabanovce sections of the Corridor X.

<sup>15</sup> SEETO Five Year Multi-annual Plan 2006-2010, May 2006.

<sup>16</sup> “Technical Assistance to the Ministry of Transport and Communications and the Fund for National and Regional Roads in Elaborating a Road Investment Plan”

Illustration 4 – Map of Corridor X



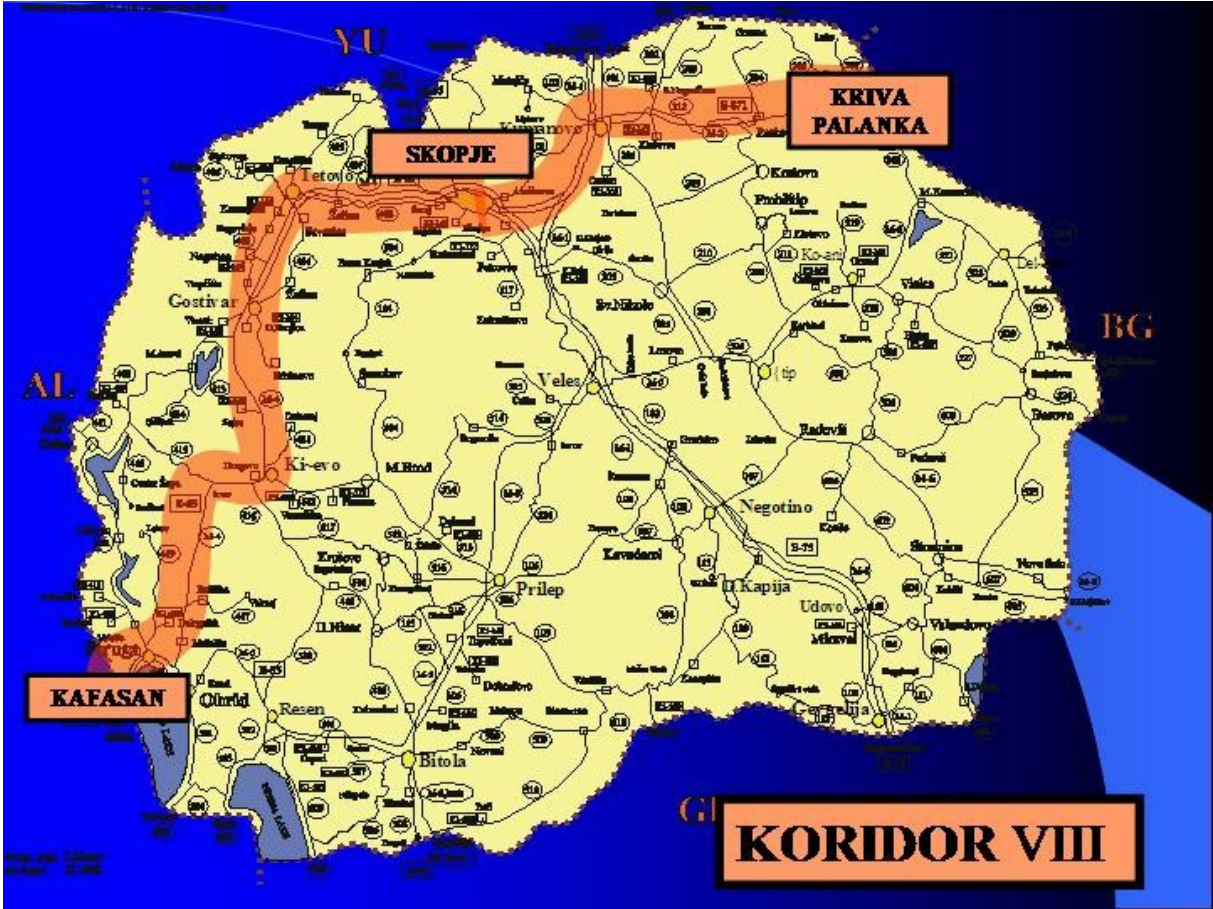
Corridor VIII spans over the South Eastern European area where transport infrastructure is traditionally weak. It connects the Adriatic with the Black Sea. Corridor VIII is a multi-modal transport system along the East-West axis comprising sea and river ports, airports, multi-modal ports, roads and railways, with a total extension of 1270 kilometres of railways and 960 kilometres of roads.

In view of future planning for the extension of the Trans-European Transport Axes it is of common interest of all the countries of the region to consider Corridor VIII the Motorway of the Sea connecting Varna/Burgas, Sofia, Skopje, Tirana, Durres to Bari/Brindizi in Italy (the Black Sea with the Adriatic Sea).

Corridor VIII is passing through the national territory from East to West with a total length of 304 km. Concerning the road infrastructure along the Corridor only 27,6% of the total is already built at modern highway standards with another 8,7% being currently under construction (The Skopje Bypass).

The construction of both Corridors is of equal importance for the development of the core transport network in the country. Taking into consideration the smaller quantum of work to complete the remaining parts on the Corridor X, the Government has determined the completion of Corridor X as a priority.

Illustration 5 – Map of Corridor VIII



### 1.1.1.5 Railway Transport

#### 1.1.1.5.1 Macedonian railways background

The railways have been operational since 1873, when the railway section Thessaloniki – Skopje commenced operating.

Whilst there are no significant geographic constraints to complete the implementation of the planned rail network along the Corridors, the prime impediment to completion arises from lack of funds availability and in turn, the inability to attract funds from international financing institutions.

During the period from independence in 1991 through to 2005, limited funding was provided to Macedonian Railways for infrastructure maintenance. The current level of funding remains insufficient for maintenance or for upgrading those sections identified for higher line speed.

#### 1.1.1.5.2 Railway Infrastructure

Pursuant to the Law on Railways, the infrastructure covers the following areas:

- Railway tracks with superstructure and substructure
- Railway stations
- Buildings, facilities, and track devices
- Electrification systems
- Signalling-safety systems
- Telecommunications and information systems in the railway transport
- Buildings, depots, and other facilities on the railway stations in function of organisation, regulation of the railway transport and infrastructure maintenance
- The land that functionally belongs to and under the rail and the facilities within the railway belt
- The air space above the rail in height of 12 m, i.e. 14 m above the upper border of the track next to the overhead transmission line with power of over 220 KW.

The actual condition of the railway network is shown in the table below:

Table 4 – Condition on the railway network

| Rail Section         | km     | Year of construction | Type of rails | Age of superstructure | Driving speed km/h |
|----------------------|--------|----------------------|---------------|-----------------------|--------------------|
| Tabanovci-Skopje     | 49,80  | 1888                 | 49            | 32                    | 100/75             |
| Skopje-Veles         | 48,74  | 1873                 | 49            | 27-33                 | 90/80              |
| Veles-Gevgelija      | 113,92 | 1873                 | 49            | 17-37                 | 100/80             |
| Skopje-Volkovo-gran. | 31,68  | 1874                 | 49            | 25-33                 | 100/85             |
| G.Petrov-Kicevo      | 103,00 | 1952/69              | 49            | 37                    | 100/50             |
| Veles-Bitola         | 128,87 | 1931/36              | 49            | 12-40                 | 100/50             |
| Bitola-Kremenica     | 16,70  | 1894                 | different     | 72                    | 30                 |
| B.Gumno-Sapotnica    | 29,43  | 1957                 | 35b           | 49                    | 35                 |
| Gradsko-Sivec        | 16,33  | 1983                 | 49            | 23                    | 50                 |
| Kumanovo-Beljakov.   | 30,70  | 1956                 | 45,8a,10a     | 50                    | (overhaul)         |
| Veles-Kocani         | 85,58  | 1925-                | 45,8a,35b     | 13-40                 | 70/50              |
| Zajas-Tajmiste       | 6,60   | 1969                 | 49            | 37                    | 40                 |
| Skopski jazol        | 37,30  | 1971                 | 49            | 35                    | 100/40             |

Source: Public Enterprise "Macedonian Railways"

### **1.1.1.5.3 The Railway Operator**

The rail sector is managed by the PE Macedonian Railways, a public company established by the state that is currently the sole shareholder. At present, the company is also the sole provider of railway services in the country. The general trend that railway traffic volumes has followed from 2001 to 2006 includes a gradual decrease for the first 2 years (2001 and 2002) at an approximate rate of 19% per year followed by an increase that led to the highest volumes in the year 2006.

Compared to the transport of passengers by train, in 2002 these transports have been significantly reduced. From 2002 to 2006, the transport percentage is significantly increasing by 33% (2002-2006). The situation with the transport of goods by train is identical. In 2002 it was the lowest, and subsequently increasing significantly by 33% (2002-2006). The total transports are also increasing. The transports are increasing by approximately 19% per year (2002-2003), 19%(2003-2004), 11% (2004-2005), 12% (2005-2006), i.e. the percentage of increase for the period 2002-2006 is 50%. Pursuant to the Business Plan for 2007, adopted by the Government, the movements are expected to increase by 12% per year, in the next 5 years, as a result of the increased volumes of both passenger and the freight transport.

### **1.1.1.5.4 Traction and Rolling stocks**

There are 56 locomotives, 124 passenger cars, and 1553 freight wagons. In 2003 the railway carried 902,000 passengers, equating to 92 million passengers/kms. As for cargo, the railway has carried 2,39 million tons, equating to 373 million ton-kms of cargo. The railway carries selected bulk commodities including fuels, coals, cokes, steel products and clinker/cement.

### **1.1.1.5.5 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 are difficult to quantify with any accuracy at this time.

The Law on Railways, 2005 had committed the Government to annual funding equivalent to 0.3% of the national budget, but this remains insufficient to absorb both the backlog of works due plus ongoing recurrent maintenance needs.

The provisions for interoperability policy are included in the Law on Railways (Official gazette 64/05, 24/07) and the Law on Rail Transport Safety (Official gazette 40/07). There is no specific law related to interoperability, but there are by laws pursuant to the legislation mentioned above that include provisions related to interoperability in accordance with EU directives.

### **1.1.1.5.6 Railway Operations**

#### **a) General**

A 2004 World Bank Study (*Reducing the Economic Distance to Market, A Framework for The Development of the Transport System in SEE*) identified that the rail networks in SEE, had lower activity levels below those achieved in the 1990s, particularly in transporting heavy industry materials such as coal, ores and building materials. In addition modern consumables



and household durables can often be moved quicker by road. As a result, overall rail freight traffic has fallen.

To place the sector and the Study in context, the current rail sector outputs and trading partnerships need to be understood. Apart from the World Bank Study, there are no other rail sector projects existing or in prospect.

#### ***b) Passengers Carried by Rail***

The key passenger groups are students and young people, farmers and also low-income groups. The replacement of the existing obsolete and unattractive train sets with higher speed attractive and modern multiple unit trains on the proposed renovated tracks may be considered so as to provide a much-needed marketing boost to attract new users.

#### ***c) Freight Carried by Rail***

It should be noted that whilst volumes of rail freight have been reduced since 1990, the reduction rate (50%) is much greater than experienced generally in the EU-25 (19%) or the EU-15 (1.5%). The data correlation between the two tables no. 10 and 11 is approximate, but the scale of activity change is very similar.

### **1.1.1.5.7 Rail Sector Modernisation and Re-structuring**

The Government is developing the National Transport Strategy that will address, among others, strategies governing the development of sectoral policies both in relation to road and rail transport (as well as air transport) and in relation to the carriage of both passengers and freight.

The Government has developed an Action Plan to manage the reform of Macedonian Railways. The objective is to make the railway system sustainable, with the separation of the existing PE MR into two new companies with entirely separated and accountable financial regimes. The two newly established companies will have new organizational structures and will be based on commercial principles with a market-oriented management approach. In reference with the provision of transport services, the Government will support the provision of the direct rail operations by JSC Transport and will also encourage the entry of other private sector rail operators and thereby introduce competitiveness in the rail sector. The introduction of competition will place pressure on the new operator JSC Transport, to identify where profit and losses occur, to develop a more market oriented business strategy, to develop productive working practices, to use assets more intensively and to manage the business more pro-actively.

In accordance with the Law on Railways, the financing of the construction, reconstruction, modernization, repair and the maintenance of the railway infrastructure is to be regulated with a dynamic national program for railway infrastructure over a period of five years. It will be adopted by the Parliament after the adoption of the fiscal strategy. The Annual Plan for the construction, reconstruction, modernization, repair and maintenance of the railway infrastructure will be prepared, based on the approved national programme.

At the end of 2006 within the Ministry of Transport and Communication a new Railway Sector unit was established. The new unit acts as the interim regulatory authority, until 2009, and will be responsible for issuing the licences and safety certificates to the railway

undertakings, licences and safety authorization for the railway infrastructure, according to the EU Directives, and will develop the transport and infrastructure policy in the railway sector.

### 1.1.1.5.8 Investment needs in the rail sector

While assessing the potentials for development of railways in future, one should not overlook its advantages over road transportation. First, railways represent a significantly less burden on environment. The land used for railway construction is significantly smaller than the land required for construction of highways. Railways transportation is also significantly less air polluting and needs less energy per unit of services performed. Second, safety on railways is much better than in road transportation sub-sector. These advantages, together with cost efficiency arguments, bode well for an intensified railways development in the country.

Policy reforms aimed at commercialisation of the sector will must be accompanied by significant public investment if railways are expected to take a more important role in the Macedonian transport sector. The overall “investment needs” are forecasted at approximately 97 million EUR for the whole 3-year period. Of this total, a large majority is planned for reconstruction/modernization of the infrastructure on the existing tracks.

Table 5 – Investment needs in the rail sector

| Description   | 2007         |            | 2008         |            | 2009         |            | Total        |            |
|---|--------------|------------|--------------|------------|--------------|------------|--------------|------------|
|   | mil.         | %          | mil.         | %          | mil.         | %          | mil.         | %          |
| <b>Projects with completed financial construction</b>     |              |            |              |            |              |            |              |            |
| Track mechanization                                       | 0,29         | 1,64       | 2,61         | 5,83       |              | -          | 2,90         | 2,98       |
| Track equipment   | 0,90         | 5,08       |              | -          |              | -          | 0,90         | 0,93       |
| Diesel shunting   | 0,26         | 1,47       | 2,34         | 5,23       |              | -          | 2,60         | 2,67       |
| <b>Rec. of flat freight wagons</b>                        | 0,06         | 0,34       | 0,54         | 1,21       |              | -          | 0,60         | 0,62       |
| CTC on Tabanovci-Gevgelija line                           | 0,23         | 1,30       | 0,62         | 1,39       |              | -          | 0,85         | 0,87       |
| Info-system for infrastructure                            | 0,06         | 0,34       |              | -          | 0,54         | 1,55       | 0,60         | 0,62       |
| Level crossings interlocking on Sk.-Gostivar line         | 0,19         | 1,07       | 0,30         | 0,67       | 0,30         | 0,86       | 0,79         | 0,81       |
| Thyristoration of electric locomotives                    | 0,18         | 1,02       | 1,62         | 3,62       | 0,00         | -          | 1,80         | 1,85       |
| Thyristoration of EM TRAINS                               | 0,13         | 0,73       | 1,17         | 2,62       |              | -          | 1,30         | 1,34       |
| Flat freight wagons                                       | 0,16         | 0,90       | 1,44         | 3,22       |              | -          | 1,60         | 1,65       |
| Rec. of Gradsko-Sivec line (LT)                           | 0,27         | 1,52       | 0,27         | 0,60       | 0,27         | 0,78       | 0,81         | 0,83       |
| <b>Projects with uncompleted financial construction</b>   |              |            |              |            |              |            |              |            |
| ALB on Klisura-Gevgelija line                             | 0,40         | 2,26       | 0,40         | 0,89       |              | -          | 0,80         | 0,82       |
| Radio system on Sk.-Gost. Line                            |              | -          |              | -          |              | -          | 0,00         | -          |
| Autostop equipment on track and traction                  | 0,00         | -          | 0,27         | 0,60       |              | -          | 0,27         | 0,28       |
| corr.8-part 2-Kicevo-border R.A.                          | 1,50         | 8,47       | 15,00        | 33,53      | 20,00        | 57,49      | 36,50        | 37,53      |
| <b>Rec. of DMTrains</b>                                   | 0,32         | 1,81       | 0,33         | 0,74       |              | -          | 0,65         | 0,67       |
| Optic cable on Tabanovci -Gevgelija and Skopje-Gost.lines | 0,85         | 4,80       | 1,40         | 3,13       | 1,41         | 4,05       | 3,66         | 3,76       |
| Level crossings interlocking on other lines               | 0,10         | 0,56       | 0,32         | 0,72       |              | -          | 0,42         | 0,43       |
| SS.TC equipment G.Petrov stat.                            | 0,00         | -          |              | -          | 0,00         | -          | 0,00         | -          |
| Rec.of SS,TC equipment on Tabanovci-Gevgelija line        | 0,00         | -          | 0,40         | 0,89       | 0,40         | 1,15       | 0,80         | 0,82       |
| Rehab. of Taban-border.R.G line                           | 1,70         | 9,59       | 5,55         | 12,41      | 1,71         | 4,92       | 8,96         | 9,21       |
| Rehab. of Bitola-border.R.G line                          | 0,00         | -          | 0,00         | -          | 0,00         | -          | 0,00         | -          |
| corr.8-part 1-Kum-border R.B.                             | 10,00        | 56,43      | 10,00        | 22,35      | 10,00        | 28,74      | 30,00        | 30,85      |
| Other   | 0,12         | 0,68       | 0,16         | 0,36       | 0,16         | 0,46       | 0,44         | 0,45       |
| <b>Total</b>  | <b>17,72</b> | <b>100</b> | <b>44,74</b> | <b>100</b> | <b>34,79</b> | <b>100</b> | <b>97,25</b> | <b>100</b> |

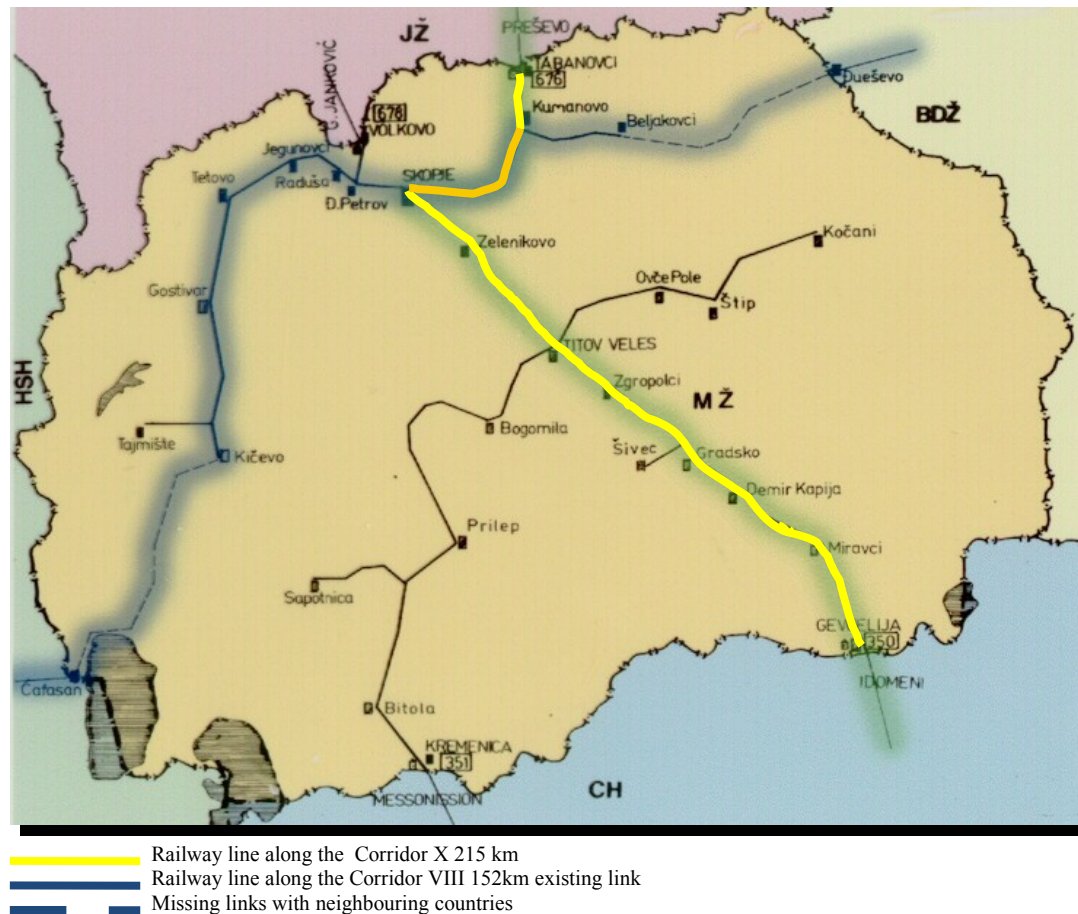
Source: National Development Plan (2007-2009)

### 1.1.1.5.9 Condition of the Rail Infrastructure along the Corridors VIII and X

The railway line along the Corridor X is 215 km long and starts from the border crossing Tabanovce in the North and ends in the South with the border crossing Gevegelija, including the branch Xd of the Corridor X that starts in Veles and ends at the border crossing Kremenica by Bitola. The railway connection, along the Corridor X provides for speed of 100 km/h, and at some points the speed is drastically limited. Taking into consideration that large proportion of the transport is performed on the Corridor X, special priority is given to the increase of speed on certain sections to 130 km/h and to improve the level of infrastructure, with an aim to achieve technical conditions on a level of a Corridor.

The railway line along the Corridor VIII is in total length of 315km, whereas only 50% of the railway line has been constructed so far. At the moment, Republic of Macedonia does not have railway links with the two neighbouring countries Republic of Albania and Republic of Bulgaria. The Eastern part of the corridor VIII towards Republic of Bulgaria requires another 89 km to be built (29 % of the total) while in its Western section towards Republic of Albania another 66 km is needed (21 % of the total).

Illustration 6 – Rail infrastructure along the Corridors VIII and X



### 1.1.1.6 International Transport and Border Crossings

Border crossing management has to achieve safety and security of passage and legality of goods and passengers undertaking the crossing on international boundaries. To create balance between bureaucratic control and ease of movement, EU countries have in place protocols to standardise common procedures so that administrative work is streamlined and minimised.

This approach contributes towards reduction of the processing time at borders, but often they need modern facilities and communication and control systems physically in place so as to ensure that systems function as it has been planned and that opportunities for illegal actions are minimised.

Various studies on crossing times show that in some countries of South-East Europe, crossing international borders can take between 10 and 20 hours, and 24 hours at peak season, and in extreme cases, even up to 72 hours. One Study prepared for the purpose for Dutch transporters stated that the average financial loss per truck because of waiting times on the BCPs amounted to 5.000 Euro.

There are 14 road border crossings: 3 with Bulgaria, 4 with Serbia, 3 with Greece and 4 with Albania. In addition, there are 3 rail border crossings: 2 with Serbia and 1 with Greece. Also, there are international air transport border controls at Skopje and Ohrid Airports. The Macedonian government considers the BCPs located on the Corridors VIII and X to be Strategic BCPs, whilst others are classified as regional and local BCPs.

The safety and security of activities at international borders is paramount, yet Republic of Macedonia is a land locked country and therefore is heavily reliant upon efficient and speedy processing of goods and passengers across these borders. EU countries achieve high levels of safety and speed of processing at international borders, using a combination of well trained staff, common and comprehensive processing systems and the use of modern technology and techniques to control activities and communications. It is important that these attributes are adopted at national level, together with strategies to achieve similar standards for integration of systems with those of the EU by accession. Work towards achieving these standards is in progress and this includes also withdrawal of Army from the border line, and transfer of the duties and responsibilities of the Army regarding state borders to the Border Police. With this transfer, the process of Integrated Border Management (IBM) has commenced. IBM means establishment of a system that will enable facilitation of the flow of passengers and goods across the state borders, in accordance with the EU standards and the best practise, without affecting the state security and the basic human rights.

The Single Window is a concept allowing commercial entities involved in trade and transport to produce standardised information and documents via a single access point, in order to carry out all legal, export, import and transit procedures.

The Single Windows concept aims to:

- Establish upgrading of Information System for Integrated Border Management
- Allow access to all information concerning export, import and transit procedures, supported by the legal framework allowing any necessary level of data exchange protection
- Allow the commercial entities involved in trade and transport to produce standardised information and documents via single access point, in order to carry out all legal, export, import and transit procedures.

### 1.1.1.7 Relevant National Planning Documents

The national priorities for development of the transport sector are defined in several national and regional strategic documents. The *National Transport Strategy* adopted in July 2007 determines the transport development priorities for the period 2007-2017.

*The Public Investment Programme (2007-2009)* includes projects/programs for which the government has made an assessment confirming that they can substantially contribute to the development of the country. The PIP, covering a three-year period and being updated annually, contains projects for all economic infrastructure sectors, including energy, transport, water supply, irrigation, environment, as well as for the social infrastructure segments. The current PIP, in the part pertaining to transport, identifies the sections of the Corridors VIII and X that will have a major contribution towards achieving the sector's development.

Key objectives of the transport sector as defined in the *National Development Plan (2007-2009)* are to support the country's international competitiveness and ensure a balanced regional development leading to higher growth and improved living standards. In particular, developed transport infrastructure secures businesses reliable, fast and cost-effective access to production inputs, reducing the costs of production. Similarly, it allows businesses quality access to internal and external product without a large burden on the price. In addition, a good transport infrastructure eases citizens' movement in the country and abroad, and their daily commuting for job or for other reasons. The NDP emphasizes the priority for enhancing international competitiveness in the transport sector by building and modernizing the road and railway infrastructure along the Corridors while enhancing safety and limiting the adverse impact of the traffic on the environment.

As far as the studies and planning documents of the specific fields of transport are concerned, under CARDS 2006, in process of preparation are the *Study for Restructuring the Road Sector* and the *Road Investment Plan*. The *Study Investment Options in Transport Sector* was completed in 2003 and its outputs should guide future IFI investments in all areas of transport (financed by World Bank). In addition, the *Pilot Study for Project Formation for Transport Network Development in the western Balkan* (JBIC financed) seeks to identify regional transport infrastructure projects and to propose a short to medium term strategy for JBIC activities in Western Balkan countries while considering major envisaged works supported by the EC and the IFIs.

Regarding the regional approach it is noteworthy to mention that priorities for development of the Core Network in the South East Europe are determined in the *Five-Year Multi-annual Plan 2007-2011 of SEETO*.

## 1.1.2. DESCRIPTION OF THE ENVIRONMENT SECTOR

The description of the environment sector is based on available data. However, there is no central records on historical data of the water and waste sector, where all various types of information are collected and reviewed. In urban areas, data concerning quantities, quality, efficiency, problems in operation, etc. is available from public utilities. In rural areas, there is no (or very limited) data available. All information used herein has been provided by public utilities or retrieved from available studies in this sector.

### 1.1.2.1 Water sector

#### 1.1.2.1.1 Drinking water supply

According to the hydrographical conditions of the country there are four river basin areas<sup>17</sup> and three major natural lakes<sup>18</sup>. Most of the surface waters are formed on the territory by precipitation. The country is not rich in surface water (about 3,000 m<sup>3</sup>/capita) and depends mainly on precipitation. Due to the morphological, hydro-geological and hydro-geographical structure of the relief, the run off quickly runs into the hydrographical network (rivers, streams and lakes) and out of country. Only the karst areas divert from this general picture where water retains in the ground for longer periods and recharges the running waters of the river network. In total, the annually available surface water is assessed to be in the order of 6,372 billion m<sup>3</sup>.

About 4,400 springs with a total annual yield of 992 million m<sup>3</sup> are registered, out of which 58 springs have a capacity of over 100 l/s. In regard to groundwater yields, there is a lack of sufficient relevant data on quantities as well as on qualitative aspects, due to a lack of systematic and continuous observations and examinations of ground waters, except data for the local demand for certain regions.

According to the total water demand by users, currently the major water consumer is the irrigation sector with 46%, minimum accepted flow<sup>19</sup> with 28%, then industry with 14% and the population and tourist consumers with 12%. The same water demand by the river basins are as follows: river Vardar 79% of the total water demand, river Crn Drim basin 12% and river basin Strumica 9% of the total water demand.

Table 6 – Water demand, current situation

| River basin  | Number of Population | Water demands (thousand m <sup>3</sup> /year) |                |                |                        |                     |
|--------------|----------------------|---|----------------|----------------|------------------------|---------------------|
|              |                      | Population and tourists                       | Industry       | Irrigation     | Minimum accepted flows | Total water demands |
| Vardar       | 1.732.102            | 185.608                                       | 233.025        | 731.732        | 457.000                | 1.607.365           |
| Strumica     | 120.869              | 11.511  | 32.898         | 117.941        | 13.000                 | 175.349             |
| Crn Drim     | 178.576              | 17.095  | 8.224          | 49.662         | 164.000                | 243.036             |
| <b>TOTAL</b> | <b>2.022.547</b>     | <b>218.269</b>                                | <b>274.147</b> | <b>899.335</b> | <b>635.000</b>         | <b>2.026.751</b>    |

Source: Expert report on water resources management conducted for the Spatial Plan

Approximately 60% of the drinking water is supplied from carstic springs, 20% from surface waters, and 20% from groundwater.

<sup>17</sup> river Vardar, river Crn Drim, river Strumica and river Juzna Morava

<sup>18</sup> Ohrid Lake, Prespa Lake and Dojran Lake

<sup>19</sup> Minimum acceptable water flow is a biological minimum which should be constantly available in the river beds for water life preservation; it is defined as 10% of the average discharge of a river

Water consumption in the country is relatively low, but the volume of the extracted water per capita is nearly twice as large in comparison with other countries, due to the worn out distribution systems of the water supply networks that cause massive leaking. Currently total drinking water supply demand is in excess of 212 million m<sup>3</sup>/year. The demand is expected to raise in the future, estimation for 2010 is 285 million m<sup>3</sup>/year and for 2020 336 million m<sup>3</sup>/year<sup>20</sup>. The following table shows some basic data with regard to water use .

Table 7 – Water use

| Indicator                                       | Unit                  | EU member states |           |           |           | Republic of Macedonia |
|---|-----------------------|------------------|-----------|-----------|-----------|-----------------------|
|   |                       | Austria          | Bulgaria  | Hungary   | Czech Rep |                       |
| Population                                      | Inhabitants           | 8 033 000        | 7 801 273 | 10198 000 | 10023 000 | 2 022 547             |
| Fresh water extracted for public use            | m <sup>3</sup> /cap/d | 75               | 144       | 74        | 76        | 105                   |
| Water consumed by the population                | l/cap/d               | 155              | 96        | 106       | 104       | 250                   |
| Population included in the water supply network | %                     | 86.4             | 98.8      | 98.0      | 89.8      | 72,5                  |

Source: Eurostat 2003

The water supply system is fairly developed. The available data indicates, that around 1.45 million people are connected to water supply, which represents an average connection rate of 72.5%. The higher rate is reached in urban areas, where 82 to 100% of the population is connected (1,2 million inhabitants), in rural areas overall connection rate is lower varying between 10% to 100%.

According to the Study on the Conditions in the Public Utilities (May 2004) there are 2.209,5 km of total mains and distribution pipelines, out of which 454,7 km are mains pipelines and 1.754,8 km are distribution network pipelines. 84% of the pipes are older than 15 years, 10% of them are between 10-15 years old, while only 6% of the total network was built less than 5 years ago. In order to improve the quality of the raw water, there are 10 filter plants with a total capacity of 6,822 m<sup>3</sup>/hour, which is approx. 28% of the total volume supplied<sup>21</sup>.

In many urban areas the current condition of the water supply systems is not satisfactory in regard to the distribution network, mains pipelines, water storage tanks, structures and other facilities. The network is mostly elderly and worn out, the capacity of the pipelines is not meeting the growing demand and they are constructed of various different materials such as cast iron, asbestos, PVC, concrete. In some cases these conditions result in very high water losses up to 60% of the total consumption, while in general percentage varies from 10 to 60%. The water storage tanks in many cities have insufficient capacity, which results in a shortage of water during peak hours. The shortage of drinking water, especially in the summer period, leads to restrictions of water supplies for hours in a day in some areas. This restriction has a high negative impact on the technical conditions of the network and other structures, as well

<sup>20</sup> According to the Expert report on water resources management, calculated on the demographic forecast (expert report "Projection on population and labour up to 2020") and water supply norms, defined in accordance to the size of the cities, population life standard, economy development, culture and habits, e.g Skopje 500 l/c/day, Bitola, Kumanovo 450 l/c/day, Valandovo ,Gevgelija 370 l/c/day, rural areas 270 l/c/day.

<sup>21</sup> The Association of Municipal Communal Enterprises (ADKOM) and the Association of Financial Officers have started collecting basic indicators on enterprise efficiency and financial performance for a considerable number of enterprises, with assistance of GTZ.(Association of Finance Officers of Local Self Government and Public Enterprises (2004) "Study on the Situation in the Public Communal Enterprises-with a a special review of the level of collection of the claims, the influence of the environment and the economic conditions for management"Skopje, Draft). GTZ is also supporting a pilot benchmarking project in 10 CSEs.

as on water quality, mainly because of shortages in the water pipelines with possible air flow entering the pipes, which increases the risk of the corrosion and deterioration of the quality of the drinking water.

Regarding the rural water supply systems, there is no data on their condition, or system operational efficiencies, maintenance or financing. According to local practice, once the system is put into operation, there is no regular maintenance neither monitoring of the network conditions and only essential repairs are performed as demands arise.

As a whole, the water quality in the country is good, except in certain regions that face problems at local level. The basic pollution of the surface water comes from untreated wastewater discharge from the urban sewerage systems in major settlements and also from industrial wastewater that is discharged entirely untreated or insufficiently treated into the rivers.

Water quality is monitored and controlled by the Republic Institute for Health Protection, Department for Control of Water Quality. In this department the wholesomeness of potable water is controlled in accordance with the legislative rules (Official Gazette no. 33/87), through the basic and periodic sanitary and chemistry analysis (chemical toxicological analysis).

The chemical quality of drinking water varies with the origin of the drinking water source. Almost all carstic and surface waters, and significant amounts of well water, are notably short in fluoride, on average 0.1 mg/l. Some wells in Veles, Shtip and Kocani have relatively high content of iron and manganese, and the content of nitrates ranges between 1 and 5 mg/l. During summer, higher nitrate concentrations have been found in wells in Prilep and Radovich (10-15 mg/l). Both wells are situated in regions where the land is used for intensive agriculture production. The content of nitrite generally lies below 0.03 mg/l. Toxic parameters, such as lead, arsenic, chromium and cadmium concentrations, meet WHO standards. 5% of all wells assessed by the Republic Institute for Health Protection are microbiologically contaminated. Several water-borne epidemics were observed over the last century, caused by serious failures in the distribution networks combined with poor local hygiene practices and inadequate sanitation (around 70% of urban settlements are connected to the sewage network whereas in the rural areas the connection rate is only 15%).

The water supply systems are operated and managed by public enterprises established by local authorities. There are also several regional water supply systems<sup>22</sup>, operated by state owned public utilities.

#### **1.1.2.1.2 Wastewater collection and treatment**

With regard to the extent of the constructed sewerage network and waste water treatment facilities, the country lags behind in comparison with the water-supply infrastructure. At the national level, the sewerage network comprises 1,239.1 km of pipelines. From the total number of 697,529 dwellings (Census 2002), 65% are connected to a public sewage system, whereas 21% of the dwellings have septic tanks and another 12% only have a system of uncontrolled waste water discharge. Generally, the existing sewerage systems in major urban areas are designed as a single system collecting and conveying both wastewater and precipitation water. There are only 12 cities having separate sewage systems. The City of

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<sup>22</sup> "Studencica" for Kicevo, Prilep, Makedonski Brod and Krusevo, "Lukar" for Kavadarci, Negotino and 13 villages and "Debar" for town Debar and several surrounding villages.



Skopje, as the largest conurbation with the highest production of pollution, has constructed a separate system for sewage (534 km) and storm water (196 km).

As far as waste water treatment plants are concerned, there are only 6 urban WWTPs constructed and operated in the country at present. Three of them are in communities located on the shore of three large tectonic lakes Ohrid, Prespa and Dojran that are of the highest priority concerning natural protection. Lake Ohrid was declared a World Heritage site by UNESCO in 1979, part of Lake Prespa called Ezerani is categorized as IUCN Category I - Strict Natural Reserve. The Ohrid conurbation comprises the cities of Ohrid and Struga and several other villages, with around 120,000 inhabitants in total, of which approximately 80% are connected. The WWTP is located in the village of Vranista, and its built capacity was 120,000 PE. The settlements at Lake Prepsa, the town of Resen and the villages of Jankovec, Carev Dvor, and Ezerani are connected to the WWTP located in Resen. The WWTP in Dojran serves the towns of Dojran and Nov Dojran. The fourth WWTP in operation is in the town of Makedonski Brod. Except of the existing WWTP in operation, there are two newly constructed WWTPs, one in Krivogastani that is now in trial operation and one large facility in Kumanovo that is close to commissioning.

Table 8 – Existing wastewater treatment plants

|                        | Urban Waste Water Treatment Plants |                     |                        |                        |                      |                                      |  |
|------------------------|------------------------------------|---------------------|------------------------|------------------------|----------------------|--------------------------------------|--|
|                        | Dojran                             | Krivogastani        | Kumanovo               | M. Brod                | Sveti Nikole         | Resen                                | Vranista <sup>1</sup>                              |
| Settlements included   | Dojran, Nov Dojran                 | Krivogashtani       | City of Kumanovo       | Tow of Makedonsky Brod | Town of Sveti Nikole | Resen, Jankovec, Carev Dvor, Ezerani | Ohrid, Struga, Trpejca, Pestani, Lagadin, Vraniste |
| No of inhabitants      | 3426                               | 6150                | 105484                 | 7141                   | 18497                | 16 497                               | 91 272   |
| sewage system coverage | 56%                                | 50%                 | 80%                    | 90-95%                 | 95%                  | 80%                                  | 75%  |
| Year of construction   | 1989                               | 2007                | 2007                   | 2000                   | 2000                 | 2005                                 | 1985/1988  |
| Treatment process*     | M, B, C                            | M, B                | M, B, C                | M, B                   | M, B, C              | M, B                                 | M, B   |
| Source of funding      | State budget                       | Austrian Government | Swiss Government, EBRD | Government of Austria  | USA donation         | KfW, Germany                         | State budget                                       |
| Capacity (PE)          | 12,000                             | 3,200               | 100,000                | 5,000                  | 15,000               | 12,000                               | 120,000  |
| Present status         | in operation                       | trial operation     | not commissioned yet   | in operation           | in operation         | in operation                         | in operation                                       |

\* Mechanical-M; biological-B; chemical-C;

The construction of a WWTP in the municipality of Gevgelija (population 22988) will begin in the near future.

Taking into consideration all existing treatment plants, in operation or close to commissioning, the total rate of population served by wastewater treatment would be approximately 12,5% of the total population. The table below compares some basic data regarding sewerage systems with some EU member states.

Table 9 – Development of sewerage system

| Indicator  | Measure  | EU Member state |          |            |            | Republic of Macedonia |
|------------|----------|-----------------|----------|------------|------------|-----------------------|
|            |          | Austria         | Bulgaria | Hungary    | Czech R.   |                       |
| Population | Inhabit. | 8 033 000       | 7801273  | 10 198 000 | 10 023 000 | 2 022 547             |

| Indicator   | Measure | EU Member state |          |         |          | Republic of Macedonia |
|---|---------|-----------------|----------|---------|----------|-----------------------|
|   |         | Austria         | Bulgaria | Hungary | Czech R. |                       |
| Population included in the sewerage network in 2000 | %       | 85.0            | 67       | 51.0    | 75.0     | 65.0                  |
| Population connected to WWTPs in 2002               | %       | 86.0            | 38       | N/A     | 68.0     | 12.5                  |

Source: Eurostat

The oldest WWTPs are those at the lakes. They were constructed 20 years ago, the treatment processes are now outdated and insufficient in terms of effluent quality. The design capacity is not fully utilised due to incomplete or missing sewerage infrastructure. Almost no investments for necessary maintenance and repair have been spent during their operation, except for the WWTP in Resen, where part of technology was upgraded in 2005 (KfW support).

In regard of other municipalities, there are neither wastewater treatment plants nor simple pre-treatment facilities at all, even though the sewerage networks, to some extent, exist. The wastewater is discharged as untreated to recipients. The worst situation is in the city of Skopje, which is the largest conurbation with a population approaching 700,000, where no waste water treatment plant has been constructed. All sewage is discharged untreated into the river Vardar, the longest and transboundary river, which passes through the whole country and continues in Greece as one of that country's major rivers, flowing onwards into the Aegean sea (the Vardar basin covers two-thirds of the national territory).

Table 10 – Wastewater volumes and pollution load broken down by river basins

| River basin  | Wastewater m <sup>3</sup> /year | Urban population kg/day | BOD kg/day    | N-tot kg/day  | P-tot kg/day | TSS kg/day     |
|--------------|---------------------------------|-------------------------|---------------|---------------|--------------|----------------|
| Vardar       | 119 783 943                     | 1 066 533               | 63 992        | 13 652        | 2 453        | 202 641        |
| Strumica     | 6 397 115                       | 51 534                  | 3 092         | 660           | 119          | 9 791          |
| Crn drim     | 10 576 715                      | 81 901                  | 4 914         | 1 048         | 188          | 15 561         |
| <b>TOTAL</b> | <b>137 252 793</b>              | <b>1 119 968</b>        | <b>71 998</b> | <b>15 360</b> | <b>2 760</b> | <b>227 993</b> |

Source: DPSIR Water – NEAP II

There is no monitoring of the waste water neither on influent nor effluent that the municipal sewage systems discharge to recipients, except for those where WWTPs exist and are in operation. However, even though the discharge is monitored, no restrictions are in place, even when the discharges exceed the normal limits.

Water supply and waste water services are provided mostly by public enterprises established by local authorities. For the time being, there has been no involvement of the private sector in the provision of water and wastewater services as well as in the construction of infrastructure in these areas. The general pattern of public enterprises is that the quality of services is inadequate while the infrastructure is old and poorly maintained. There is a lack of a general planning for environmental investments, especially in the area of waste water treatment (Preparation of Environmental Investment Strategy is planned to start in mid of 2007, financed by the Austrian Government and the budget of the MoEPP).

Most of the water operation enterprises suffer from lack of financial resources. The charges for water supply and wastewater collection and treatment (if they exist) in most of municipalities are very low and in many cases do not meet even the recovery of the

operational costs. Although the tariffs are on an unsatisfactorily low level, there is in addition, an inability to collect the legitimate payments in full. In some cases the collection rate is only 50%. The determination of the tariffs is in the sole responsibility of the public water companies that are controlled by the local government or council. Low tariffs, insufficient collection rates and the liabilities of the utility companies to pay VAT for services that have not been received from the users lead to a lack of revenues that result in unattended maintenance and repairs with no possibility to extend and improve the infrastructure. This results in the poor condition of the water infrastructure at present. Apart from the inadequate tariff system, many companies perform other public activities along with the water/wastewater and the accumulated cash flow from all the activities is then reallocated to actions according to the perceived priority of needs of specific activities.

### 1.1.2.2 Waste Management Sector

Regular waste collection services are mainly limited to urban areas, providing up to 90% coverage in the cities and their outskirts. In total around 70% of the total population receives regular waste collection services, while the remaining 30%, residing in rural settlements distant from the main collection areas, manage wastes on their own.

There are 55 municipal landfills, officially provided by the communal enterprises. None of them is a sanitary landfill in compliance with the minimal requirements of the relevant EU *acquis*. The utilization level of the municipal landfills is around 60% at present. In addition, there are approximately 1,000 smaller illegal dump sites all over the country, created by the local population that do not receive any waste collection service. The biggest landfill is “Drisla” for Skopje, which is not in compliance with EU standards.

The generation of municipal waste<sup>23</sup> (waste from households, commercial waste and other waste types) is about 570,000 t annually. Around 25% of the total amount of municipal waste is biodegradable. On average, the annual waste generation is 250-315 kg/person (data is based on samples and from public utilities).

Table 11 – Overview of municipal solid waste generation and composition

|                       | Quantity (t/year) | %          |
|-----------------------|-------------------|------------|
| <b>Waste streams</b>  |                   |            |
| Waste from households | 418 000           | 73         |
| Commercial waste      | 155 000           | 27         |
| <b>Waste types</b>    |                   |            |
| Biodegradable waste   | 149 000           | 26         |
| Packaging waste       | 97 000            | 17         |
| Bulk waste            | 29 000            | 5          |
| Other waste           | 298 000           | 52         |
| <b>Total</b>          | <b>573 000</b>    | <b>100</b> |

Source: Second NEAP

Regular separate collection of municipal waste on a large scale does not exist, except for some separate bulk waste collection in Skopje and (on a small scale), the separate collection of biodegradable waste in the municipality of Zrnovci. (USAID funded pilot project).

<sup>23</sup> Solid Waste Management System for South-West carried out by ERM Lahmeyer International (ERM LI) in association with MVV Consultants and Engineers (MVV) and ABC Consulting (ABC); 2001

Some recycling activities are undertaken by the informal sector for recyclables such as metals, paper, plastics, car batteries and accumulators and waste oils. The recovery of the various types of potentially recyclable materials is considered not financially viable under current conditions. The informal sector, which has taken over the resources belonging to the recycling network running in the former Yugoslavia, is very active; however, their resources are limited. The Association “Makedonska Surovina” has over 70 members. The full recycling capacity of the final processors is not utilised, partly because of the market limitation but mostly due to the low payments offered by the end-users.

Scrap metal represents the biggest part of the collected recyclables, and are being processed by the steel factory “Makstil’ Skopje. There is a well-established network of collectors and/or brokers, as well as a strong and stable market for recovered scrap metal. It can be concluded that scrap metal represents almost 80% of the collected commodities. Collected and processed ferrous scrap includes cars, household appliances, technological/ industrial scrap, discarded machinery/equipment and various other steel products deriving from abandoned scrap. Roughly 50% – 60% comes from industrial sources and discarded machinery.

The recycling market for plastics is also underdeveloped, covering essentially 'hard plastic', including HDPE, PVC, polypropylene and polystyrene.

Hazardous wastes, e.g. industrial processing and health-care wastes are often mixed and disposed with municipal waste.

In the case of packaging waste, an organised system on a national level has not been established for collection and recycling. The existing packaging waste handling is voluntary, there are several collection points for PET bottles.

Table 12 – Packaging waste and its disposal

| <b>Packaging</b>           | <b>Paper/cupboard</b> | <b>PET</b> | <b>Glass</b> |
|----------------------------|-----------------------|------------|--------------|
| Recycled (t)               | 14.844                | 0.2        | 0            |
| Imported                   | n/a                   | 0          | 0            |
| Exported                   | 3 600                 | 0          | 0            |
| Disposed (at landfill)     | 71 655                | 10 748     | 13 972       |
| Total quantity (generated) | 86 499                | 10 748     | 13 972       |
| Rate of recycling          | 21.1%                 | 0.01%      | 0%           |

Source: Second NEAP

Waste collection services are primarily performed by the public utilities, often also providing other communal services such as water supply, sanitation, street cleaning, public landscaping, cemetery maintenance etc. There are only a small number of initiatives for waste collection by private companies, typically for dealing with waste in rural areas.

The situation in the country is similar to almost all other countries in transition and faces the environmental liabilities from the past. Within the process of privatisation, old environmental burdens are being abandoned by the state-controlled industries who have typically not addressed then issues appropriately. In most cases a clear specification of environmental liability has not been elaborated in the privatization contracts with the new, private owners. Therefore, the old contaminated industrial sites remained a burden for the state. From the environmental point of view it represents a serious risk for humans who live in or near the contaminated areas, because of either their direct negative impact on human health or,

indirectly, through pollutants in the food production chain. The following three industrial hotspots are subject to former, ongoing or planned investigation and/or remediation: (i) the Bucim copper mine (ongoing EU remediation programme), (ii) the former Lojane chromium, arsenic, and antimony mine (planned UNDP remediation investigation), and (iii) the Silmak ferro-silicium plant (CARDS funded restructuring plan).

### 1.1.2.3 Legal Framework

Since 2002 the country started the process of harmonization of the environmental legislation with the EU and new laws on Environment, Nature, Air Quality and Waste Management have been passed by the Parliament. A draft Law on Waters has been submitted to the Parliament for first reading. It is expected that the Law on Waters will be adopted by the end of 2007. Further regulation, regarding the drafting of secondary legislation in the environmental sector as a whole is an on-going process, guided and supervised with EU technical assistance. The completion of the environmental legislation is an important step towards the implementation of projects that put in place the EU requirements concerning waste water collection and treatment, as well as solid waste management.

The **Law on Environment** (Official Gazette no. 53/05, 81/05, 24/07) as a framework law in the area of environment, has transposed the segment of the *acquis communautaire* known as horizontal legislation. The Framework Law on Environment incorporates the basic principles of environmental protection, on the basis of which the relevant environmental management procedures are regulated. They are common to the principles of the laws regulating individual areas of the environment. The Law regulates the issues of access to environmental information, public participation in environmental decision-making, environmental impact assessment procedure, plans for industrial accidents controlling, as well as control mechanisms available to environmental inspectors. The Law places specific emphasis on integrated environmental permits, with regard to which it introduces the system of gradual adjustment to the required standards for integrated pollution prevention and control, through the introduction of integrated permits for compliance with operational plans, representing a condition for existing installations to continue their operations. Separate chapters of the law deal with EIA and SEA, namely the Directive 97/11/EC amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2003/35 is transposed in the Chapter XI of the Law on Environment. The procedure on strategic environmental assessment (SEA) is prescribed in Chapter X of the Law on Environment (Official Gazette No.53/05, 81/05, 24/07). The chapter transposes the main requirements of EU Directive 2001/41/EC. In accordance with the Law on Environment (LoE) competent authority for implementation of the EIA procedure is the Ministry of Environment and Physical Planning (MoEPP).

The area of nature protection is regulated by the **Law on Nature Protection** (Official Gazette No. 67/2004, 14/2006), which has been harmonized with the *acquis communautaire* and incorporates the obligations deriving from the ratified multilateral agreements in this area. Full implementation of the Law will be enabled upon the adoption of the relevant secondary legislation. The Law regulates the protection of the nature, through protection of biological and landscape diversity and protection of natural heritage, provision for sustainable utilization of natural resources, prevention of harmful activities by legal and natural persons. The Law also provides a legal basis for establishment of ecological networks i.e. **NATURA 2000**. The Law also includes application of provisions contained in other laws referring to the protection of nature. The Law also specifies the procedure for trading with protected species of wild

fauna and flora, in line with the CITES and provides legal grounds for the protection of species of both national and European importance.

The activities concerning the development of the **National Emerald network** started in 2002. Emerald network is a network of Areas of Special Conservation Interest (ASCI), i.e. areas of high ecological importance with regard to endangered species and habitat types protected under the Bern Convention<sup>24</sup> and it is established on the territories of its Parties. Identification of the areas is based on several Resolutions and Recommendations<sup>25</sup>. The Emerald network is an efficient tool for preparation of the countries for EU membership in the segment of the implementation of the Habitat Directive (92/43/E E C) and Birds Directive (79/409/E E C) on the basis of which the NATURA 2000 network is established.

Presently, the network includes 16 areas<sup>26</sup>, and identification of new areas will continue until the network is completed. After that, definition and implementation of conservation measures has been planned. This will provide a favourable status of conservation of the species and the habitats, as well as continuous monitoring.

The Ministry of Environment and Physical Planning is also the national focal point for the climate change issues and the body responsible for policy making with regards to the implementation of the provisions of the United Nations Framework Convention on Climate Change ratified in 1997 ("Official Gazette" No 61/97). In 2003, the First National Communication on Climate Change with Action Plan was adopted, and the drafting of the Second National Communication on Climate Change (to be finished in first half of 2008) is underway. The **Kyoto Protocol** was ratified in 2004 ("Official Gazette" No 49/04). while the Strategy for Implementation of the Kyoto Protocol regarding the Framework Convention on Climate Change ("National Strategy on Mechanism for Clean Development – first period of the realised activities regarding the Kyoto Protocol 2008-2012), was adopted by the Government in February 2007.

#### **1.1.2.3.1 Related legislation to water**

The following laws governing the water sector are in force:

- Law on Environment No. 53/05 of the Official Gazette and amendments No. 81/05 and 24/07 of the Official Gazette
- Law on Waters No. 4/98 and 19/00 of the Official Gazette
- Law on Water Management Enterprises No. 85/03 of the Official Gazette
- Law on Drinking Water Supply and Urban Wastewater Drainage No. 68/04 of the Official Gazette

The new Law on Water transposing the *acquis* is expected to be adopted by the Parliament by the end of 2007. The draft Law on Waters stipulates a transitional period of two years for appointing the competent authority for water management.

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<sup>24</sup> Convention on the protection of wildlife and natural habitats in Europe, adopted in 1979. The convention was ratified in 1997 and it entered into force in 1999.

<sup>25</sup> Some of those are: Resolution No. 4 - including a list of endangered natural habitats requiring special conservation measures; Resolution No. 6 - incorporating lists of species requiring specific protection measures for their habitats, and Recommendation No.16 – containing criteria for the areas identification.

<sup>26</sup> This represents around 80% of the total Emerald network covering an area of around 198 145 ha.

### 1.1.2.3.2 Related legislation to waste management

The following laws governing the waste sector are in force:

- Law on Environment No. 53/05 of the Official Gazette and amendments No. 81/05 and 24/07 of the Official Gazette
- Law on Waste management No. 68/04 and 71/04 of the Official Gazette
- Law on Communal Activities No 45/97, 23/99, 45/02 and 16/04 of the Official Gazette
- Law on Public Cleanness Maintenance, Collection and Transport of Communal Solid and Technological Waste No. 37/98 of the Official Gazette

**The Law on Waste Management** provides the general rules applying to the following issues: Strategy, Plans and Program formulation; Waste handling procedures; Handling of hazardous waste; Landfills; Incineration and co-incineration of waste; Import, export and transit of waste through the national territory; Monitoring and data management; Information system; Financing; Supervision and competent authorities; Punitive provisions; Transitional and final provisions. The Law on Waste Management has important linkages to other Laws, in particular to the Law on the Environment, that includes basic issues such as IPPC permitting and EIA procedures.

The Law on Waste Management in force is harmonized with the relevant EU *acquis*. However for a full harmonisation in the waste area the adoption of bylaws that will enable further transposition of the relevant EU *acquis* is needed. Parts of these bylaws have already been adopted, the remaining ones are under preparation and shall be adopted by the end of 2007.

Amendments to the Law on Waste Management related to penalty provisions and the adoption of direct penalties were adopted by the Parliament in September 2007.

### 1.1.2.4 Relevant national planning documents

The country still lacks a specific integrated environmental investment strategy that would focus on the implementation of the heavy investment directives, i.e. waste management and wastewater treatment, as well as safe drinking water supply and the rehabilitation of hot spots. According to the National Plan for Adoption of *Acquis*, the Investment strategy shall be prepared in 2007.

At present, the national priorities for the development of the environmental sector are defined in several national and regional strategic documents.

In 2004, the Government adopted the Spatial Plan. The document defines the spatial organization of the country and the goals and concepts of spatial development for individual areas, as well as the conditions for their implementation. The environment, spatial and structural grouping of the national territory into environmental management regions in the frameworks of basins of major rivers has been conducted. The purpose is to identify homogenous areas of morphological connection that influence the quality of the environment arising from different activities within the specific area. Environmental management regions have been established by municipalities belonging to the following river basins:

1 – Upper course of Vardar, 2 - Pcinja, 3 - r. Treska, 4 - Crna Reka, 5 - Crn Drim and Ohrid-Prespa region, 6 - Bregalnica, 7 - Strumica 8 – Lower course of Vardar and Dojran region.

For the regions, the medium and long term priorities for protection have been identified. In general, one of the main priorities of the spatial plan concerning the environment is the establishment of appropriate infrastructures that will integrate comprehensively the polluters, the entities responsible for their control, the supervision and the monitoring, as well as the institutions responsible for development planning, in accordance with the law.

In 2006, the Second National Environmental Action Plan had been adopted (developed in 2005-2006 and financed by CARDS 2001). It provides general guidelines and directions in the area of environment for the forthcoming six year period (by 2011). In addition to setting up general priorities and goals in different sectors, NEAP also envisaged specific measures and actions that need to be implemented in order to achieve the main goals, as the continuation of the process of approximation with the EU environmental policy, that is, management of an integrated policy as a unique method to effectively meeting the challenges, the establishment of directions for environmentally sustainable approach, the enhancement of the extent of compliance with the obligations applicable under regional and global agreements and the opening of new perspectives and involvement in international systems for environment protection. In addition, around 40 local environmental action plans have been developed and adopted by municipalities, financed by national financial resources and international funds.

The Government Public Investment Programme for the period 2007-2009, adopted in February 2007, in the chapter on Environment and Public Services, makes some recommendations on the implementation of heavy investment directives, i.e. waste management and wastewater treatment, as well as safe drinking water supply and the rehabilitation of hot spots.

The National Strategy for Sustainable Development is currently under development and it is expected to be finalized and adopted by February-March 2008.

The National Development Plan for 2007 – 2009 was adopted in February 2007. The NDP defines the framework for medium-term planning of all development oriented investments of the country that are expected to be at least partially financed from public funding sources, domestic or foreign. Within this framework, it is of high importance for programming the EU financial assistance.

The strategy on water does not exist at present. The new Law on Water expected to be adopted by Parliament by the end of 2007 will specify the provisions on the water management under the integrated river basin management approach. The draft law provides three types of water management, planning and development documents:

- The National Strategy for Water shall set out a long-term policy for the sustainable utilization of water resources through meeting the needs of all users for safe water in sufficient quantities; for water protection against pollution; for the protection and improvement of aquatic ecosystems; and for the protection against harmful effects of water.
- The Water Master Plan that shall remain valid as a planning document with a new function, integrating the principles stipulated in the river basin management plans in order to provide for an integrated approach to water management, and to provide an overview of the state of the water bodies on the general level covering the entire national territory. The



existing Water Master Plan should be updated in relation to EU requirements according to the provisions of new Law on Waters.

- The river basin management plans, shall be developed for the river basin areas according to which the water sector shall be organised and managed.

The strategy for waste management does not exist yet. It is envisaged to be developed in 2007 by the MoEPP. The only integrated document covering the waste sector is the National Waste Management Plan 2006 – 2012, which was developed in 2005 (financed from CARDS 2001). The plan is the first step to improve the problematic and inadequate solid waste management situation and in the long term, to fulfil the requirements of the various EU Directives on solid waste management. It focuses on practical ways to find acceptable and financially affordable solutions to the urgent issues.

#### **1.1.2.5 Institutional Framework**

The environmental issues, in terms of water and waste sector, are the responsibility of several authorities. The structure and competencies are as follows:

The Ministry of Environment and Physical Planning is responsible for environmental tasks related to waste management including the legal harmonization process, preparation of national strategies and action plans, inspection and enforcement and nationwide monitoring and information systems. The MoEPP sets the overall framework for policies and legislation. The responsible department for waste management issues is the Department of Environment, Division for Waste and Soil in the Administration of Environment.

Under the new draft Law of Waters expected to be adopted by Parliament by the end of 2007, the responsibility over the water sector will be the sole responsibility of the MoEPP. The Ministry has already established a separate department for waters within the Administration of Environment. The department shall be equipped and strengthened by new employment and overtaking the existing relevant staff from the MoAFWE

The Ministry of Agriculture, Forestry and Water Economy (MoAFWE) is currently responsible for the management of water resources at the national level, including irrigation. The Ministry is in charge of issuing permits for water use and maintenance of hydro-system. After the enactment of the new Law on Waters, the responsibility for water management, starting by 01.01.2010, will be taken over by the MoEPP.

Until 01.01.2010 competencies over water sector will be a responsibility of MoEPP regarding water protection and developing of relevant planning documents, while MoAFWE will be responsible only for issuing water permits based on the existing Water Master Plan.

The Ministry of Transport and Communication is responsible for the construction of the communal infrastructure, concerning the water supply and sewerage networks only. The support for the water supply and sewerage network projects is provided by granting state subsidies to the municipalities applying for such assistance. The Ministry has also been managing several water infrastructure programmes supported by international donors.

The Ministry of Health is responsible for exercising controls on the quality of drinking water through The Republic Institute for Health Protection, which is a body within this Ministry.

The municipal administrations after the decentralisation of the government administration play an important role in the implementation of the environmental policy in the water and waste sector. Their basic tasks relate mainly to the:

- Development of regional programmes for protection of the environment;
- construction, maintenance and operation of water supply systems, sewerage systems, WWTPs, communal waste collection and disposal;
- providing public information regarding the state of the environment;

Currently, the entire water and waste infrastructure is owned and operated by the municipalities. Water supply, wastewater collection and treatment and waste management are performed by the municipal public utilities. In many cases these utilities, besides water and waste management also deal with all public service activities such as street cleaning, public landscaping, cemetery maintenance etc. The public companies specialised only for one activity, i.e. water and sewerage management or waste management, exist and operate only in some cities (e.g. in Skopje, there is the company “Vodovod” responsible for the operation of water and sewerage systems and the company “Komunalna higijena” which is responsible for waste management). Most of the companies operate on a municipal level only; only three of them are regionally based, delivering water supply services to a specific district centre and several municipalities.

In regard of private sector involvement in such activities, there are only a few entities operating in waste collection, typically handling waste in rural areas although the Law on Waste Management allows the participation of the private sector in waste management. The private sector has been expressing a great interest for participating in waste management. According to the Law on Waste Management the existing public utilities need to be adjusting to the condition set in the Law on Waste Management in the next three years.

## 1.2 COMMUNITY STRATEGIC FRAMEWORK

Following the Commission's recommendation of November 2005, the European Council decided on 16 December 2005 to grant candidate status to the Republic of Macedonia for EU membership. The Council Decision of 30 January 2006 adopted the 2005 European Partnership setting out the key principles, conditions and priorities in the accession process.

Namely, as regards the transport sector a short-term and medium-term priority, inter alia, is the continued implementation of the Memorandum of Understanding on the Development of the South East Europe Core Regional Transport Network.

For environmental sector, the following short-term and medium-term priorities are particularly relevant, inter alia:

- Strengthen administrative capacity at national and local levels and start the preparation of strategic plans, including financial strategies;
- Develop an environmental investment strategy based on estimates of the cost of alignment.
- Integrate environmental protection requirements into other sectoral policies, in particular through the development of environmental impact assessments;
- Increase investments in environmental infrastructure, with particular emphasis on waste water collection and treatment, drinking water supply, tackling air pollution and waste management.

According to the Community Strategic Guidelines for Cohesion 2007-2013, the provision of efficient, flexible and safe transport infrastructure can be regarded as a necessary precondition for economic development as it boosts productivity, as well as for the development prospects of the regions concerned by facilitating the movement of people and goods. Transport networks boost opportunities for trade, while increasing efficiency.

Following the Community Strategic Guidelines for Cohesion, as well as the Community Policy of the Trans-European Networks, the key objective of the transport sector is to promote its competitiveness in the international market and to support harmonized development of the country as whole. The transport sector should provide the business sector with a reliable and cost-effective access to markets for inputs and outputs, and to provide the citizens with good passenger transport services for access to jobs, training and other activities.

In terms of environment, the Community Strategic Guidelines refer to the need to strengthen the synergies between environmental protection and growth. Environmental investments can contribute to the economy in three ways: they can ensure the long-term sustainability of economic growth, they decrease external environmental costs to the economy and they stimulate innovation and job creation. The CSG indicate as the highest priority of the environmental services inter alia waste and wastewater treatment infrastructure.

Priorities set within the Operational programme in the environment sector are completely coherent with the first action recommended by the CSG for the environment, where the significant needs for investment in infrastructure is addressed to comply with environmental legislation in the fields of waters, waste, air and nature and species protection.

The Multi annual Indicative Planning Document adopted by the Commission on 30 April 2007<sup>27</sup> is the strategic document for IPA established for a three year rolling period. The priorities determined in the MIPD components serve as a basis for the programming of EU funds.

According to the MIPD the assistance under component III – Regional Development within the 2007-2009 period shall be concentrated on the transport and environment sectors only. In the environmental sector the priorities are targeted to investments to the waste water sector and solid waste sector, to improve the wastewater and waste infrastructure. In the transport sector the priorities are focused on the continuation of the development of the South East Europe Core Regional Transport Network (Corridors VIII and X)

The strategic frame of reference for programming Components III and IV is provided by the Strategic Coherence Framework, which covers the whole programming period 2007-2013<sup>28</sup>. For each component, a single operation programme is developed for the initial 3 years period 2007-2009.

The Operational Program Regional Development has been prepared in compliance with the national priorities specified in the available strategic documents, IPA regulation and other related EU regulations. The programme strategy set up in this operational programme is therefore fully consistent with the sector strategic priorities, and is coherent with the relevant documents governing EU principles of sustainable development and regulating aid support.

### **1.3 PARTNERSHIP CONSULTATION**

The Partnership requirement processes ensure that the preparation of the Operational Program at different stages of programming is discussed and consulted with stakeholders relevant to the sector, beneficiaries, public authorities (i.e., regional, local and urban,) and other economic and social partners.

After the first draft of the OP was prepared it was published on the web site of Ministry of Transport and Communications, as the overall coordinator for Component III, with a prior announcement published in the daily newspaper with an invitation for comments from the basic stakeholders.

The Partnership process was conducted in three levels:

- Level I – Partnership with institutions appointed in the Operational Programming Team for Component III-Regional Development (central state administration bodies)
- Level II – Partnership with stakeholders
- Level III – Partnership with the municipalities and regions affected by the scope of activities included in the Operational Programme

#### **Level I - Partnership with Institutions appointed in the Operational Programming Team For Component III- Regional Development:**

- Ministry of Transport and Communications

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<sup>27</sup> Commission Decision C(2007)1853 of 30.04.2007

<sup>28</sup> Drafted by National authorities in consultation with the Commission (Commission letter of 13.08.2007)

- Ministry of Environment and Physical Planning
- Secretariat for European Affairs
- Ministry of Finance
- Ministry of Agriculture, Forestry and Water Economy
- Ministry of Local Self-Government
- Fund for National and Regional Roads
- State Statistical Office
- Association of Local self Government Units (ZELS)

The preparation of the Operational Program was coordinated by the National Coordinator for Component III-Regional Development representing the Ministry of Transport and Communications as the institution responsible for programming and technical implementation of the Regional Development Component. The Ministry of Environment and Physical Planning was the institution responsible for coordinating the activities related to the environmental part of OP.

Strong coordination between these two institutions was established from the very beginning and in general the whole document has been drafted in close co-operation among all central state administration bodies involved in the process. In the course of preparation of the Operational Programme, a series of meetings have been conducted in the form of working groups with the above mentioned programming institutions that have participated in the preparatory process by providing necessary data and policy analysis. There have been created two working groups one for transport issues and one for the environmental issues within the MoTC and MoEPP. The teams have been composed of representatives from the ministries and supported by the external TA for this purpose comprising of one expert for the environmental issues and one for the transport issues. The groups have taken into consideration the suggestions and needs raised during the workshops.

The informal working group, composed of representatives from SEA, Ministry of Finance, Ministry of Transport and Communication and Ministry of Environment was established in 2006 as in the frame of TA Environmental Management Strengthening. The main objective was to follow up activities and provide institutional coordinative approach in the process of Programming of the IPA Regional Development Component. Regular coordination meetings were held in this regard during the preparation phase. The consultations with the experts of TA Environmental Management Strengthening, involved in the implementation of TA task relating to IPA were held in March 2007.

In addition to the partnership involvement of the institutions appointed in the Operational Programming Team for Component III, a cooperation has also been established with the Public Enterprises that operate in the transport sector.

## **Level II - Partnership with the Basic Stakeholders**

- Institutions related to the transport (PE Macedonian Railways, PE Makedonija Pat Fund for National and Regional Roads)
- International Transport Institutions
- Socio-economical partners, as
  - AMERIT – Economic Interest Association on Road Transport “Makedonija Soobrakaj”- Skopje(both freight and passengers transport);

- Association of Independent Trade Unions of the Truck Transport Operators “Makamtrans”- Skopje (freight transport);
- Association of transport operators in the road transport “Istok” (both passengers and freight transport);
- ADKOM - Association of Public Communal Service Providers, Skopje;
- Relevant NGOs (“The Ecologist Movement of Macedonia (DEM”)-Skopje; “Ecological Press Center”-Skopje; Environmental Association “Eko-svest”-Skopje; “Macedonian Green Centre”-Skopje; “Macedonian Ecological Society”-Skopje; Environmental Association “Planetum”-Strumica; Centre for Economic and Ecological Development “Ideal”-Tetovo; Environmental Association “Zdravec”-Berovo; Environmental Association “Brica”-Berovo; Environmental Association “Vinozito”-Stip; Environmental Association “Dozdovnik”-Delcevo; Ecological Group “Green Power”-Veles; (Environmental Association “Vila Zora”-Veles; “Permaculture and Peacebuilding Centre”-Stip, “Permaculture and Peacebuilding Centre”-Gostivar, Ecological Association “Zdravec 2002”-Makedonska Kamenica; “Molika Environment Movement”-Bitola; Ecological Association “Eco”-Cesinovo-Oblesevo; Farmer Association “Agrostimul”Chesinovo-Oblesevo; Civil Association “Zetva na znaenje”-Prilep; Training for Sustainable Development “ORT”-Skopje )
- Chambers of Commerce
  - Transport companies, construction companies and consultant firms;
  - International financing institutions in the transport sector (EBRD, EIB, WB);
  - Donor community;

During the process of preparation of the Operational Program the basic stakeholders were consulted in order to ensure consistency of policy, priorities and data.

After the first draft of the OP was prepared it was published on the web sites of the Ministry of Transport and Communications and the Ministry of Environment and Physical Planning. An official note by the Ministry of Transport and Communications was sent to stakeholders in order to present the priorities of the Operational Programme and to invite the institutions to provide their comments and opinions. The official note was also sent to NGOs active in the field of transport and environment. An invitation to comment on the contents of the Operational Program was also announced in the daily newspaper “Dnevnik”.

Comments were received by the NGO “Eko-svest” referring to the program strategy of the Operational Program. In summary the NGO “Eko-svest” indicated in its comments that the OPRD should emphasize support for development of the railway infrastructure rather than road infrastructure as a more sustainable mode of transport in terms of its impact on the environment, energy consumption and safety. The Ministry of Transport and Communications informed the NGO that the priorities chosen in the Operational Program were in line with the strategy agreed between the Commission and national authorities. Furthermore the Ministry explained that the priority was given to completion on Corridor X due to its geo strategic importance, benefits that will be accrued and maturity of the project indicating that within the period 2007-2009 development of the railways will be supported by preparation of relevant studies. Comments confirming the contents and priorities of the Operational Programme were also received by the Association of Independent Trade Unions of the Truck Transport Operators “Makamtrans”- Skopje (freight transport).

On May 17, 2007, MoEPP organized a meeting with the NGOs on which the accomplished and planned activities of the Ministry were presented. On this meeting particular attention was

given to IPA and the corresponding 2 Components (Cross Border Cooperation and Regional Development) including the status of the Operational Programme for Regional Development and its accessibility. To this meeting 68 NGOs were invited from across the country, 22 of them were present.

On 24.08.2007 a thematic presentation regarding the latest draft of the Operation Programme was presented to the civil society organizations and NGOs. Out of 31 invited, 9 NGOs were present at the meeting. During the meeting the national authorities presented the basic elements of IPA, the latest draft of the Operational Programme and the role of the NGOs in the implementation, revision and further planning of the OP. The latest draft of the Environmental Impact Assessment Study regarding Corridor X, the road section Demir Kapija-Udovo-Smokvica, was informally presented to the participants as general information. This included the presentation of the method of preparation and the NGOs were informed about the forthcoming procedure that relates to the information and consultations with the public in accordance with the relevant Directives for EIA.

NGOs provided strong support to the Operational Programme having particular interest in the active involvement in the process of its revision and implementation as well as definition of the Operational Programme in the second programming period. Discussions during the session were related towards the best possible ways of establishing partnership in the future and the ways of developing communication. Besides their membership in the Sectoral Monitoring Committee, the use of the websites of the Ministries and the eco-net portal were proposed to be as most appropriate ways of communication. NGOs showed readiness for active participation and support in the activities of the fourth priority that relates to the information and publicity campaigns and implementation of the Operational Programme.

Coordinative meetings were held with the representative of the international financing institutions (EBRD, EIB) as well as representatives from the Hellenic Plan for Economic Reconstruction of the Balkans (HiPERB) in order to coordinate the funding procedures of institutions that will potentially be involved in financing the major projects under the Operational Programme.

A donor environmental coordination meeting was held in November 2006, organized by the Ministry of Environment and Physical Planning and Secretariat for European Affairs, supported by UNDP. The meeting had an overall objective to initiate the future coordination of the donor community in the field of environment and present the funding needs for the first preliminary project pipeline to the donor community representatives that potentially will be involved in financing the environmental projects under the environmental part of the OPRD. The donor coordination meeting was attended by representatives from the international financing institutions and the international development agencies (SIDA, UNDP, ADA, GTZ).

In the course of publishing the OPRD on the official web sites of the Ministries, comments were received by the EBRD and WB. The comments of the EBRD were related to the additional projects that were financed by the bank and should be mentioned in the Operational Program. This comment was duly taken into account and the remarks were included under the relevant section. The WB underlined that the program proves to be a solid foundation to ensure that the prospective IPA funding is used effectively for development of the transport sector and facilitation of the economic development of the country. The specific comments from WB were related to the necessity for additions in the text regarding road maintenance

and reforms in the railway sector to better align with the EU standards. The former specific comment by the WB was taken into account, the latter was avoided due to the fact that the current analysis of the railways sector is sufficient to support the programme strategy in the Operational Program.

Throughout the implementation of the programme the partnership consultation will be ensured by membership of the representatives from the civil society and socio-economic partners in the Sectoral Monitoring Committee. Their effective involvement will be achieved by performing the designated tasks of the Committee that among other include approval of general criteria for selecting the operations under the programme and their revision, review of the progress towards achieving the specific targets, examination of the results of implementation, examination of proposals to amend the financing agreement of the programme, proposals for revisions and re examination of the programme likely to make possible the attainment of the programme's objectives. The Sectoral Monitoring Committee will meet at least twice a year and upon request by the Commission, the intermediate meetings will also be convened as required.

### **Level III - Partnership with the Municipalities**

This level involves partnership with municipalities and regions affected by the scope of activities included in the OPRD.

During the course of 2006, consultations have been initiated with municipalities in order to define the current water and waste management status related to the level of preparedness of technical documentation. Individual consultations with municipalities of over 100.000 population were carried out. Questionnaires have been prepared and delivered and the answers have been used as a basis for the initial assessment and presentation of current status and defining the pipeline of the environmental project in water and waste management sector. Main policy guidelines in this regard have been prepared which serve as a basis for further definition of the scope of the Operational Programme.

During the preparation of the operational programme, consultations were held with representatives of the larger municipalities and several utility companies namely with those from Skopje – “Vodovod i Kanalizacija” and “Komunalna Hygiena”, municipality of Prilep, JP ViK, Municipality of Bitola, where the possibility to apply for the IPA funds and status of the indicative projects were discussed. At the meetings the overall scope of the OPRD was presented while a special attention was given to the technical assistance needed for preparation of technical documentation. The aims of the OPRD were also presented to the regional associations as potential final beneficiaries applying for IPA funds for waste management projects.

During May 2007 the MoEPP in cooperation with ADKOM, organized a workshop for public utility representatives where a general presentation of IPA and scope of the OPRD was introduced. The same presentation was carried out for the representatives of municipalities attending the Financing Workshop organized jointly by the MoEPP and EBRD. During the workshops the discussions were mainly oriented towards the role of public utilities and their problems.

Several working meetings and consultations in the scope of negotiations for preparation of the technical documentation for the Waste water treatment plant in Skopje were held in the



course of February and March 2007. Based on consultations and meetings the tripartite Memorandum defining the scope of the work and studies for preparation of technical and financial documentation was signed with JICA in March 2007.

During 2006 a number of workshops were held with relevant municipalities and public utilities (a representative from relevant ministries was also present on workshops). The workshops have been organised under the TA Environmental Management Strengthening (CARDS 2004), with the objective to present and discuss the IPA programme at the level of LSGs, as the potential final beneficiaries of the assistance.

The following workshops were held:

- 1) Workshop on Environmental Policies and Implementation, 21<sup>st</sup> March 2006, where the presentation on the “Project Investment and EU Funding” was made. The workshop was attended by representatives of a number of municipalities and staff from the MoEPP. The representative from the Ministry disseminated information regarding IPA and preparation of IPA application forms.
- 2) Workshop on Project Assessment, 11<sup>th</sup> May 2006 with an emphasis on investments as means of mitigation of the environmental problems created by pollution. The possibility of having access to EU funding was also discussed and the IPA instrument was introduced to the participating LSG staff. The detailed conditions of the IPA were not known at that time (not yet formulated by EU Commission), however, it was anticipated that the establishment of regional landfills could only be supported if the full range of the integrated waste management system was addressed in the projects proposed.
- 3) Workshop on Economic Instruments, 26<sup>th</sup> October 2006.  
The workshop addressed specific IPA related issues. Three topics were presented, related to IPA cycle management, financial assessment of projects, the roles of the final beneficiary and the preparation of the IPA application form. The brief summary of the themes presented is as follows:  
The ISPA/IPA Cycle - The presentation outlined the roles and responsibilities of each of the key players in the ISPA/IPA cycle from programming, through application and implementation to evaluation. The presentation was designed to enable the participants (from MoEPP, CFCD, National Fund and LSG’s) to understand the likely IPA cycle (in the absence of IPA guidelines the ISPA cycle was used as a model) and their role in it.  
The topics covered in this workshop included:
  - Financial assessment of the final beneficiary to ensure that it has sufficient resources to operate the EU funded facilities, to remain financially viable (review of solvency) and is able to repay debt funding (issue of gearing);
  - Financial analysis of the proposed investment to identify the least cost financial solution. Review of tariffs to ensure respect of the Polluter Pays Principle in comparison to the affordability and cost recovery. Calculation of the EU grant intervention rate;
  - Drafting ToR for preparation of IPA applications taking into consideration that the MoEPP and final beneficiaries will need external assistance to prepare IPA applications for successfully drawing EU funds.
- 4) Workshop on Financial and Economic Aspects of IPA, 12<sup>th</sup> - 14<sup>th</sup> December 2006. The participants were from MoEPP, MTC, MOF and the Municipality of Kocani. The

workshop has increased knowledge of financial analysis and economic analysis regarding IPA.

- 5) Workshop on Efficient Tariff Management - Prerequisite for IPA Funding, 21<sup>st</sup> February 2007. The workshop was attended by 44 participants including central level stakeholders, municipal staff and public utility staff. As currently the administration of utilities in the municipalities is managed in a manner that does not respect the 'user pays' principle, the specific objective of this workshop was to identify the obstacles to the utility management in order to respect the 'user pays' principle and to establish eligibility for IPA support.

## **1.4 MAIN CONCLUSIONS OF THE EX-ANTE EVALUATION ON OPRD**

### **1.4.1. TRANSPORT MEASURES –GENERAL COMMENTS**

#### **1.4.1.1 Appraisal of the Socio Economic Analysis and Relevance to the Need Identified**

1. The logic behind the choice of the priority axis of the OPRD appears clearly, especially in the choice of the improvement of the main transport infrastructures along Trans-national axes and Helsinki corridors, which connects the main populated areas, the support to the growth of the European trade exchanges, and the need to finance such projects in an international framework.

It is also visible in railways sector, whose operational capacities should be enforced in an international context, although the priority given to this mode of transport remains limited.

The relevance of programme objectives to these needs can be assumed.

2. The socio economic analysis in the OP supports efficiently the further development of the programming, analysing key statistic figures and establishing convincing explanations of the main evolutions observed.

However, compared to Western Europe, there is, in most of the cases, no socio-economic studies at the basis of the public policies. This situation exists in most of the Balkan countries and is explained by the very low level of public expenditure for engineering studies outside pure technical issues.

Unfortunately, the strategy of recovery of road sector is still in course of preparation, although the orientation for road recovery is considered as a priority and the development of the sector as a key strategy for supporting the economy. This didn't enable to evaluate easily the impact of the projects related to road infrastructure improvement. A general study (such as a Master plan) integrating a wide scope of possible actions should be necessary.

A special attention should be paid to integrate the branch Xd of the corridor X in the objectives of improvement of the road network, as this itinerary connects major populated areas and economic centres.

It is also recommended by the evaluator that the principle of concentration of funding should not lead to oversized investments in motorways, neglecting the need for rehabilitation of strategic national roads. A good balance in priorities in this domain remains essential to insure a smooth management of traffic flows in the next decade.

#### **1.4.1.2 Evaluation of the rationale of the strategy and its consistency**

The consistency of the strategy appears clearly. The analysis of the relationships and complementarities between the different priorities is convenient, provided the existence and the impacts of parallel policies led in different domains (such as safety policy, restructuring of operators) are taken in consideration by the evaluation. The contribution of each measure to the programme objectives and to the general goals of the development of a sustainable transport system is in this context adequate although the ambition of the OPRD is limited to one major project and a group of technical studies.

#### **1.4.1.3 Appraisal of the coherence of the strategy with European and national policies**

1. At a general level, the priorities developed by the main EU orientations match well the strategic priorities of the OP –transport part, the other IPA planning documents and are consistent with the draft National transport strategy.

However, effort should be made in the next programming period to implement a more balanced development of the rail and the road network, with the objective of limitation of the development of road traffic. Attention should be paid to make more explicit during the phase of project preparation the repartition of charges of the transport network to road users.

2. At priority axes, measure and main project level, the purposes of the actions developed in OP and the projects proposed match well the regional development of SEETO core network and regarding the nature of projects, more general purposes such the upgrading of the quality of transport, the limitation of bottleneck and the enhanced safety for road users.

At the limited financial level of the country programming, priorities of interconnection of the networks, consistency in infrastructure alignment and compliancy with other level of planning are correctly observed.

Some possible opportunities in the scope of the OP programme, such as intermodal nodes development, should be studied to cover all the priorities developed in EU policies.

#### **1.4.1.4 Evaluation of expected outputs and results**

##### **a) Proposed indicators at the priority axis level**

The projects proposed to financing made an evolution from an initial set of two groups of projects of civil works (road & rail) to a single major project (Construction of New Carriage Way and Rehabilitation of the Section Demir Kapija-Udovo-Smokvica -Corridor X) with a group of preparatory studies (rail & road).

During his last assignment, the evaluator delivered a list of simplified indicators for such a purpose.

##### **b) Proposed indicators at the measure level**

The indicators were proposed for each measure:

- Measure 2.1 (rail projects) : 3 to 5 project identified, 2 projects prepared
- Measure 2.2 (road projects) : 2 to 3 project identified, one project prepared.

c) Coherence of the programme: the internal coherence is demonstrated by the balance between rail and road measures, for a sustainable development.

However, the budgetary constraints don't allow supporting the rehabilitation of rail section and only the feasibility studies will be financed during the 2007-2009 period. It is recommended that the next programming period should propose for financing at least one rail rehabilitation project.

The external coherence of the main project with other national and international policies and main sources of funding, IFIs, neighbouring countries' development agencies, SEETO observers (for the major project) is clearly visible.

d) Efficiency of the programming is visible throughout the analysis of the main project and the orientation of the studies, which aim directly and efficiently to time savings, VOC decreases and enhanced attractiveness of rail service by the increase of the operational speed.

e) Effectiveness of the programme is obvious as the programme intends to implement a high degree of quality of transport services in infrastructure sector, especially in road sector. However, a transport master plan is missing to determine with more accuracy which degree of quality of service is requested in road and rail programming to face the varied range of issues in the country transport sector for the next decade.

f) Environmental impact : during the first evaluation period, the consultant noticed that too limited consultations for the environmental impact of the Section Demir Kapija to Smokvica project were conducted and a too limited set of option had been taken in consideration. This could lead to major disturbance for the implementation of the OP and conduct to the impossibility of its implementation in the next years. However, at the time of the final evaluation, the proposed design of the project was modified by changing the alignment of the highway specifically in response to concerns raised over possible environmental impacts. The most important aspect of this re-alignment is its avoidance of any disruption to the *Bela Voda* cave system and its ecology.

### **Appraisal of the Proposed Implementation Systems**

The programme implementation framework is developed in the OPRD in accordance with the IPA draft regulation. The distribution of functions for management, monitoring and control of the operations was delegated to the relevant Macedonian administration. Civil servants are appointed or in course of appointment in order to fulfil the task described by the draft regulation. The accreditation for conferral of decentralised management is ongoing. The major documentation such as the IPA application form is in course of preparation.

Priority Axis 4, measure 1 proposes to funding some actions for strengthening the administrative capacity of the decentralized management.

No major issue was detected at this moment of the preparatory period.

#### 1.4.2. ENVIRONMENTAL MEASURES – GENERAL COMMENTS

The country has demonstrated its commitment to alignment with the policies and laws of the European Community by signing the Stabilization and Association Agreement and acquiring the status of a candidate country. There is in place a National Plan for the Adoption of the Acquis (NPAA), which encompasses the legislative framework for the environment. Certain laws of the country are already in alignment with European Community Law, although there remains much work to do. The Operational Programme for Component 3 (environment) is therefore oriented towards ultimate compliance with the requirements of European Community Law and policy; at the same time, it recognises that this is not a process that can be completed quickly. The measures that the programme envisages are a small but essential first step in this process and should be seen as such.

The measures that are proposed make sense and will have a quantifiably beneficial<sup>29</sup> impact upon the environment once the investment components of those measures are implemented. Most importantly, the Operational Programme does not make the all-too-common error of trying to justify spending money just for the sake of spending money. It takes the wholly professional approach of recognising that major investments require major planning and that it would therefore be irresponsible to proceed with investment measures without first ensuring that the investment components are properly defined and evaluated. It recognises, correctly, that proper project definition and preparation are an integral aspect of infrastructure investment. On that basis, the programme is professionally sound in terms of environmental protection, engineering design and responsible use of funds.

The interim ex ante evaluation (April 2007) concluded that there were a number of structural weaknesses in the programme, which the Ministry of Environment and Spatial Planning was attempting to address on the basis of advice that we had provided to them. The actual presentation of the programme could have been clearer and better organised in terms of its layout and information content. The MESP was aware of this and was working to improve the document in this regard.

The ex-ante evaluators considered that the Ministry of Environment and Spatial Planning has now addressed this concern. The sequencing of the information presented in the Operational Programme is now clearer and more logically structured. Accordingly ex-ante evaluators considered it to be satisfactory in this respect.

The SWOT analyses in the Operational Programme have been improved and strengthened significantly since the first draft of the programme. They are now well focused, detailed and correctly structured, with a small number of minor observations by ex-ante evaluators, which should not be construed as criticisms.

The country's Second National Environmental Action Plan (NEAP II, 2006) is comprehensive in scope. Objective O1 refers to water. The wording of the objective itself includes references to the principles of sustainability and river basin management, but the second and third indicators are too vague and unrelated to practical reality to be of any significant use. Neither the objective itself nor the indicators attaching to it are SMART<sup>30</sup>.

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<sup>29</sup> Even in the absence of specific data, it is possible to say with reasonable certainty what would be the overall reduction in organic pollution load that would result from providing sewage treatment for a given population in line with the European Community's Urban Wastewater Treatment Directive. Consequently, the lack of specific data in this instance does not call into question the validity of the measures proposed.

<sup>30</sup> Specific (concrete, detailed, well defined), Measurable (numbers, quantity, comparison), Achievable (feasible, actionable), Realistic (considering resources) and Time-Bound (a defined time line).

The second measure proposed (M2) in the NEAP II in order to achieve these objectives is the construction of priority wastewater treatment plants and other infrastructure, as indicated by:

- Priority waste water treatment plants listed
- List of waste water treatment plants under construction
- List of waste water treatment plants in operation

Despite the reservations expressed above concerning the way in which the objective and the indicators are worded in the NEAP II, it is clear that the country's strategy is to improve the provision of sewage treatment. Consequently, the sewerage and sewage treatment measures envisaged in the Operational Programme are of direct relevance to this objective and there is a clear chain of logic linking NEAP II, water management objective O1 and the measures proposed.

**NEAP II, Water Management:**

**Objective O1:** Integrated water management based on the principles of sustainable development with the introduction of river basin management.

**Indicators:**

- Adoption of the draft Law on Waters and introduction of institutional structure for river basin areas management
- Definition of the manner in which to measure sustainable development in river basin management
- Annual assessments of whether water management complies with the above definition

**NEAP II, Waste Management:**

**Objective O1:** Establishment of an integrated and financially self-sustainable waste management system.

**Indicators:**

- Percentage of the population covered by organized waste collection and disposal
- Percentage of sites for waste disposal, categorized by the risk level
- Percentage of landfills constructed in accordance with the EU Directive requirements
- Number of illegal waste dump sites
- Quantity of recycled and reused waste

The NEAP II provides a more detailed (though not more specific) set of provisions relating to waste. The third measure proposed (M3) for achieving the objective is the improvement of waste management infrastructure, as indicated by:

- Assessment of the needs to improve investments
- List of priority infrastructure projects
- Percentage of implemented infrastructure projects

The Operational Programme envisages the eventual construction of landfills that comply with the requirements of European Community Law. Clearly this would represent an improvement of waste management infrastructure and in consequence the proposals derive logically from Measure M3 of NEAP II Objective O1 for waste management in the country.

The interim ex ante evaluation (April 2007) noted that although the content of the Operational Programme was linked logically to the objectives of the NEAP II, the text of the Operational Programme did not present this linkage in a clear and concise manner. In addition, while the draft programme contained a lot of information, the *analysis* of this information (i.e. putting the information into context and summarising its significance) was perhaps weaker than it should be. The interim ex ante evaluation concluded that this situation needed to be rectified before further consultation took place.

This recommendation has now been adopted and is reflected in sections 1.1.2 and 3.1.3 of the Operational Programme.

**The matrixes presenting the incorporation of the recommendations in the OPRD from the Ex-Ante Interim Report 1 are given in the *Annex 1 Overview of the Recommendations of the Ex-Ante Analysis*. The Ex-Ante Interim Report 2 included**

**limited number of recommendation referring mostly to the future implementation of the OPRD. These matrixes presenting the incorporation are given in Annex 2.**

## **2. ASSESSMENT OF MEDIUM TERM NEEDS, OBJECTIVES AND STRATEGIC PRIORITIES**

### **2.1 SOCIO-ECONOMIC ANALYSIS**

One of the key factors to pursue economic growth is to establish and improve the transport and environment infrastructure, as prerequisites for sustainable development.

During the last 15 years the country has conducted a series of actions to establish a market-based economy. However, underdeveloped infrastructure inhibits from the sustainable development of the economy, or the development is inadequate and at the prejudice of the environment deterioration and health of population. Key sectors of the economy that need rapid development of infrastructure are the transport and environment sectors.

#### **2.1.1. TRANSPORT SECTOR**

The key socio-demographic and economic factors that influence changes in transport demand (and that in turn influence the rate of transport developments) are population growth, gross domestic product, motorisation growth, tourism, agriculture and industry. High quality transport infrastructure is necessary to support the growth of the external trade activities and to increase mobility of individuals with neighbour countries and the EU.

The population growth rate is relatively low (0, 3%) and it influences economic activity levels that in turn influence the growth of consumer demand. The process of migration to a market-based economy is now established and irreversible. This gradual process should generate higher economic growth in future years, which in turn should generate an increase in demand for transport services.

The major export destinations for agricultural products are Serbia (including Kosovo), Montenegro, Greece and Germany. The southeast part of the country around Kavadarci, Negotino, and Gevgelija, is the main grape and wine production region. Together with a part of Corridor X (National Road M1) that runs north-south and directly connects Negotino and Gevgelija with the capital and the major export routes (also towards Greece), roads 106 and 107 also serve this economically important activity.

The share of industrial production in the total GDP of the country was 20.7% in 2003, but recent government data estimates it to be 19.7% in December 2006. Industry is characterized by high concentration in several sectors (food industry, production of electricity, textile industry, basic metals). In terms of their geographic distribution and subsequently, access to the road infrastructure, the production of the basic metals is largely concentrated in the capital Skopje, whereby several largest companies are privatized spin-offs of the former large steelworks (Zelezarnica); two additional large scale producers are Feni in Kavadarci, served by roads R106 and R107 to access the M1, and Silmak in Tetovo connected to Skopje with M4. The large publicly owned textile companies were largely dissolved into smaller private companies with the beginning of the transition. One remaining big capacity with strong export potential is Teteks, located in Tetovo. Clusters of smaller textile producers are to be found in the towns, which traditionally hosted the garment industry, such as Shtip, Gevgelija, Ohrid, Vinica, but it is fair to argue that textiles do not have a narrow territorial concentration in the country. The same applies to food production, which does not have a particular territorial



concentration but is to be found throughout the country, with naturally high concentration in the capital of Skopje.

The national transport strategies and priorities were thoroughly presented in chapter 1.1 of the operational programme. The priorities in the operational programme are fully compliant with the priorities determined in the national strategic documents and particularly with the National Development Plan, National Transport Strategy and the Public Investment Programme. Regarding the regional approach it is noteworthy to mention that the priorities of the operational program contribute to the development of the Core Network in the South East Europe as determined in the *Five-Year Multi-annual Plan 2007-2011 of SEETO*.

Following the analysis of the National Development Plan (NDP) the development of the transport infrastructure is associated with huge investments. The best available figures for the volume of investment required for the period 2007-2009 are the following:

Table 13 – Estimates for development of transport infrastructure for period 2007-2009<sup>31</sup>

| <b>Area of intervention</b>   | <b>Capital cost estimate for period 2007-2009 (Million Euro)</b> | <b>Transport Percentage allocation of the overall investment needs in the NDP</b> |
|-------------------------------|--|---|
| Road Transport Infrastructure | 349  | 20%   |
| Rail Transport Infrastructure | 97,25  | 5,57%   |

Road infrastructure with a total volume of 349 million EUR in the three year period is the activity area with largest investment needs among the development priorities as underlined in the NDP. A significant percentage is also allocated to the railways sector where the policy reforms aimed at commercialisation of the sector will have to be accompanied by significant public investment if railways are expected to take a more important role in the Macedonian transportation sector.

As elaborated in Chapter 1.1 there is a dense road network with already existing high speed segments and the expected restructuring of the road maintenance sector should, in the coming years, enhance the quality of the network. Rutting is a problem on a limited length and few identified sections (mainly motorway, carrying high traffic), but the rut depth affect the road user's safety. Part of the core network is already in process of being rehabilitated or upgraded to provide consistent standards along the main Corridors and routes but the bottlenecks must continue to be eliminated. The overall condition of the structural road network (main and important regional roads) is lower in comparison to European standards, as well as to the neighbouring countries network.

The road maintenance counts up to 25% of the budget for Annual Programmes for construction, re-construction, maintenance and protection of the national and regional roads. In the table below are shown the data regarding the maintenance expenditures for the period 2004-2006.

Table 14 – Expenditure for Road maintenance (2004-2006)

| <b>Activity</b> | <b>Total implemented expenditures</b> | <b>Planned expenditures for maintenance</b> | <b>Implemented expenditures for maintenance</b> | <b>Implemented expenditures for maintenance</b> | <b>Share in total expenditures</b> |
|-----------------|---------------------------------------|---|---|---|------------------------------------|
|                 |                                       |   |   |   |                                    |

<sup>31</sup> As estimated in the National Development Plan 2007-2009

|                     |                  |               |               | %      | %    |
|---------------------|------------------|---------------|---------------|--------|------|
| Road<br>Maintenance | <b>year 2004</b> |               |               |        |      |
|                     | 4,450,933,026    | 1,000,000,000 | 1,081,653,917 | 108.17 | 24.3 |
|                     | <b>year 2005</b> |               |               |        |      |
|                     | 3,911,081,200    | 1,000,000,000 | 1,013,157,451 | 101.32 | 25.9 |
|                     | <b>year 2006</b> |               |               |        |      |
|                     | 4,180,613,000    | 1,070,000,000 | 1,208,000,000 | 112.9  | 28.9 |

Currently the Fund for National and Regional Roads is dividing all cost positions as following: road investments related to the construction of new roads, designs & studies, supervision and pilot projects, maintenance, toll collection expenditures, loan payments and administrative running costs of the Fund. The overall estimation is that the usability of the national and regional roads is ranging from 10% for the less maintained roads to 60% for the better maintained roads (highways and part of the national roads). It is crucial to note that postponing the maintenance issue will increase the medium to long term fiscal repercussions. It has been found that delaying the maintenance of roads can lead to costs that are three times higher when repairs are finally done. In the short term, the poor roads are constraining mobility, contributing to high vehicle operating costs, increasing accidents and in general are hampering the much needed economic development of the country. The Study for Restructuring the Road Sector is in its inception phase, with particular emphasis on the introduction of competition for road maintenance. It is expected that the implementation of the measures proposed in the study will contribute towards greater efficiency in the road sector, as well as higher quality, stability and adequate funding, particularly concerning the opening of road maintenance to competitive tendering regimes. As an overarching rule, the financing should be in line with a balanced national budget, repayment capacity and based upon realistic growth expectations of the Macedonian economy.

For transport operators the infrastructure condition is not fully satisfactory but it is not an immediate threat for further development of the sector. There are several transport companies associations, IRU members, managing the TIR Carnet operations in cooperation with the Ministry of Transport and Communications and the Customs. The combined development of the two Corridors crossing the country is of high interest for this sector. It would be considered as a logistic asset as the north/south route (to Greece and to Germany) and the East West Route (to Albania and South Europe) are in interconnection in Skopje, creating a natural logistic node for international transport. There is a dynamic network of small sized private companies, growing with the transport demand, but with a limited array of services. There is an obvious need of larger external investment in the sector to reach the point where companies will be able to provide international (or regional) services.

The border crossing issue is depending mainly on the successful implementation of the modernization of customs regulations, improvement and operability of the cross border buildings, enhancement of the battle against smuggling, corruption and illegal human trade. The main issue arising in the near future is the border crossings new categorization in accordance with the national border crossing strategy and EU SCHENGEN regime.

Inter and multi-modality of the transport system is one of the objectives determined in the National Transport Strategy. The overall aim is to introduce a policy enabling the shift of freight and passengers from roads to railways which has the bonus of being environment friendly and influence the structural conditions of the roads.

The transport as a whole, and mostly, the road transport, has negative impact on the environment affecting the quality of the air in the populated areas, the global climate changes, the landscape and agricultural land (completion of big transport infrastructural projects) and by creating noise and waste. Finding acceptable environmental solutions to address the effects of traffic growth, undesirable modal splits and sustainable infrastructure construction is one of the greatest challenges. The key measures for solving the environmental problems, caused by transport activities, include ensuring the importance of environmental considerations in major transport infrastructure planning. Environmental Impact Assessments are carried out in the planning and implementation stages of all transport infrastructure projects including those included in this operational programme. The programme will contribute towards improving the environmental sustainability of transport by reduction the index of yearly fatalities and improved safety and security and by supporting project preparation for development of the railway infrastructure.

The transportation sector impacts on environment through the fragmentation of habitats, as well as through air, water and soil pollution and noise. The air pollutants are generated mainly by the vehicle traffic, and the same are emitted from the engine's exhausts. Motor vehicles are also the major sources of noise burden in the settlements. The highest levels of noise pollution are measured near the roads with intensive traffic in the settlements, and the transit roads near settlements. The extremely adverse age structure of the motor vehicles is the main reason for the air pollution and the high noise levels.

The transport is a major consumer of land. It has a significant impact on nature and biodiversity, through the construction activities, land conversion, land and habitat degradation, land and habitat fragmentation, resulting with indirect loss of flora and fauna species, etc. Concerning the land and habitat fragmentation, the present situation could be considered as better in comparison with developed EU countries, but the status is becoming worse.

The road transportation does not generate much water pollution directly, but there are several ways in which it affects the water quality—Improper disposal of used lubricating oil is a major source of contamination of surface and underground water.

Emissions of the transport sector are included in the energy sector within the greenhouse gas inventories (GHG), as a part of the Second national communication to the UN Framework Convention on climate change (which is currently under preparation). The share of the emissions from the transport sector in the total CO<sub>2</sub>-eq emissions for the period 1990-2002 is in range of 6.8%-9.6%. Due to its small share in the total emissions, transport sector is not attractive from CDM perspective. Within the 'National Strategy for Clean Development Mechanism for the first commitment period of the Kyoto Protocol 2008-2012' this sector is not identified as a priority one. However, projected growth of the transport sector will be analyzed within GHG abatement strategy of the Second national communication on climate change, and appropriate measures for GHG emission reduction in this sector will be proposed. Impact on biodiversity, not only from transport sector, is also assessed in the Second National communication on climate change.

Regarding institutional arrangements, the responsibilities of the main stakeholders in the road sector are not clearly and properly assigned. A good example of lack of coordination between all principal parties is collecting, recording and processing of data on condition of roads and structures. Both institutions, the Fund for National and Regional Roads and PE Makedonijapat are understaffed especially in view of future wider scope of responsibilities

which would be linked to the restructuring. PE Makedonijapat has a monopolistic position in the maintenance sector, with all consequences that are coming with lack of effectiveness and efficiency on every day working responsibilities especially on toll revenue collection and regular maintenance. The aim of the upcoming restructuring process is to create a consistent structure with clearly assigned responsibilities and skills for the Fund, PE Makedonijapat and their parent Ministry of Transportation and Communications. As for the railways sector, all indicators of performance of PE Macedonian Railways have declined over the years and its financial position has steadily deteriorated. The results are a poor quality of the service and a growing burden on the State budget. Yet the railways are essential for the national economy, more so as an important link for international freight and passenger traffic. The restructuring of PE Macedonian Railways organization and improvement of its financial viability is not only for the transport sector's efficiency but also for the macroeconomic benefit.

The presence of the two Trans National Axes (Corridors VIII and X) indicates the importance of the country and the region for transit traffic as well as for to and from EU and between the different South Eastern Europe entities. The central position of the Balkan Peninsula and the physical and geographical characteristics of the territory of the country enable intensive connections to neighbouring countries and regions, and participation in international workforce distribution with own capacities. Considering the connectivity of the country, it is obvious that some parts are not covered with rail traffic connections. Two important rail links to Bulgaria and Albania are missing. The "blind" rail branches to Kochani and Beljakovce are not linked with the neighbouring Bulgaria rail system and the built branch to Kichevo is not linked with Albanian railway network. Alternative links to the settlements are essential to solve connectivity problems. This is especially the case in the bigger cities where artificial transportation barriers are breaking the flows of goods and passengers.

The urgency of completing the Corridor X is required in order to enhance accessibility to regional and EU markets, by the elimination of existing bottlenecks and improvement of safety and economic efficiency of exchanges, to the benefit of the whole region. The smaller percentage of remaining sections for completion of the Corridor X is additional argument for setting this Corridor as a priority.

There is a progressive integration of the EU *acquis* in the transport sector. Strengthening transport planning policy and implementation in targeted sectors is a strategy to maximise the opportunities identified in the SWOT analysis below.

Following the analysis, the main problems identified in the transport sector are:

- Physical connections with all neighbouring states are not sufficiently well established by road and rail to meet current mobility aspirations
- Constraints accruing from a very limited railway infrastructure network
- Obsolete road and railway infrastructure and rolling stock fleets
- Inadequate funding available to fulfil all transport infrastructure project requirements
- Backlog in maintenance for road and rail infrastructure
- Cross border delays
- Unsatisfactory or aged vehicle fleet, especially for commercial operations
- Small sized road companies
- Limited quality and array of services in road operation

### 2.1.2. ENVIRONMENT SECTOR

The socioeconomic analysis of the environment sector is focused on those areas having currently the highest negative impact to the environment deterioration, where the Country is seriously deficient, and where the medium term expected investments, although costly, have great potential to improve the environmental conditions and contribute to a sustainable economy with the greatest impact on the population and nature protection.

The detailed analysis of the recent state of environment and strategies to improve the conditions in the midterm period has been developed in the Second National Environmental Action Plan, adopted in 2006. The NEAP provides general guidelines and directions in the area of environment in the forthcoming six year period (by 2011). In addition to setting up general priorities and goals in different sectors, the NEAP also envisages specific measures and actions that need to be implemented in order to achieve the main goals, such as the continuation of the process of approximation with the EU environmental policy, the management of an integrated policy as a unique manner of proper overcoming the challenges, the establishment of directions for environmentally sustainable approach, the enhancement of the extent of compliance with the obligations deriving from regional and global agreements and the opening of new perspectives and the involvement in the international systems for environment protection. One of the conclusions of the NEAP II is that there is the need for environmental investments in order to fulfil the requirements of the *acquis*, especially in the area of waste water treatment and solid waste management.

The National Development Plan for years 2007 – 2009, adopted in February 2007, refers that the most problematic areas of the environment have been wastewater treatment and solid waste management. To meet the environmental standards compliant with the EU environmental *acquis* is associated with huge investments in environmental infrastructure. The highest investments required to comply with the *acquis* are the investments in urban wastewater treatment facilities (230 million EUR) and municipal solid waste facilities (130 million EUR)<sup>32</sup>.

Following the above, the socio-economic analysis of the environment addresses particularly the situation in the sectors of wastewater and solid waste. The current analysis is prepared on the basis of the detailed survey of the wastewater and waste sector presented in Chapter 1.1 with regard to the available financial resources from the IPA for the period 2007-2009.

The development of the wastewater infrastructure lags behind the infrastructure of the European Union. Sewerage network covers 65% of the population, however only 12,5% is served by the wastewater treatment. The technical status of the infrastructure is in an unsatisfactory condition. The lack of regular maintenance and repair exacerbates on an obsolete sewerage network with numerous breakdowns and leakages. The existing WWTPs at the three natural lakes are almost 20 years in operation and their treatment technology is outdated in technical terms as well as inadequacy of the conditions. None of them are in compliance with the recent parameters on effluent as governed by the EC legislation (Urban Wastewater Treatment Directive 91/271/EEC), resulting in discharging insufficiently treated wastewater to the recipients.

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<sup>32</sup> “Economic, Financial and Administrative Requisites of Approximation to the European Union”, GOPA-Consultants, 2004 (financed by EU)

The cost effectiveness of operations is low and needs to be substantially improved<sup>33</sup>.

Most urban areas do not have any wastewater treatment facilities. Sewage water is discharged directly to the recipients without any treatment and it pollutes rivers. The quality of rivers is insufficient, due to their permanent pollution by households and industrial wastewater.

There are 65 agglomerations falling within the scope of the Wastewater treatment directive 91/217/EEC (agglomeration is a settlement or group of settlements, where the sewage is collected and centralised to one common WWTP). Thereof, 4 agglomerations are above 100 000 PE, 25 agglomerations with PE above 15 000 to 100 000, 7 agglomerations of 10 000 – 15 000 PE and 29 agglomeration of 2000-10000 PE. The far biggest agglomeration is the capital city of Skopje, which, including suburban municipalities, results to approx. 882 000 PE<sup>34</sup>.

At present the WWTP exists only in 4 agglomerations over 10 000 inhabitants (Ohrid (Vranista), Resen, Makedonski Brod and Dojran), Kumanovo is close to commissioning and will be the only agglomeration over 100 000 PE with wastewater treatment. The construction of a new WWTP for Gevgelija has started recently for a capacity of 20000 PE.

The pressure on urban infrastructure is most acute in the City of Skopje. The capital city has a population approaching 700,000 and is continuing to expand. This represents about one third of the total population of the country. The pressure that this population growth places upon the city's sewerage network is easily appreciated even in the absence of data: in recent years, any period of heavy rainfall in the Skopje area during the summer leads to the surcharging of the sewerage network and consequent flooding by sewage of the northern parts of the city. This in itself represents an unacceptable risk to public health, in addition to the obvious aesthetic considerations. The situation is exacerbated when the sewage dries out while remaining on the city's streets. This gives rise to the additional risk of infection from airborne pathogens, which in an area as densely populated such as Skopje could lead to localized epidemics. In addition to the unsatisfactory condition of the sewerage network in Skopje, there is no facility for wastewater treatment, and all sewage water is discharged directly to the river Vardar. The water quality in the downstream is classified as the lowest according to the water quality classification (class III-IV). No investment has been made in the sewerage system since independence. Consequently it is not only of insufficient capacity to deal with the load arising from a growing population but it is also in a poor state of repair. The public utility company (Vodovod i Kanalizacija), which is responsible for the water supply, sewerage and sewage disposal in Skopje, has not been able to draw upon any investment support for the upgrading of the sewerage network, nor has it been able to increase water tariffs sufficiently to finance such investment.

The situation in the solid waste management is not favourable as well. Although around 70% of the population receive regular municipal waste collection, waste disposal is contrary to environmental good practice. Almost all communal waste is disposed to landfills or dumpsites. Waste disposal practices do not comply with any technical and/or environmental standards. Most of the existing municipal dumpsites are to be closed since the site conditions do not allow their upgrading to EU conformity landfill standards within reasonable costs.

From all 55 municipal landfills in operation, only the landfill "Drisla" in Skopje is officially certified as a landfill for waste. The capacity of Drisla is 16,000,000 tons, and around 6% of

<sup>33</sup> Based upon the assumptions, that processes are broadly similar those in other parts of the former Yugoslav Republics and feasibility studies conducted by the Danube Investment Support Facility

<sup>34</sup> Wastewater, Water Quality and Solid Waste Management of Macedonia, 1999 Kruger

its design capacity had been utilized. However, management of the landfill, in terms of the environment protection, is inadequate. The plans for application of non-permeable foundation, in order to prevent contamination of ground water have not been implemented yet, the constructed system for gas capture has not been put into operation and no specific construction measures have been implemented in order to prevent potential leakage of liquid waste into upper and ground aquifers.

Equipment for waste handling in landfills is missing or is outdated and of insufficient parameters. Handling is therefore ineffective and costly.

Apart of the disposal infrastructure, the collection and transport infrastructure and equipment is also not adequate. There is a shortage of waste containers in streets, which causes long walking distances from home to dump garbage. There are containers for mixed waste only; no containers for separate collection are in place. There is a lack of garbage wagons collecting the waste, existing ones are old and worn out which results in insufficient waste collection and it is not as frequent as needed. The consequences are that garbage is heaped around container stands or is dumped slovenly anywhere at the streets and pollutes the environment.

In case of packaging waste, an integrated system has not yet been organised for its collection and recycling and the national legislation transposing the Packaging directive (94/62/EC) has not yet been fully prepared and adopted. There is almost no infrastructure for separation and recycling of such waste. Almost all packaging waste is mixed with communal waste and is disposed to landfills. No containers for separate collection of paper, plastics (mainly PET bottles) and glass exist. Some paper and PET bottles are informally collected by poor people directly from containers and sold to private companies dealing with PET recycling.

In regard of green waste, there are no facilities for composting, all waste is mixed with communal waste and disposed in landfills.

The basic strategic document on national level - National Waste Management Strategy providing the framework for the development of the waste management does not exist yet. The Waste management strategy shall be prepared in 2007; service procurement procedures to select an external contractor are now in place. However, there is the National Waste Management Plan (NWMP), developed under the CARDS 2001 assistance in 2005. According to the plan the first step is to improve the problematic and inadequate solid waste management situation and in the long term, to fulfil the requirements of the related EU Directives to solid waste management.

According to the plan, the development of the waste management has been based on the assumption, that the minimum viable size of such system should be around 100,000 population. It is assumed that it would be optimal to split the territory to 7 regional waste management systems, where waste is collected and disposed to landfill sites meeting EU standards.

In the last two years three feasibility studies for regional systems have been developed:

- Integrated regional waste management system in North East (Feasibility study developed in the scope of the CARDS 2001 programme)
- Integrated regional waste management system in Central East (Feasibility study developed in the scope of the CARDS 2001 programme, its review and update to prepare IPA

application scheduled for 2007, funding and installation of the first stage of the regional system to be implemented by 2009)

- Integrated regional waste management system for South West (Feasibility study completed financed by KfW)

None of the projects have yet been implemented due to difficulties regarding project implementation.

Waste separation and recycling is not included in those studies. As it is one of the priorities and preconditions of the IPA support, the projects need to be developed in that way to be eligible for the assistance.

### **Operators**

The environmental infrastructure in question is operated by the public utilities. The public companies are funded and owned by the municipalities or in some cases, an association of municipalities. Many of the companies are responsible for all public services, and water, wastewater and solid waste management is only one of the series of activities provided in the public interest. The operation of the environmental infrastructure requires professional management and planning for the effective operation, maintenance, reproduction and future investments along with cash flow management to meet financial needs. However, many of public utilities suffer from a lack of sound management, do not pay adequate attention to development activities and only undertake essential repairs as demanded to keep the systems functioning.

In some cases, inappropriate management led to the interrupting of the WWTP operation, due to high operation costs and lack of revenues for cost recovery. Because no restrictions in regards of untreated wastewater discharge exist at present, it was easier to suspend the operation instead of undertaking the necessary actions to maintain a sustainable and viable operation, even if the infrastructure was built with the donor assistance.

### **Tariff system**

Paying for the environmental services, in particular for water and solid waste is not satisfactory at present. The existing tariff system is an unreliable source of revenue, the tariffs are low when compared to real needs. This happens mainly in water supply and sanitation, where the charges do not cover even direct operational costs. The charges for water, sanitation and waste are set by the municipal authorities, and the billing and collection are performed by the relevant utilities. The legislation governing the determination of tariffs exists, however, the provisions of the control mechanisms to review the tariffs set by individual operations, whether they reflect real costs, does not exist. There is no independent authority assigned by the government for regulating and monitoring the tariff system. The present situation therefore enables changing of tariffs not based on need but often on the decision of the local authorities.

Paying for the environmental services should respect the polluter pays principle. However, it is not fully respected now. The charges for wastewater are set on the volume of water consumption, which is good, in several areas the charges are set as flat rate, which is not in compliance with the principle. The tariffs for households and businesses are usually different, being much higher for businesses, which cross subsidises the charges for households. Concerning the solid waste, the determination of waste charges is usually set on the floor area of houses or, in case of businesses on the floor area of commercial space, ignoring the real



volume of waste generated. If the public utility deals with all public activities, the revenues from all activities are consolidated and reallocated to the activities at need.

Notwithstanding the low tariffs, the revenues collection rate is low and reaches in average of about 50% of the total invoiced revenues only. There is no effective mechanism to force customers to pay for such services. Public awareness on environmental issues is low, people do not feel any responsibility for the deterioration of the environment caused by their activity and are not willing to pay neither for environmental protection nor for the preservation of nature. On the other hand, due to the social situation in the country with a high level of unemployment, there are many households with very low income and the payments for the public services such as water supply; sewage or waste collection is a low priority for them.

The insufficiency of the system of tariffs and low rate of revenue collection along with the weak cash flow management results to a lack of available means for operation and future development of the infrastructure. The lack of funds and management capacities results in poor service, neglected maintenance, repair and replacement of the elderly equipment, and no possibility for development activities.

### **Institutional framework**

The Ministry of the Environment is the primary authority responsible for the environmental issues. However, in regard of the water management, the institutional framework is not efficient, and is fragmented to several authorities. No integrated water management has been established so far. At present, the MoAFW is responsible for water resources, MoTC is responsible for the construction of the water supply and sewerage network infrastructure (WWTPs not included), and however the MoEPP has no competences so far in regard of sound water management and applying the principles of the protection and rational use of water. The new draft of the Law on Waters which is being prepared now, transposing the EU water directives, specifies the rules and competences of which authority undertake a responsibility over water.

In the late April, the Government has approved the new draft of the Law on Waters, which designates the MoEPP as the responsible body for the water sector. The draft law is expected to be passed by the parliament by the end of 2007.

Following the analyses, the following problems and needs of the environmental sector has been identified:

- Deteriorating environment conditions, increased health risks, deteriorating living conditions and quality of life
- insufficient wastewater collection and treatment infrastructure, wastewater is discharged untreated directly to recipients
- only 12,5% of the population is connected to a WWTP
- facilities for sound solid waste disposal do not exist, waste is disposed in an inadequate way
- almost no conditions for the segregation and recycling of the solid waste
- regular waste collection covers only 70% of the population, mainly rural areas practically without any collection service
- tariff systems in not effective, charges do not achieve cost-recovery, polluter pays principle is not fully respected, willingness to pay is low, revenue collection is only 50%
- low level of public awareness, people do not feel the personal responsibility for the environmental protection,

- public utilities are inefficient in their operation, a lot of them manages the whole the public activities under a single organisation, development of the infrastructure is limited
- an effective and consistent institutional framework for the water management has not yet been established

Implementation of the Operational Programme Regional Development should contribute to the improvement of the existing unfavorable situation in the environment. The program shall introduce the sound solid waste management and wastewater treatment practices which are in compliance with the relevant environmental norms and acquis of the EU. Improvement of the environmental infrastructure should be planned based on integrated and strategic approaches, in particular in line with the river basin approach and waste management strategy. The introduction of the European union principles on environmental protection by implementation of the OPRD will contribute to the mitigation of the negative impact of humans on the natural environment, in particular by reduction of pollutants contaminating surface and underground water and soil by uncontrolled or inadequate solid waste a wastewater disposal and treatment, which exists in the most of the territory in the present and it will contribute to establish the basis of the sustainable development of the country.

The development of the environmental infrastructure along with respecting the principles of sustainable development should contribute to the energy recovery as well. Waste treatment markedly reduces the volume of pollutants and mitigates the environment deterioration, however on the other hand, the treatment processes consume energy and methane is the by-product of the treatment, what might have negative impact on the climate changes. New available technologies being able to utilise generated biogas for energy recovery shall be considered in new projects. The methane can be used as a fuel in combined heat and power (CHP) units installed in the treatment facilities, producing heat and energy utilised to recover the treatment needs.

Methane is generated during the anaerobic digestion of sewage sludge in wastewater treatment process or by biological waste digestion in the landfills. When performed effectively within a well-balanced anaerobic digester, methane recovery can be highly efficient and may often pay back the cost of the capital equipment involved in a matter of just a few years.

Wastewater treatment plants are heavy users of energy, and the use of methane recovery within anaerobic digesters can make the plant a net producer of energy rather than a consumer. Methane recovery and energy generation from anaerobic digestion should be considered as an environmentally-friendly option for reducing solid wastes, improving wastewater treatment, and reducing energy costs with positive surplus for the environment.

## **2.2 SWOT ANALYSIS**

In setting out the medium-term needs and objectives of the Operational programme for regional development, the socio-economic analyses have been supported by the SWOT analyses to analyse the transport and environment sector in details, to better justify and address the objectives of the Operational program and to set out the strategy, how to achieve the objectives.

Table 15 – SWOT analysis of the Transport Sector

| Strengths   | Weaknesses   |
|---|--|
| <ul style="list-style-type: none"> <li>• Excellent geographic location along main Balkan international routes</li> <li>• Dense and extensive road network connecting the main populated areas</li> <li>• Acceptable condition of main road network, with already existing high speed segments</li> <li>• Developed education system related to transport and civil engineering qualifications</li> <li>• Developing road transport services</li> <li>• Modern legal framework in course of implementation for all modes of transport, progressive integration of the EU acquis in the transport sector</li> <li>• Strong pipeline of transport sector projects prepared for implementation</li> <li>• Active participation in sectoral regional cooperation activities (including the South East Europe Transport Observatory-SEETO) to support project development and a more regional approach for transport infrastructure development</li> </ul>  | <ul style="list-style-type: none"> <li>• Unsatisfactory road condition in local network</li> <li>• Unsatisfactory level of financing of road maintenance</li> <li>• Limited connections (rail, road) with neighbouring states</li> <li>• Limited railway network, limited capacity to support national PSO in the rail sector.</li> <li>• Backlog in maintenance for rail infrastructure</li> <li>• Cross border delays</li> <li>• Unsatisfactory or aged individual vehicle fleet.</li> <li>• Small sized road companies</li> <li>• Limited quality and array of services in road operations</li> <li>• Weakness of international investment in distribution sector and transport sector</li> <li>• Lack of the institutional and public finance capacity to implement effectively the approximation with EU legislation</li> </ul> |
| Opportunities   | Threats  |
| <ul style="list-style-type: none"> <li>• Programmed access to EU pre-accession instrument for the development of infrastructure</li> <li>• Coordinated regional IFI policy for transport project alignment favourable to Macedonian projects</li> <li>• Development of transport service for international passenger mobility</li> <li>• Development of logistics activity supporting the growing interior market</li> <li>• Development of transport demand for intercity connection, potentiality of development of some public transport service network</li> <li>• Development of transport service for international passenger</li> <li>• Support of the transport services for the development of trade relations with the EU, especially in long distance rail transport mobility</li> <li>• Increased transport demand arising from improving performance and growth in the manufacturing, tourism, agriculture and industrial sectors</li> <li>• EU recognises that the Trans-European Corridors VIII and X are trans-national axes and multimodal directions</li> </ul> | <ul style="list-style-type: none"> <li>• International financial support is delayed or not at the expected level; project implementation is delayed</li> <li>• External trade is hampered by transport bottlenecks</li> <li>• Alignment with the acquis in out of reach of transport companies in road sector;</li> <li>• The EU legal framework is formally adopted but not implemented in the field</li> <li>• Alternative transit routes are preferred by shippers</li> <li>• Interior economic demand weakness</li> <li>• Delays in accreditation of structures and in preparation and implementation of projects</li> <li>• Strict rules for implementation of EU funded programmes and disbursing of funds (N+3)</li> </ul>  |

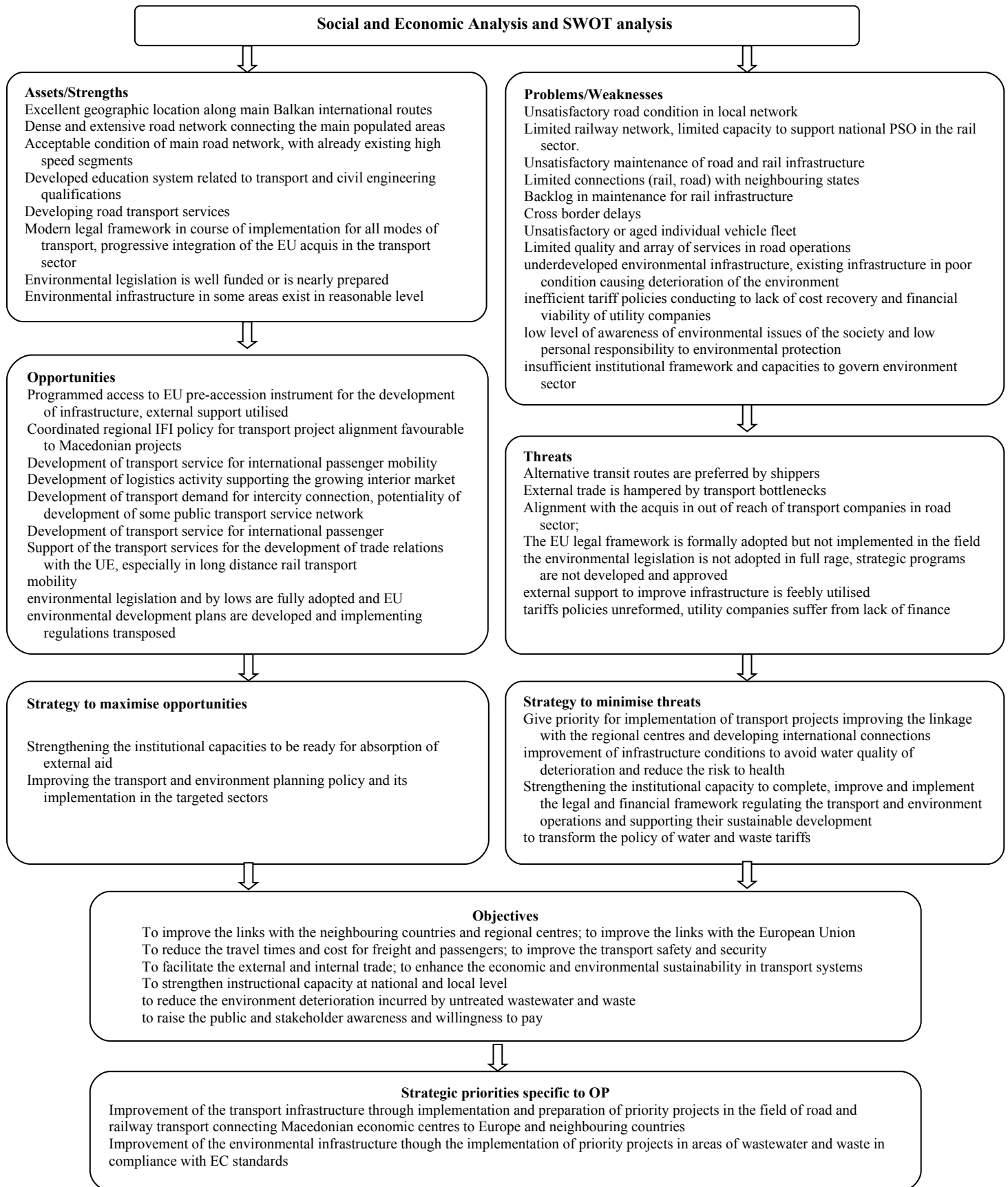
Table 16 – SWOT Analysis of the Environment Sector

| Strengths  | Weaknesses  |
|--|---|
| <ul style="list-style-type: none"> <li>• The top-tier of environmental legislation is well founded (as a consequence of the technical assistance for the development of policy and policy instruments).</li> <li>• Decentralisation since 1996 means that the management of the environmental infrastructure is on the regional level, provided by the public utilities established by the municipalities</li> <li>• The connection rates to water supply and sewerage networks in urban areas are reasonable, for the short- to medium-term.</li> <li>• Operational waste water treatment plants exist serving six urban areas.</li> <li>• The opening up of the waste sector to private operators offers the potential for efficiencies of service provision in response to free market competition incentives</li> <li>• There is already a degree of voluntary recycling of waste, suggesting that the public would be receptive to new initiatives to encourage recycling.</li> <li>• Regional cooperation towards the establishment of integrated regional waste management systems is already beginning.</li> </ul> | <ul style="list-style-type: none"> <li>• Insufficient investments in environmental infrastructure from domestic sources</li> <li>• The lack of an overarching strategy for investment in environmental infrastructure</li> <li>• The lack of the institutional and public finance capacity to implement effectively the approximation with EU legislation</li> <li>• Lack of experience in preparation and implementation of large environment infrastructure projects</li> <li>• The policy documents and feasibility studies that exist need to be revised and/or strengthened before they can be considered adequate for proceeding with projects; in consequence there is a deficit of adequately prepared projects.</li> <li>• The existing municipal water infrastructure is in a poor state of repair; existing waste management infrastructure does not comply with EU requirements; solving the problem requires both investment support and stable commitment to operational revenue generation for the purposes of cost recovery.</li> <li>• The tariff system does not fully respect the polluter pays principle;</li> <li>• Tariff policies and the ability of utilities to achieve cost-recovery are not resilient to political interference; consequently there is no assurance that revenue generation would support adequate operation and maintenance of sewerage and sewage treatment infrastructure.</li> <li>• Collection rates for water service charges are poor; while mechanisms exist that could improve the situation, these are probably not well suited in the short-term to the way in which Macedonian households manage their cash flows.</li> <li>• Lack of information on affordability or willingness to pay, in relation to water and waste service tariffs.</li> <li>• There is either little scope for improvements of efficiency or resistance to it. Consequently it is not clear how a utility could implement a Financial and Operational Performance Improvement Programme (FOPIP), even if such a programme were to be agreed.</li> <li>• The pace of economic growth appears insufficient in the short-term to service municipal infrastructure investment requirements, either directly or through the repayment of loans.</li> <li>• The tendency of people from rural areas to move into cities in pursuit of work is placing increasing pressure upon municipal water infrastructure, particularly in Skopje.</li> <li>• The quality of both surface waters and ground waters is being detrimentally affected by the discharge of untreated or inadequately treated sewage.</li> <li>• Poor data on river, ground water and effluent quality in manageable format for different users or purposes.</li> <li>• There is generally a low level of awareness of environmental issues and personal responsibility in regard to these.</li> <li>• Consultation procedures and public participation in environmental policy development and decision making exist at only a very rudimentary level and are certainly insufficient to meet the requirements of</li> </ul> |

|  |   |
|--|---|
|  | European Community consultative procedures. |
|--|---|

| Opportunities  | Threats  |
|--|--|
| <ul style="list-style-type: none"> <li>• Candidate status provides potential access to development support from the European Community and related institutions such as the European Investment Bank.</li> <li>• The Country also has access to bilateral and multilateral support</li> <li>• Develop and maintain the institutional capacity to secure financial support from the sources potentially available, both now and in the future.</li> <li>• Secure project preparation support by facilitating and supporting agreements between utility companies, development banks such as the EBRD and the EIB and the Western Balkans Investment Support Facility.</li> <li>• Conclude negotiations with bilateral donors and integrate such support into the national operational programmes.</li> <li>• Ensure coherent development of policy packages by establishing top-down co-ordination of all technical assistance and internal policy implementation measures.</li> <li>• Ensure wastewater treatment in compliance with the Urban Wastewater Treatment Directive and the principles of the Water Framework Directive.</li> <li>• Ensure waste management in compliance with European Community requirements.</li> <li>• Complete a coherent framework of policies and policy instruments.</li> <li>• Implement and effectively enforce the laws on regulating the financing of LSGs.</li> </ul> | <ul style="list-style-type: none"> <li>• Non-enforcement of the environmental acquis in whole or in part.</li> <li>• External sources of potential investment support fail to materialise due to a perceived inability on the part of the country to justify and disburse effectively the funds that could be made available</li> <li>• Municipal water and waste infrastructure deteriorates; investment support ineffective in the long-term.</li> <li>• The levels of service provided by utility companies deteriorate, placing public health at increased risk.</li> <li>• The Country is dependent upon external financial assistance for the implementation of its own policy in the environment sector.</li> <li>• Potential unwillingness on the part of development banks to co-finance infrastructure investments, arising from an internal inability to establish and maintain regulatory tariff structures for water, wastewater and waste management at a level consistent with cost-recovery and debt servicing.</li> <li>• Municipal infrastructure in cities is unable to keep up with the growth in urban populations. External factors affecting population movements in a way that is not properly taken into account in project design.</li> <li>• Surface waters and ground waters never achieve adequate status as determined by compliance with European Community requirements.</li> <li>• The Country is unable to support EU-style river basin management.</li> <li>• Delays in accreditation of structures and in preparation and implementation of projects</li> <li>• Strict rules for implementation of EU funded programmes and disbursing of funds (N+3)</li> </ul> |

Illustration 7 – Cascade from the socio-economic analysis to the deduction of the strategic priorities



## 2.3 OBJECTIVES OF THE OPERATIONAL PROGRAMME REGIONAL DEVELOPMENT

The analysis of the transport and environmental sectors presented above indicates the insufficient condition of infrastructure and its development with necessity of actions, via which it would be possible to achieve an improvement of the current inappropriate situation. Following the analysis, the objectives of the Operational program regional development for the programming period 2007 – 2009 have been identified.

**The strategic objective of the OP** is to support the conditions for sustainable development through the improvement of transport and environment infrastructure. In particular, the objective is focused on:

- Improved access and safety of connections with neighbouring countries by upgrading and modernisation of the transport infrastructure along the Trans National Axes (Corridors VIII and X).
- To support regional development by providing the environmental conditions necessary to ensure quality of life and economic development, by achieving compliance with applicable legislation through infrastructure investments.

**The specific objectives of the OP** are:

- Upgrading and modernisation of the transport infrastructure along the Corridors connecting national economic centres with Europe and the neighbouring countries
- Promotion of international and transit movements of people and goods with the EU and its regional neighbours by modernisation and development of the Corridors and the regional core network
- Promotion of sustainable development especially through minimizing the adverse effects of transport on the environment and through transport safety improvement
- Reduction of untreated wastewater discharged to the recipients in the larger agglomerations (over 10 000 PE) where no treatment facilities exist or are in insufficient condition through the improvement of the wastewater collection and treatment infrastructure to be in compliance with the water related *acquis*
- Reduction of environment deterioration incurred by inappropriate waste disposal through the introduction of solid waste management infrastructure to be in compliance with the waste related *acquis*, with emphasis upon increased waste separation, recycling and composting
- Increase in the number of population served by the wastewater and waste collection and disposal facilities which are in compliance with the environmental *acquis*

Due to a limited IPA allocation for the initial programming period and lack of mature environmental projects, IPA funding in the field of environment for this period will be as a priority mainly dedicated to technical assistance and preparation of a list of projects in the waste and wastewater sectors, mature for implementing within next programming periods.

## 2.4 STRATEGIC PRIORITIES

Definition of the strategic priorities creates a framework for the OPRD to ensure achieving the specific objectives using the assigned IPA financial resources for the given period. The priorities are derived from the analyses and the set of objectives, contributing to achieve the objectives and priorities of the other strategic documents as National Development Plan, NEAP II, Five Year Multi-annual Rolling Plan of SEETO, SCF, MIPD .

For the initial period of 2007-2009 the following three priorities have been defined in the framework of the Operational Program Regional Development:

Priority 1: Corridor X Motorway Completion

Priority 2: Upgrading and Modernization of Transport Infrastructure

Priority 3: Improvement of the Environmental Infrastructure

This Operational Program is only one of the instruments for implementation of the national policy for development of the country and particularly of the national transport and environmental policy. Objectives and priorities of the national policy shall be supplemented also by other means, other financial resources, respectively, in accordance with the national sectoral and regional programs and plans.

The National Development Plan as well as the commitments undertaken for the country's accession to the EU directly or indirectly define the development of the environmental infrastructure as a condition for improvement of the quality of the environment. Development of the transport infrastructure is defined as key condition for enhancing of the international competitiveness, transport safety and limiting of the adverse effects of traffic on the environment. One of the specific objectives of the NDP related to the environment is to develop new and improve existing physical infrastructure, particularly those related to transport, energy, ICT, environment and irrigation, in order to support economic growth and improve the overall competitiveness of the country.

The NEAP II is the strategic document for the environment sector, setting up general priorities and goals. One of the conclusions of the NEAP II is that there is a need for environmental investments in order to fulfil the requirements of the *acquis*, especially in the area of waste water treatment and solid waste management. In those fields, it defines the following objectives:

Water management – Objective O1: Integrated water management based on the principles of sustainable development with the introduction of river basin management. Second measure M2 proposed for achieving the objective is the Construction of the priority wastewater treatment plants and other infrastructure.

Waste management Objective O1: Establishment of an integrated and financially self-sustainable waste management system. The third measure M3 proposed for achieving the objective is the Improvement of waste management infrastructure.

The five-year Multi-annual Rolling Plan of SEETO 2007-2011 was adopted as a regional strategy for development of the core regional transport network in South East Europe. This plan identifies significant number of regional important reforms and measures for management in the transport sector. The list of priorities covers the whole territory of the participating countries and includes all transport modes. Five projects have been included in the priority list for implementation in the period that encompasses the first multi-annual plan



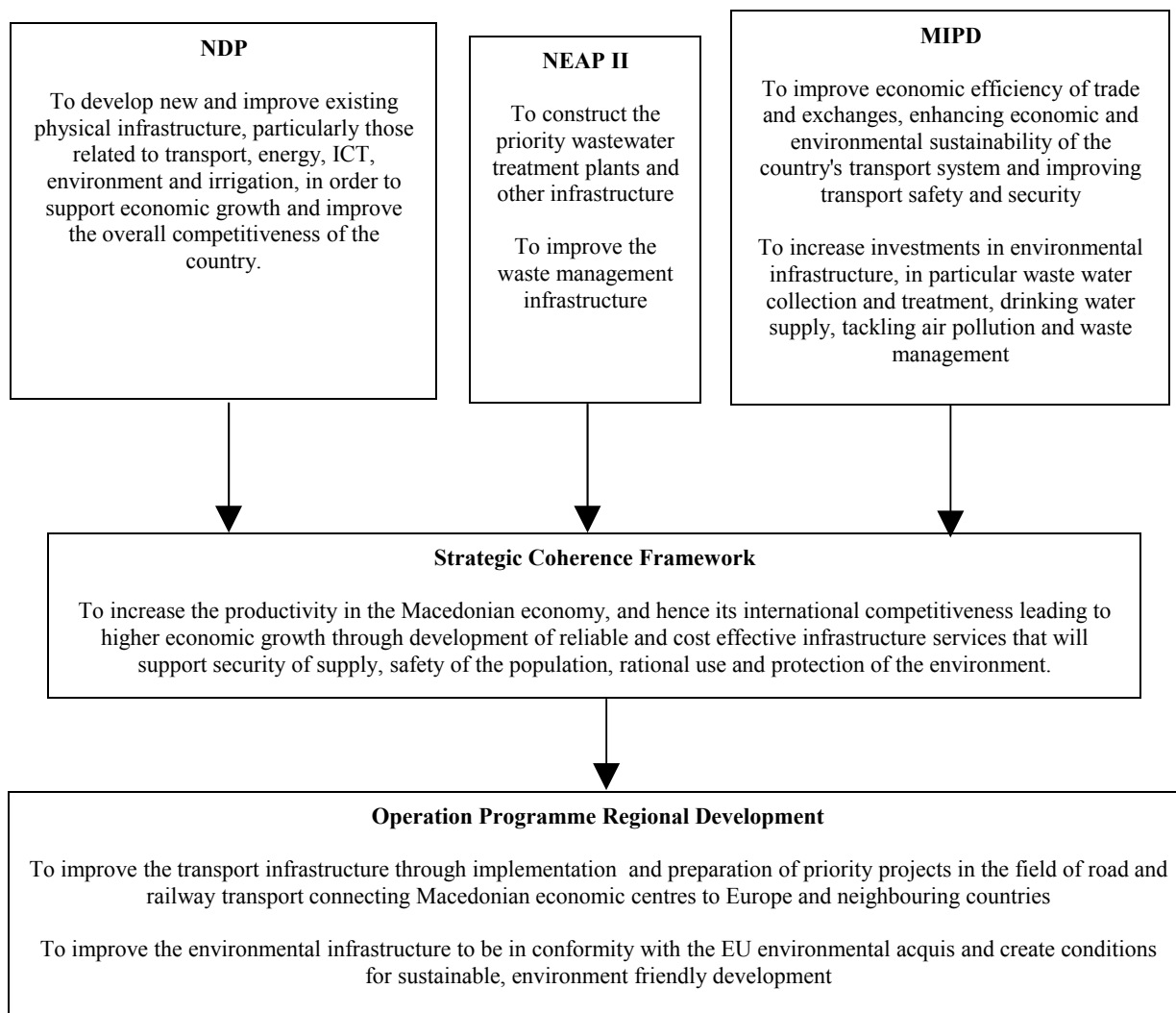
along with technical documentation for all of them. On the Corridor X there is one priority road infrastructure project and two priority rail infrastructure projects. On the Corridor VIII there are two priority road infrastructure projects.

The Multi-annual Indicative Planning Document sets out the priorities for the IPA program for the initial programming period 2007-2009 for the all IPA components. In terms of component III, the priorities are (i) to improve economic efficiency of trade and exchanges, enhancing economic and environmental sustainability of the country's transport system and improving transport safety and security; (ii) to increase investments in environmental infrastructure, in particular waste water collection and treatment, drinking water supply, tackling air pollution and waste management.

The Strategic Coherence Framework, covering components III and IV of the IPA programmes for the period 2007-2013 defines the priority areas for interventions. The objective of the SCF for component III is to increase the productivity in the Macedonian economy, and hence its international competitiveness leading to higher economic growth through development of reliable and cost effective infrastructure services that will support security of supply, safety of the population, rational use and protection of the environment.

The coherence between the strategies on the national level and Operational programme regional development is demonstrated in the schematic thereinafter.

Illustration 8 – Cascade of the strategic priorities of the OPRD coherent with NDP, NEAP II, MIPD and SCF



The strategic priorities of the OP will be implemented through the measures specified for each priority. The programme strategy is described in the next chapter.

To achieve the objective of the operational program in the transport sector, three measures have been defined to implement the actions contributing to fulfil specified objectives:

1. Upgrading the remaining link along the Corridor X to the level of motorway
2. Improving the Rail Infrastructure along the South East Europe Core Regional Network
3. Improving the Road Infrastructure along the South East Europe Core Regional Network

Analogous to transport, the measures for environment priority axis have been identified:

1. Establishing wastewater collection and treatment infrastructure meeting the EC requirements
2. Establishing of an integrated and financially self-sustainable waste management system.

It is important to say, that the implementation of the environment priority axis depends on the assumptions, that objectives related to the tariff system, final beneficiaries and national authorities will be largely in major fulfilled prior the implementation of the Operational programme. These issues might be considered as preconditions for successful implementation and fulfilment of the OP objectives. There are the main assumptions as:

- Adoption of law on waters
- clear competences on water sector with no overlapping
- management of public utilities is strengthened
- sound financial conditions of public utilities
- tariff system transformed
- EIA process fully applied

In order to achieve preconditions it is foreseen that according to NPAA the adoption of the Law on Waters is planed by the end of 2007 which in the same time define clear division of competences in the water sector. The transition period foreseen in the draft Law on Waters concerning existing overlapping between the institutions is latest by the end of 2009.

Issues regarding the management of public utilities, their strengthening as well as sound financial condition and transformation of tariff systems will be addressed in the Environmental Investment strategy, planned to be developed by the third quarter of 2008. The Strategy will provide objectives, measures and activities, as well as time plan for their implementation. During the process of preparation of the Strategy the relevant stakeholders, particularly public utilities, municipalities and Ministry of Finance representatives will be consulted and involved in the planning activities. Under this component, each planned investment will be preceded by the development of technical documentation which will include, apart from preliminary solutions and feasibility studies, socio-economic studies with the relevant estimates of socio-economic implications. Cost-benefit analyses and affordability analyses of the service price and its prior calculation based on justification of defined levels will be carried out as well, in order to provide future sustainability and proper operation of the environmental infrastructure.

The Law on Environment and relevant sub-legislation acts are prescribing in details EIA process. The process of application of EIA procedures has initially started and it is expected

that establishment of devoted Division for EIA in Administration for Environment will greatly contribute to application of EIA process.

All projects financed under the RDOP must fully respect compliance with sustainable development principles and meet relevant environmental norms, in particular directives on EIA, Habitats and Birds (in order to avoid negative impacts on potential Natura 2000 sites) and the relevant environmental *acquis*. Investments in the environment sector will be planned based on the integrated and strategic approaches, in particular in line with the river basin approach and waste management planning. The projects to be financed must be appraised case by case in order to be coherent with the relevant obligations of the environmental *acquis*.

### 3. PROGRAMME STRATEGY

#### 3.1 PRIORITY AXES AND MEASURES

##### 3.1.1. PRIORITY AXIS 1 -CORRIDOR X MOTORWAY COMPLETION

###### **Priority Axis Aim:**

The purpose of the priority axis is to implement the strategic objective for a better cohesion with the EU member states and regional neighbours by completion of the Trans National Axis (Corridor X).

For the present programming period the priority will be given to the road sector, by completion of the missing motorway section along the Corridor X.

The expected result of such a strategic priority is an improved attractiveness, safety and quality of service of Macedonian transport system (passenger and freight traffic), and better transport connection between the main cities and to the main destination of the neighbouring countries.

###### **Specific objectives:**

- To facilitate international and transit movements of people and goods with the EU and its regional neighbours by completion of the national components of the Corridor X to the level of motorway
- To facilitate the effective movement of persons and goods that supports improved living standards and socio-economic environment in the regions through completion of the national components of the Corridor X
- To promote sustainable development especially through minimizing the adverse effects of transport on the environment and through improving transport safety

###### **Rationale:**

Road infrastructure has great importance for economic growth, for labour force mobility and also for competitiveness within international distribution of transport operations. It is one of the key factors that considerably affects economic development and spatial structure of the country (regions). The regional core transport network is considered to be one of the most important policies for bringing long term peace, stability and economic prosperity to South-East Europe.

The transport priority axis will focus on the continuation of the Development of the South East Europe Core Regional Transport Network. This is in line with the political priorities set out in the European Partnership and the MoU signed in June 2004 between the representatives of the countries and administrative entities of the South East Europe and the Commission. It is also consistent with the relatively advanced stage of project preparation. The Trans National Axes (Corridors VIII and X) are of a major importance for the country since their development will ensure better service of its domestic and international traffic and will enhance trade, economic development and regional cohesion in Europe. Corridor X is the first priority for the Government, proved by the fact that substantial progress has been made during the last years, while its completion is anticipated in the forthcoming years.

The main part of road Corridor X linking Salzburg and Thessaloniki through Ljubljana, Zagreb, Belgrade and Skopje is 1,451.4 km long and consists of multilane motorways at a percentage of 80% of its length. The percentage of the multilane motorways is foreseen to reach 90% of the Axis by 2008, with construction of all the Slovenian and Croatian sections to full motorway profile. The remaining sections of the main part of Corridor X that need upgrading are the Leskovac (Grabovnica) in Serbia and Tabanovce-Kumanovo and Demir Kapija-Smokvica in Republic of Macedonia. Recently, the negotiations with the World Bank ended up with an agreement for the financing of Tabanovce-Kumanovo motorway. Furthermore, the construction of the Leskovac-Presevo motorway is foreseen to be completed by 2012 with Greek financial assistance as well as the construction of the Belgrade bypass. Hence, according to the above-mentioned scheduled projects, after five years the only remaining non-motorway section along Corridor X would be Demir Kapija-Udovo-Smokvica.

The regional priorities are matching also the needs identified in the economic and SWOT analysis of the transport sector at national level.

Following the analysis the national and regional transport delivery suffered because of various weaknesses:

- Limited connections (rail, road) with neighbouring states
- Unsatisfactory road condition in local network
- Cross border delays
- Inadequate funding available to fulfil all transport infrastructure project requirements

**Axis Description:**

The primary activity is to construct the remaining link of road infrastructure along the Corridor X to the level of motorway.

**Targeting:**

The priority is targeted on the road sector. The target commercial beneficiaries will include the importers and exporters of goods and products, including agricultural products, as well as those involved in internal trade movements and also those engaged in goods transit across South Eastern Europe. In addition, modern highways have high safety design standards that create benefits for all road users and contribute towards improvements in the safety standards and reduction of accidents, injuries and fatalities.

**Measures:**

The priority axis comprises one measure which contributes to fulfilment of the priority.

**Measure 1.1: Upgrading remaining link along the Corridor X to the level of motorway**

**Delivery:**

Delivery principles include support of investments to construct/upgrade physical infrastructure. The implementation of the measure requires the use of specialist construction techniques. This may include highway, yards, tunnels, bridges, embankments and cuttings across various terrains. The works will be managed through the appointment of an expert Supervisory Engineer and implemented by contractors.

Both the Supervisory Engineer and the contractors will be selected through international competitive tender in accordance with the rules and the procedures applicable to EU external assistance.

### Tables and indicators:

The table below outlines the priority's core indicators

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Total public expenditure</b> | <b>60 912 000 EUR</b> |
| <b>EU support</b>               | <b>27 410 400 EUR</b> |
| <b>Intervention rate</b>        | <b>45%</b>            |

| <b>Output</b>                                    | <b>Base value</b> | <b>Target</b>   | <b>Definition and assumptions</b>  |
|--|-------------------|---|--|
| Motorway sections Constructed along the Corridor | 131,7 km<br>77%   | 172 km<br>100%<br>Out of which new Motorways sections with IPA funding<br>28,05 km (+16%) | Percentage of motorway sections along the itinerary of the corridor X crossing the country |

| <b>Result</b>                       | <b>Base value</b> | <b>Target</b>                  | <b>Definition and assumptions</b>  |
|-------------------------------------|-------------------|--------------------------------|--|
| Hours of work saved for the economy | 0                 | 718 000 hours of work per year | This benefit will be realized by the decrease of travel times along the corridor for people using their vehicle for business purpose (transport companies, individuals in business trip) |

#### **3.1.1.1 Measure 1.1 – Upgrading Remaining Link Along the Corridor X to the Level of Motorway**

##### **Specific objectives:**

- To construct the remaining highway link on the Corridor X to the level of motorway
- To eliminate dangers and delays that currently occur in this sub-standard stretch.
- To reduce accidents and ensure safer travelling environment
- To limit the harmful impact of road traffic on the environmental to an optimal level
- To increase the capacity of the connections with neighbouring countries along the Corridor X

##### **Rationale:**

The Corridor X is the most important element of the core transport network, linking SEE countries together, from Turkey to Austria. The E-75 is mostly four lane tolled motorway. A high proportion (25%) of it is regional or international. The completion of the Corridor X would enhance the possibilities of increased traffic by linking the central Europe with the port of Thessaloniki.

This road axis is classified as part of the main and most important corridor of the national road network of the country, while at the same time it constitutes a section of the Corridor X. The measure refers to the significant missing link of the Corridor X. Upgrading of the remaining link will accrue benefits from vehicle operating costs reduction, benefits from time savings and accidents reduction.

Concerning direct employment impacts, it is expected that the realisation of the measure would result around to 3700 jobs during the construction period and around to 45 jobs for the annual maintenance and operation of the motorway. Indirect employment is expected due to the increase of labour force employment at enterprises providing material and equipment during the construction and operation/maintenance of the project. Additional jobs are also expected with the development of motorway service areas along the entire Corridor X.

### **Description:**

Concerning the construction of road infrastructure along Corridor X, of the 172 km long Corridor X passing through the Country in the North – South direction, 70.1 % has been already constructed to modern highway standards with the remaining sections accounting for 29.9 % of the total being ready for construction.

1. **Section Tabanovce – Kumanovo** is 8,4 km out of which only 1,1 km had been constructed in 1994 before the border crossing at Tabanovce. 7,4 km is remaining to be constructed, for which a complete investment technical documentation has been prepared. This section is considered as a priority.
2. **Section Kumanovo –Petrovec – Veles**, was completely constructed in 1977. Rehabilitation is foreseen for certain sections.
3. **Section Negotino – Demir Kapija** is 15,4 km long. The construction was completed in three phases, the two phases financed through the PHARE Programme and the third phase supported by the CARDS Programme.
4. **Section Smokvica-Gevgelija** with a length of 11,22km was financed through EBRD and was completed in January 2006.
5. Complete technical documentation has been prepared for the section **Demir Kapija – Udovo – Smokvica** by Scetauroute International in 2000 funded by PHARE CBC programme and is currently subject of revision by the Greek Company Egnatia Odos.

The remaining sections on this Corridor are Demir Kapija-Udovo-Smokvica and Kumanovo-Tabanovce. The section Demir Kapija-Udovo-Smokvica will be proposed to be financed through IPA and Hellenic Plan for Economic Reconstruction of the Balkans, with financial sources from the national budget and IFI contribution. The section Kumanovo-Tabanovce will be financed through a World Bank loan. By upgrading these remaining sections the road infrastructure of Corridor X will be completed. The section from Gevgelija to the border with the Hellenic Republic, is in length of 4,6 km and was upgraded to the motorway standard in 2000. The Branch D of Corridor X along the alignment from : Veles - Prilep - Bitola – to the Border Crossing with Greece (Medzitlija), is 127 km long.

The project proposed to be financed under this measure refers to the construction of a completely new motorway section between Demir Kapija and Smokvica which follows the west bank of the Vardar River, bypassing Udovo. The total length of this motorway section is 28.05 km and the design speed is 110 km/h along the entire section.

### **Eligible Actions:**

The following are eligible actions: supervision of works, construction, reconstruction or upgrade of new motorway in compliance with the EU technical standards. The activities include highway construction and associated support structures, related procurement contracts, assistance with tendering and contracts (tender specifications, evaluation, preparation of contracts, etc.)

**Selection Criteria:**

Operation to be financed under this measure will be subject of consideration by the Programme Monitoring Committee. The underlying principles in the formation of the criteria would include:

- Consistence with the national and regional policies
- Readiness of the project for implementation
- Greater positive impact on population and least impact on nature
- Adequate management capacity of final beneficiary
- Sufficient financial condition of the beneficiary and available co-financing

**Final Beneficiaries:**

Ministry of Transport of Transport and Communications and Fund for National and Regional Roads will be the final beneficiary.

**Monitoring Indicators:**

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Total public expenditure</b> | <b>60 912 000 EUR</b> |
| <b>EU support</b>               | <b>27 410 400 EUR</b> |
| <b>Intervention rate</b>        | <b>45%</b>            |

| <b>Output</b>                                     | <b>Base value</b> | <b>Target</b> | <b>Definition and assumption</b>   |
|---|-------------------|---------------|--|
| Km of new motorways completed<br>With IPA funding | 0                 | 28,05 km      | Number of Km of road upgraded to highway according to the feasibility study for the project<br>Demir Kapija – Udovo – Smokvica |

| <b>Result indicators</b>   | <b>Base value</b> | <b>Target</b>  | <b>Definition and assumption</b>   |
|--|-------------------|--|--|
| Travel time savings to all freight operators                         | 0                 | 12 minutes<br>Per truck on<br>Corridor X                 | Figures obtained by an increase in speed from 60 Km /h to 100 Km/h for trucks due to the upgrading of a section of road<br>With similar safety standard              |
| Travel time savings to all passengers                                | 0                 | 14 minutes<br>per individual<br>vehicle on<br>corridor X | Figures obtained by an increase in speed from 60 Km /h to 120 Km/h for individual vehicles due to the upgrading of a section of road<br>With similar safety standard |
| Reduction of the index of yearly fatalities for this section of road | 100               | 60   | Gain in fatalities according to the feasibility study for the project<br>Demir Kapija – Udovo – Smokvica   |

|   |
|---|
| <b>3.1.2. PRIORITY AXIS 2 – UPGRADING AND MODERNIZATION OF THE TRANSPORT INFRASTRUCTURE</b> |
|---|

**Priority Axis Aim:**

The purpose of the priority axis is to implement the strategic objective for a better cohesion with the EU member states and regional neighbours, supported by varied investments in the transport infrastructure network of the country.

For the present programming period the priority will be given to the railway infrastructure along the Corridors X and VIII and the road infrastructure along the Corridor VIII.

**Specific objectives:**



- To facilitate international and transit movements of people and goods with the EU and its regional neighbours by the modernisation and development of the Corridors and the regional core network
- To facilitate the effective movement of persons and goods that supports improved living standards and socio-economic environment in the regions through development of the national components of the Corridors
- To promote sustainable development especially through minimizing the adverse effects of transport on the environment and through improving transport safety
- To develop design studies, Environment Impact Assessments (EIA), project preparation studies as feasibility studies, cost-benefit analyses, design documentation and tender documentation of the projects where pre-feasibility studies already exist and are of the priority.

**Rationale:**

The national territory is a crossing point of the two Trans National Axes (Corridors VIII and X) which is an opportunity for development of the Macedonian transport network in order to make the most of the geo-strategic advantage and thus to contribute to the functioning of the Common European Market by providing effective transport links and facilitating the transport of people and goods and access to the other countries and markets.

The priority axis will contribute to strengthen links with neighbouring countries by improving the flow of international trade and by improving connectivity with its more remote areas. Improved infrastructure along the Corridors VIII and X would enhance the possibilities of increased traffic by linking central Europe with the port of Thessaloniki and Adriatic/Ionian Seas with the Black Sea linking Europe with Asia.

The regional core transport network is considered to be one of the most important policies for bringing long term peace, stability and economic prosperity to South-East Europe. Transport priority axis will focus on the continuation of the Development of the South East Europe Core Regional Transport Network. This is in line with the political priorities set out in the European Partnership and the MoU signed in June 2004 between the representatives of the countries and administrative entities of the South East Europe and the Commission.

This priority axis will contribute to better cohesion with the EU member states, by reducing travel times, supporting improved safety and quality of transport delivery both within the Country, to neighbouring countries and onward to other countries in the EU and the region. It will be achieved through activities aimed at development of motorways and railway infrastructures. In this manner, improvements will also accrue in the quality, efficiency and speed of transport services, door-to-door leading to increases in freight and passenger traffic.

These regional priorities are matching also the needs identified in the economic and SWOT analysis of the transport sector.

Following the analysis the national and regional transport delivery suffered because of various weaknesses:

- Limited connections (rail, road) with neighbouring states
- Unsatisfactory road condition in local network
- Unsatisfactory level of financing of road maintenance
- The constraints accruing from a very limited railway infrastructure network

- Backlog in maintenance for rail infrastructure
- Cross border delays
- Inadequate funding available to fulfil all transport infrastructure project requirements

**Axis Description:**

The axis includes activities that will contribute to rehabilitation of the existing rail links and construction of missing links, construction of road infrastructure to the level of motorway, so that these two important transport links will then be operational across the country along the strategic East-West and North-South Corridors. This includes project preparation studies, feasibility studies, cost-benefit analyses, EIA, design documentation, tender documentation of the projects where pre-feasibility studies already exist and are of the priority.

**Targeting:**

The priority is targeted on two transport sectors:

- Rail sector
- Road sector

The target commercial beneficiaries will include the importers and exporters of goods and products, including agricultural products, as well as those involved in internal trade movements and also those engaged in goods transit across South Eastern Europe. In addition, modern highways have high safety design standards that create benefits for all road users and contribute towards improvements in the safety standards and reductions of accidents, injuries and fatalities.

**Measures:**

The priority axis comprises of two measures, each of which contributes to fulfilment of the priority.

**Measure 2.1: Improving the Rail Infrastructure along the South East Europe Core Regional Network**

Development of rail infrastructure along Corridors X and VIII. The measure contributes towards infrastructure development of Corridors VIII and X that provide the national and international railway links.

**Measure 2.2: Improving the Road Infrastructure along the South East Europe Core Regional Network**

Development of road infrastructure along the Corridor VIII. The measure contributes towards infrastructure development of Corridors VIII that provides the national and international motorway links.

**Delivery:**

Delivery principles include support of preparatory studies for future investments Transport infrastructure projects are capital intensive. Funds allocated for the first programming period (2007-2009) are limited to support one transport infrastructure project. Therefore, the projects available for financing should be prepared in a manner that will enable their implementation in the next programming period. This approach will enable flexible and effective utilisation of the IPA assistance.

**Tables and indicators:**

The table below outlines the priority's core indicators

|                                 |                      |
|---------------------------------|----------------------|
| <b>Total public expenditure</b> | <b>4 060 801 EUR</b> |
| <b>EU support</b>               | <b>3 045 600 EUR</b> |
| <b>Intervention rate</b>        | <b>75%</b>           |

| <b>Output</b>  | <b>Target</b>   | <b>Definition and assumptions</b>   |
|--|-----------------|---|
| Project identification completed                         | 5 to 8 projects | <u>Beginning of the programming period 2007-2009</u><br>A relevant, potentially financed and consistent pipeline of project will be prepared  |
| Projects selected for submission and ToR adopted         | 3               | Indicatively 3 projects (according to budgetary constraints) selected for submission for feasibility study financing  |
| Project prepared in compliance with IPA application form | 3               | <u>End of the programming period 2007-2009</u><br>Environmental impact evaluated, public consultation done and mitigation measures adopted<br>Final design studies completed<br>If necessary land availability solved |

| <b>Result indicators</b>   | <b>Target</b> | <b>Definition and assumptions</b>                   |
|--|---------------|---|
| Readiness of pipeline of project for the next programming period | 3             | Project prepared to fulfil the IPA application form |

### **3.1.2.1 Measure 2.1 – Improving the Rail Infrastructure along the South East Europe Core Regional Network**

**Specific objectives:**

- To rehabilitate the rail links along the international Corridors X and VIII
- To improve the safety and security
- To reduce travel time for passengers and freight railway transport
- To increase the capacity of the connections with neighbouring countries along the Corridors
- To promote sustainable development especially through minimizing the adverse effects of transport on the environment and through improving transport safety
- To develop design studies, Environment Impact Assessments (EIA), project preparation studies as feasibility studies, cost-benefit analyses, design documentation and tender documentation of the projects where pre-feasibility studies already exist and are of the priority.

**Rationale:**

The overall condition of the rail network is obsolete as compared to the European standards. Besides the low level conditions of the infrastructure, there are also missing links towards Republic of Bulgaria and Republic of Albania.

The completion of the remaining rail links on the Corridors VIII and X will contribute towards improving rail-based activities in several ways:

- By attracting greater domestic passenger and freight movements currently either undertaken by road or not undertaken
- By increasing international passenger traffics
- By increasing use of rail for trade imports
- By increasing use of rail for trade exports
- By increasing use by rail of international transit traffics

These priority rail links with neighbouring countries are designed to strengthen traditional mobility and trade patterns and to optimise opportunities for increased social and economic benefits both at national level and to neighbouring countries.

There is a number of specific projects for which preparation is only at preliminary phase and need to be developed to the stage of comprehensive studies to be able to apply for financing for the physical works from IPA or other IFIs. Therefore the support of the measure is focused on specific projects, where preparatory activities are needed to be completed before the application for financing is submitted. This will include preparation of feasibility studies, cost benefit analyses, environmental impact assessments, design documentation etc

**Description:**

The network is entirely single-tracked and all at 1.435 mm standard international gauge and is open to both passenger and freight traffics. There are passing loops. The core railway network follows the north-south and east-west Corridors, corresponding generally to the EU Corridors X and VIII. Note that infrastructure development has been virtually non-existent since 1990, with only 3 kms (or 0.4%) of new track opened. In a similar manner to the major road links, Macedonian Railways follows the Corridors VIII and X.

Corridor X rail infrastructure runs North – South Corridor X is 215 long and is fully operational. Within the country, it starts from the border crossing at Tabanovce in the north and ends in the south with the border crossing at Gevegelija, including the branch Xd from Corridor X that starts in Veles and ends at the border crossing at Kremenica by Bitola.

Corridor X line is designed for speeds of 100 km/h, although at some points the speed is drastically reduced. Along the Corridor, there are 19 stations; the standard gauge railway track has 25 KV voltage electrification 50 Hz and with a relay signal system that provides for good communications. Corridor X carries around 85% of the total transport so priority is being given to an increase of speed on some sections to 130 km/h. In turn, this requires upgrading of the infrastructure standards in order to achieve the specified technical conditions that are applicable to Corridors funded by the initiative SEEC- South-East European Cooperation Process. In addition, in order to improve the flow of passenger and freight traffic on Corridors VIII and X, the procedures and documentation requirements at the various border crossings need to be simplified and harmonized. Currently, funding is sourced from a mixture of state budget allocations, foreign aid and co-funding arrangements.

Corridor VIII rail infrastructure runs East – West and is 315 km in length within the Country but is incomplete, with only 154 km (50%) having been constructed. As a result, there are no railway links with neighbouring Albania and Bulgaria. The Eastern part of the Corridor VIII towards the Republic of Bulgaria requires another 89 km to be built (29 % of the total) while in its Western section towards the Republic of Albania another 66 km is needed (21 % of the total).

In addition to the gaps in the basic infrastructure of the network, there are several factors behind the relatively small share of the railways in the total surface transport traffic. The geographical characteristics generate relatively short distances between major destinations. In addition, because the network comprises of only two lines, the influence on passenger and freight traffic is limited to destinations along these lines of route or the then immediate surrounding hinterland areas. This relative lack of accessibility to stations and to goods yards hampers the wider scale marketing of rail services to a larger proportion of the population.

### Eligible Actions:

The following are the eligible actions:

- Project preparation studies, as feasibility studies, cost-benefit analyses, EIA, design documentation and assistance with tendering and contracts (tender specification, evaluation, preparation of contracts, etc).
- Rehabilitation, upgrading of the existing railways with EU technical standards
- Post-completion restoration activities, related to the measure

### Selection Criteria:

Operations to be financed under this measure will comply with the following selection criteria:

- Consistence with the national and regional policies
- Readiness of the project for implementation
- Adequate management capacity of the final beneficiary
- Sufficient financial condition of the beneficiary and available co-financing
- Professional competence of the management team

### Final Beneficiaries:

Ministry of Transport of Transport and Communications, Public Enterprise Macedonian Railways (or the new entity with responsibility for railway infrastructure which will succeed to it after the completion of the on-going restructuring process) will be the final beneficiary.

### Monitoring Indicators:

|                                 |                      |
|---------------------------------|----------------------|
| <b>Total public expenditure</b> | <b>2 824 561 EUR</b> |
| <b>EU support</b>               | <b>2 131 920 EUR</b> |
| <b>Intervention rate</b>        | <b>75%</b>           |

| <b>Output indicators</b>                                 | <b>Target</b>   | <b>Definition and assumptions</b>   |
|--|-----------------|---|
| Project identification completed                         | 3 to 5 projects | <u>Beginning of the programming period 2007-2009</u><br>A Relevant, potentially financed and consistent pipeline of project will be prepared  |
| Projects selected for submission and ToR adopted         | 2               | Indicatively 3 projects (according to budgetary constraints) selected for submission for feasibility study financing  |
| Project prepared in compliance with IPA application form | 2               | <u>End of the programming period 2007-2009</u><br>Environmental impact evaluated, public consultation done and mitigation measures adopted<br>Final design studies completed<br>If necessary land availability solved |

| Result indicators  | Target | Definition and assumptions                           |
|--|--------|--|
| Readiness of pipeline of project for the next programming period | 3      | Projects prepared to fulfil the IPA application form |

### 3.1.2.2 Measure 2.2 – Improving the Road Infrastructure along the South East Europe Core Regional Network

#### Specific objectives:

- To upgrade the highway links on the Corridor VIII that are currently below standard
- To eliminate dangers and delays that currently occur in this sub-standard stretch.
- To reduce accidents and ensure safer travelling environment
- To limit the harmful impact of road traffic on the environmental to an optimal level
- To increase the capacity of the connections with neighbouring countries along the Corridor VIII
- To develop design studies, Environment Impact Assessments (EIA), project preparation studies as feasibility studies, cost-benefit analyses, design documentation and tender documentation of the projects where pre-feasibility studies already exist and are of the priority.

#### Rationale:

A well-developed and maintained road infrastructure provides the foundations for the country's economic growth and sets the preconditions for development of the road transport. The Corridor VIII spans over the South Eastern European area where transport infrastructure is traditionally weak. It is the energy and infrastructure axis connecting the Adriatic with the Black Sea. From an economic point of view, with the trans-European networks the European Commission aims at realising an enhanced access to EU countries, and thus develops an increased mobility of people/goods following the single market objectives and the principles of sustainable mobility.

Corridor VIII develops a system of transportation that clearly would foster improved trade within the region. It would bring economic development benefits to the sub-regions and municipalities along its route and better connect inland localities to ports on both the Adriatic and Black Seas, allowing better access to raw materials and markets.

There number of specific projects for which preparation is only at preliminary phase and need to be developed to the stage of comprehensive studies to be able to apply for financing for the physical works from IPA or other IFIs. Therefore the support of this measure is focused on specific projects, where preparatory activities needed to be completed before the application for financing is submitted. This will include preparation of feasibility studies, cost benefit analyses, environmental impact assessments, design documentation etc.

#### Description:

Concerning road infrastructure along Corridor VIII, at present only 27,6 % of the Corridor is already built to modern highway standards with another 8,7 % being currently under construction (The Skopje Bypass).

The Constructed Sections are:

- Kumanovo- Skopje

- Skopje- Tetovo – Gostivar
- Tetovo Bypass

The remaining Sections for upgrading are the following:

- Deve Bair-Kriva Palanka
- Kriva Palanka-Dlabocica
- Dlabocica-Stracin
- Stracin-Strezovce
- Strezovce-Romanovce
- Gostivar-Gorna Gonovica
- Gorna Gonovica-Bukojcani
- Bukojcani-Kicevo
- Kicevo-Podvis
- Podvis-Preseka
- Preseka-Pesocani
- Pesocani-Trebenista
- Trebeniste-Ohrid
- Podmolje-Struga
- Struga-Kafasan

**Eligible Actions:**

The following are the eligible actions:

- Project preparation studies, as feasibility studies, cost-benefit analyses, environment impact assessments, design documentation, and assistance with tendering and contracts (tender specification, evaluation, preparation of contracts, etc) with the view to rehabilitation, upgrading of the existing motorways with EU technical standards
- Post-completion restoration activities, related to the measure

**Selection Criteria:**

Operations to be financed under this measure will be subject to consideration by the Programme Monitoring Committee. The underlying principles in the formation of the criteria would include:

- Consistence with the national and regional policies
- Readiness of the project for implementation
- Greater positive impact on population and least impact on nature
- Adequate management capacity of final beneficiary
- Sufficient financial condition of the beneficiary and available co-financing

**Final Beneficiaries:**

Ministry of Transport of Transport and Communications, Fund for National and Regional Roads.

**Monitoring Indicators:**

|                                 |                      |
|---------------------------------|----------------------|
| <b>Total public expenditure</b> | <b>1 218 240 EUR</b> |
| <b>EU support</b>               | <b>913 680 EUR</b>   |
| <b>Intervention rate</b>        | <b>75%</b>           |

| <b>Output indicators</b> | <b>Target</b> | <b>Definition and assumptions</b> |
|--------------------------|---------------|-----------------------------------|
|--------------------------|---------------|-----------------------------------|

|  |                 |   |
|--|-----------------|---|
| Project identification completed                         | 2 to 3 projects | <u>Beginning of the programming period 2007-2009</u><br>A relevant, potentially financed and consistent pipeline of project will be prepared  |
| Projects selected for submission and ToR adopted         | 1               | Indicatively, one project selected for submission for feasibility study financing   |
| Project prepared in compliance with IPA application form | 1               | <u>End of the programming period 2007-2009</u><br>Environmental impact evaluated, public consultation done and mitigation measures adopted<br>Final design studies completed<br>If necessary land availability solved |

| Result indicators  | Target | Definition and assumptions                          |
|--|--------|---|
| Readiness of pipeline of project for the next programming period | 1      | Project prepared to fulfil the IPA application form |

### 3.1.3. PRIORITY AXIS 3 – IMPROVEMENT OF ENVIRONMENTAL INFRASTRUCTURE

#### Aim

To improve the environmental protection through investments in environmental infrastructure, and create conditions for environment friendly sustainable development.

#### Community legislation:

This priority will contribute to implement the following segments of the *acquis*:

- Water Framework Directive 2000/60/EC
- Urban Wastewater Treatment Directive 91/271/EEC
- Sewage Sludge Directive 86/278/EEC
- Directive on waste 2006/12/EC
- Directive on the landfill of waste 1999/31/EC

#### Specific objectives:

- To reduce the pollution by untreated wastewater by establishing the wastewater collection and treatment system meeting the EU requirements
- To increase the number of population connected to reliable sewerage system and served by wastewater treatment of requisite parameters on effluent
- To create conditions for sound solid waste collection and disposal and avoid further deterioration of the environment by uncontrolled waste management
- To reduce the volume of municipal solid waste disposed to landfills and increase the share of waste separated, composted and recycled
- To increase number of population served by waste collection and disposal in compliance with EU standards

#### Rationale:

The priority attends to the needs identified in the economic and SWOT analysis of the environmental sector. Following the analysis, two main fields of environmental sector have been identified as most important in terms of future development and needs for investment with the greatest impact on the population and on the nature. The programme focuses on the investments in wastewater collection and treatment and integrated solid waste management.



As far as the wastewater is concerned, the environmental standards are very low. The percentage of connection of the population to public sewerage systems is about 65%; however, only 12.5% of collected wastewater is treated. Most of the agglomerations do not have a sewer system, and the wastewater is either discharged into sewer pits, septic tanks, and cesspools or similar or discharged directly into fields or streams. No monitoring of the wastewater discharged into recipients by municipal sewerage systems exists, except of limited volume where sewerage systems are connected to the WWTPs in operation.

To improve the environmental conditions and to reduce further pollution of nature and environment, particularly watercourses and water sources, it is necessary to build a sufficient wastewater collection and treatment infrastructure to safeguard the adequate effluent parameters of discharged wastewater meeting the required criteria specified in the Urban Wastewater Treatment Directive (91/271/EEC) and mitigate present situation of uncontrolled deterioration of the environment.

In observation of the above Directive, the priority should focus on agglomerations over 10 000 PE, with emphasis on agglomerations over 100 000 PE which are most important, as the negative impact on the environment is the greatest. Special attention must be devoted to sensitive areas as well. It is necessary to build WWTPs of adequate technical standards of secondary and tertiary treatment to eliminate the continued environment deterioration.

All large municipalities (agglomerations) have plans and ideas of wastewater management, but lack funds and knowledge of how to handle the technical, financial and managerial problems. Therefore, they need support, especially during the preparation phase.

In the domain of solid waste management, despite of the fact that around 70% of the total population receives regular waste collection services, almost no waste collected is disposed environmentally appropriate manner. Waste disposal practices do not comply with any technical and/or environmental standards. There are 55 municipal dumps in operation, but most of them are to be closed since the site conditions do not allow their upgrading to the level required to conform with the EU standards of landfills under reasonable costs. Regular separate collection of municipal waste does not exist except of some rare cases; all municipal waste is disposed at dumps of inappropriate technical standards. Therefore, it is necessary to establish municipal integrated waste collection and disposal systems compatible with EU requirements to secure the waste is properly disposed and avoid further degradation of the environment. The above will require building of infrastructure for waste collection and disposal, as well as facilities for waste separation, recycling and composting, to reduce the volume of waste disposed in landfills, in line with the main priority of EU waste directives.

Establishing the required infrastructure will contribute to controlled waste management and reduction of nature deterioration.

**Description:**

To fulfil the defined objectives, the actions are focused on investments aimed at upgrading and establishing the infrastructure for sufficient wastewater collection and treatment in agglomerations over 10000 PE with particular emphasis on agglomerations over 100 000 PE. Focus is also placed on investments in solid waste management infrastructure and equipment. It is necessary to establish integrated waste management systems on specified regional level and introduce a separate waste collection in areas where the system of regular waste

collection already exists and is operational. Investments in waste recycling facilities to increase the volume of recycled waste are considered as well.

Along with the waste treatment processes, the emphasis should be given also on the energy recovery and emissions of greenhouse gas by utilization of methane generated during the waste treatment processing. Best available technologies should be applied in this regards, as CHP units, producing heat and energy by burning of methane.

In addition, support for project preparation for future investments in infrastructure is essential, in order to prepare a pipeline of projects developed to the level to be ready for implementation within the next operational programme period under the SCF, or through other potential IFIs or donors support. Due to the small available contribution of IPA funds allocated for the initial programming period and lack of mature projects, the priority of this period is to support the preparation of the list of projects in the waste and wastewater sector for eligible IPA funds to be ready for implementation within the next programming period,

**Targeting:**

The priority is targeted on two environmental sectors:

- Wastewater collection and treatment
- Solid waste management

From the territorial point of view, investments are focused on activities, where the effects on the population and nature protection are the greatest. In the area of wastewater, agglomerations over 10000 inhabitants are targeted, especially agglomerations over 100000, with particular accent on the agglomeration Skopje, as the highest priority.

In the area of waste management, the activities are targeted to defined regions, focusing on those which are the biggest and where the project preparation has already started, mainly regions of Skopje, Southwest region, Polog, Northeast region and Central-east region.

**Measures:**

The priority measures are designed to support the improvement of the environmental infrastructure focusing on wastewater and solid waste areas. The following measures have been considered under the priority axis 3:

- Measure 3.1 - Establishing wastewater collection and treatment infrastructure meeting the EC requirements
- Measure 3.2 - Establishing integrated and financially self-sustainable waste management system

**Delivery:**

Delivery principles include:

- Support of investments to construct/upgrade physical infrastructure
- Support of preparatory studies for future investments

Environmental infrastructure projects are capital intensive. Funds allocated for the first programming period (2007-2009) are limited and implementation of large scale projects in whole is not feasible. Therefore, the projects available for financing should be prepared in a manner that will enable their implementation split into phases, with a possibility to be

individually implemented and each of them operable after the completion. This approach will enable flexible and effective utilisation of the IPA assistance.

### Targets and indicators:

The table below outlines the priority's key indicators:

|                                 |                        |
|---------------------------------|------------------------|
| <b>Total public expenditure</b> | <b>10 152 002 Euro</b> |
| <b>EU Support (IPA)</b>         | <b>7 614 000 Euro</b>  |
| <b>Intervention rate</b>        | <b>75%</b>             |

| <b>Outputs</b>  | <b>Base value</b> | <b>Target</b> | <b>Definition and assumptions</b>  |
|---|-------------------|---------------|--|
| Number of agglomerations over 10000 PE served by WWTP meeting the EU criteria | 0                 | 1             | Number of agglomerations over 10000 PE, where WWTP is constructed and commissioned meeting the EU environmental standards on treatment process and effluent parameters |

| <b>Results</b>  | <b>Base value</b> | <b>Target</b> | <b>Definition and assumptions</b>   |
|---|-------------------|---------------|---|
| Number of population served by public wastewater system connected to WWTP meeting the EC criteria | 0                 | 95 000        | Number of population that is connected to sewerage system, where the wastewater is treated at the WWTP of EU standard |

### 3.1.3.1 Measure 3.1 – Establishing Wastewater Collection and Treatment Infrastructure Meeting the EC Requirements

#### Specific objectives

- To secure the effective wastewater treatment meeting the EU environmental standards on effluent quality in agglomerations over 10000 inhabitants with emphasis on agglomerations over 100000 and/or locations in sensitive areas
- To increase the number of inhabitants connected to sewerage system and wastewater treatment plant with the necessary treatment parameters in agglomerations over 10000 inhabitants
- To increase the efficiency and reliability of public sewerage and wastewater treatment systems, including their financial sustainability and effective application of the polluter-pays principle;
- To reduce the volume of untreated municipal wastewater discharged and reduce negative impact on quality of water resources, nature and health of population
- To increase the amount of pollution removed in particular BOD<sub>5</sub>, N-tot, P
- To develop the pipeline of new wastewater projects to the extent ready for implementation within the next programming period

#### Rationale

Approximately 65% of urban population is served by sewage connections but only 6% is connected to the 3 existing wastewater treatment plants serving agglomerations with a population above 10000.

To improve the environmental conditions and to avoid further pollution of nature and environment, particularly watercourses and water sources, it is necessary to build sufficient wastewater collection and treatment infrastructure to safeguard the adequate effluent quality

of discharged water meeting the required criteria given in the Urban Wastewater Treatment Directive (91/271/EEC). Construction of WWTP with secondary and tertiary level of treatment is needed, with nutrient and phosphorus removal and sludge management is necessary to fulfil the criteria of EU given in the Urban Wastewater Treatment Directive.

Agglomerations over 10 000 PE are targeted, whereas the agglomerations over 100 000 PE are prioritised. There are four agglomerations over 100000 PE, namely Skopje (approx. 880000 PE), Kumanovo (100000), Ohrid (120000), Bitola (near 100000), and 37 agglomerations over 10000 PE. Skopje, is the biggest agglomeration with the greatest adverse impact on environment, mainly massive pollution of the Vardar River, is the highest priority. Although the Skopje Waste Water Treatment Plant project is the most important, the available funds of this programming period are not enough to finance this major project under current programme, and it is considered to be implemented under future programme and through a pooling of resources<sup>35</sup>.

There are some studies on wastewater management for several agglomerations already developed to the level of preliminary plans up to comprehensive feasibility studies, older or recent in age. Completion, revision or update of the selected projects according to the IPA requirements to the stage of their readiness for implementation will result in a pipeline for investments for the next programming period.

### Description

The measure will support project implementation, physical works of the selected projects that are at most advanced level of preparation and are in compliance with the sectoral priorities and fulfil the selection criteria of the measure. Construction of WWTPs must ensure the compatibility, operating and efficiency of investments through constructing secondary and tertiary sewage treatment facilities and sludge management in independent stages. It must be ensured that polluters adopt the Best Available Techniques (BAT) to limit pollution, in compliance with **Directive 96/61/EC concerning integrated pollution prevention and control** (IPPC Directive). Along with the construction of WWTPs, completion, upgrade or extension of sewerage network has to be supported to facilitate collection of wastewater produced in agglomerations.

There is a number of other specific projects the preparation of which is at preliminary phase and need to be developed to the stage of comprehensive studies adequate to apply for financing of the physical works from IPA or other IFIs. Therefore the support of the measure is also focused on specific projects, where preparatory activities need to be completed before the submission of the application for financing should be promoted, as feasibility studies, cost-benefit analyses, environmental impact assessment, design documentation etc. Preparation of those projects should be supported only where at least some pre-feasibility studies already exist, justifying the projects' eligibility for subsequent development.

### Eligible Actions

- Construction, upgrading, intensification or extension of wastewater treatment plants with at least secondary treatment (nutrient removal) meeting the EC criteria in agglomerations over 10000 PE in settlements where sewerage networks are already well developed and where adequate management capacity and structures are in place

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<sup>35</sup> Presently a detailed feasibility study is being developed by TA (JICA), the study shall be finalized within 2 years, which gives a good basis to prepare the project to apply for financing under future programme

- Construction, upgrading, intensification or extension of sewerage network in agglomerations over 10000 PE where the sewerage network exists and where WWTP meeting the EC criteria is constructed and operated, or is part of the project
- project preparation studies, as feasibility studies, cost-benefit analyses, EIA, design documentation, and assistance with tendering and contracts (tender specification, evaluation, preparation of contracts, etc)

### Selection Criteria

Formal approval of the criteria for selecting operation to be financed under this Measure will be subject to consideration by the Programme Monitoring Committee. Principles to underlay the criteria are as follows:

- Consistence with the national and regional policies, mainly with the Program for waters
- Level of readiness of the project for implementation
- Great impact on population and nature
- Adequate management capacity of final beneficiary
- Sufficient financial ability of the beneficiary and available co-financing

### Final Beneficiaries:

- Municipalities
- Municipal public water companies
- Regional public water companies

### Monitoring Indicators/Targets/Definitions

|                          |                       |
|--------------------------|-----------------------|
| Total public expenditure | <b>8 121 600 Euro</b> |
| EU support               | <b>6 091 000 Euro</b> |
| Intervention rate        | <b>75 %</b>           |

| Output  | Target | Definition and assumption  |
|---|--------|--|
| Number of WWTPs meeting the EC required criteria constructed    | 1      | number of WWTPs of capacity over 10000 PE with at least secondary treatment constructed and commissioned   |
| Number of developed preparatory studies for wastewater projects | 1      | The number of comprehensive preparatory studies of wastewater treatment projects developed in accordance with the IPA requirements to make project ready to apply for IPA assistance and/or other donors |

| Results  | Target                                | Definition and assumption  |
|--|---------------------------------------|--|
| Number of population connected to sewerage                 | 39 500                                | The number of additional population that is connected to sewerage system thanks to the construction/upgrading of sewerage  |
| Number of population connected to WWTP                     | 95 000                                | The number of population that is connected to sewerage system conveying to the upgraded/new WWTP in operation meeting the required criteria on discharge   |
| Volume of wastewater treated                               | 6 156 000 m <sup>3</sup> /year        | Volume of domestic wastewater treated in the new/upgraded wastewater treatment plants and which would have been otherwise discharged untreated into recipients or in an uncontrolled manner into environment |
| Amount of pollution removed                                | 17 684 tons of BOD <sub>5</sub> /year | The tons of BOD <sub>5</sub> per year removed from wastewater before discharging to recipients thanks to the IPA assistance  |
| Number of new wastewater projects ready for implementation | 1                                     | Number of projects of construction/upgrading wastewater systems in agglomerations over 10000 inhabitants ready for implementation under subsequent IPA multi-annual operation programme and/or other donors  |

### 3.1.3.2 Measure 3.2 – Establishing of an Integrated and Financially Self-sustainable Waste Management System

#### **Specific objectives:**

- To increase the population covered by organised communal waste collection and disposal services of adequate quality, on regular basis and at affordable tariffs
- To increase the volume of communal waste collected
- To construct and utilise new landfills fully compliant with EU directives and secure sound communal waste disposal
- To reduce the volume of waste disposed in landfills and increase the volume of waste separated
- To establish the organised separation and recycling of packaging waste, batteries and oils in accordance with the relevant Directives
- To avoid further utilisation of existing dumps in operation, non-compliant with the required standards, by their phasing out as soon as the relevant alternative is established
- To develop the pipeline of new waste management projects to the stage for readiness for implementation within the next programming period

#### **Rationale:**

Present waste disposal practices do not comply with any technical and/or environmental standards. Most of existing municipal dumpsites are to be closed since the site conditions do not allow their upgrading to EU conform landfills under reasonable costs. Only 70% of the population receive regular waste collection. Organised and regular separation and recycling or composting of the communal waste does not exist yet.

To implement the waste management acquis, it is necessary to set-up integral municipal waste collection and disposal systems on appropriate regional level that are compatible with EU requirements. This represents mainly to build the infrastructure for waste disposal, separation, recycling and composting and to acquire relevant equipment and facilities.

#### **Description:**

Within the framework of this operational programme, the IPA allocation for environment in 2007-2009 is limited and a major share shall be allocated for wastewater sector. As investments in environmental infrastructure are cost demanding there is only project preparation/upgrading activities envisaged within this measure in the period 2007-2009 to prepare a pipeline of sound projects ready for implementation within the forthcoming programming period.

There are regional waste management systems projects already developed to the stage of preliminary plans up to comprehensive feasibility studies, older or recent age. Completion, revision or update of the selected projects according to the IPA requirements to the stage of readiness for implementation shall prepare a pipeline for investments for the next programming period.

The measure will support the projects of regional landfills meeting the required criteria and introduction of the separation and recycling facilities to reduce the share of waste disposed in landfills.

**Targeting:**

This measure is targeted to the regions, where the integrated regional waste management system is considered to be established. There are 5 priority regions envisaged:

- Skopje region
- Southwest region
- Polog region
- Northeast region
- Central east region

As far as the processing of waste disposal is concerned, the priority is given to (in order of importance):

- Separation
- Recycling
- Composting
- Land filling

**Eligible actions:**

Actions which may be funded under this measure are:

- Project preparation studies, as feasibility studies, cost-benefit analyses, environment impact assessment, design documentation and assistance with tendering and contracting (tender specification, evaluation, preparation of contracts, etc)
- Development of regional waste management plans

**Selection criteria:**

Formal approval of the criteria for selecting operation to be financed under this Measure will be subject to consideration by the Programme Monitoring Committee. Principles to underlay the criteria are as follows:

- Consistence with the national and regional policies, mainly with the Waste management strategy
- Existence of waste management plans
- Readiness of the project for implementation
- Great impact on population and nature
- Adequate management capacity of the final beneficiary and authorisation for waste handling and disposal
- Sufficient financial condition of the beneficiary and available co-financing

**Final Beneficiaries:**

- Regional waste management public entities

**Monitoring indicators:**

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Total public expenditure</b> | <b>2 030 400 Euro</b> |
| <b>EU support</b>               | <b>1 522 800 Euro</b> |
| <b>Intervention rate</b>        | <b>75 %</b>           |

| <b>Output</b> | <b>Target</b> | <b>Definition and assumption</b> |
|---------------|---------------|----------------------------------|
|---------------|---------------|----------------------------------|

|  |   |   |
|--|---|---|
| Project identification completed                         | 3 | <u>During the programming period 2007-2009</u><br>The existing feasibility studies will be updated and consistent pipeline of projects will be prepared   |
| Projects selected for submission and ToR adopted         | 3 | Indicatively, three projects selected for submission for financing of design stages   |
| Project prepared in compliance with IPA application form | 3 | <u>End of the programming period 2007-2009</u><br>Environmental impact evaluated, public consultation done and mitigation measures adopted<br>Final design studies completed<br>If necessary land availability solved |

| Results  | Target | Definition and assumption  |
|--|--------|--|
| Readiness of pipeline of project for the next programming period | 3      | Number of well prepared waste management projects establishing, or enlarging or improving the integrated waste management of specified regions, ready for implementation and funding from the next IPA multi-annual operation programme and/or by other donors |

### 3.1.4. PRIORITY AXIS 4 – TECHNICAL ASSISTANCE

#### Aim

To achieve effective management and implementation of the Operational Programme Regional Development and high absorption of the IPA assistance.

#### Specific Objectives

- To achieve the administration of IPA assistance implementation within the OPRD being carried out in due course
- To make the public well informed and aware of the support from IPA and in particular of OPRD, and to achieve positive common reputation
- To raise the public awareness on environmental issues in particular wastewater and waste disposal measures as being necessary
- To develop the transport and environment sectors policy and to establish sector planning documents as a framework for the actions for further development
- The operating structure at the level of beneficiaries are able to prepare the projects and to apply for IPA assistance
- Preparation of future operational programmes

#### Rationale

The sound management and implementation of OPRD requires particular contents for technical assistance measures in order to answer to the main needs for support for programme coordination and to strengthen the capacity building of administrative structures involved in its implementation.

Technical assistance is the particular priority axis of the OPRD, whose aim is to support implementation of the main priority axes 1, 2 and 3 and the activities presented in particular measures. Effective implementation of the operational programme depends on the ability of



managing authorities (operating structures) involved in the process of implementation to carry out their duties in compliance with the requirements of the IPA procedures and related regulations of the EU assistance.

IPA assistance will be implemented through decentralised management, which means on the national level of the beneficiary country. For the first time the Macedonian administrative structures must face the decentralised management and implement the operational programme by their local capacities. In general, the management of an operational programme, as well as single projects, anticipate a long list of activities including preparation, managing, monitoring, evaluation, information and control activities to safeguard the implementation of the operational programme in due course. All activities have to be in compliance with the relevant Community and national rules.

Technical assistance in the framework of this operational program will provide support for the structures and authorities involved in the implementation of the Operational Programme to duly carry out above mentioned activities.

Along with the administration, the presentation and promotion of the Operational Programme towards the public is another key activity of the OP implementation. The programme visibility and publicity will be presented via a communication strategy that shall be developed and implemented by the operating structure.

The preparation of sectoral strategies and plans as well as revisions of ongoing OP and preparation of new OP is needed for the successful and coherent fulfilment of the OP objectives.

**Description:**

- To finance preparatory, management, monitoring, evaluation information and control activities in order to reinforce the administrative capacity for implementing the IPA assistance
- Administrative support
- Information evaluation and control activities
- Publicity and promotion of the operational programme
- Support the operating structure at the level of beneficiaries to conduct preliminary studies prior to the development of the proper projects, to prepare the pipeline of the projects eligible for implementation under IPA assistance

**Targeting:**

TA is targeted for the OPRD management bodies responsible for ensuring that selected projects are identified, designed, implemented and monitored in accordance with approved procedures. The support of the TA will be targeted to staff directly involved and responsible in the management and implementation of the Operational Programme.

TA shall be also provided to the final beneficiaries to support activities related to proper administration of implemented projects.

Public is targeted also through the measures that focus on increase of public awareness about EU support in general, and in particular IPA programme and Operational Programme regional development.

**Measures:**

The priority's measures are designed to provide appropriate assistance to the specific needs of the implementing bodies of the OPRD and final beneficiaries. The following measures have been designed for TA:

- **Measure 4.1: Administration of the operational programme implementation**

This measure will enhance the capacity of the IPA Coordination and Implementation departments of MoTC and MoEPP, in order to carry out their designated tasks within the operating structures directly linked to the implementation of IPA assistance.

- **Measure 4.2: Information, evaluation, monitoring and control activities**

This measure will provide assistance for regular evaluation, monitoring and control activities related to the implementation of the programme as given in the IPA implementation regulation. The measure also implies activities related to public promotion and visibility of the OP.

- **Measure 4.3: Preparation of investment projects and programmes**

Activities under this measure relate to identification of the potential eligible projects and their preliminary examination, and maintain the indicative pipeline of projects eligible for future IPA assistance. Also the development and update of the sectoral programmes and plans related to the priority areas are included in this measure.

**Delivery:**

The technical assistance will be delivered through the implementation of 3 proposed measures. The implementation of each measure requires, among others:

- Training of staff on project management and IPA implementation rules,
- Evaluations, expert reports, statistics and studies
- Measures to disseminate information, networking, raise awareness, promote cooperation and exchange experiences;
- The installation, operation and interconnection of computerised systems for management, monitoring, control and evaluation;
- Improvements in evaluation methods and the exchange of information on practices in this field.

**Targets and indicators:**

|  |                       |
|--|-----------------------|
| <b>Total public expenditure</b>  | <b>3 240 000Euro</b>  |
| <b>EU Support (IPA) (6% of the total allocation for component III)</b> | <b>2 430 000 Euro</b> |
| <b>EU aid rate</b>   | <b>75%</b>            |

| <b>Outputs</b>                                 | <b>Target</b> | <b>Definition and assumption</b>  |
|--|---------------|---|
| Operational programme successfully implemented | yes           | OPRD implemented by decentralised implementation system, no substantial reservations from EC, final report approved |
| IPA allocation depleted                        | 100%          | At the end of the programming period, 100% of the IPA contribution is allocated for eligible projects               |

| Results         | Target | Definition and assumption  |
|-----------------|--------|--|
| Functioning DIS | yes    | Decentralised implementation system's staff and equipment capacities are sufficient, staff is trained and experienced, the Operating structures are capable to prepare, manage and implement the operational programme of the forthcoming programming period |

### 3.1.4.1 Measure 4.1 – Administration of the operational programme implementation

#### Specific objectives:

- Preparatory and management activities implementing the IPA assistance being carried out in due course
- Sufficient staff capacities that are trained and able to manage the programme

#### Rationale:

Technical assistance in the framework of this measure will provide support for the program management and implementation. All activities related to the effective administration of the OP have to be in compliance with the IPA rules and Management and control structure of IPA assistance.

#### Description:

The Operating structure created for the OP management will be charged with specific tasks directly linked to the implementing the OPRD, namely as described in chapter 5. The TA assistance will support the capacities of the Operating structure to carry out these tasks and any other tasks which may be designated by the Sectoral Monitoring Committee

#### Eligible actions:

- Preparation, organization and carrying out trainings of staff to be able to follow IPA implementation procedures
- Procurement for technical equipment to improve the office equipment to required level
- Identification, assessment and selection of eligible projects

#### Final Beneficiaries:

- Operating structure MoTC and MoEPP

#### Monitoring indicators:

|                                 |                     |
|---------------------------------|---------------------|
| <b>Total public expenditure</b> | <b>648 000 Euro</b> |
| <b>EU Support (IPA)</b>         | <b>486 000 Euro</b> |
| <b>EU aid rate</b>              | <b>75%</b>          |

| Outputs                      | Target | Definition and assumption   |
|------------------------------|--------|---|
| Number of training courses   | 6      | Training of Operating structure staff to be familiar with the IPA implementation procedures |
| Number of evaluated projects | 15     | Number of projects that might have been eligible for IPA assistance                         |

| Results                              | Target | Definition and assumption   |
|--------------------------------------|--------|---|
| Number of trained and equipped staff | 30     | Number of Operating structure staff trained and experienced with the IPA procedures and equipped with equipment needed for effective implementation of the OP |
| Number of approved projects          | 15     | Number of eligible projects selected and financial memorandum signed  |

### 3.1.4.2 Measure 4.2 – Information, evaluation, monitoring and control activities

#### Specific objectives:

- To ensure coherence and coordination in the implementation of the OPRD and other programmes and operations implemented under the different IPA components, as well as for any cross-component corrective measures needed to ensure the achievement of the global objectives of the assistance provided, and to enhance its overall efficiency
- To increase the awareness of Macedonian population regarding EU financial assistance as well as the transparency and efficiency in the use of these resources.

#### Rationale:

The operating structure shall establish a Sectoral Monitoring Committee for the programme, which shall meet at least twice a year. This Sectoral Monitoring Committee shall draw up its rules of procedure in compliance with a Sectoral Monitoring Committee mandate set out by the Commission, and within the national institutional, legal and financial framework.

The operational programme must develop a communication strategy identifying appropriate activities that is in pursuit of the two major goals: visibility and information/publicity. The proposed communication activities are to be presented in a communication action plan and should be programmed, structured and evaluated, with regular reporting to the Sectoral monitoring committees.

The operating structures are responsible for organizing the publication of the list of the final beneficiaries of the programme, the names of the operations and the amount of IPA funding allocated to these operations. They will ensure that final beneficiaries are informed that acceptance of funding is also an acceptance of their inclusion in this list of beneficiaries published.

#### Description:

The assistance relates to the organisation and technical support of sectoral monitoring committee meetings, and providing for the capacities to conduct the program evaluation, monitoring and control activities, etc.

For the information activity various media shall be used, as leaflets, advertisements, posters, seminars, promotional materials. At the same time, information on EU aid will be available via the Internet.

#### Eligible actions:

- All actions related to the Sectoral monitoring committee as referred in the Implementation regulation of IPA
- Evaluation and control activities

- Ex-ante evaluation of future programmes
- Development of an information system in view of monitoring and evaluating the programme
- Collecting and analysis of data on the implementation and monitoring of the programme
- Development of the communication action plan
- Implementation of communication activities

**Final Beneficiaries:**

Sectoral monitoring committee  
 Operating structure

**Monitoring indicators:**

|                                 |                     |
|---------------------------------|---------------------|
| <b>Total public expenditure</b> | <b>486 000 Euro</b> |
| <b>EU Support (IPA)</b>         | <b>364 500 Euro</b> |
| <b>EU aid rate</b>              | <b>75%</b>          |

| <b>Outputs</b>                        | <b>Target</b> | <b>Definition and assumption</b>  |
|---------------------------------------|---------------|---|
| number of sectoral committee meetings | 6             | Sectoral committee meeting shall take place regularly, twice a year                       |
| Communication action plan developed   | yes           | Plan should be developed at the beginning of the programme implementation                 |
| Information campaigns carried out     | 4             | Information campaigns set in the communication plan carried out to promote IPA activities |

| <b>Results</b>                                     | <b>Target</b> | <b>Definition and assumption</b>   |
|--|---------------|--|
| Evaluation and Monitoring reports                  | 6             | Conclusions and findings of the monitoring committees presented in the evaluation and monitoring reports   |
| Communication action plan successfully implemented | yes           | Objectives of the plan fulfilled after implementation, actions carried out and target groups addressed   |
| Increase of public awareness                       | yes           | Public is informed about IPA programme and OP measure and eligible activities (measured by public opinion polls before and after information campaign) |

**3.1.4.3 Measure 4.3 –Preparation of investment projects and programmes**

**Specific objectives:**

- transport and environment sectors to dispose with the sector planning documents as a framework for the actions for further development
- Pipeline of eligible projects in transport and environment sector ready for further proceeding
- operating structure at the level of beneficiaries successfully supported in project identification and implementation

**Rationale:**

It is necessary to develop sectoral studies and strategic documents on the national and regional level, thus updating the comments according, to the actual development. A particular emphasis will be placed on the sector studies, investment studies and general assistance that will be provided to the environment sector.

For further effective drawing of the IPA assistance in the next programming periods, it is essential to have prepared a pipeline of potential projects eligible for IPA funding, which would be ready for further proceeding in time of need and promptly develop the project to the phase of IPA application.

Readiness and capability of final beneficiaries is one of the assumptions of the successful programme implementation. Therefore, the assistance shall be also focused on supporting the capacity of the final beneficiary during the project preparation and implementation.

**Description:**

This measure complements the previous measures, which are mostly oriented towards activities resulting from the mandatory procedures of the programme implementation. The assistance under this measure is dedicated to the development of the sectoral programmes needed to meet the needs and objectives of the particular sectors. It also includes the preparation and drafting of the operational programmes for the next programming period.

Along with the sectoral programmes providing the framework for its future development on the national level, the assistance is dedicated to the level of the beneficiaries and specific projects. Identification of potential future projects eligible for financing and their preliminary assessment give the basis to compile the project pipeline including only the selected projects meeting the objectives of the programme.

**Eligible actions:**

- Drawing up sector studies, strategies, master plans, investment studies and other documents on national and regional level necessary for planning interventions to support regional development
- Drawing up programme documents for the next programming period 2010-2013 and revision of ongoing programme
- Providing support to the operating structure at the level of beneficiaries, financing of preliminary studies prior to the development of the proper project in order to prepare the pipeline of eligible projects

**Final Beneficiaries:**

- Ministry of Transport and Communications
- Ministry of Environment
- Ministry in charge of the future Regional competitiveness programme

**Monitoring indicators:**

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Total public expenditure</b> | <b>2 106 000 Euro</b> |
| <b>EU Support (IPA)</b>         | <b>1 579 500 Euro</b> |
| <b>EU aid rate</b>              | <b>75%</b>            |

| <b>Outputs</b>   | <b>Target</b> | <b>Definition and assumption</b>   |
|--|---------------|--|
| Number of sectoral studies elaborated                          | 4             | Sectoral studies related to the transport and environment sectors only   |
| Number of preliminary studies of indicative projects developed | 12            | Reason for the preliminary studies is to consider, whether a project is eligible for IPA financing and only then the detailed studies shall be conducted |
| New OP developed   | yes           | Preparation of OP is long-term process that requires involvement of number of stakeholders and working   |

| Outputs | Target | Definition and assumption |
|---------|--------|---------------------------|
|         |        | group                     |

| Results   | Target | Definition and assumption  |
|---|--------|--|
| Number of sector strategies/plans adopted                     | 4      | Sectoral studies being developed and approved by relevant authorities and ready for implementation |
| Number of indicative projects eligible for further proceeding | 10     | Pipeline of the projects eligible for IPA assistance created                                       |
| New OP adopted  | yes    | OP for forthcoming programming period developed and approved by the EC                             |

## 3.2 HORIZONTAL ISSUES

### 3.2.1. EQUAL OPPORTUNITIES BETWEEN MEN AND WOMEN

The challenge of cultural differences and providing fair work opportunities for all sections of society is recognised. The equal opportunities must include enhanced integration of women in all areas of the workplace including in the selection, training and development initiatives.

Equality in the freedom and rights of citizens regardless of sex, race, colour of skin, national and social origin, political and religious beliefs, property and social status are provided for in the Constitution of the country. Equality between men and women constitutes a basic principle of the international and regional human rights instruments that the country has signed and ratified. There are several positive developments in this field such as adoption of the National Action Plan on Gender Equality, establishment of Unit for Gender Equality within the Ministry of Labor and Social Policy and Gender Equality Commissions at local level. In May 2006, the country adopted the Law on Equal Opportunities of Women and Men with the purpose to promote the principle for establishing equal opportunities between women and men in the political, economical, social, educational field as well as in other fields of social life.

The existence of both legislative and non-legislative measures to fight against discrimination and promote equal treatment and opportunities are prerequisites for EU accession. During implementation of the program measures will be taken to eliminate barriers that could prevent any of these discriminations. Mainstreaming equal opportunities is a horizontal principle of Structural Funds interventions and the implementation of this principle will be considered in the process of implementation and evaluation of the OPRD.

### 3.2.2. ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT

In the Transport sector, sustainable development will be reflected through the incremental reduction of the adverse impacts generated from transport activities that will occur with the implementation of the Measures proposed. The rail or road activities will be improved for all users through having smoother transport flows and thereby less harmful impacts on the Corridors, their immediate hinterlands and the transport providers and users.

The opportunity to address sustainable initiatives into the design and implementation of Measures and in the project outcomes will be developed. This will include reference to issues such as:

- Optimal production processes and operational features of the project
- Types and quantities of raw materials, energy and other resources consumed;
- Treatment of residues and emissions by type, quantity, composition and strength including discharges to water and emissions to air;
- Noise
- Vibration;
- Light;
- Heat;
- Radiation;
- Deposits/residues to land and soil;
- Physical Severance

The specific actions will incorporate relevant best practice observance into the design processes and then to incorporate them into the implementation of measures and also in the post-implementation procedures.

The implementation of the proposed Programme actions is designed to provide a permanent improvement in the quality and protection of the environment. The actions will positively improve the various qualities both for users and for those living along the Corridors.

Environmental protection itself is the one of the priority axis of the operational programme. Implementation of the priority objectives through the investments in the environmental infrastructure will directly contribute to reduce the negative impacts of the population on the environment and improves its protection and preservation for future generations.

Implementation of the operational programme shall result in a reduction in water pollution, and consequently in risks to human health and the environment, by means of construction, reconstruction, extension and modernization of the sewerage system and the urban waste water treatment plants. Effective waste management and stimulating the waste separation and recycling processes together with ecologically sound utilization will also contribute to the improvement of environmental protection. In this respect, the implementation of the Operational Program is directed to the fulfilment of the Community environment priorities.

Improvements to the environmental infrastructure will lead to improvements in the quality of life, promote investment opportunities to the economy and contribute to more sustainable economic growth.

### **3.2.3. PARTICIPATION OF CIVIL SOCIETY**

There are benefits in consulting with various elements of civil society during the development and implementation of the OP as well in the post-implementation stage. Therefore, the consultation will be undertaken with the various elements of civil society and they will be planned, scheduled and undertaken at all stages of the OP to optimise value and effectiveness. The processes will demonstrate that the consultation processes are publicly valued and recognised and address the need to consult both thematically by affinity associations and also geographically to encompass all major communities.



In the Transport sector, the consultees include transport users and providers, local communities affected by the implementation processes as well as the industrial, agricultural, tourism and general trading communities where the provision of goods and services is influenced by the quality and availability of transport links. In addition, access and mobility affects those who use public and private sector transport facilities, including students, commuters, traders, the elderly, the disabled and the dis-advantaged groups. Consultation with relevant professional and occupational groups is also important.

The engagement of the civil society in the development and protection of the environment and the identification of personal responsibility for human actions against the environment is one of the conditions of the successful implementation of the operational programme. An increase in awareness shall lead to better implementation and an effective utilization of the built infrastructure and facilities under the IPA assistance.

The financial involvement of the public regarding environmental services is also needed in order to be aware of the responsibility for payment and reduction of pollution. The motivation of people to eliminate pollution and to actively participate in the protection of the natural environment is also an objective.

### **3.3 COMPLEMENTARITIES AND SYNERGIES WITH OTHER FORMS OF ASSISTANCE**

All activities need to be closely coordinated in order to avoid overlapping. This holds especially true for measures related to decentralised management of EU funds or Institution Building in areas such as transport and environment. Measures should rather be complementary, not only in relation to each of the components but also in relation to other donors' activities. It is important to take into account funding from other donors in order to maximise the synergies among the various forms of assistance. With this in mind, close coordination among all actors, internally (national authorities concerned) as well as externally (other donors and the beneficiary), has already been established through regular meetings and consultation.

#### **3.3.1. COMPLEMENTARITIES WITH OTHER IPA COMPONENTS**

Although IPA is envisaged to provide targeted pre-accession assistance in different areas through five different Components with different priorities and objectives, still close coordination and coherence between all five Components is needed in order to avoid the overlapping between measures and activities.

***The institution building assistance provided under the IPA Component I is a necessary complement to the Regional Development Component.*** The priority axes Capacity Building for the Management of EU funds under the Component I will assist the development of necessary structures and mechanisms for the future management and implementation of the assistance provided under the Regional and Development Component. In particular, financial assistance provided from the institution building components will be used to establish Decentralised management structures/agencies in the Ministry of Environment and Physical Planning and the Ministry of Transport and Communication, as key institutions responsible for the programming and implementation of assistance under the third and the fourth IPA Components.

Component I will support enhanced economic development and social cohesion through a capacity-building in the field of regional policy, facilitating implementation of national and regional development plans, and by introducing European standards into national legislation. In addition, it will provide training to municipalities' staff in infrastructure project preparation and supervision, ensuring development of sufficient decentralised capacities. On the other hand, the assistance under the Components III will contribute to economic and social development through enhancing the regional competitiveness of the country and reducing its regional disparities. This will be achieved by improvements in the transport, environment, social and rural infrastructure.

In the area of transport, under Component I, support will be given to reorganising and strengthening the public administration and institutions in the transport sector and to implementing the requirements regarding alignment with EU policies as provided under the European Partnership. It will also provide legislation alignment and the adoption of the transport *acquis*. On the other hand, Component III will support infrastructure investments in the transport sector that will strengthen integration and cohesion with the neighbouring countries and with the EU.

In the area of environmental protection under Component I, particular attention will be given to the strengthening of administrative capacities and to the incorporation of environmental protection requirements into other sectoral policies, e.g. through the development of environmental impact assessments, including compliance of agriculture and industry with the *acquis* in the environmental sector. Component III will also contribute to implementation of EU standards by supporting infrastructure investments in the environmental sector that will enhance the sustainable development of the country as a whole.

Environmental infrastructure development relates to the component III, while tariffs system, consolidation of the public utilities and strengthening and capacity building of the national authority shall be covered by the component I.

IPA Component I will also provide support to the programming process, in particular for ensuring smooth programming and the maintenance of high quality in delivering IPA funds. This type of assistance will allow project preparation to proceed in a quick and effective manner by supporting the preparation and early implementation of activities under the five IPA components.

**The *complementarity of Component III Regional Development with Component II Cross Border Cooperation*** is highly relevant as both Components contribute towards the achievement of a more balanced regional development. Although the Component II aims towards balanced regional development through a local focus and in a cross border context, as well as through the support of smaller local projects, its complementarity with the country's priorities under the Component III cannot be underestimated.

In this regard, given the limited financial allocations for the cross border programmes to be implemented in the framework of Component II, some of the projects that will be supported will be able to focus merely on small scale infrastructure activities (both environment and transport). Nevertheless, the successful realization of the objectives set in the cross border programmes of the IPA CBC Component will undoubtedly advance the swifter and more sustainable achievement of the two priority axes outlined in the OP on Regional Development: Improvement of Transport Infrastructure and Improvement of Environmental Infrastructure.

***Component III is complementary and synergic with Component IV*** related to economic development, employment growth, education and training. The principle of coherence and complementarity between interventions under Components III and IV will be taken into consideration, both at a strategic level and at the level of implementation of the two Components. Together, the two Components contribute towards increasing the competitiveness of the economy and at the same time addresses the social aspects of development. Investments in infrastructures (transport and environment) will increase living standards and social development, intensifying the business links and sustainable development. In addition, infrastructure construction and management will contribute towards increasing employment directly and indirectly.

Being landlocked, the development of the transport sector is important for the integration of the country and trade development with neighbouring countries. Furthermore the foreseen direct and indirect impact of the projects related to the Trans-European Transport Network, i.e. decreasing transportation costs, increasing accessibility, job creation etc. are crucial for future economic and social development. Component III and IV will together contribute significantly to mobilizing the local growth factors through improving the possibilities for employment generation and the quality of life in urban centres, connections centre - periphery and between centres themselves. Furthermore, they will stimulate inter-municipal co-operation in the process of realization of investment projects in local infrastructure.

Regarding the ***Complementarity with Component V***, the measures, which are proposed to be supported by IPARD, are targeted towards improvement of the efficiency of agricultural production on-farm, bringing it into compliance with the market requirements; to ensure the development of a competitive and efficient food processing industry; and provision of conditions for sustainable rural development to contribute to the socio-economic development of rural areas.

Development in rural areas is constrained by lack of basic infrastructure and services. Rural areas suffer from poverty, high unemployment and lack of alternative living sources to agriculture. The agricultural sector is also challenged by such environmental issues as agricultural land management and land preservation, treatment of agricultural and animal waste, water management, lack of proper irrigation systems and lack of training for farmers on environmental issues.

The development of the rural economy is closely linked to the connection with the urban centers and the provision of transport infrastructure. The quality of life in rural areas depends on the provision and quality of public services, health and education, public infrastructures such as water supply networks with access to clean water and sewerage systems. This implies to a strong correlation between the measures foreseen under Component V and Component III.

### **3.3.2. COMPLEMENTARITIES WITH OTHER PROGRAMMES SUPPORTED BY INTERNATIONAL FINANCIAL INSTITUTIONS (IFIs) OR OTHER RELEVANT EXTERNAL ASSISTANCE**

Apart of the IPA programme, there are a number of other donor activities aiming to support development of the transport sector as well as environment protection and improvement. IFI and bilateral financial assistance to the country is substantial. All major IFIs are present in the field, such as the World Bank as the country's largest creditor, the IMF with its multi-annual

Stand-By Arrangement, the EIB, the EBRD, the CEB etc. Clearly, IFIs and other donors' assistance has not only decisively contributed to stabilise and improve the political, economic and social situation in the country but has also complemented the EU association agenda, which is recognised by all members of the donor community. In addition, EU member states as well as other bilateral and multilateral donors also provide significant financial and technical support. Multilateral donor assistance has been provided mainly through EU (PHARE, CARDS) and UNDP. The support has been also provided by bilateral donors, such as Swiss Government, German Government (GTZ and KfW), Swedish Government (SIDA), Government of Japan (JICA), Austrian Government, Italian Government, PSO Programme of the Netherlands Government and other donors.

Cooperation and coordination with the international financial institutions is aimed at complementary financing of complex projects from many sources of funds. Recent example is the project "Completion of the highway, which as part of Corridor X", worth around EUR 150 million. Financing of this project is planned to be carried out as follows:

- World Bank loan for Tabanovce – Kumanovo section,
- Bilateral donation from Greece "Greek Plan for Reconstruction of the Balkans", for part Demir Kapija – Udovo – Smokvica section,
- IPA funds within component 3: regional development, for part Demir Kapija – Udovo – Smokvica section,
- IFI loan for part of Demir Kapija – Udovo – Smokvica section, and
- Co-financing from the national budget.

Having in mind that the transport sector is crucial for successful regional integration, the World Bank's assistance will be provided for the implementation of the second stage of the Trade and Transport Facilitation in Southeast Europe (TTFSE 2), thus enabling: improvement of the transport Corridor X by rehabilitating Tabanovce-Kumanovo part – 7 km; improvement of border crossing for railway transport; modernisation of the pay toll system and upgrading the facilities at Blace border crossing. In order to improve financial viability, productivity and effectiveness of railway operations in the country, the implementation of the Railways Reform Project will continue until 2009. This would be achieved through labour rationalization, separation of infrastructure from operations, increasing accountability for performance of the separated entities, introducing competition in rail operations, and restructuring and rationalization of passenger services.

The World Bank will continue its analytical work in the transport sector, through a Transport Sector Study (in 2009) to be followed by a new transport project, most likely focused on feeder roads, providing better access from the farmgate/local markets to the main transport Corridors.

Regarding road infrastructure, EIB and EBRD are the main financiers of the construction of the Skopje bypass as part of the Road Project 2, which also included the upgrading of the road between Smokvica and Gevgelija, being part of Corridor X. The project is expected to be completed during 2008.

Future cooperation with the European Investment Bank (EIB) will be aimed at road infrastructure, in particular Corridor sections (Demir Kapija – Udovo – Smokvica), in a form of co-financing through a loan. EIB has also expressed readiness, together with EBRD, to extend co-financing loan for modernization of Skopje airport, depending on the model of modernization to be determined by the Government and the financing needs.

The ongoing NATO Project for Rehabilitation and Improvement of the Road Network will be implemented by 2010 in two phases. Phase I: The rehabilitation of 30 bridges on the M3-between Skopje and Blace and also on E-75 between Katlanovo and Veles; Phase II: The rehabilitation of 30 bridges on E-75between Veles and Negotino.

In the Environment sector, before the IPA programme was in place there had been assistance from a number of multilateral and bilateral donors. The external support assisted to begin the process of transformation and development of society towards a more sustainable development, supporting improvements to the environment, in civil society and by support for equal opportunities.

In general, these projects were prepared through donor-funded assistance from IFIs, some of which had been undertaken through several phases. In contrast, some other projects were initially identified by the IPA programme in order to attract development and funding through then attracting international donors.

With IFI and other donors assistance being channelled into all possible areas the biggest challenges to the programming of EU financial assistance was and is to avoid overlaps and to ensure that different but related activities are aligned. In the past it proved to be rather difficult to obtain a clear and comprehensive picture of all donors' activities in the country, despite close cooperation with the donor community. Nonetheless, coordination has improved with initiatives taken by the beneficiary and the large stakeholders, including the Commission and the EAR, to enhance the exchange of information.

The focus of the coordination between IPA and other national programmes will be put on strengthening coordination mechanisms through:

- Capacities for monitoring, analysis and policy support, in particular:
  - data quality on foreign assistance, improved, analysed and widely disseminated in a coordinated manner
  - priority needs, as a basis for programming the foreign assistance, identified and formulated (analysis of the priority areas for donor assistance; gaps analysis);
  - mechanism for monitoring and evaluation in place (establishing thematic working groups linked to the work of the Joint Monitoring Committees established for monitoring purposes of the IPA funded projects);
- Coordination activities - Information necessary for formulating and/or adjusting projects identified and communicated with donors (organisation of thematic coordination meetings, follow-up technical meetings and round tables);
- Professional skills for effective coordination of foreign assistance. Training plan developed and trainings organized/delivered (training for the mid-level of civil servants in strategic planning and programming).

## 3.4 INDICATIVE LIST OF MAJOR PROJECTS

|   |  |   |                        |                                     |           |
|---|--|---|------------------------|-------------------------------------|-----------|
| <b>Project No: 1</b>  | <b>Priority Axis 1</b><br>Corridor X Motorway Completion   | <b>Measure No.: 1.1</b><br>Upgrading Remaining Link Along the Corridor X to the Level of Motorway |                        |                                     |           |
| <b>Project location:</b> Demir Kapija – Udovo – Smokvica              |  |   |                        |                                     |           |
| <b>1. Project name</b>  | <b>CONSTRUCTION OF NEW CARRIAGE WAY AND REHABILITATION OF THE SECTION DEMIR KAPIJA – UDOVO – SMOKVICA (CORRIDOR X)</b>   |   |                        |                                     |           |
| <b>2. Investment value (estimated)</b>                                | <b>151 MEUR</b>  |   |                        |                                     |           |
| <b>3. Description of main project components and/or activities</b>    | Construction of a completely new motorway section between Demir Kapija and Smokvica which follows the west bank of the Vardar River bypassing Udovo. The total length of this motorway section is 28,05km and the design speed is 110Km/h along the entire section.  |   |                        |                                     |           |
| <b>4. Description of main project objectives and expected results</b> | <p>The main project objectives are the following:</p> <ul style="list-style-type: none"> <li>- To facilitate international and transit movements of people and goods with the EU and its regional neighbours by completion of the national components of the Corridor X to the level of motorway</li> <li>- To facilitate the effective movement of persons and goods that supports improved living standards and socio-economic environment in the regions through completion of the national components of the Corridor X</li> <li>- To promote sustainable development especially through minimizing the adverse effects of transport on the environment and through improving transport safety</li> </ul> <p>The expected results are:</p> <ul style="list-style-type: none"> <li>- Increased capacity of the connections with neighbouring countries along the Corridor X</li> <li>- Accrual of benefits from vehicle operating costs reduction, time savings and accidents reduction.</li> </ul> |   |                        |                                     |           |
| <b>5. Month and year of start of project implementation</b>           | April 2008   | <b>6. Month and year of end of project implementation</b>   | December 2011          | <b>7. Project duration (months)</b> | 46 months |
| <b>8. Readiness of basic project documentation</b>                    |  |   |                        |                                     |           |
| <b>Document type</b>  | <b>status (tick box)</b>   | <b>status description</b>   | <b>completion date</b> |                                     |           |
| Feasibility study including cost-benefit analysis                     | <input checked="" type="checkbox"/>  | completed   | April 2007             |                                     |           |
| EIA study   | <input checked="" type="checkbox"/>  | completed   | April 2007             |                                     |           |
| Tender documents  | <input type="checkbox"/>   | in progress   | December 2007          |                                     |           |
| IPA Application   | <input type="checkbox"/>   | in progress   | December 2007          |                                     |           |
| <b>9. Status of project design documentation and permits</b>          |  |   |                        |                                     |           |
| <b>Document type</b>  | <b>status (tick box)</b>   | <b>status description</b>   | <b>completion date</b> |                                     |           |
| Preliminary design  | <input checked="" type="checkbox"/>  | completed   | April 2007             |                                     |           |
| Main design   | <input type="checkbox"/>   | in progress   | December 2007          |                                     |           |
| Final design  | <input type="checkbox"/>   | in progress   | December 2007          |                                     |           |
| Location Permit   | <input checked="" type="checkbox"/>  | completed   |                        |                                     |           |

|  |  |                             |                                   |
|--|--|-----------------------------|-----------------------------------|
| Building Permit  | <input type="checkbox"/>   | in progress                 | March 2008                        |
| Other-Contract   | <input type="checkbox"/>   | none                        | April 2008                        |
| <b>10. Description of the land ownership status:</b> in progress   |  |                             |                                   |
| <b>11. Describe current project status</b>   | Feasibility Study and the EIA completed. Main and Final Design to be finalized by December 2007  |                             |                                   |
| <b>12. Name of final beneficiary</b>   | Ministry of Transport and Communications & Fund for National and Regional Roads  | <b>13. Name of Operator</b> | Public Enterprise "Makedonijapat" |
| <b>14. Sources of financing:</b>   |  |                             |                                   |
| <b>National Component</b><br>(Sources from the State Budget and from the Fund for National and Regional Roads) | <b>IFI</b>   | <b>Other donors</b>         | <b>Proposed IPA grant</b>         |
| 19 MEUR  | 55 MEUR  | 50 MEUR                     | 27 MEUR                           |
| <b>15. Additional comments: Technical Assistance Strategic documents (plans, programmes, etc)</b>              | Technical assistance is already provided for preparation of the Feasibility Study, Main Design, Final Design and the IPA Application form. |                             |                                   |

|  |  |  |   |                                      |           |
|--|--|--|---|--------------------------------------|-----------|
| <b>Project No: 2</b>   | <b>Priority Axis 3</b><br>Improvement of Environment Infrastructure  |  | <b>Measure 3.1</b><br>Establishing wastewater collection and treatment infrastructure meeting the EC requirements |                                      |           |
| <b>Project location:</b> Municipality of Prilep,                       |  |  |   |                                      |           |
| <b>16. Project name</b>  | <b>CONSTRUCTION OF THE WASTE WATER COLLECTION AND TREATMENT SYSTEM FOR MUNICIPALITY OF PRILEP</b>  |  |   |                                      |           |
| <b>17. Investment value (estimated)</b>                                | <b>13 MEUR</b>   |  |   |                                      |           |
| <b>18. Description of main project components and/or activities</b>    | <p>The main project activities</p> <ul style="list-style-type: none"> <li>- upgrading of existing sewerage system</li> <li>- extension of sewerage system where the network is missing to cover approx. 95 000 inhabitants in total</li> <li>- construction of new waste water treatment plant of capacity 115 000 PE meeting the EU standards on quality of discharged waters to recipients.</li> </ul>                                       |  |   |                                      |           |
| <b>19. Description of main project objectives and expected results</b> | <p>The main objective of the project is to prevent pollution of surface and underground waters, reduce the risk of illnesses due to untreated water and improve the services and quality of life of almost one hundred thousand population of Prilep.</p> <p>The expected results:<br/>95 thousand inhabitants of Prilep connected to reliable sewerage system where wastewater is threaded at WWTP meeting the EU parameters on effluent.</p> |  |   |                                      |           |
| <b>20. Month and year of start of project implementation</b>           | July 2010  | <b>21. Month and year of end of project implementation</b> | December 2012   | <b>22. Project duration (months)</b> | 30 months |
| <b>23. Readiness of basic project documentation</b>                    |  |  |   |                                      |           |
| <b>Document type</b>   | <b>status (tick box)</b>   | <b>status description</b>                                  | <b>completion date</b>  |                                      |           |
| Water Master Plan  | <input checked="" type="checkbox"/>  | completed  | Aug. 2007   |                                      |           |
| Feasibility study including cost-benefit analysis                      | <input type="checkbox"/>   | in progress  | Jan. 2008   |                                      |           |
| EIA study  | <input type="checkbox"/>   | in progress  | Feb. 2008   |                                      |           |
| Operations and Maintenance Plan  | <input type="checkbox"/>   | in progress  | Feb. 2008   |                                      |           |
| Procurement Strategy   | <input type="checkbox"/>   | in progress  | Feb. 2008   |                                      |           |
| Waste Water Collection System feasibility study                        | <input type="checkbox"/>   | in progress  | Mar. 2008   |                                      |           |
| Waste water treatment plant feasibility study (FIDIC Yellow Book)      | <input type="checkbox"/>   | in progress  | Mar. 2008   |                                      |           |
| Sewerage Network rehabilitation and extension (FIDIC Red Book)         | <input type="checkbox"/>   | in progress  | Mar. 2008   |                                      |           |
| IPA Application  | <input type="checkbox"/>   | in progress  | Jun. 2008   |                                      |           |
| <b>24. Status of project design documentation and permits</b>          |  |  |   |                                      |           |
| <b>Document type</b>   | <b>status (tick box)</b>   | <b>status description</b>                                  | <b>completion date</b>  |                                      |           |
| Preliminary design   | <input type="checkbox"/>   | in progress  | Mar. '08  |                                      |           |
| Main design  | <input type="checkbox"/>   | none   | Dec. '08  |                                      |           |



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|   |  |                             |   |
|---|--|-----------------------------|---|
| Final design  | <input type="checkbox"/>   | none                        | Oct. '09  |
| Location Permit   | <input type="checkbox"/>   | none                        | Jun.'10   |
| Building Permit   | <input type="checkbox"/>   | none                        | Jun.'10   |
| Other-Contract  | <input type="checkbox"/>   | none                        | July. 10  |
| <b>25. Description of the land ownership status:</b> In phase of solving                          |  |                             |   |
| <b>26. Describe current project status</b>  | Master plan completed and Feasibility Study under the preparation (to be finalized by mid of 2008)   |                             |   |
| <b>27. Name of final beneficiary</b>  | Ministry of Environment and Physical Planning  | <b>28. Name of Operator</b> | Public Utility company for Water and Sewerage ViK |
| <b>29. Sources of financing:</b>  |  |                             |   |
| <b>National Component</b>   | <b>IFI</b>   | <b>Other donors</b>         | <b>Proposed IPA grant</b>                         |
| 2 MEUR  | -  | 5 MEUR                      | 6 MEUR  |
| <b>30. Additional comments: Technical Assistance Strategic documents (plans, programmes, etc)</b> | Ultimate construction contract <i>anticipated</i> value:<br>- Waste water treatment Plant (FIDIC Yellow Book) -9 million Euro;<br>- Sewerage Network rehabilitation and extension (FIDIC Red Book) - 4 million Euro.<br><br>Technical Assistance will be provided for completing application for funding |                             |   |

## 4. FINANCIAL TABLES

*\*The National Public Contribution includes foreign financial sources and sources from the state budget*

| Year 2007                   | Total Public Expenditure (€) | Public Expenditure (€)               |                                       | IPA co-financing rate (%) | For Information Other (IFI,etc) (€) |
|-----------------------------|------------------------------|--------------------------------------|---------------------------------------|---------------------------|-------------------------------------|
|                             | (1)=(2)+(3)                  | Community Contribution (IPA) (€) (2) | National Public Contribution (€) (3)* |                           |                                     |
| <b>Priority Axis 1</b>      | <b>11.129.600</b>            | <b>5.008.320</b>                     | <b>6.121.280</b>                      | <b>45%</b>                |                                     |
| Measure 1.1                 | 11.129.600                   | 5.008.320                            | 6.121.280                             | 45%                       |                                     |
| <b>Priority Axis 2</b>      | <b>741.974</b>               | <b>556.480</b>                       | <b>185.494</b>                        | <b>75%</b>                |                                     |
| Measure 2.1                 | 519.382                      | 389.536                              | 129.846                               | 75%                       |                                     |
| Measure 2.2                 | 222.592                      | 166.944                              | 55.648                                | 75%                       |                                     |
| <b>Priority Axis 3</b>      | <b>1.854.934</b>             | <b>1.391.200</b>                     | <b>463.734</b>                        | <b>75%</b>                |                                     |
| Measure 3.1                 | 1.483.947                    | 1.112.960                            | 370.987                               | 75%                       |                                     |
| Measure 3.2                 | 370.987                      | 278.240                              | 92.747                                | 75%                       |                                     |
| <b>Technical Assistance</b> | <b>592.000</b>               | <b>444.000</b>                       | <b>148.000</b>                        | <b>75%</b>                |                                     |
| Measure 4.1                 | 118.400                      | 88.800                               | 29.600                                | 75%                       |                                     |
| Measure 4.2                 | 88.800                       | 66.600                               | 22.200                                | 75%                       |                                     |
| Measure 4.3                 | 384.800                      | 288.600                              | 96.200                                | 75%                       |                                     |
| <b>Total Year 2007</b>      | <b>14.318.508</b>            | <b>7.400.000</b>                     | <b>6.918.508</b>                      | <b>52%</b>                |                                     |

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| Year 2008                   | Total Public Expenditure (€)<br>(1)=(2)+(3) | Public Expenditure (€)                  |  | IPA co-financing rate (%)<br>(4)=(2)/(1) | For Information<br>Other (IFI,etc)<br>(€)<br>(5) |
|-----------------------------|---|---|--|--|--|
|                             |   | Community Contribution (IPA) (€)<br>(2) | National Public Contribution* (€)<br>(3) |  |  |
| <i>Priority Axis 1</i>      | 18.499.200                                  | 8.324.640                               | 10.174.560                               | 45%                                      |  |
| Measure 1.1                 | 18.499.200                                  | 8.324.640                               | 10.174.560                               | 45%                                      |  |
| <i>Priority Axis 2</i>      | 1.233.280                                   | 924.960                                 | 308.320                                  | 75%                                      |  |
| Measure 2.1                 | 863.296                                     | 647.472                                 | 215.824                                  | 75%                                      |  |
| Measure 2.2                 | 369.984                                     | 277.488                                 | 92.496                                   | 75%                                      |  |
| <i>Priority Axis 3</i>      | 3.083.200                                   | 2.312.400                               | 770.800                                  | 75%                                      |  |
| Measure 3.1                 | 2.466.560                                   | 1.849.920                               | 616.640                                  | 75%                                      |  |
| Measure 3.2                 | 616.640                                     | 462.480                                 | 154.160                                  | 75%                                      |  |
| <i>Technical Assistance</i> | 984.000                                     | 738.000                                 | 246.000                                  | 75%                                      |  |
| Measure 4.1                 | 196.800                                     | 147.600                                 | 49.200                                   | 75%                                      |  |
| Measure 4.2                 | 147.600                                     | 110.700                                 | 36.900                                   | 75%                                      |  |
| Measure 4.3                 | 639.600                                     | 479.700                                 | 159.900                                  | 75%                                      |  |
| <i>Total Year 2008</i>      | 23.799.680                                  | 12.300.000                              | 11.499.680                               | 52%                                      |  |

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| Year 2009                   | Total Public Expenditure (€)<br>(1)=(2)+(3) | Public Expenditure (€)                     |  | IPA co-financing rate (%)<br>(4)=(2)/(1) | For Information<br>Other (IFI,etc)<br>(€)<br>(5) |
|-----------------------------|---|--|--|--|--|
|                             |   | Community Contribution (IPA)<br>(€)<br>(2) | National Public Contribution *<br>(€)<br>(3) |  |  |
| <i>Priority Axis 1</i>      | 31.283.200                                  | 14.077.440                                 | 17.205.760                                   | 45%                                      |  |
| Measure 1.1                 | 31.283.200                                  | 14.077.440                                 | 17.205.760                                   | 45%                                      |  |
| <i>Priority Axis 2</i>      | 2.085.547                                   | 1.564.160                                  | 521.387                                      | 75%                                      |  |
| Measure 2.1                 | 1.459.883                                   | 1.094.912                                  | 364.971                                      | 75%                                      |  |
| Measure 2.2                 | 625.664                                     | 469.248                                    | 156.416                                      | 75%                                      |  |
| <i>Priority Axis 3</i>      | 5.213.868                                   | 3.910.400                                  | 1.303.468                                    | 75%                                      |  |
| Measure 3.1                 | 4.171.094                                   | 3.128.320                                  | 1.042.774                                    | 75%                                      |  |
| Measure 3.2                 | 1.042.774                                   | 782.080                                    | 260.694                                      | 75%                                      |  |
| <i>Technical Assistance</i> | 1.664.000                                   | 1.248.000                                  | 416.000                                      | 75%                                      |  |
| Measure 4.1                 | 332.800                                     | 249.600                                    | 83.200                                       | 75%                                      |  |
| Measure 4.2                 | 249.600                                     | 187.200                                    | 62.400                                       | 75%                                      |  |
| Measure 4.3                 | 1.081.600                                   | 811.200                                    | 270.400                                      | 75%                                      |  |
| <b>Total Year 2009</b>      | <b>40.246.615</b>                           | <b>20.800.000</b>                          | <b>19.446.615</b>                            | <b>52%</b>                               |  |

| Years<br>2007-2009              | Total<br>Public<br>Expenditure<br>(€)<br><br>(1)=(2)+(3) | Public Expenditure (€)                           |  | IPA co-<br>financing rate<br>(%)<br><br>(4)=(2)/(1) | For<br>Information<br>Other (IFI,etc)<br>(€)<br>(5) |
|---------------------------------|--|--|--|---|---|
|                                 |  | Community<br>Contribution<br>(IPA)<br>(€)<br>(2) | National Public<br>Contribution*<br>(€)<br>(3) |   |   |
| <i>Priority Axis 1</i>          | 60.912.000   | 27.410.400                                       | 33.501.600                                     | 45%   |   |
| Measure 1.1                     | 60.912.000   | 27.410.400                                       | 33.501.600                                     | 45%   |   |
| <i>Priority Axis 2</i>          | 4.060.801  | 3.045.600  | 1.015.201                                      | 75%   |   |
| Measure 2.1                     | 2.842.561  | 2.131.920  | 710.641  | 75%   |   |
| Measure 2.2                     | 1.218.240  | 913.680  | 304.560  | 75%   |   |
| <i>Priority Axis 3</i>          | 10.152.002   | 7.614.000  | 2.538.002                                      | 75%   |   |
| Measure 3.1                     | 8.121.601  | 6.091.200  | 2.030.401                                      | 75%   |   |
| Measure 3.2                     | 2.030.401  | 1.522.800  | 507.601  | 75%   |   |
| <i>Technical Assistance</i>     | 3.240.000  | 2.430.000  | 810.000  | 75%   |   |
| Measure 4.1                     | 648.000  | 486.000  | 162.000  | 75%   |   |
| Measure 4.2                     | 486.000  | 364.500  | 121.500  | 75%   |   |
| Measure 4.3                     | 2.106.000  | 1.579.500  | 526.500  | 75%   |   |
| <i>Total Year<br/>2007-2009</i> | 78.364.803   | 40.500.000                                       | 37.864.803                                     | 52%   |   |

## 5. IMPLEMENTATION PROVISIONS

*This chapter of the operational programme describes the systems and arrangements in place as they are known at the time of the drafting of the operational programme. However, a number of critical decisions regarding structures and responsibilities as well as management and information systems will be taken in the context of the accreditation for conferral of decentralised management, which follows a different timing from the adoption of the operational programme. To this end, the Framework Agreement, as well as the Financing Agreement to be signed after conferral of decentralised management, will set out detailed provisions regarding management and control systems. The provisions in this chapter must therefore be understood as subject to latter adaptations by the applicable provisions of these agreements, where required.*

### 5.1 MANAGEMENT AND CONTROL STRUCTURES

#### 5.1.1 BODIES AND AUTHORITIES

In the implementation of assistance under the IPA regulations, the European Commission may authorise the management of certain actions on the beneficiary country, while retaining overall final responsibility for general budget execution. This decentralised management encompasses as a minimum tendering, contracting and payments for Regional Development and Human Resources Development Components of the IPA.

In order to meet the conditions for conferral of the management powers by the Commission, relating to a component, a programme or a measure, the national Authorities established management and control systems, and launched the process of accreditation of the National Authorising Officer (NAO), National Fund and of the operating structure.

To fulfil its obligations under this arrangement, the Government on its session held on 11.02.2007 adopted a Decision for designation of the following bodies and authorities:

- National IPA Co-ordinator,
- Strategic Co-ordinator for components III and IV,
- Competent Accrediting Officer,
- National Authorising Officer,
- National Fund,
- Operating Structure by IPA component or programme,
- Audit Authority.

#### 5.1.1.1 Operating Structure (OS)

##### Functions

The Operational Programme for Regional Development component of IPA will be managed by the Operating Structure, which in compliance with Article 28 of the IPA Implementing Regulation will be responsible for the following functions:

- a. drafting the annual or multi-annual programmes;
- b. programme monitoring and guiding the work of the sectoral monitoring committee as defined in Article 59 of the IPA Implementing Regulation, notably by providing the documents necessary for monitoring the quality of implementation of the programmes;

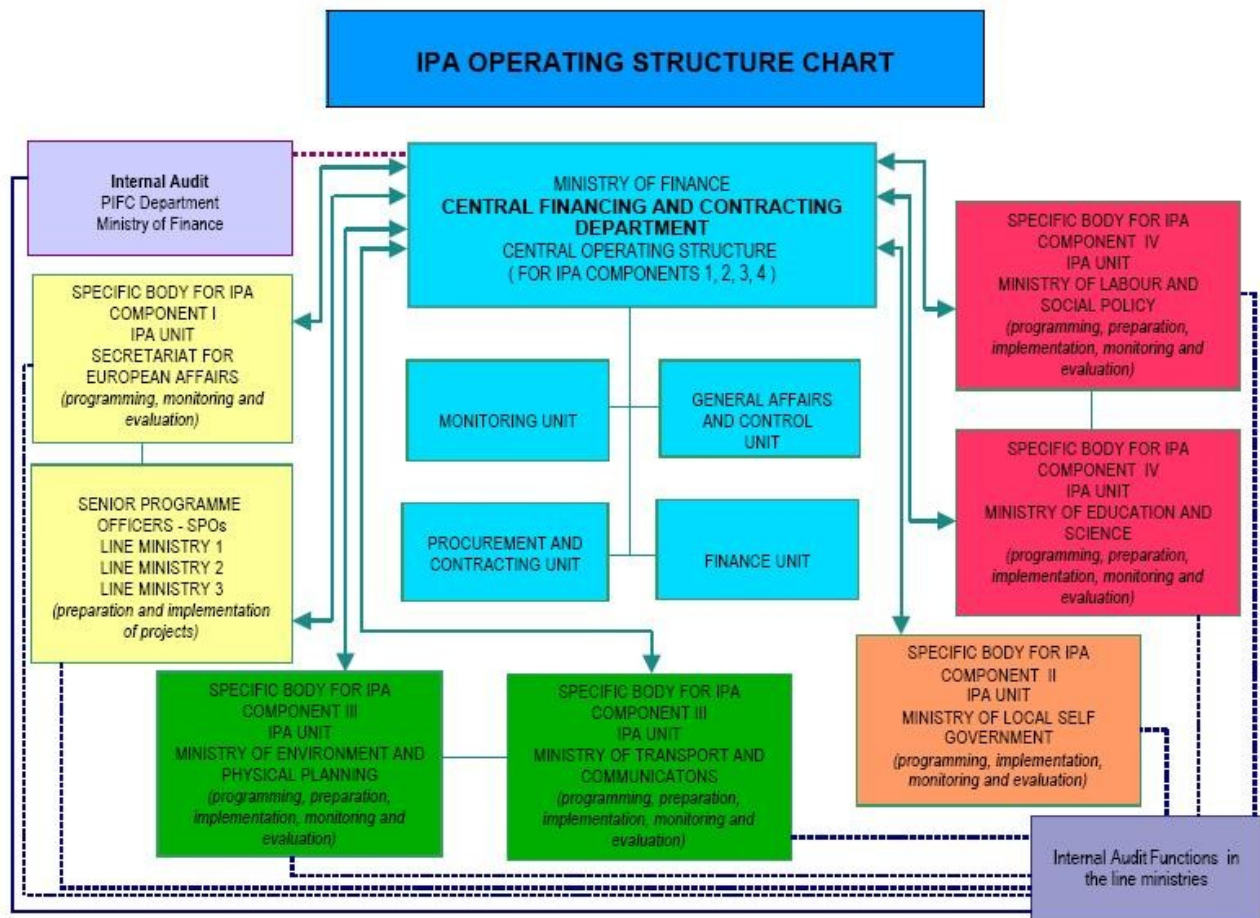
- c. drawing up the sectoral annual and final implementation reports defined in Article 61(1) of the IPA Implementing Regulation and, after their examination by the sectoral monitoring committee, submitting them to the Commission, to the national IPA coordinator and to the national authorising officer;
- d. ensuring that operations are selected for funding and approved in accordance with the criteria and mechanisms applicable to the programmes, and that they comply with the relevant Community and national rules;
- e. setting up procedures to ensure the retention of all documents required to ensure an adequate audit trail, in accordance with Article 20 of the IPA Implementing Regulation;
- f. arranging for tendering procedures, grant award procedures, the ensuing contracting, and making payments to, and recovery from, the final beneficiary;
- g. ensuring that all bodies involved in the implementation of operations maintain a separate accounting system or a separate accounting codification;
- h. ensuring that the national fund and the national authorising officer receive all necessary information on the procedures and verifications carried out in relation to expenditure;
- i. setting up, maintaining and updating the reporting and information system;
- j. carrying out verifications to ensure that the expenditure declared has actually been incurred in accordance with applicable rules, the products or services have been delivered in accordance with the approval decision, and the payment requests by the final beneficiary are correct. These verifications shall cover administrative, financial, technical and physical aspects of operations, as appropriate;
- k. ensuring internal audit of its different constituting bodies;
- l. ensuring irregularity reporting;
- m. ensuring compliance with the information and publicity requirements.

### **Composition**

The Operating Structure will be composed by the following bodies:

- Central Finance and Contracting Department
- Ministry of Transport and Communications and Ministry of Environment and Physical Planning, acting as a specific bodies

Illustration 9 – Schematic of the IPA Operating Structure Chart



The heads of the bodies are the following:

- Head of CFCD , Ministry of Finance, Dame Gruev str. 14 Skopje,
- Head of the EU Department, Ministry of Transport and Communications, Crvena Skopska Opstina 4, Skopje,
- Head of Department for Cooperation and Project Coordination, Ministry of Environment and Physical Planning, Drezdenska 52, Skopje

The Head of CFCD , Ministry of Finance will act as the Head of Operating Structure in the meaning of Article 167 (3) of the IPA Implementing Regulation..

**Distribution of functions**

The Central Finance and Contracting Department will be responsible for the following functions:

- drafting the annual or multi-annual programmes;
- monitoring programme implementation and guiding the work of the sectoral monitoring committee as defined in Article 59 of the IPA Implementing Regulation , notably by providing the documents necessary for monitoring the quality of implementation of the programmes;



- drawing up the sectoral annual and final implementation reports defined in Article 61(1) of the IPA Implementing Regulation and, after their examination by the sectoral monitoring committee, submitting them to the Commission, to the national IPA coordinator and to the national authorising officer;
- preparation and submission of Major Projects to the National IPA Coordinator.
- ensuring that operations are selected for funding and approved in accordance with the criteria and mechanisms applicable to the programmes, and that they comply with the relevant Community and national rules;
- setting up procedures to ensure the retention of all documents required to ensure an adequate audit trail, in accordance with Article 20 of the IPA Implementing Regulation;
- arranging for tendering procedures, grant award procedures, the ensuing contracting, and making payments to, and recovery from, the final beneficiary;
- ensuring that all bodies involved in the implementation of operations maintain a separate accounting system or a separate accounting codification;
- ensuring that the national fund and the national authorising officer receive all necessary information on the procedures and verifications carried out in relation to expenditure;
- setting up, maintaining and updating the reporting and information system;
- carrying out verifications to ensure that the expenditure declared has actually been incurred in accordance with applicable rules, the products or services have been delivered in accordance with the approval decision, and the payment requests by the final beneficiary are correct. These verifications shall cover administrative, financial, technical and physical aspects of operations, as appropriate;
- ensuring internal audit of its different constituting bodies;
- ensuring irregularity reporting;
- ensuring compliance with the information and publicity requirements.

These functions will be performed in close coordination with the Ministry of Transport and communications and with the Ministry of Environment and Physical Planning regarding the implementation of the priorities and measures within their technical responsibilities

### **Separation of functions**

In accordance with the Article 21.2 of the IPA Implementing Regulation and with the Operational Agreements signed between the Head of the Operating Structure and the Head of the EU Department within the Ministry of Transport and Communications /Head of Department for Cooperation and Project Coordination within the Ministry of Environment and Physical Planning, (to be signed in September 2007), the appropriate segregation of duties will be ensured between and within the designated bodies.

### **Separation of functions between the bodies**

The separation of functions results from a division of tasks as described above.

This includes the following principles:

- there shall be a clear separation between verifications, controls, and evaluations to be carried out by the Operating Structures and by the National Fund;
- there shall be clear separation between the audits carried out by the Audit Authority and the implementation and payment procedures.

### **Separation of functions within the bodies**

The organizational structure of the bodies and their internal management and control procedures will take into account an adequate separation of functions. This includes the following principles:

- before an operation is authorized, the operational and financial aspects shall be verified by members of staff other than the one responsible for initiation or implementation of the operation;
- certificates of statement of expenditure shall be drawn up by the National Fund that is functionally independent from any services that approve claims;
- the initiation, the ex-ante, and the ex-post controls are separate functions, to be carried out by different persons, functionally independent from each other.

## **5.2 MONITORING AND EVALUATION**

### **5.2.1. MONITORING ARRANGEMENTS**

#### **5.2.1.1 Monitoring Committees**

In order to ensure coherence and coordination in the implementation of the IPA components, programmes and operations as well as to follow the progress in the implementation of IPA assistance, the following monitoring committees will be established:

- IPA Monitoring Committee
- Sectoral Monitoring Committees attached to components or programmes

#### **IPA Monitoring Committee**

An IPA Monitoring Committee will be established to ensure coherence and coordination in the implementation of all five Components of IPA.

#### **Sectoral Monitoring Committee**

The Head of the Operating Structure will establish a Sectoral Monitoring Committee within 6 months after the entry into force of the IPA Implementing Regulation.

The Sectoral Monitoring Committee will be co-chaired by the Head of the Operating Structure and a representative of the Commission. Its member will include:

- The National IPA Coordinator or his/her representative;
- A representative of the Commission, Strategic Coordinator for Components III and IV or his/her representative;
- Representatives of each body of the operating structure for the programme: representatives of the Monitoring Unit within the CFCD, Ministry of Transport and Communications, Ministry of Environment and Physical Planning, Secretariat for European Affairs;
- The Sectoral Monitoring Committee includes representatives from the civil society and socio-economic partners, regional or national organisations with an interest in and contribution to make to the effective implementation of the programme;
- The National Authorising Officer;
- A representative of the National Fund;

The composition of the Sectoral Monitoring Committee can be reviewed and extended by the Head of the Operating Structure in agreement with the Commission in order to guarantee sufficient representation and membership.

The Sectoral Monitoring Committee will be assisted by a permanent secretariat provided by the Operating Structure as a body for overall coordination of the implementation of the programme.

The Sectoral Monitoring Committee will report to the IPA Monitoring Committee. Its tasks will include to:

- a. consider and approve the general criteria for selecting the operations and approve any revision of those criteria in accordance with programming needs;
- b. review at each meeting progress towards achieving the specific targets of the operational programme on the basis of documents submitted by the operating structure;
- c. examine at each meeting the results of implementation, particularly the achievement of the targets set for each priority axis and measures and interim evaluations, it shall carry out this monitoring by reference to the indicators agreed;
- d. examine the sectoral annual and final reports on implementation, including OP summary tables;
- e. be informed of the annual audit activity report or of the part of the report referring to the operational programme;
- f. examine any proposal to amend the financing agreement of the programme and propose to the operating structure any revision or examination of the programme likely to make possible the attainment of the programme's objectives or to improve its management, including its financial management, as well as to oversee the cross cutting themes and publicity measures.

The Sectoral Monitoring Committee shall confirm or make proposals to the Head of the Operating Structure, to the Commission, the Strategic Co-ordinator and the National IPA Co-ordinator to revise the programme following where relevant an evaluation, including the results, output and financial indicators to be used to monitor the assistance.

The Sectoral Monitoring Committee will set up its rules of procedure in agreement with the Operating Structure and the IPA Monitoring Committee. It will meet at least twice a year and upon request by the Commission. Intermediate meetings may also be convened as required.

#### **5.2.1.2 Management Information System**

The Head of the Operating Structure is responsible for the efficiency and correctness of management and implementation and in particular for setting up, maintaining and updating regularly a reporting and information system to gather reliable financial and statistical information on implementation, for the monitoring indicators and for evaluation and for forwarding this data in accordance with arrangements agreed between the NIPAC and the Commission.

This system will be developed into one or several computerised system(s), in a form chosen by the Operating Structure, which will enable to:

- monitor and manage the implementation of operations and projects, from the moment of tendering and call for proposal to the closure of the OP, in particular results whenever feasible and outputs;
- carry out and monitor financial transactions;
- ensure the reporting requirements on the implementation of the OP.

The Operating Structure and all other bodies involved in the implementation of the OP shall if possible have access to this system.

### **5.2.1.3 Monitoring System and Indicators**

The quantitative and qualitative progress made in implementing the programme as well as its efficiency and effectiveness in relation to its objectives will be measured by the use of evaluation and monitoring indicators related to the results and outputs of the individual measures.

In identifying appropriate monitoring and evaluation indicators, account has been taken of the methodologies, guidelines and lists of examples of indicators issued by the Commission, in particular the "Indicative guidelines on evaluation methods: Monitoring and evaluation indicators" (August 2006, working document No. 2 for the programming period 2007-2013).

The Heads of the IPA Units within the Ministry of Transport and Communications and the Ministry of Environment and Physical Planning will be responsible for programme monitoring. In this context, these Units will collect performance data (outputs, results and expenditure) from operations and projects. They will establish, maintain and update the reporting and information system by taking this project-level data and aggregate it to measure, priority axis and whole OP levels. Data on individuals who are the ultimate beneficiaries must be collected for each project and used for aggregation at measure and priority level. On this basis the IPA Units within the Ministry of Transport and Communications and the Ministry of Environment and Physical Planning will assess the progress of the OP at each level against objectives and targets, prepare reports to the Sectoral Monitoring Committee, draft the sectoral annual and final reports on implementation and to launch interim evaluations if required.

In the context of monitoring and for the purpose of using indicators, the role of the IPA Units within the Ministry of Transport and Communications and the Ministry of Environment and Physical Planning will also be to ensure that:

- a. monitoring requirements are built into the calls for tender and proposals documents (application forms and guidelines for applicants);
- b. project applications (when appraised and selected) include proposed outputs and results, as well as data on individuals, that are consistent with the OP indicators for the appropriate measure;
- c. provision of data is built into the contract with beneficiaries as an obligation, and that performance data is provided systematically and in a timely manner by beneficiaries alongside the project reimbursement claim.

The sectoral annual and final reports on implementation will provide information on the use of expenditure according to the above categories.

### **5.2.1.4 Selection of operations**

All operations which are not major projects and which are implemented by final beneficiaries other than national public bodies shall be selected through calls for proposals.

The Central Finance and Contracting Department will set up a selection committee for each call for proposals launched for the selection of operations financed under a specific measure. The selection committee will appraise project applications in compliance with the selection criteria and methodologies agreed by the Sectoral Monitoring Committees and published in the call for proposals documents. The applications will first be screened for their compliance with eligibility and administrative criteria meeting the relevant eligibility requirements set out in the relevant measures (completeness, accuracy, etc) and thereafter will be evaluated according to their quality. The selection committee will then make recommendations to the operating structure, in compliance with Article 158 of the IPA Implementing Regulation. Members of the Selection Committee should be the most appropriate officials and experts with technical competence to undertake a qualitative appraisal of project applications.

#### **5.2.1.5 Sectoral Annual and Final Reports on Implementation**

Sectoral annual and final reports on implementation will be prepared by the IPA Units within the Ministry of Transport and Communications and the Ministry of Environment and Physical Planning in accordance with article 169 of the IPA Implementing Regulation. These reports will assess the implementation progress covering the attainment of set objectives, the problems encountered in managing the programme and the measures taken, the financial execution as well as monitoring and evaluation activities carried out. For Component III programmes this will include specific progress reports on each major project, in accordance with the format to be agreed with the Commission. They will be discussed at least at the second Sectoral Monitoring Committee meeting of each year.

#### **5.2.2. EVALUATION ARRANGEMENTS**

Evaluations are a tool for assessing the relevance, efficiency and effectiveness of the financial assistance as well as the impact and sustainability of the expected results. As a minimum, an ex ante evaluation and an interim evaluations will be carried out under the responsibility of the Head of the IPA Units within the Ministry of Transport and Communications and the Ministry of Environment and Physical Planning in accordance with the principles laid down in the IPA Implementing Regulation and guidance provided by the Commission.

**The evaluation arrangements and activities of each programme will fully respect the principle of proportionality.**

Types of evaluations:

##### **5.2.2.1 Ex ante Evaluation**

With technical assistance provided by the European Agency for Reconstruction, an ex ante evaluation of the Operational Programme for Regional Development, has been carried out and is annexed to the programme. A summary of the results of the ex-ante evaluation and the way the evaluation was conducted is set out in section 1.5.

### **5.2.2.2 Interim Evaluation**

During the implementation of the programme, interim evaluations complementing the monitoring of the Operational Programme for Regional Development will be carried out, in particular where this monitoring reveals a significant departure from the goals initially set or where proposals are made for the revision of the programme. At any rate, evaluations should be planned to provide data on indicators agreed upon in the OP that cannot be obtained through the monitoring system. In addition, strategic evaluations or thematic evaluations can be carried out under the responsibility of the IPA Units within the Ministry of Transport and Communications and the Ministry of Environment and Physical Planning, as specific bodies within the operating structure. The results will be sent to the ad-hoc committee on evaluations, to the Sectoral Monitoring Committee and to the Commission.

### **5.2.2.3 Evaluation Function**

The Heads of the IPA Units within the Ministry of Transport and Communications and the Ministry of Environment and Physical Planning are responsible for ensuring that adequate evaluations of the operational programme are carried out. The evaluations will be carried out by experts or bodies, internal or external, functionally independent from the management and control system.

Since the operating structure is in the process of building its capacity, for the beginning, at least for the first three years, the evaluation will be performed by outsourced experts. Having in mind the importance of developing “in house” evaluation capacity, the operating structure will work on building its capacities throughout trainings and TA, in order to ensure a proper managing of IPA assistance.

Regarding the evaluation system, at the moment one can not be foreseen, since this activity will be outsourced. The system will be developed by the evaluators engaged, having in mind that the methodology of performing evaluation or the evaluation system proposed will be a main criteria when selecting the evaluators to be engaged.

### **5.2.2.4 Evaluation Committee**

The Sectoral Monitoring Committee should designate an ad-hoc committee to assist the operating structure in its evaluation activities. The committee members should be experts in evaluation, and, for the component III programmes, in the transport and environment sector. The assistance should take place at all stages of the evaluation (guidance, planning, implementation, communication of results...). Relevant stakeholders should be able to contribute as well.

In undertaking the evaluation tasks, the Sectoral Monitoring Committee, when necessary, will establish an Evaluation Committee. Since the committee members should be experts in evaluation for the component III programmes, they will be engaged in two ways:

- by establishing framework contract for carrying out interim evaluations of an Operational Programme by independent evaluators, covering the entire programming period or its major part, or
- by stipulating single contracts for specific evaluations to be carried out.

### **5.2.2.5 Evaluation Activities and Timing**

According to the IPA Implementing Regulation there are two specific cases in which evaluation will be carried out:

- where the monitoring of the Operational Programme for the RD Component reveals a significant departure from the goals initially set (Article 166(2))
- when revision of the OP is proposed in the following cases: following significant socio-economic changes; in order to take greater or different account of Community or national priorities; following the annual revision of the MIPD and following implementation difficulties (Article 156 (1)).

## **5.3 INFORMATION AND PUBLICITY**

### **5.3.1. INTRODUCTION**

Information and publicity are important aspects of pre-accession assistance and in particular to the successful design and delivery of the operational programmes, given the partnership basis on which they are undertaken. Communicating for a successful management and implementation of the operational programmes can be broken down into a series of information and publicity activities.

Accordingly, article 62 of the IPA Implementing Regulation sets out certain requirements regarding the information to be provided and publicity of programmes and operations financed by the Community, addressed to citizens and beneficiaries with the aim of highlighting the role of Community funding and ensuring transparency.

The information to be provided by the operating structures should include inter alia the publication of the list of final beneficiaries, the names of the operations and the amount of Community funding allocated to operations. The Commission must also ensure the publication of the relevant information on tenders and contracts in the official Journal of the European Union and other relevant media and websites.

Article 63 of the IPA Implementing Regulation provides further that the Commission and the relevant authorities of the beneficiary country shall agree on a coherent set of activities, to be funded from the TA priority of the operational programme, to make available and publicise information about IPA assistance.

In accordance with the above provisions the Ministry of Finance, Central Contracting and Finance Department shall be responsible for the information and publicity activities under the programme. The information shall be addressed to national citizens and to European citizens in general, and to the (potential) beneficiaries. It shall aim to highlight the role of the Community and ensure that IPA assistance is transparent.

### **5.3.2. REQUIREMENTS**

In compliance with Article 63 of the IPA Implementing Regulation the CFCD in the Ministry of Finance, within its organizational structure has foreseen an Information and Publicity Officer (to be recruited), who shall prepare a communication action plan (CP) to provide a strategic coherence to the set of activities to publicise information about IPA assistance. This

communication action plan shall cover the entire period 2007-2013. The Information and Publicity Officer will submit a draft of the communication action plan to the Commission within four months of the date of signature of the Financing Agreement covering the operational programme. As a minimum the communication action plan shall include the following points:

- The aims and target groups
- The strategy and content
- The indicative budget
- The administrative departments
- The criteria used for evaluation

### **5.3.3. ACTIVITIES**

The Information and Publicity Officer shall ensure that the information and publicity measures are implemented in accordance with the communication action plan aiming at the broadest possible media coverage using all suitable forms and methods of communication at the appropriate territorial level. The Information and Publicity Officer will be responsible for organising at least the following information and publicity measures:

- a major information activity publicizing the launch of an operational programme, even in the absence of the final version of the communication action plan;
- at least one major information activity a year, as set out in the communication action plan, presenting the achievements of the operational programme including major projects;
- the publication (electronically or otherwise) of the list of beneficiaries, the names of the operations and the amount of Community and national funding allocated to the operations

The Information and Publicity Officer shall provide potential beneficiaries with clear and detailed information on at least the following:

- the possibility of financing opportunities offered jointly by the Community and the beneficiary country through the OP;
- the conditions of eligibility to be met in order to qualify for financing under the operational programme;
- a description of the procedures for examining applications for funding and of the time periods involved;
- the criteria for selecting the operations to be financed;
- the contacts at national, regional or local level that can provide information on the operational programmes.

### **5.3.4. INDICATIVE BUDGET**

The indicative budget for the communication action plan for the period 2007-2009 will be allocated from the TA budget, to cover the costs for the publicity and information measures. The budget allocation per years as well as the indicative amounts necessary for the period 2010-2013 will be presented in the communication action plan.



### **5.3.5. MANAGEMENT AND IMPLEMENTATION**

Within the Ministry of Finance, in the Central Finance and Contracting Department, Information and Communications will be assigned to the Information and Publicity Officer (Assistant Head of Department). The tasks of the Information and Publicity Officer will involve supporting the Head of the Operating structure in the performance of the following functions and responsibilities:

- discuss the communication action plan with the Commission;
- coordinating with the information and publicity activities under other IPA funded programmes;
- communication with the media;
- elaboration, implementation and assessment of the programmes communication action plan;
- represent the programme in the relevant national and Commission information networks;
- handling enquiries from beneficiaries;
- monitoring and control on the fulfilment of the P&I requirements from the beneficiaries;
- development, production and distribution of information materials; preparation and implementation of public events;
- development and maintaining the contents of programme website;
- liaison with the IT regarding technical maintenance;
- management of out-sourced services;
- elaboration and monitoring Annual communication action plans and coordination of internal events and trainings.

Some of the information and publicity measures will almost certainly require out-sourcing for professional services (such as design and pre-print, web page, printing, advertising, photography and opinion pools). It will be the responsibility of the information and publicity team to manage such services and ensure they are contracted in accordance with public procurement rules.

### **5.3.6. MONITORING, EVALUATION AND REPORTING**

Monitoring, evaluation and reporting are compulsory requirement for the implementation of the publicity measures included into the communication action plan of the programme.

The progress made in the implementation of the communication action plan shall be reported during the meetings of the Sectoral Monitoring Committee. The Head of the Operating Structure shall inform the Sectoral Monitoring Committee of the information and communication measures carried out and the means of communication used. The Head of the Operating Structure shall provide the Sectoral Monitoring Committee with examples of communication measures carried out.

The annual and final reports on implementation of the Operational Programme shall include the following information:

- Examples of information and communication measures for the operational programme undertaken in implementation of the communication action plan;

- The arrangements for the information and publicity measures concerning the publication electronically or otherwise of the list of beneficiaries, the names of the operations and the amount of public funding allocated to the operations;
- The content of major amendments to the communication action plan.

A set of indicators for evaluation of the publicity measures will be included in the communication action plan and represent the essential part of the plan with regard to the assessment of the efficiency and effectiveness of the implemented publicity activities.

The yearly results of the qualitative and quantitative analysis will be used for the elaboration of the Annual communication action plans and if there is a need for the modification of the communication action plan.

### 5.3.7. PARTNERSHIP AND NETWORKING

Bodies that can act as relays for the programme and disseminate the information concerning the general public are the following:

- Professional and trade associations and organizations;
- economic and social partners;
- non-governmental organisations;
- educational institutions;
- organisations representing business;
- operators;
- information centres on Europe and Commission representation in Skopje;
- other main stakeholders of each priority.

The operating structure will work in close cooperation with the above-mentioned bodies for the dissemination of information regarding the programme and IPA pre-accession assistance strategy.

### 5.3.8. INTERNET

The CFCD website will provide data on the RD Programme, as well as data of the other programmes and links to the IPA, ECD, DG ELARG, DG EMPL and DG REGIO websites. It will be created according to the following principles:

- **Accessibility to as many users as possible** – ensuring the site has a simple address; registering it on main search engines so it can be found easily; designing it to be viewable with low specification screens and software; ensuring it is quick to download.
- **Prioritizing fast access to rich information** – the site should be clearly organized so users can find what they are looking for quickly and easily; the information should be available as downloadable PDF documents, where possible.
- **Visual appeal** – strong visual identity through logos, use of colors etc. without limiting the clarity, speed and simplicity
- **Developing as an ongoing resource**
- **Interactive content**, exploiting the unique strengths of websites.

# **Annexes**

**Annex 1: Overview of the Recommendations in the Ex Ante Interim Report 1****Transport Sector**

- General recommendations are reminded but they were globally followed, especially in the final draft
- Previous misses in logic connections between paragraphs or ideas and pure drafting recommendations are not included, as they refer to previous drafts and were globally followed in the final draft.
- We mentioned in the following tables recommendations on specific points that should be checked with the new OP draft. Recommendations mentioned several times are underlined.

| <b>Location (paragraph)</b> | <b>Ex Ante Recommendations</b>   | <b>Integration and/or comments</b>   |
|-----------------------------|--|--|
|                             | General recommendations (overview)   |  |
| 10                          | In the evaluated draft, the socio economic analysis in the OP doesn't support efficiently the further development of the programming   | Recommendation is included. Socio-economic analysis amended accordingly  |
|                             | There are logical gaps between the sets of figures provided, the descriptions of the sectors, the general aims targeted and the OP SWOT analysis   | Recommendation is included. Sets of figures, description of the sectors, the general aims and SWOT analysis amended accordingly  |
|                             | To mention is done of the aims of the national policy, and of the objectives followed in parallel to support such a programming (efficiency of the maintenance, additional projects)                                 | Recommendation is included in section 2.1  |
|                             | few information is available about road condition  | Recommendation is included in the section 1.1.1.4.1  |
|                             | very few information is available about road operators   | Recommendation is included in the section 1.1.1.4.9  |
| 27                          | The environmental sustainability of the measures still needs to be demonstrated (see 43)   | Refer to point 43  |
|                             | The description of all the road policy as a whole (including operations, safety, cross border facilitation, combined transport) is essential   | Recommendation is included in the sections 1.1.1 and 2.1.1   |
|                             | More emphasis in drafting could be put on the logic beyond a balanced development of the rail and the road network, in term of modal balance, the objective of limitation of the development of traffic              | Recommendation is included in the sections 1.1.1 5 and 2   |
|                             | More details given about the repartition of charges of the transport network to road users   | Recommendations is included in the section 1.1.4.8   |
|                             | Some possible opportunities in the scope of the OP programme, such as intermodal nodes development, could be mentioned to cover all the priorities developed in EU policies  | Recommendation is included in the section 2.1  |
| 43                          | Section Demir Kapija to Smokvica. Environmental impact. Two options have so far been studied No sufficient consideration has been given to other possible alternatives, in which case the public concerned and other | Feasibility Study and the Environmental Impact Assessment Study consider in details three options – Do nothing, Alternative 1 (current) and Alternative 2 (new). Issues raised by the ex-ante evaluation and within informal consultations with DG |

| Location (paragraph) | Ex Ante Recommendations   | Integration and/or comments  |
|----------------------|---|--|
|                      | stakeholders should be given the opportunity to comment upon these also.  | Regio and DG Envy on Alternative 2 (endorsed by the Government and potential financing partners) have been promptly addressed by re-positioning the line by 0.4 km off its initial path, thus avoiding potential adverse impacts on Bela Voda cave. According to conclusion of the Government (21 June 2007) and recommendations from DG Regio (E.Unterwurzacher), Ministry of Environment is establishing close communication with DG Envy in performing public hearing process, with participation of all relevant stakeholders – local communities, NGOs and other entities. In the process of public consultation regarding EIA study the public concerned and relevant stakeholders will have the possibility to comment the study and possible alternatives. |
|                      | <b>Specific Recommendations</b>   |  |
| 2                    | Some consideration about main populated areas, population growth, structure of the population (urban /rural) could occur  | Recommendation is included in section 1.1  |
| 2                    | The inter-city connection realized through main road axes or corridors could be underlined  | Recommendation is included in sections 1.1.1.4.1; 1.1.1.4.11; 2.1. and 3.1   |
| 3                    | Mention could be done on the regional studies such as SEETO in the domain of the transport forecast when relevant   | Recommendation is included in section 1.1.1.4.11   |
|                      | Integrate the listing of the socio economic partner, probably the transport associations or users association.  | Recommendation is included in section 1.3  |
| 3                    | Socio economic indicators chosen for the analyses should be more in connection with the further steps of the programming  | Recommendation is included with the revisions of section 2.  |
| 4                    | The corridors map could be in accordance with the text (branch Xd should appear)  | Recommendation is included. This map is presented in section 1.1.1.4.11  |
| 4                    | A traffic map should be integrated  | The Ministry included graphic presentations of the traffic in order to present the traffic in a more accurate manner than if presented with a map. Included in the Annex 2 and 3   |
| 4                    | A regional map could make appear the other level of programming   | Recommendation included in Section 1.1.1 Map on South East Europe Core Network   |
| 4                    | The OP provides the description of the present and forecasted mechanism for fund raising but doesn't provide basic figures to evaluate if the present level of maintenance is sufficient, if some backlogs remain, if the maintenance of the renewed and improved network will be an acceptable burden for Macedonian state | Recommendation is included in Section 2.1  |
| 4                    | <u>No comprehensive description of the road policy undertaken is developed</u>  | Recommendations are included in sections 1.1.1.1; 1.1.4.10 and 1.1.7   |
| 4                    | Some explanations are also necessary to explain the wide development of the network in the past 20 years  | Recommendation was included but deleted after the informal comments received by DG Regio on 30.05.2007 indicating that historical data are not necessary to be included in the OPRD  |
| 4                    | <u>Some information about road transport operators should be necessary</u>  | Recommendation is included in the section 1.1.1.4.9  |
| 4                    | Some connection should be made in road transport chapter with the   | Recommendation was included but deleted after the informal comments received   |

| Location (paragraph) | Ex Ante Recommendations   | Integration and/or comments   |
|----------------------|---|---|
|                      | compliance of road operation with UE standards (legislation, vehicle fleets for example...) and more generally, of the integration of the acquis in this domain   | by DG Regio on 30.05.2007 indicating that references to the community legislation should be deleted   |
| 4                    | A map of the rail network could help to understand the main issues  | Recommendation is included in section 1.1.1.5.10  |
| 4                    | <u>Intermodal transport policy is still not developed</u><br><br><u>Some possible opportunities in the scope of the OP programme, such as intermodal nodes development, could be mentioned to cover all the priorities developed in UE policies</u> | Recommendation is included in the section 2.1   |
| 5                    | The OP doesn't provide any information about national strategy out of the UE priorities   | Recommendation is included in sections 1.1.1; 1.1.1.7 and further in the sections 2.1.1 and 2.4   |
| 5                    | Provide the general approach of the transport policy towards socio economic factor such as the needs of mobility of people, the social cohesion, the regional development   | Recommendation is included in sections 2.1.1 and 3.1  |
| 6                    | Provide an analysis of operators' activities for road sector (freight transport and passenger)  | Recommendation is included in sections 1.1.1.4.8 and 1.1.1.4.9  |
| 6                    | No indication about logistics services operators and potential development was found  | Recommendation is included in section 1.1.1.4.9   |
| 6                    | A developed analysis of the border crossing issues exist but no indication of the ongoing policies to improve this domain is mentioned  | Recommendation is included in section 1.1.1.6   |
| 6                    | No indication how to promote interoperability policies such as ERTMS.   | Recommendation is included in section 1.1.1.5.6   |
| 6                    | What are the socio economic factors in favour of the European integration process ?   | Recommendation is included in section 2.4   |
| 10                   | Sectoral SWOT could be prepared to give more consistency to the reasoning (A SWOT per sector)   | Recommendation is included in section 2.2   |
| 10                   | Some terminology should be revised about Trans-national axes / Helsinki Corridors   | Recommendation is included in the OP by revision of the terminology in the whole text   |
| 14                   | A better coordination could appear with some parallel policies (with the chosen actions of the OP), in order to enhance the effectiveness of the choices of the OP  | Recommendation is included in section 2.1.1   |
| 14                   | A paragraph about road safety policy is missing   | Recommendation is included in section 1.1.1.1   |
| 14                   | Idem for the ongoing policies to modernize the road profession, the fleet and the capacity of actors  | Recommendation is included in section 1.1.1.4.8   |
| 14                   | <u>contribution of road users, information to add in the OP about the toll policy, no indication in the OP of the policy followed for user's charge calculation</u>   | Recommendation partially included in section 1.1.1.4.3 and 2.1  |
| 17                   | <u>No indication of the internal decision making and of the "brain storming" within the Ministry (refers to criteria of choice of projects, see 32)</u>   | Recommendation is not included as a specific paragraph referring to internal decision making within the ministry. The section 2.1 indicates that priorities in the OP are compliant with the national strategies and the SEETO. National priorities |

| Location<br>(paragraph) | Ex Ante Recommendations  | Integration and/or comments   |
|-------------------------|--|---|
|                         |  | are also explained in sections 1.1.1.1 and 1.1.1.7.   |
| 30                      | No mention of R&D policy in the transport sector   | There is no integrated policy or strategy regarding R&D policy in the transport sector.   |
| 32                      | The OP could integrate the multi –criteria weighting in SEETO planning in order to make more obvious and understandable the origin of the choice of some the project and introduce some information or difference in marking the projects about the (fully understandable) choice of the completion of the corridor VIII Skopje –Bulgarian border. Cross border programmes could be introduced to support this choice. | Recommendation included in section 3.1.1  |
| 45                      | The programme implementation framework is in low status of preparation, according to external factors  | The implementation of the instrument is in course of development. New section 5.Implementing Provisions prepared according to the EC template is included in the OPRD |

## Environment Sector

| Location (paragraph) | Ex Ante Recommendations   | Integration and/or comments   |
|----------------------|---|---|
| 1.                   | 1. Overview<br>1.1. Scope of the work   | Whole part is descriptive without concrete recommendations Ministry subsequently responded to the conclusions and recommendations given by ex-ante evaluation   |
| 2                    | 1.2 Documents reviewed  |   |
| 1                    | The final construction of Corridor X, Highway E-75, Section Demir Kapija to Smokvica is the only transport measure proposed in the present Operational Programme  | The remark refers to the very first draft of transport part, that has been significantly changed  |
|                      | 1.3 Process   |   |
| 3                    | The preparation of a good Operational Programme must start with a proper understanding of the process<br><br>The weakness, therefore, lies not in the ability of the people doing the programming, but in the way in which the process has been explained to them.  | Programming was conducted with introduction of contextual aspects of the programming<br>Programming started with discussions and clarifications regarding the process of preparation of OP.<br>Aside of guidelines, no other assistance (workshops, explanations, etc.) was provided in relation to programming   |
| 4                    | Operational Programme for Component 3 (environmental aspects) has not been prepared by a working group albeit with limited support from an expert assigned to provide technical assistance<br><br>there has been very little consultation and very little opportunity for people to feed their views and experience into the preparation of the Operational Programme<br><br>There may be insufficient sense of ownership of the Operational Programme.               | At the very beginning, no formal working group was established, but there was WG within the TA project, supported by the MoEPP employees from IPA unit<br><br>Later, the first initial team in the Ministry was extended; representatives from various Ministry departments were consulted. Also individual meetings with representatives of public utilities were held in order to improve the feeling of Programme ownership<br>Comments refer to the beginning of the process<br><br>Due to the absence of mature projects, financial allocations for environmental part of the Programme are limited to as low as 20%. Thus, the ground for mature discussion with stakeholders with strong feeling of ownership is limited accordingly |
|                      | 1.4 Transport Measure ( also replicated in transport part)  |   |
|                      | We concur with the recommendation to avoid disturbing the <i>Bela Voda</i> cave and its ecosystems, on the principle of halting loss of biodiversity.<br><br>In view of the possible bilateral financial participation of a Member State of the European Union (Greece), we consider that an environmental impact assessment should be a mandatory requirement in full compliance with European Community Directive 85/337/EEC as amended by 97/11/EC and 2003/35/EC. | Recommendation is adopted<br>On the basis of conclusions in the Study that the construction of the tunnel in the initial part of the line would pose threat to the Bela Voda cave, an alteration has been made in the preliminary design for this road section in order to avoid the cave, i.e. the cave and its adjacent area are outside the new road section and definitely outside all potential adverse impacts.<br>Recommendation is adopted<br>and reflected in the last draft of OPRD in section 2.4 Strategic priorities   |



| Location (paragraph) | Ex Ante Recommendations  | Integration and/or comments   |
|----------------------|--|---|
|                      | 1.5 Environmental Measures – General Comments  | Whole part is descriptive without concrete recommendations  |
| 1                    | The measures that the programme envisages are a small but essential first step in this process and should be seen as such.   | Measures are adapted to available financial resources   |
| 2                    | There are a number of structural weaknesses in the programme, The actual presentation of the programme could be clearer and better organised in terms of its layout and information content.   | Fully reflected and integrated into the draft OPRD meaning<br>- program has been structurally reorganized in order to be clearer<br>As noted by ex-ante evaluator the process of improvement of OPRD started according to the given recommendations   |
| 3                    | The SWOT analyses in the Operational Programme have been improved and strengthened significantly since the first draft of the programme was given to us for evaluation   | Recommendation is included in the section 2.2.<br>SWOT was additionally amended and improved and accordingly reflected in the SCF   |
| 12                   | The text of the Operational Programme does not present linkage with NEAP II objectives in a clear and concise manner....Putting the information into context and summarising its significance is perhaps weaker than it should be. ...This situation needs to be rectified before further consultation takes place.  | Recommendation adopted and reflected in the draft OPRD, section 1.1.2 and 3.1.2<br>Linkage between measures and national planning document through adding of paragraphs containing summary of analysis made it more understandable for readers  |
|                      | 2.Socio-economics and relevance to needs<br>2.1 General Comments   |   |
| 1                    | There is a very clear need to address this issue (pressures placed upon communal infrastructure, in particular in Skopje,) and this is correctly reflected in the emphasis given to Skopje in the programme.   | Recommendation adopted, considered during the preparation of OPRD and reflected in the draft OPRD, section 1.1, 3.4<br>Due to the recommendation given by DG REGIO that major project list should contain only mature projects with realistic chances to commence in the programming period Skopje may be excluded from the list  |
|                      | 2.2 SWOT Analyses<br>2.2.1 General considerations  |   |
| 2                    | A separate SWOT is, therefore, required for each of these areas, related to the respective objectives.   | Recommendation adopted, considered during the preparation of OPRD and reflected in the draft OPRD, section 2.2. in the SWOT for environmental part<br>- SWOT is related to the respective objectives<br>Comment was given when there were two separate programming documents, one on transport and one on environment, and more specific objectives were defined.<br>In the last draft of OPRD both sectors are presented in one programming document |
| 3                    | The SWOTs in the Operational Programme precede the discussion of objectives. This is procedurally incorrect. The objectives should be established first and then a SWOT conducted for each set of objectives.<br>Accordingly we have suggested to the MESP that the presentation of the top-tier objectives should precede the SWOTs in the Operational Programme and that the SWOTs should be focused specifically upon | Recommendation was not followed because “procedural incorrectness” is not explained. Furthermore content and sections of draft OPRD were prepared according to the draft template for Multi-annual Operational Programmes, where SWOT is foreseen before the section for strategic objectives.<br>Recommendation adopted, SWOT is focused specifically upon defined environmental objective   |

| Location (paragraph) | Ex Ante Recommendations   | Integration and/or comments   |
|----------------------|---|---|
|                      | these objectives.   |   |
| 4                    | Whenever a SWOT analysis is performed, there is a tendency to confuse “threats” with “weaknesses”, and “strengths” with “opportunities”.  | Recommendation adopted, SWOT adjusted according to given comments Comments given on the SWOT analyses in the OP draft of 19 <sup>th</sup> April 2007 Changes were included in final SWOT analysis |
|                      | Several key issues identified in 2.2.2. Water and 2.2.3 waste   | Integrated into table for SWOT under the environmental objective; also included in the description under both sub-sectors   |
|                      | 3. Rationale and consistency  |   |
| 1                    | Operational Programme needs to provide a clearer, more concise and less fragmented explanation of how these have been derived from the SWOT analyses. In spite of this, the underlying rationale of the programme is sound: the problem lies in the presentation of the programme rather than with its underlying rationale.                                      | Recommendation is included. Sets of figures, description of the sectors, the general aims and SWOT analysis amended accordingly   |
| 4                    | While there is a clear cause-effect relationship between these goals and the measures proposed, the Operational Programme at present fails to communicate this clearly to the reader. Nevertheless, the underlying strategy is consistent, both internally and externally.  | Text of OPRD is significantly improved according to the recommendation given, included accordingly in sections (general description) 1.1.2 and more specifically in the section 3.1. 2            |
|                      | 4. Coherence  |   |
| 7                    | The Operational Programme is completely coherent with the draft strategic coherence framework 2007 – 2013 and is being finalised in parallel with it to ensure that the two strategies remain coherent  | Recommendation was followed by parallel finalisation of both documents in order to ensure their coherence   |
|                      | 5. Expected results   |   |
| 1.                   | The infrastructure investments envisaged in the Operational Programme will not be completed within the planning horizon of this Operational Programme. Accordingly the expected results relate to the quantifiable outputs of the actions to be undertaken.   | Reflected in the text of OPRD   |
|                      | Only several results related only with Skopje are noted in ex-ante report   | Draft OPRD has number of indicators and expected results as required in draft template for Multi-annual Operational Programmes, not related only to Skopje infrastructure project                 |
|                      | 6. Proposed implementation systems  |   |
| 1                    | At present there is no legal basis for implementation nor do structures exist to perform this function. Consequently the Operational Programme provides only a broad, generic description. This needs to be elaborated further with the addition of more specific information on roles and responsibilities, before this aspect could be considered complete..... | Recommendation is implemented –New chapter dealing with Implementation provision is prepared according to the provided template   |
| 2                    | potentially a critically important link in the cycle of programme and   | Recommendation is included in section 3.1.3 and in rewritten Chapter on   |

| Location<br>(paragraph) | Ex Ante Recommendations  | Integration and/or comments  |
|-------------------------|--|--|
|                         | project management, leads us to suggest that a thorough programme of management training should be provided to all people who participate in Sectoral Monitoring Committees. This is to some extent envisaged in the technical assistance measures to which the Operational Programme makes reference, but it is not immediate obvious from the wording of the draft that is the subject of this evaluation.   | Implementing provisions  |
|                         | 7.2 Conformity with European Community policy<br>7.2.2 Climate change  |  |
| 1                       | The sewerage and sewage treatment measures proposed would require energy during operation. This is unavoidable with techniques presently in use in the European Union. It is difficult to say whether the marginally reduced rate of generation of carbon dioxide and methane in the natural environment, which would result from better sewage treatment, would be of any significance in this respect, particular since processes for the treatment of sewage sludge tend to generate methane. | Recommendation is included in sections 2.1.1 (relation Kyoto Protocol –transport) and 1.1.2.1.2      |
|                         | 7.2.4 Respecting the “Polluter pays” principle   |  |
| 3                       | The ultimate design of the project must ensure that the principle of polluter pay is respected   | Even though recommendation relates to project design, recommendation is included in sections 3.1.2.1 |
|                         | 7.4 Monitoring   |  |
| 1                       | At present there are no established structures for monitoring.   | Recommendation is included in section 3.1.3 and in rewritten Chapter on Implementing provisions      |

**Annex 2: Overview of the Recommendations from the Ex Ante Interim Report 2**

| <b>Location (paragraph)</b> | <b>Ex Ante Recommendations</b>   | <b>Integration and/or comments</b>   |
|-----------------------------|--|--|
|                             | Transport  |  |
| Executive Summary           | A special attention should be paid to integrate the branch Xd of the corridor X in the objectives of improvement of the road network, as this itinerary connects major populated areas and economic centre   | This will be taken in consideration during the selection phase of the projects   |
|                             | The principle of concentration of funding should not lead to oversized investments in motorways, neglecting the need for rehabilitation of strategic national roads  | This will be taken in consideration during the selection phase of the projects   |
|                             | Effort should be made in the next programming period to implement a more balanced development of the rail and the road network   | The balance between the two set of measure in the priority axis 2 will support to implement this balanced objectives between rail and road |
|                             | Attention should be paid to make more explicit during the phase of project preparation the repartition of charges of the transport network to road users   | This will be taken in consideration during the project preparation phase   |
|                             | Some possible opportunities in the scope of the OP programme, such as intermodal nodes development, should be studied to cover all the priorities developed in EU policies<br>&<br>a transport master plan is missing to determine with more accuracy which degree of quality of service is requested in road and rail programming t | This could be included within the scope of the general studies programmed in priority axis 4, measure 3                                    |
|                             | Environment  |  |
| Executive Summary           | Small number of minor observations of SWOT   | Incorporated in the environment SWOT analyses  |