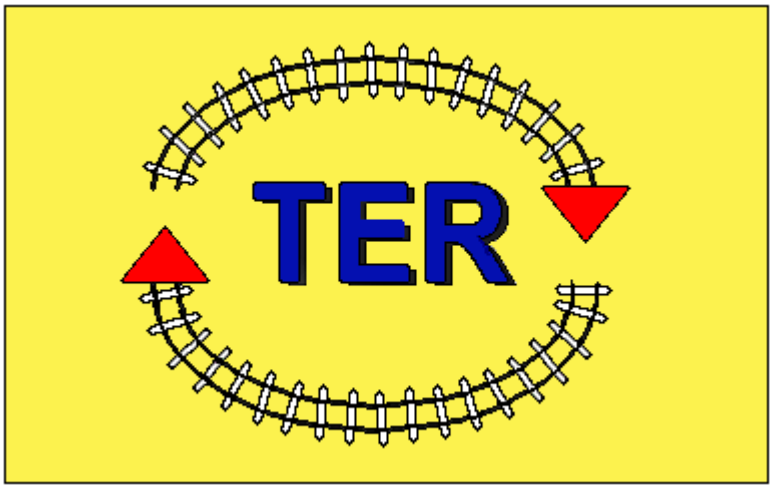
ECONOMIC COMMISSION FOR EUROPE

TRANS-EUROPEAN RAILWAY (TER) PROJECT



UNITED NATIONS

ECONOMIC COMMISSION FOR EUROPE

TRANSPORT DIVISION

TRANS-EUROPEAN MOTORWAY (TEM)

AND

TRANS-EUROPEAN RAILWAY (TER)

PROJECTS' MASTER PLAN

UNITED NATIONS

NOTE

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TABLE OF CONTENTS

PREFACE

The United Nations Trans-European Motorway (TEM) and Trans-European Railway (TER) projects' Master Plan has been a unique undertaking. It was made possible thanks to the commitment, skills, and conviction of the UNECE TEM and TER Projects' Central Offi ces (PCOs), the external consultants and the designated experts of the countries concerned. Two expert groups, one for road and one for rail, worked for sixteen months, in consolidating and processing substantive information on transport plans and priority needs of the respective countries, as well as liaising with the respective Governments, UNECE, and TEM and TER PCOs.

The report presents the results of a fi rst attempt of the TEM and TER Projects to elaborate a consistent and realistic short-, medium- and long-term investment strategy on the road, rail and combined transport Backbone Networks in 21 Central, Eastern and South east European countries, members of the Projects, and their immediate neighbours. As a result of this exercise, as many as 491 projects have been evaluated and prioritized, with an aggregate estimated cost of over 102 billion Euros. These results have been obtained by using a commonly agreed methodology and taking into account alternative scenarios of growth, bottlenecks and missing links as well as problems posed for the funding of transport infrastructure and border crossings.

Despite the application of rigorous screening criteria, a considerable proportion of the total implementation cost for the realization of the TEM and TER Projects' Master Plan is not yet secured. In addition, by examining border crossings issues in relation to a number of considerations such as infrastructure needs, procedures and staffi ng matters, it is clear that there is substantial need for further action. A range of proposals to address these issues is presented in this report.

The current work can substantially assist the development of transport infrastructure in the wider TEM and TER region. Moreover, it can also contribute to integration and harmonization of transport beyond Europe. However, the elaboration of an investment strategy, though important, is just a starting point. The implementation of this work is a long-term process that requires fi rst and foremost all political will and commitment from the countries concerned. It will also require intensive follow-up work in close co-ordination between TEM and TER member countries, the TEM PCO, the TER PCO and the UNECE, as well as with the European Commission competent Directorates and other international organizations and bodies concerned.

I should like to thank all those who contributed to the elaboration of this work and encourage them to continue and further intensify their efforts for the progressive implementation of the TEM and TER Projects' Master Plan.

Marek Belka

Executive Secretary

United Nations Economic Commission for Europe

SUMMARY

The work summarised here – the Trans-European Motorway (TEM) and Trans-European Railway (TER) Projects' Master Plan – is intended to assist the thinking in TEM and TER member countries, in neighbouring countries, and within concerned international organizations about future road, rail and combined transport infrastructure developments and related investments. It also addresses important related questions such as alternative scenarios of growth, methodological aspects and assumptions, bottlenecks, missing links and other priority needs, as well as problems posed for funding of transport infrastructure and border crossings. More specifi cally, the work has addressed the goals of promoting the integration of European transport infrastructure, extending the TEN-T, supporting the implementation of the pan-European transport corridors, promoting of intermodal operations and supporting the objectives of the TEM and TER Projects.

In 2001, the TEM and TER Projects' Steering Committees, adopted a new short-term strategy for the Projects' further integration in the new transport context. The elaboration of the TEM and TER Master Plan, was among the fi rst priorities of the strategy. Thereafter, the Terms of Reference for the elaboration of the Master Plan was prepared and approved. Work started in October 2003 and was completed in February 2005.

Two groups were created for the needs of the Master Plan, namely the Master Plan Coordination Group, constituted to supervise and coordinate the work, and the Master Plan Expert Group, in order to consolidate substantive information on transport plans and priority needs of the countries concerned, as well as to liaise with respective Governments and the UNECE and TEM and TER Projects' Central Offi ces (PCOs).

During the reporting period, the Master Plan Coordination Group, consisting of the TEM and TER Projects' Personnel and the Director of UNECE Transport Division and/or the Regional Adviser on Transport, UNECE, as well as the external consultants, has met four times. The TEM Master Plan Expert Group and the TER Master Plan Expert Group, consisting of different national coordinators and designated experts from the countries involved for each one of the Projects, met twice.

Special emphasis was placed throughout the project work on seeking to balance the internal priorities of States for the development of infrastructure within their own borders with the recognition that many of the most important national links are also critical to the establishment of effective international networks.

International networks have a major contribution to make to broader socio-economic goals aimed at the prosperity and stability of the wider region. However, despite the efforts of a number of organizations, this international dimension and the inter-play between national and international perspectives has not always been as fully recognized as it might be. For this reason, the current study has placed particular emphasis on co-ordination of thinking across different countries. Thus, identifi cation of bottlenecks and missing links in relation to major international fl ows in the road, rail and combined transport networks has been given priority. Airports and inland waterway infrastructure projects were not the focus of this work.

However, it must also be acknowledged that the range of possible investments greatly exceeds the immediate and foreseeable capacity of national and international bodies to fund them. What has been developed in the Master Plan is consciously *not* a simple wish

list of desired investments, but is rather one that is tailored to a realistic assessment of likely available funds. Further, the work has not been undertaken in isolation from the range of previous studies and initiatives of international transport infrastructure needs that have been undertaken. It builds on and acknowledges the contributions of major projects such as TINA, TIRS, REBIS, TEN-STAC, EU High Level Group, etc.

The underlying methodology of the study has been top-down, reflecting in part the time and resources available, but also recognize that the availability of reliable data, especially over time, for a number of the areas included in the work was weak. Growth scenarios were therefore developed, starting with the socio-economic external environment such as demography, GDP growth and development in foreign trade. Two scenarios of growth were developed – one moderate, the other more optimistic – to recognize the uncertainty inevitably surrounding such projections. Transport demand forecasting up to 2020 performed by analyzing the current trends in transport industry and identifying inter relations between transport demand and the socio-economic environment.

Against the macroeconomic backgrounds sketched out through the scenarios, the work then sought to establish priorities for individual projects that had been identified through examination of known national and international plans. Specifically, evaluation and prioritization proceeded through four stages.

In the first stage, *Project Identification*, projects were screened according to generic criteria of relevance, readiness and viability. In essence, projects were only considered if they already showed within existing lists of proposals, were sufficiently far ahead in the planning process to be capable of being completed within the time frame of this study, and for which a degree of financial viability could be established with no evidence of major environmental constraints. Since candidate projects had to pass all three screening criteria, this stage representing a major step towards ensuring that only schemes under serious consideration were included.

In the second stage, *Forecasting*, the previously derived macroeconomic growth patterns were applied to flows on the proposed projects.

Thirdly, a simple multi-criteria model was applied to the *Evaluation* of each individual project. Evaluation focused around three clusters of criteria reflecting respectively socio-economic return on investment, functionality and coherence of the network, and strategic/political issues in relation to the network. Application of more sophisticated methods, such as full socioeconomic cost-benefit analysis, is not feasible given the restrictions on data availability that are usually present. The importance of applying the multi-criteria approach lies in the fact that it allows a single known evaluation scheme to be applied with equal rigour to *all* projects under consideration and for the basis for the assessment to be transparent to all.

Fourthly and finally, *Prioritization* of projects was undertaken on the basis of technical priority as established through the multi-criteria model, compliance with any existing legally binding commitments (typically through international agreements) and the financial capacity of the country concerned to undertake the investment.

The projects were prioritized into the following four pre-defined priority categories, according to their scores:

- *Priority I*: projects, which may be funded and implemented rapidly, including on-going projects up to 2010.
- *Priority II:* projects requiring some additional investigations for final definition before likely financing, or planned for implementation up to 2015.
- *Priority III:* projects requiring further investigations for final definition and scheduling before possible financing, or planned for implementation up to 2020.
- *Priority IV*: projects to be implemented in the long run, including the projects where insufficient data existed.

For a few countries only, for which no projects were proposed, the study considered projects that were proposed in the framework of other similar works, such as REBIS, EU High Level Group and the UNECE-UNESCAP Project on developing Euro-Asian transport linkages.

As a result of this exercise, subsequently verifi ed by the consultants and members of the TEM and TER Expert Groups to ensure that no anomalous proposals had been prioritized, sets of priority projects, as set out in sections 4 of this report were prepared. In total, 491 projects (319 TEM and 172 TER) were evaluated and prioritized, with an aggregate estimated cost of 102,114 billion Euros, of which, 49,556 billion Euros for TEM and 52,558 billion Euros for TER. According to the results reported here and despite the application of rigorous screening criteria, a considerable proportion of the total implementation cost for the realization of the TEM and TER Projects' Master Plan is not yet secured in the sense of potential funding sources having been confidently identified.

In addition to examining direct infrastructure needs, the work also pays attention to the question of border crossings, examining issues for both the TEM and TER Networks in relation to a number of considerations such as infrastructure needs, procedures and staffi ng matters. It is clear that, for both road and rail, there is a substantial need to modernize both facilities and procedures and that failure to do so poses a signifi cant impediment to international movements. A number of proposals to address these problems are presented in this report.

Overall, the initial phase of the TEM and TER Projects' Master Plan elaboration has achieved its intended goals. It has succeeded in presenting a reliable and pragmatic investment strategy (for short, medium and long- term horizon) on road, rail and combined transport Backbone Networks in TEM and TER countries; in particular, it has provided, among other outputs:

- A methodological framework for the identification, evaluation, prioritisation and financing of priority infrastructure projects;
- Identification of a TEM and TER Backbone Network of core projects;
- A TEM and TER Projects' Master Plan with alternative implementation scenarios;

- A corresponding inventory of specific projects for implementation;
- Budget estimates for implementation;
- Some possibilities in relation to staged construction;
- Estimates of likely available finance;
- An inventory of border crossing problems and some suggestions for ameliorative action
- An inventory of TEM Network bottlenecks with a special respect to truck and coaches
- An analysis of the possible impacts of the European Union Railway Infrastructure Package on TER Region.

The current work can substantially assist in allowing TEM and TER Projects to represent the backbone underpinning a future European transport integration process. Moreover, it can also make a substantial contribution to integration and harmonization of transport beyond Europe, notably as input to the EC High Level Group No. 2 and to the Euro-Asian Transport Links development process.

However, the work is not yet complete. To see it to fruition will require continued close cooperation between the TEM and TER member countries, between them and their immediate neighbors, the respective TEM and TER PCOs and the UNECE. This relates in particular to missing information on individual country plans, priorities and to missing data in general, as well as in monitoring the progress of implementation of the identifi ed TEM and TER region Backbone Networks on the basis of commonly accepted technical and operational standards

1. UNECE TEM AND TER PROJECTS' MASTER PLAN

1.1 Introduction

United Nations Economic Commission for Europe (UNECE) is constantly supporting and encouraging specific actions, aiming at the promotion of relations between European countries and the economic development and co-operation in Europe. Among the most known actions in the field of transport, are the "Trans-European North-South Motorway (TEM), and Trans-European Railway (TER) Projects".

UNECE TEM and TER Projects are sub-regional cooperation frameworks established in 1977 and 1990 - respectively - by the Governments of the Central, Eastern and South Eastern European Countries under the aegis of UNECE for the development of coherent road, rail and combined transport infrastructure networks in the region and the facilitation of international traffic in Europe.

They have, so far, been instrumental in the development and upgrading of international road and rail links in the participating countries. They have also contributed to the interoperability of the European transport systems, elaborated studies, created continuously updated TEM and TER databases, published a large number of technical documents, guidelines, recommendations, and are working for the harmonization of management, maintenance and operational procedures of motorways and railways in the region and their integration in the Pan-European context.

TEM and TER Projects' Master Plan, which is funded by the TEM and TER's own budgets and by the International Road Transport Union (IRU) as far as the road component is concerned, provides a useful contribution to the objectives of the individual TEM and TER Projects as well as to the work of the European Commission on the development of the Trans-European Transport Networks (TEN-T) in the new EU member and accession countries and to the future development of Transport Corridors outside the EU.

The countries participating in the UNECE-sponsored TEM and TER Projects' Master Plan aim at the identification of main bottlenecks, missing links and other priority infrastructure needs in their road, rail and combined transport networks, and the design of a realistic investment strategy to meet those needs.

Austria, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Greece, Hungary, Italy, Lithuania, Poland, Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia and Turkey as well as the former Yugoslav Republic of Macedonia and Ukraine have been invited to participate in the TEM and TER Projects' Master Plan work. The European Commission, the World Bank, the EBRD, the EIB and other international organizations and transport related bodies had also been invited to participate.

1.2 Review of the development of TER Project

General introduction

For over a decade Trans-European Railway (TER) Project provided the co-operation framework to Central and Eastern European countries to the view to promoting and implementing initiatives for an efficient international rail and combined transport system in those countries in accordance with the Pan–European infrastructure agreements.

The TER Project consists of a series of objectives and actions to achieve, which are established with the aim to improve the quality and efficiency of international rail and combined transport, passenger and freight, on the main international railway lines of the following countries: Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Greece, Hungary, Italy, Lithuania, Poland, Romania, Russian Federation, Slovakia, Slovenia and Turkey.

While these lines are not the whole railway network of the above countries, but a small number of them, they constitute nevertheless a continuous railway network, designated as the TER Network.

The TER Network includes, not only the north-south corridors, but also west-east lines which have been added to take into account new developments and integration processes in the region.

The TER Project relates to the TER network only. It considers also the related combined transport installations and equipment in the above countries.

TER Project Objectives

General objectives

The general objective of the TER Project is to develop a coherent, efficient rail and combined transport system among Central and Eastern European countries and between those countries and other European countries.

By providing efficient competitive services, the TER system must become attractive to customers, both passenger and freight, and be able to absorb an important part of the international transport market within, from and to Central and Eastern Europe, thus alleviating congestion and reducing environmental and safety problems on major international lines of those countries.

Specific objectives

TER specific objectives are:

(i) Infrastructure development

With the exception of some short sections, the physical plan of the TER Network is already in place. However, the infrastructure standards are far below those indicated in the AGC and AGTC Agreements.

The objectives in this field are therefore, firstly the implementation of the TER standards (medium term) and the upgrade the existing infrastructure to the level determined in the AGC and AGTC agreements (final target). As regards related combined transport installations, the objective is to upgrade what exists, to develop new ones and to provide all of them with appropriate equipment.

(ii) Modernisation of transport equipment

Transport equipment (rolling stock, motive power, signalling and telecommunications equipment, etc.) is in many cases not apt to today's performances. The objective is therefore to progressively replace it by new equipment according to a necessary harmonisation – at least at the level of compatibility – of the equipment adopted by the different countries. Within these new solutions, Joint Ventures, Leasing, etc. should be also considered.

(iii) Adaptation of organisation to market oriented management

Railways have not any more the dominant position they had in the past. In market economies, road transport has succeeded in providing better door-to-door services and just-in-time deliveries, required by customers today, and its share of the transport market became much more important than the one of rail transport. In Central and Eastern European countries, as a consequence of a fundamentally different approach, railways were able to keep for decades the strongest position with regard to other modes. However, recent developments in those countries and the adoption of market principles in economies will lead to a strong and fast development of road transport. Already, as a consequence of both this development and the recession, which has followed the initiation of a transition period, rail traffic has sharply decreased. If this situation goes on, governments might face soon very serious problems.

The final objective is therefore to provide railway companies a modern, efficient market oriented organisation and management, which are able to ensure a smooth transition to a new equilibrium of modes in the transport sector in Central and Eastern European countries. In particular, increased attention should be paid to international combined transport. Advantages of road in terminal transport should be combined with the environmental and safety advantages of rail on main transport in order to provide efficient international combined transport services. The rail part of the service still has to be efficient and of the appropriate quality. Border crossing procedures will have to be simplified. Railway companies will have to adopt a commercial orientation. In order to achieve this objective, management staff will have to be trained accordingly. The implementation of the solutions from the latest EU Directives from that field should also be considered.

Main TER Activities

Main TER activities are concentrated on a number of fields, which should finally lead to the increase of the overall railway efficiency in the countries from the region, as follows:

Activities on development of infrastructure

TER activities on development of infrastructure are targeting towards:

(i) Establishment and upgrading of the TER Network, including West – East connections, taking also into consideration in this agreement defined TER Standards.

(ii) Identification of major bottlenecks and missing links as well as the related infrastructural works to be undertaken, including at border points. Establishment of priorities.

(iii) Elaboration of pre-feasibility and feasibility studies based on common economic criteria. In this context the "Economic Evaluation of Railway Projects" issued by the United Nations Development Programme - Economic Commission for Europe should also be considered.

(iv) Schedule for planning, design and construction.

(v) Financing

Activities on development of combined transport

TER activities on development of combined transport are targeting towards:

(i) Collection of data on traffic flows, all modes. Identification of major international road transport flows through, from and to the TER Network.

(ii) Studies on the establishment of alternative combined transport solutions on, from and to the TER Network.

(iii) Identification of obstacles to the development of international combined transport, including deficiencies in transfer terminals, special wagons, containers and swap bodies, etc.
(iv) Proposals for eliminating those obstacles.
(v) Identification of the necessary steps to be taken by the TER countries for the implementation of the latest directives adopted on that filed by the EU.
(vi) Prioritisation of proposals on a cost/benefit analysis basis.
(vii) Financing.
(viii) Consideration of possibilities for development of combined transport of dangerous goods.

Training activities

The TER activities on training targeting towards the organization of seminars and workshops on marketing oriented management and other commercial issues, use of computers in railways, CAD systems, etc.

Activities on improvement of railways efficiency

TER activities on improvement of railways efficiency are targeting towards:

(i) Identification of major obstacles (other than infrastructural) to rail transport efficiency, including obsolescence or incompatibility of rolling stock, motive power and signalling and telecommunications equipment, delays in border crossings, inadequacy of international rail transport regulations, etc.
(ii) Proposals for the elimination of those obstacles.
(iii) Prioritisation on a cost/benefit analysis basis.
(iv) Financing.

Establishment of a multimodal database

TER activities on establishment of a multimodal database are targeting towards:

(i) Data on flows and forecasts (intermodal approach)
(ii) Technical and operational parameters, rolling stock, etc.
(iii) Data on border stations
(iv) Data on train-ferry connections

Evolution of TER Project

TER Project activity may be divided in two main cycles and four phases. The first cycle for a period of 5 years from September 1987 up to December 1992 covers the period when the

project was sponsored by UNDP. The second cycle from Jan 1993 up to Dec 2005, is characterised as the period of project's self sustainability and financing by the participating countries.

TER Project Cycle I

1st July 1987 was considered as TER Project official start for a period of 5 years (up to December 1991). It constituted a co-operative project of the Governments of the following 11 countries, where the UNDP was the only sponsor and UN/ECE was the Executing Agency for the project, and both UNDP and UN/ECE were also contracting parties along with the participating countries to TER activities: Austria, Bulgaria, Czechoslovakia, Germany, Greece, Hungary, Italy, Poland, Romania, Turkey and Yugoslavia. As the project started in practice in the course of 1990, its expiration was extended for one more year up to Dec 1992. Therefore the period from July 1987 to December 1992 constitutes the 1st Phase of the project that generally may be de described as the period of the Project's technical preparation.

TER Project Cycle II

(i) The 2nd phase of the project is from 1st Jan 1993 to 31st Dec 1996. Since the UNDP sponsoring of the project arrived to its end, most of the TER signatory countries have decided to continue the project at their own financial support. Therefore, a Trust Fund Agreement was prepared and finally signed in December 1992 by Hungary, Romania and Turkey with the objective to continue the co-ordinated actions of the countries concerned on the same more or less lines with the main objectives of the initial plan. The Trust Fund Agreement was opened for signatures to all TER member countries, as well as to other countries. Within the year 1993 Croatia, Bulgaria, Slovakia became contracting parties and signed the Agreement. In 1994, Poland, Czech Republic, Austria, Slovenia and Russia followed. In 1996 Georgia. UN/ECE was agreed to be the Executing Agency of the Project. The 2nd Phase is the period of self-sustaining structure and TER adaptation to the new economic environment in Europe.

(ii) The 3rd phase of the Project was from 1st Jan 1997 to Dec 2000. In 1997 Bosnia and Herzegovina became contracting party and signed the Agreement, whilst in 1998 Lithuania became the Project's 14th member. In 1999 Greece applied and was accepted as TER member. Italy sent also an official request for membership. At the end of 1999 the following countries were considered as members of TER: Austria, Bulgaria, Czech Republic, Slovakia, Greece, Hungary, Poland, Romania, Turkey, Croatia, Lithuania, Georgia, Bosnia & Herzegovina, Slovenia, Russia. The 3rd Phase is the period of intensive efforts of TER to respond to the needs of the region and to be integrated in the new European Transport environment. In 2000 Italy became a new member country and signed the Agreement. At the end of 2000 with Italy the membership of TER reached 16 countries.

(iii) The 4th phase of the Project from 1 January 2001 to December 2005 was endorsed by all the countries and a new Annex to the Trust Fund Agreement was prepared and approved. In

2001 Italy became contracting party and signed the Agreement. The 4th phase is a period of continuous efforts for integrating the railway and combined transport of the CEEC into the EU system. Adaptation of legislation to the EU and the implementation of its Directives became a major component part of the reform of the railway system in the countries from the region. During this phase the following points out of the project's efforts and achievements may be emphasized:

1. The co-operation with other international bodies and particularly with the European Commission and the EU member states increased continuously, proving to be beneficial both to the TER countries and those organisations and countries. As a matter of fact three members of the EU and 8 countries in accession to the EU are TER members. The international status of TER as a relevant partner in the transport field was widely recognised.
2. Based on the good experience obtained in many areas, TER developed a new strategy in order to achieve a more rapid progress in implementing its tasks as well as in ensuring the integration of TER into the European transport context.
3. This strategy has as main objective the further integration of TER in the new European transport context, as well as to strengthen the co-operation with the EU. It should ensure the incorporation of the Project into the European transport system, secure institutional role for TER Project implementation within the European infrastructure development plans, develop closer co-operation between TER and other related initiatives and projects, apply on larger scale the inter-modal concept as well as supplementary development and operational plans between TER, TEM and other components of the European networks, assist the facilitation of railway border crossings, take the leading role in the region in the development of Freight Villages concept as supplementary component of railway network and last but not least achieve a higher level of political support from the Governments of the member countries in the implementation of projects in the railway and combined transport sectors in the region.
4. Within this strategy the paramount objective is the carrying out of a Master Plan on the most important railway and combined transport projects available for implementation in the TER region. The adoption of this strategy by the TER countries demonstrated their determination to go forward in looking for solutions to the railway transport problems, to facilitating the integration of the CEEC transport system into the Pan-European system.

TER Project achievements and the strategic directions for the future

The UNECE Transport Division, in order to validate TEM and TER Projects' performance, examine ways of improving and enhancing their management and implementation structures and finally indicate the necessary strategic directions for the future, decided to proceed with an assessment of the Projects during the period of their implementation.

This task was entrusted to Mr. Michalis P. Adamantiadis, Economist - Transport Planner, UNECE Regional Advisor on Transport, who carried out the work in 1999-2000[1]. The work was completed in March 2000, after a thorough survey and review of the TEM and TER Projects in close cooperation with the member countries and the Project Central Offices. This assessment contributed to establishing a concrete picture of the Projects' most important achievements and the identification of the necessary strategic directions for the future, and has led to a number of discussions within the projects until a new strategy and action plan were adopted by the projects, in 2001.

Here follows some information on the assessment's findings and proposals.

TER Project Outputs

(i) TER Outputs

– Assistance to the development of rail infrastructures in the countries:

1. Elaboration and introduction TER network plan, list of all TER lines, including nodes and border stations and their constant extension/revision
2. Elaboration of maps of the TER network and its sections in the territory of its member states
3. Elaboration of studies for: a) Economic evaluation of Railway Projects b) Pre feasibility studies for Railway and combined transport on two priority axes: Baltic Sea – Black Sea – Eastern Mediterranean Sea – and Adriatic Sea – Baltic Sea c) Study on amelioration of services on TER lines (Rijeka – Zagreb – Budapest – Bratislava – Warsaw – Gdansk) d) pilot study for train operation between Rijeka and Gdansk
4. Creation of TER Data Base and Data Bank on infrastructure, rolling stock, flows constantly updated for general use of the project's members
5. Agreement on technical standards and operational parameters and topology of TER lines
6. Adaptation of technical standards and issues of technical documents, guidelines, recommendations on different railway issues.

– Promotion and improvement of co-operation in matters concerning rail transport between TER countries:

(1) Adaptation of a long-term common strategy for sound economic and financial railway operation and management

[1] Assessment of TEM and TER Projects & indication of strategic directions for the future, UNECE Transport Division – Geneva March 2000.

(2) Agreement for setting up priority corridors in TER

(3) Harmonisation of border control procedures on moving train and common frontier station control

(4) Establishment of the institutional framework for permanent management of TER project and co-operation of member countries

– Support of the European integration process:

1. Assistance in implementation of EU directives on infrastructure, access to the infrastructure, user charges and impact of public services
2. Elaboration of comparison tables and integration of TER network with European Networks, TINA, TEN, Pan European Corridors

– Dissemination of knowledge expertise and know-how:

Over 30 Technical staff training programs/ seminars/workshops were held in various cities in the region and outside related to:

(1) Investment efficiency – Assessment and evaluation of cost benefit – Optional timing of investments – sensitivity and risk analysis – benefits outside transport sector – Case studies – Combined transport operations – Construction and maintenance technologies – Securing and financing for railway projects – Macroeconomic evaluation of transport infrastructure investments – Restructuring Railways – Impact on Public Services in transport – Management and financing of railway infrastructure projects. According to the information obtained from PCO and the annual reports to the Steering Committees of the project, over (300) technical personnel from the country members have followed the training courses, contributing an enormous value of know-how and expertise transfer from West to East and among the member countries.

(2) In addition a considerable number of conferences, round tables, ad-hoc meetings in different issues concerned, held in various occasions in different cities inside and outside TER member countries on an annual basis (3/4 per year), helping the exchange of opinions, establishment of advance knowledge in different topics, transfer of know how, harmonisation of TER members policy within TER region and between EU and TER region countries

(3) The establishment and actions of two permanent Working Parties: WP1 – dealing with Infrastructure Development and Technical Operations and WP2 – dealing with Economics, Financial and Management Matters that meet regularly and work out different related issues, contributed considerably in establishing TER knowledge, transfer of know-how and technical guidelines.

Results and Outcomes

The assessment presented the opinion of the stakeholders on the results and outcomes of the project's activities.

– (i) TER Results

Co-ordinated actions of the participating countries for the creation of TER network and its necessary adjustments

(1) Establishment of TER Network representing the priority lines for TER countries for updating, modernisation, needs for investment and increasing efficiency of the railway activities on the TER corridor

(2) Creation under UNECE auspices of an effective framework of co-operation and transport infrastructure planning in the region, based on scientific investigation and long permanent political dialogue and co-operation between its members

(3) Assistance towards first steps of reconstruction of national railway lines

Improvement of national techniques and understanding of railway reconstruction, management, operation and maintenance feasibility studies for investment projects in the participating countries*:*

(1) Assistance in establishment of national database

(2) Assistance in preparation of proposals

(3) Better understanding of new methods, trends, techniques and developments of railway sector related issues

Improvement of bilateral contacts, co-operation and co-ordination among TER countries serving the integration of Central European rail transport system:

(1) Promotion of TER network as a backbone of Trans-European Transport Network in CEEC by the decisions of the 2nd and 3rd Pan-European transport conferences, giving a valuable contribution to the formation of the new strategic transport plan of Europe

(2) Promotion of TER as a backbone in the TINA exercise for the CEEC rail network, giving a valuable contribution to the establishment of the priority plan for the extension of EU TEN in the candidate countries for membership in EU.

(3) Assistance for negotiations on amelioration of customs and border police services among member countries

– **(ii) TER Outcomes**

(1) Contribution to the interoperability of the European railway system enabling the integration of national railway systems into the European one and the establishment of European strategic transport infrastructure plan

(2) Improvement of efficiency of transport operations by assisting the adoption of EU "acquis" in the field of railway

(3) Assistance in reconstruction and up-grade of national links with neighbouring countries

Assessment conclusions

TER is one of the most important transport infrastructure projects and networks of institutional inter-country co-operation in Central-Eastern & South-Eastern Europe. Its relatively long lasting experience, flexible, effective and self sustainable structure, in combination with the strong desire and commitment with the project of their country members, assisted towards the integration and harmonisation of European transport, and may continue doing so in the future.

Throughout its life time with co-ordinated actions among the member countries and the support of UNDP and UNECE, it has contributed to the improvement of national techniques and understating of railway modernisation and reconstruction, management, operation, maintenance and related investments and plans in Central-Eastern & South Eastern Europe. It has effectively assisted in the formation of the future Trans-European Transport Networks and achieved the improvement of bilateral and multilateral contacts and co-operation that helped the integration process of transport infrastructure systems of Europe and the balancing of existing gaps and imbalances.

The work done is considered efficient, effective, useful and of sustainable character. The project covered at the outmost possible degree its main objectives, given the character of the project and the real financial, political and social constrains in most of the member countries. The comparative perspective of the present work may clearly suggest that those of the conditions not met by the project, although to the correct directions, were unrealistically high, than the project itself failed to complete.

The direct invested capital on the project throughout lifetime of TER is estimated to about 2,200,000 USD. This amount do not include the various in kind contributions of the member countries, the approximate amount of which is not possible to be estimated clearly, but should any way be much more than the direct ones.

Among the main conclusions that may guide the future actions, is that although the project achievements is considered important for the region and the countries concerned, TER project needs to be placed institutionally in the scheme of the European transport developments. The rapidly changing context in Europe, found the project and the countries concerned not ready to react adequately, or at least not to the necessary degree.

TER Project may effectively be incorporated in the new transport context of Europe and play a very useful role. The timing is excellent as the European policy for integration is more or less established by now, and the main concern from all sides is the implementation. What is necessary is to proceed quickly to the necessary adjustments.

TER nowadays, represent an important instrument of co-ordinated actions in related transport issues of the Central-Eastern & South Eastern Europe, that can play a serious and concrete role in the future European Transport Integration process. Their long lasting, flexible, effective and self-sustainable structures are characterising them as unique instruments that may effectively assist towards Pan-European transport infrastructure development.

Recommendations of strategic directions for the Project in the future.

The following recommendations fully supported by findings and conclusions are divided in two main sections. Recommendations for realistic adjustments on strategy and objectives.

(i) Recommendations on TER Project adjustments on strategy

Make the Project Integrate in the new European transport context

- Incorporate the project in the European transport system
- Secure institutional role for TER project implementation within the European Infrastructure development plans
- Develop close co-operation with other related initiatives and projects
- Apply intermodal concept and supplementary development and operational plans between TER and TEM as well as between them and the other components of the networks (Sea Ports – Inland Ports – Air Ports – Intermodal Terminals – Short Sea Shipping Connections – Inland Navigation)
- Work for application of PPP concept in the TER member countries becoming the central point for its development in the region

- Introduce, assist and take the leading role in the region, for the wider application of Freight Villages concept as supplementary components of road and railway networks
- Secure continuity of the projects main links in the region, irrespective of the changes in EU membership and work on alternative links and connections
- Secure equal interest and active participation from all members in promoting the projects objectives at national level

Strengthen the co-operation with EU

- Establish permanent dialogue and co-operation with EC relevant DGs, as well as with the Transport Sections of the European Parliament, Economic and Social Committee and the Committee of Regions
- Use the possibilities given by the EU Instrument for Structural Policies for Pre-Accession (ISPA), to incorporate TER project within the scheme of an overriding Community interest by their interconnection and interoperability with EU TENs.
- Become the forum for development of transport networks strategies in the region jointly with the EU, the member countries and the funding and lending institutions
- Use the possibilities given by participation in the EU Transport Research and development programs

Strengthen the co-operation with the European Private sector and other related organisation:

- Establish institutional co-operation with the European private sector and other Transport related bodies and the International Financial Institutions

- Make known the Project importance within the member countries and in Europe

(ii) Recommendations on TER Project Objectives

- Clarify and agree on a realistic priority plan for implementation of the projects objectives, responding to the current needs of the region, indicating a time horizon of their completion

- Support the implementation by TER of EU Directives on railway of the region and take practical actions on the topics of Freight Freeways, User Charges, Connection of EUs railway system in Europe, Privatisation, Harmonisation of State Agreements, Traffic Management, Economic Evaluations

- Link and extent TER Network with neighbouring regions, and especially Baltic Sea, Mediterranean Sea, Black Sea, Caspian Sea, North Africa and Euro-Asian and Trans-African Links

- Investigate alternative links within and out TER region, by incorporation of intermodal concept using Intermodality and interconnection of transport systems (Railways, Roads, Inland Navigation) and related modes and infrastructures

- Intensify TER project concern for application of technological achievements and new transport techniques in Telematics, informatics, Intelligent Transport Systems etc.

- Elaborate a new Strategic TER Master Plan.

- Prepare new maps of the projects presenting the region of TER projects concern and extend, their East and West European alignments and their dynamic towards neighbouring regions, incorporating intermodal concept and links.

- Give attention on the necessity of harmonisation of legislative and administrative status and decrease obstacles affecting the operational aspect of the networks

- Co-ordinate the projects with national infrastructure development plans of the member countries

- Support pilot actions and practical projects implementation by direct involvement of the projects in securing financial resources

- Work on regular feed back and publicity on the projects achievements, news, and plans

- Be present on European transport Forums and events

- Develop joint actions and institutional co-operation between TER and TEM Projects

- Proceed with regular evaluations of the projects and set indicators for measurement of the degree of success or failure

- Concentrate the concern and continuously refer on the achievement of specific and general objectives

- Organise a high-level meeting under the auspices of the UNECE for promotion of co-operation with all parties concerned, co-ordination of actions on the basis of agreed strategy and achievement of the necessary support for the projects.

Most of the above-mentioned strategy and tasks have been taken on board for the formulation of the new strategic plan of action for the TER Project that was approved by the Steering Committee in its 14th session in Antalya-Turkey on May 2001. The full text of the approved new strategy of the TER Project is presented as 1.4 TER Project Strategy.

TER technical characteristics, standards and operational parameters; decisions and guidelines for their implementation

TER member countries always considered the implementation of AGC and AGTC standards as final target in the process of modernisation of the railway infrastructure in their countries.

However, considering the high costs required during the implementation of these standards, they selected and agreed upon the implementation on a short-medium term, of a set of technical standards and operational parameters at a level nearer to their present financial possibilities for implementation. TER Steering Committee in 1996 adopted the following standards for use on short and medium term:

Technical Standards for the TER Network

1.	Vehicle loading gauge:		UIC/B
2.	Minimum distance between track centres:		4.0 m
3.	Nominal minimum speed:		120 Km/h
4.	Authorised mass per axle:		
	- Locomotives	(200 km/h):	22,5 t
	- Wagons:	120 km/h:	20 t
		140 km/h:	18 t
5.	Authorised mass per linear metre:		8t
6.	Test train (bridge design):		UIC 71
7.	Minimum platform length in principal stations:		250 m
8.	Minimum useful siding length:		500 m

Operational parameters for the TER Network

(i) Passenger transport

To establish the system of execution of border control procedures (police, customs) on the moving train with short stops at the frontier station for technical/administrative reasons if necessary.

(ii) Freight transport

1. To complete the system of common frontier stations in order to avoid to duplication of border controls.

2. To rationalise the control procedures at the existing common frontier stations.

3. To introduce the frontier control operations of block trains in terminals of neighbouring railways wherever possible.

(iii) Passenger and freight transport

To introduce the use of hauling vehicles in the territories of neighbouring TER countries wherever possible.

The implementation of these standards (with lower costs) would allow the modernisation of a bigger part of the national network. These so called "TER standards" were used already by various consultants who did studies in the accession countries to the EU for modernisation of railway infrastructure within the PHARE Multi-country Transport Programme, which was financing these studies until 2000.

The above list of standards has been reconfirmed and validated by the 13th Session of TER Steering Committee in 2000 and are part of the TER Trust Fund Agreement for 2001-2005.

Here follows a Comparative Table with TER Standards and Parameters versus AGC and AGTC.

Comparative Table with TER Standards and Parameters versus AGC and AGTC			
Infrastructure parameters	AGC European Agreement on Main International Railway Lines	AGTC European Agreement on Important International Combined Transport Lines and Related Installations	TER Standards and Parameters
Vehicle loading gauge	UIC/B	UIC/B	UIC/B
Minimum distance between track centres	(4.0m)	(4.0m)	(4.0m)
Nominal minimum speed	(160km/ h)	100 km/h; 120 km/h. For wag. (<=100km/h: 22.5t) (<=120km/ h: 20t)	(120 Km/h)
Authorized mass per axle Locomotives	<= 200km/h: 22.5t at a speed of 200km/h (AGC only)		<=(200 km/h): 22,5 t
Railcars and rail motor sets	<= 300km/h: 17t at a speed of 160km/h (AGC only).		
Carriages	16 t.		
Wagons	<=100km/h: 20t at a speed of 100km/h, <=120km/h: 20t at a speed of 120km/h, <=140km/h: 18t at a speed of 140km/h.	<=100km/h: 20t at a speed of 100km/h, <=120km/h: 20t at a speed of 120km/h, <=140km/h: 18t at a speed of 140km/h.	<=120 km/h: 20 t ; <=140 km/h: 18 t
Authorized mass per linear metre	8t	8t	8t
Maximum gradient	35mm/m		
Minimum platform length in principal stations	400m (AGC only).		250 m
Minimum useful siding length	750m.	750m.	500 m
Capacity bottlenecks on railway lines	never, "seldom", "occasionally", "often", or "always" (AGC only)		
Level crossings	The AGC aims at a progressive elimination of existing level crossings.		
Test train (bridge design)			UIC 71

Presentation of existing TER network and plans

In the development of TER Project, according to the Trust Fund Agreement, the proposals for inclusion of new railway lines in the TER network was accepted only if approved by the Steering Committee. So, every Session of the Steering Committee was entitled to consider proposals of new sections to be included into the network by the member countries. Bearing in mind that TER network has developed quite a lot along the years, the 13th Session of the Steering Committee agreed upon a network with line sections which was defined as "final".

However, one country with the agreement of the other member countries can propose the inclusion in the TER network of new line sections.

The member countries have also agreed upon that in TER network could be also line sections which belong to AGC and AGTC Agreements concluded within the UNECE or the TINA network. So in many cases, the TER line sections are common with the AGC and AGTC. Regarding TINA network it includes sections, which as a rule are in addition to the TER lines or AGC and AGTC.

The TER network and its map approved by the Steering Committee at its 13th session on 8-10 March 2000 in Budapest, as well as the member country maps is presented bellow.

List of Trans – European Railway (TER) Lines[2]

E 010	{Helsinki – Vainikkala}– Luzhayka (b. st. RZD/VR) - Buslovskaya – St. Petersburg – Akademicheskaya - Moscow	TN 001
E 020	{Berlin – Frankfurt/O} – Rzepin (b. st. PKP/DB) – Poznan – Barlogi – Lowiz – Warsaw/Skierniewice – Lukow – Terespol (b. st. PKP/BC) - {Brest (b. st. BC/PKP) – Minsk – Orsha }- Krasnoye (b. st. RZD/BC) – Smolensk – Moscow – Nizhniy Novgorod – Sverdlovsk – {Omsk – Novosibirsk – Krasnoyarsk – Irkutsk – Vladivostok}	TN 004
E 026	Wroclaw – Idzikowice and Warsaw – Bialystok – Sokolka – {Kuznica Bial. (b. st. PKP/BC) – Grodno – Kabeliai (b. st. LG/BC) – Vilnius	TN 007
E 026/1	Sarkiai – Siauliai – Gaiziunai – Palemonas – Kazlu Ruda - Mockava	TN

[2] To be updated by the decision of the Steering Committee as and when required

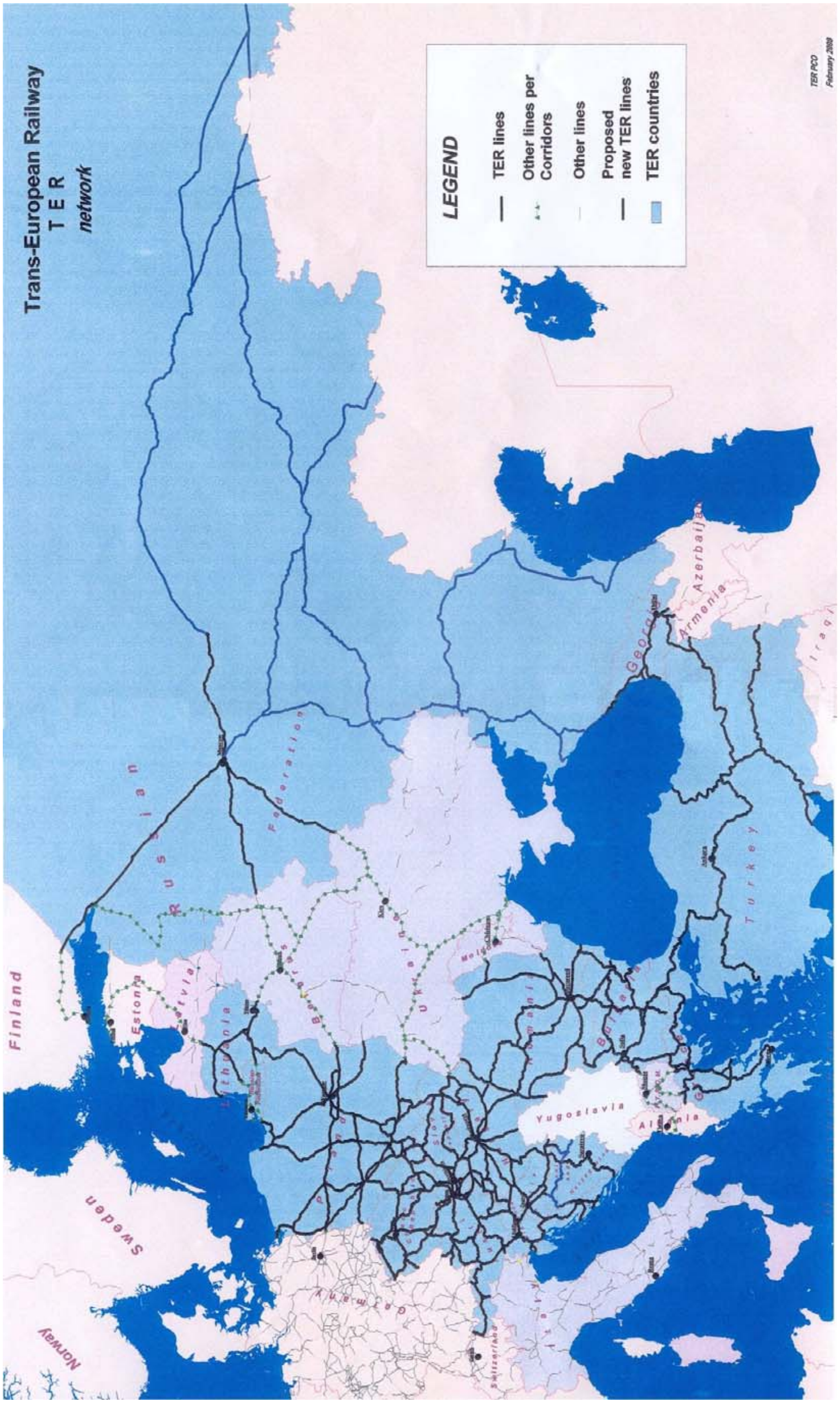
		010
E 030	{Dresden} – Zgorzelec (b. st. PKP/DB) – Wroclaw	TN
	and	013
	Opole – Kedzierzyn Kozle – Gliwice – Katowice – Krakow – Przemysl (b. st. PKP/UZ) – {Mostiska (b. st. UZ/PKP) – Lvov}	
	and	
	Siechnice – Opole – Gliwice	
	and	
	{Kyiv- Poltava – Kharkov – Topoli (b.st. UZ/RZD)} - Solovei Valuiki – Povonno – Rtishcevo – Penza – Samara – Uta – Chelysbinsk – Kurgan – Omsk	TN 013
E 030/1	Tarnow – Nowy Sacz – Muszyna (b. st. PKP/ZSR) – Plavec (b. st. ZSR/PKP) – Kysak	TN
	and	016
	Kosice – Cana (b.st. ZSR/MAV0 – Hidasnemeti (b. st. MAV/ZSR) – Felsozsolca	
E 040	{Nurnberg} – Cheb (b. st. CD/DB) – Plzen – Prague – Kolin – Usti n/O – Ceska Trebova – Prerov - Hranice na Morave	TN 019
	and	
	Petrovice u Karvine – Mosty u Jablunkova (b. st. CD/ZSR) – Cadca (b. st. ZSR/CD) – Zilina – Vrutky – Poprad Tatry – Kysak – Kosice – Cierna n/T (b. st. ZSR/UZ) – {Chop (b. st. UZ/ZSR)}	
	And	
	Horni Lidec (BCP) – Luky pod Makytou (b. st. ZSR/CD) – Puchov - Zilina	
T 040	Ceska Kubice (b. st. CD/DB) – Plzen	TN 022
T 041	Plzen – Ceske Budejovice – Ceske Velenice	TN 025
T 042	Nove Zamky – Zvolen – Plesivec – Kosice	TN 028
E 045	Kufstein (b. st. OBB/DB) – Worgl	TN 031
	and	
	Innsbruck – Garberbach – Brenner	
	and	
	Baumkirchen – Garberbach	

E 050	{Buchs (b. st. SBB/OBB)} – Feldkirch – Innsbruck – Baumkirchen – Schwarzach/St.Veit – Bischofshofen – Salzburg – Wels – Marchtrenk – Linz – Vienna – Bruck/L – Hegyeshalom (b. st. MAV/OBB) – Gyor – Komarom – Budapest – Hatvan – Miskolc – Nyiregyhaza – Zahony (b. st. MAV/UZ) – {Chop (b. st. UZ/MAV) – Lvov – Kyiv – Zernovo (b. st. UZ/RZD)} – Suzemka (b. st. RZD/UZ) – Moscow and {Fastov – Dnepropetrovsk – Krasnoarmeisk – Krasnaya Mogila (b.st. UZ/RZD)} – Gukovo – Lichaiy - Astrakhan (b.st. RZD/Kazakhstan)	
T 050	Vienna Meiding – Ebenfurth – Sopron (b. st. GySEV/RoeEE) – Gyor and Vienna Meiding – Ebenfurth – Wiener Neustadt – Loipersbach – Sopron (b. st. GySEV/OBB)	TN 037
E 050/2	{Kvashino (b.st. UZ/RZD)}- Uspenskaya – Taganrog – Rostov-na-Donu - and Tihoreckaia - Armavir	TN 040
E 052	Vienna-Sud – Marchegg (b. st. OBB/ZSR) – Devinska Nova Ves (b. st. ZSR/OBB) – Bratislava – Galanta – Nove Zamky – Sturovo (b. st. ZSR/MAV) – Szob – Budapest – Cegled – Szolnok – Puspokladany – Debrecen – Nyiregyhaza	TN 043
T 053	Parndorf – Kittsee (b. st. OBB/ZSR) – Bratislava – Petrzalka	TN 046
E 054	Arad – Vintu de Jos - Coslariu – Ploesti – Bucuresti	TN 049
T 054	Vintu de Jos – Sibiu - Bujoreni – Titu - Bucuresti	TN 052
E 054/1	Puspokladany – Biharkeresztes (b. st. MAV/CFR) – Episcopia Bihor (CFR/MAV) – Oradea – Cluj – Coslariu –	TN 055
E 055	{Dresden} – Decin (b. st. CD/DB) – Usti n/L – Prague and Schwarzach/St. Veit – Villach – Arnoldstein (b. st. OBB/FS)	TN 058
T 055	Usti n/L – Karlovy Vary – Cheb	TN

		061
E 056	Budapest – Maglod – Ujszasz – Szolnok – Lokoshaza (b. st. MAV/CFR) – Curtici (b. st. CFR/MAV) – Arad – Timisioara – Craiova – Videle – Bucuresti	TN 064
T 056	Craiova – Calafat (b. st. CFR/BDZ) – Vidin (BDZ/CFR) – Mezdra	TN 067
E 059	Swinoujscie – Szczecin – Poznan – Wroclaw – Siechnice – Opole – Kedzierzyn Kozle – Chalupki (b. st. PKP/CD) – Bohumin (b. st. CD/PKP)	TN 070
T 059	Szczecin – Rzepin – Nowa Sol – Wroclaw - Opole	TN 073
E 061	{Dresden} Decin (b. st. CD/DB) Usti n/L – Prague – Kolin Usti n/O – Ceska Trebova – Brno – Breclav – Lanzhot (b. st. CD/ZSR) – Kuty (b. st. ZSR/CD) – Devinska Nova Ves – Bratislava – N. Zamky– Komarno (b. st. ZSR/MAV) – Komarom (b. st. MAV/ZSR) and Bratislava (Petrzalka) - Rusovce - (b.st. ZSR/MAV) -Rajka (b.sr. MAV/ ZSR) - Hegyeshalom	TN 076
T 061	Decin (b. st. CD/DB) – Usti n/L – Vsetaty – Nymburk – Kolin – Havlickuv Brod – Brno	TN 079
T 062	Brno – Viskov - Prerov	TN 082
E 063	Zilina – Puchov – Leopoldov – Bratislava/Galanta	TN 085
E 065	Gdynia – Gdansk – Tczew – Malbork – Warsaw – Idzikowice – Psary – Katowice – Pszczyna – Wisla Most – Zebrzydowice (b.st. PKP/CD) – Petrovice u Karvine (b. st. CD/PKP) – Bohumin – Hranice na Morave – Prerov – Breclav (b. st. CD/OBB – Bernhardsthal - Hohenau (b. st. OBB/CD) – Retz (b. st. OBB/CD) – Florisdorf – Vienna – Bruck a. d. M. – St. Michael – Villach – Rosenbach (b. st. OBB/SZ) – Jesenice (b. st. SZ/OBB) – Ljubljana – Pivka – Il. Bistrica (b. st. SZ/HZ) – Sapjane (b. st. HZ/SZ) – Rijeka	TN 088
T 065	Tczew – Barlogi – Zdunska Wola – Gliwice – Pszczyna	TN 091
E 066	{Chop} – Halmeu (b. st. CFR/UZ) – Satu Mare - Oradea – Arad - Timisoara – Stamora Moravita (b. st. CFR/JZ)	TN 094

E 067	Bruck a. d. M. – Graz – Spielfeld Strass (b. st. OBB/SZ) – Sentilj (b. st. SZ/OBB) – Maribor – Pragersko – Zidani Most	TN 097
T 067	Graz – Jennersdorf (b. st. OBB/MAV) – Szentgotthard (b. st. MAV/OBB) – Kormend	TN 100
E 069	Budapest – Szekesfehervar – Nagykanizsa – Murakeresztur (b. st. MAV/HZ) – Kotoriba (b. st. HZ/MAV) – Cakovec (b. st. HZ/SZ) – Sredisce (b. st. SZ/HZ) – Ormoz – Pragersko – Zidani Most – Ljubljana – Pivka – Divaca – Koper	TN 103
T 069	Szekesfehervar – Veszprem – Boba/Celldomolk – Zalalovo – Hodos (b. st. SZ/MAV) Murska Sobota – Ormoz	TN 106
E 070	{Trieste – Villa Opicina (b. st. FS/SZ)} – Sezana (b. st. SZ/FS) – Divaca – Pivka – Ljubljana – Zidani Most – Dobova (b. st. SZ/HZ) – Savski Marof (b. st. HZ/SZ) – Zagreb – Sunja - Novska – Slavonski Brod – Tovarnik (b. st. HZ/JZ) and Zagreb – Dugo Selo – Novska And Dragoman (b. st. BDZ/JZ) – Sofija – Plovdiv – Dimitrovgrad – Svilengrad (b. st. BDZ/TCDD) – Kapikule (b. st. TCDD/BDZ) – Sirkeci – Istanbul – Haydarpasa – Ankara – Kalin - Cetinkaya – Malatya – Kapikoy and Cetinkaya – Divrigi – Erzurum – Kars – Dogukapi (b. st. TCDD/Armenia) and Kars – Gildir – Aktas (b. st. TCDD/Georgia) – Marneuli	TN 109 TN 109
T 070	Vinkovci – Gunja - Brcko (b. st. BHZ/HZ) – Tuzla	TN 112
E 071	Budapest – Dombovar – Gyekenyes (b. st. MAV/HZ) – Koprivnica (b. st. HZ/MAV) – Zagreb – Ostarije – Rijeka	TN 115
E 074	Eskisehir – Alayunt – Balikesir – Manisa - Izmit	TN 118
E 085	Budapest - Kiskunhalas – Kelebia (b. st. MAV/JZ) and {Volkovo (b. st. CFARYM/JZ)/Tabanovci (b. st. CFARYM/JZ) – Skopje – Veles – Gevgelija (b. st. CFARYM/CH) – Thessaloniki – Athens}	TN 121

E 500/3	Kotchetovka – Gryazi – Voronezh – Gukevo Volzhsky – Rostov-na-Donu – and Tihoreckaia - Krasnodar - Novorossiysk	TN 163
T 501	Vienna Nord – Wolfsthal	TN 166
E 502	Bischofshofen – Selzthal	TN 169
T 502	Bregenz – Lustenau/St. Margrethen (b. st. OBB/SBB)	TN 172
T 503	Lindau (b. st. OBB/DB) – Bregenz – Feldkirch	TN 175
E 551	Prague – Veseli n/L – Ceske Budejovice – Horni Dvoriste (b. st. CD/OBB) – Summerau (b. st. OBB/CD) – Linz – Traun – Selzthal – St. Michael and Traun – Marchtrenk	TN 178
T 551	Veseli n/L – Ceske Velenice (b. st. CD/OBB) – Gmund (b. st. OBB/CD) – Vienna FJB	TN 181
E 560	Buzau - Faurei - Galati	TN 184
T 560	Faurei – Bucuresti	TN 187
E 562	Bucuresti – Fetesi – Medgidia – Constanta	TN 190
T 592	Wroclaw – Miedzylesie (b. st. PKP/CD) Lichkov (b. st. CD/PKP) – Letohrad - Usti n/O	TN 193
T 654	Wisla Most – Zwardon (b. st. PKP/ZSR) – Skalite (b. st. ZSR/PKP) – Cadca	TN 196


Trans-European Railway
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Proposed new TER lines
TER countries
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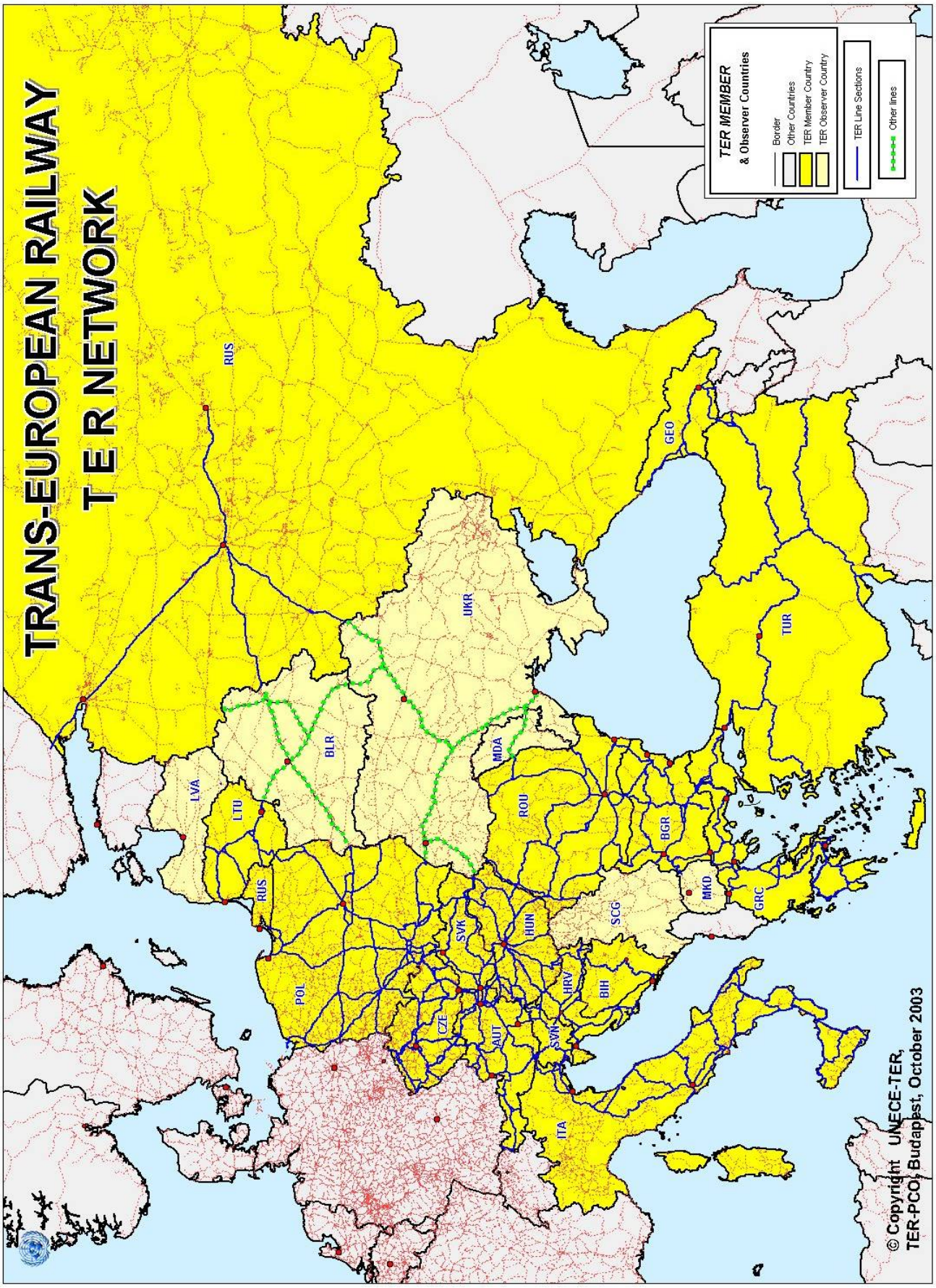
TRANS-EUROPEAN RAILWAY
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Presentation of the TER GIS mapping and database management system

The basis for the creation of a TER database goes back to 1993. At that time it was agreed only some basic principles like presentation in Excel format and several (very few) categories of data were provided to the PCO.

By the years this process for establishing a database was developed and improved. However, until 2001, it was never used mainly because of lack of application.

In January 2003, the Meeting of the Group of TER National Co-ordinators approved the rules for the restructuring of the database including categories of data required and system of collection with a new database structure (more application oriented) to be implemented in the future.

Database

The TER Database is meant to cover all 16-member countries as well as several observer countries in TER.

The list of the data fields of the new TER database proposed by the above group, was approved by the Steering Committee at its 17th session, which took place in Bratislava, Slovakia on 30 May 2003.

The aim of this database is to provide the necessary data for the preparation of pre-feasibility studies, assessment of investments, facilitation of railway border crossings, etc., for upgrading and modernization of the TER lines in the member countries.

At present TER Database is built for Access Database. The structure of the database was obtained from the Conceptual Data Model created using the tool Sybase Power Designer 8.

Data is available from 9 countries, but significant data was received only from 8 countries. The reference year for operational data is 2001. For most of the countries commercial data is missing. There is no data about projects on line sections, no matter of the project status.

The logical structure diagram of the actual TER database is presented further on.

Presentation of TER GIS mapping and database management systems

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Database

The TER Database is meant to cover all member countries as well as several observer countries in TER as showed bellow.

List of member and observer TER countries

#	Abbr.2	Abbr.3	Short Name	Full Name	Status
1	AT	AUT	AUSTRIA	Republic of Austria	Member
2	BA	BIH	BOSNIA and HERZEGOVINA	Bosnia and Herzegovina	Member
3	BG	BGR	BULGARIA	Republic of Bulgaria	Member
4	BY	BLR	BELARUS	Belarus	Observer
5	CZ	CZE	CZECH REPUBLIC	Czech Republic	Member
6	GE	GEO	GEORGIA	Georgia	Member
7	GR	GRC	GREECE	Hellenic Republic	Member
8	HR	HRV	CROATIA	Republic of Croatia	Member
9	HU	HUN	HUNGARY	Republic of Hungary	Member
10	IT	ITA	ITALY	Italian Republic	Member
11	LT	LTU	LITHUANIA	Republic of Lithuania	Member
12	LV	LVA	LATVIA	Republic of Latvia	Observer
13	MD	MDA	MOLDOVA	Republic of Moldova	Observer
14	MK	MKD	FYROM	THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA	Observer
15	PL	POL	POLAND	Republic of Poland	Member
16	RO	ROU	ROMANIA	Romania	Member
17	RU	RUS	RUSSIAN FEDERATION	Russian Federation	Member
18	SK	SVK	SLOVAKIA	Slovak Republic	Member
19	SL	SVN	SLOVENIA	Republic of Slovenia	Member
20	TR	TUR	TURKEY	Republic of Turkey	Member
21	UA	UKR	UKRAINE	Ukraine	Observer

In the actual database is data for Austria (only for line sections, some infrastructure data), Bosnia and Herzegovina, Bulgaria, Czech Republic, Hungary, Lithuania, Romania, Turkey. Also Russian Federation sent data but due to a coding problem of the line sections is not imported yet into the TER database.

The list of the data fields of the new TER database proposed by the above group, was approved by the Steering Committee at its 17th Session which took place in Bratislava, Slovakia on 30 May 2003.It is showed bellow.

List of database fields (new database structure approved by S.C)

Entity Category	Table Name	Field Name	No
General	**General data per Country**	Data valid for the year	1
		Country Code	2
		Total length of the rail network (Km)	3
		Labour productivity: employees/km of network in use (Conventional Rail Transport)	4
		Labour productivity: net ton-km + passenger-km/employee (Conventional Rail Transport)	5
		Labour productivity: employees/km of network in use (High Speed Rail Transport)	6
		Labour productivity: net ton-km + passenger-km/employee (High Speed Rail Transport)	7
		Productivity of freight transport per km: gross ton-km/km of network	8
		Productivity of freight transport per km: net ton-km/km of network	9
		Productivity of freight transport per employee: gross ton-km /employee	10
		Productivity of freight transport per employee: net ton-km/employee	11
		Productivity of Passengers Transport per Year (passenger-kM/employee) (Conventional Rail Transport)	12
		Productivity of Passengers Transport per Year (passenger-km/km of network) (Conventional Rail Transport)	13
		Productivity of Passenger Transport per Year (passenger-km/employee) (High Speed Rail Transport)	14
		Productivity of Passenger Transport per Year (passenger-km/km of network) (High Speed Rail Transport)	15
		Productivity of Locomotives: gross ton-km/locomotive	16
		Productivity of Wagons: net ton-km/wagon	17
		Productivity of lines (passenger train-km + freight train-km/km of network	18
		Energy consumption (for traction power): MJ/1000 gross ton-km	19

		Total number of railway workers	20

Entity Category	Table Name	Field Name	No
Infrastructure	**Line section File**	Data valid for the year	1
		Country Code	2
		Section code	3
		Start Node Code	4
		End Node Code	5
		Railway Code	6
		Main Location of the Start Node	7
		Length of Line Section	8
		Type of Line Section	9
		Maximum Speed Allowed by the Track	10
		Maximum Design Speed	11
		Load Limits for Railway Lines	12
		Number of Tracks	13
		Distance between Axes of Tracks	14
		Track Gauge	15
		Loading Gauge	16
		Rail Structure gauge	17
		Traction System	18
		Two-way Direction Operation	19
		Type of signaling	20
		Maximum Gradient	21
		Minimum Radius of Curve	22
		Maximum Capacity of Line Section	23
		Authorised mass per axle wagons < 100 km/h	24
		Authorised mass per axle wagons < 120 km/h	25
		Construction year of the Line Section	26
		Year of Last Main Overhaul of Line Section	27
		Minimum Design Speed	28
		Dominant Speed	29
		Percent of Double Track	30
		Sleeper Type	31
		Distance between Sleepers	32
		Land Type	33
		Type of fastening	34
		Thickness of Ballast	35
		Presignallinig Distance	36
		Connection between the Driver and the Dispatcher	37

Entity Category	Table Name	Field Name	No
Infrastructure	**Operational Data of a Line**	Data valid for the year	1
		Country Code	2
		Line Section Code	3
		Minimum Travel Time for Passenger Trains	4

		Minimum Travel Time for Freight Trains	5
		Number of Present Freight Train	6
		Number of Present Passenger Train	7
		Freight Net Load	8
		Passenger - km per year	9
		Passenger Gross Load	10
		Freight Gross Load	11
		Passenger Train Movements	12
		Freight Train Movements	13
		Passenger Trains Commercial Speed	14
		Freight Trains Commercial Speed	15
		Type of service	16
		Frequency of service	17
Infrastructure	**Nodes**	Data valid for the year	1
		Country Code	2
		Node Code	3
		Node Type	4
		Rail Code	5
		Station type	6
		Distance of the Node from the Main AGC or TER Line	7
		Access to the station	8
		Intermodal operation	9
		System of traction on the Node	10
		Average Waiting Time for Lorries	11
		Minimum Main Track Length	12
		Minimum Siding (Track) Length	13
		Minimum (Main) Passenger Platform Length	14
		Number of Tracks	15
		Number of Passenger Tracks	16
		Number of Freight Tracks	17
		Number of Loading Tracks	18
		Number of Sorting Tracks	19
		Maximum Speed on Switches	20
		Track Gauge	21
		Change of Gauge	22
		Construction year of the Node	23
		Year of Last Main Overhaul of Node	24
Entity Category	**Table Name**	**Field Name**	**No**
Infrastructure	**Bridges**	Data valid for the year	1
		Country Code	2
		Section Code	3
		Location from the Start Node of the Line Section	4
		Order Number of the parallel railway Structure	5
		Length of Bridge	6
		Number of Tracks	7
		Loading Gauge	8
		Rail Structure Gauge	9
		Test Train	10
		Construction year of the Bridge	11
		Year of Last Main Reconstruction of Bridge	12

Infrastructure	**Tunnels**	Data valid for the year	1
		Country Code	2
		Section Code	3
		Location from the Start Node of the Line Section	4
		Order Number of the parallel railway Structure	5
		Length of the Tunnel	6
		Number of Tracks	7
		Loading Gauge	8
		Rail Structure Gauge	9
		Construction year of the Tunnel	10
		Year of Last Main Reconstruction of Tunnel	11
Infrastructure	**Overpasses**	Data valid for the year	1
		Country Code	2
		Section Code	3
		Location from the Start Node of the Line Section	4
		Order Number of the parallel railway Structure	5
		Number of Tracks	6
		Loading Gauge	7
		Rail Structure Gauge	8
		Construction year of the Overpass	9
		Year of Last Main Reconstruction of Overpass	10
Infrastructure	**Level Crossings**	Data valid for the year	1
		Country Code	2
		Section Code	3
		Location from the Start Node of the Line Section	4
		Number of Tracks	5
		Type of Protection of Crossing	6
		Construction Year of the Level Crossing	7
		Year of Last Main Overhaul of Level Crossing	8
Entity Category	**Table Name**	**Field Name**	**No**
Infrastructure	**International Line Codes**	Data valid for the year	1
		Country Code	2
		Section Code	3
		AGC, AGTC or TER	4
		Order Number of the Section Line into Country	5
Infrastructure	**Coded Lines Section**	Data valid for the year	1
		Country Code	2
		Section Code	3
		Pan-European Corridor Code	4
		Order Number of the Section Line in to Country	5
Infrastructure	**Operators on a Section Line**	Data valid for the year	1
		Country Code	2
		Section Code	3
		Railway Service Operator Initials	4
		Railway Service Operator Code	5
		Comments	6
Infrastructure	**Borders**	Data valid for the year	1
		Country Code	2

		Node Code	3
		Abbreviation of the Connected Country	4
		Combined Transport Border Crossing Possibilities	5
		RO-LA Transit Trains	6
		RO-LA Export or Import Trains	7
		Combined Transit Transport	8
		Combined Export or Import Transport	9
		Block or Shuttle Trains Transit	10
		Block or Shuttle Export or Import Trains	11
		Mixed Freight Transit Trains Inspected	12
		Mixed Freight Transit Trains without Inspection	13
		Mixed Freight Trains Export or Import Inspected	14
		Mixed Freight Trains Export or Import without Inspect.	15
		Time for Pass.Long Dist.Trains no Inspect. Needed	16
		Processing Time for Pass. Regional or Local Trains	17
		Type of Passenger Border Control	18
		Customs Procedure for Freight on the Border	19
		Phyto Inspection	20
		Veterinary Inspection	21
		Nuclear safety Inspection	22
		Dangerous Goods Transported	23
Entity Category	**Table Name**	**Field Name**	**No**
Transport Equipment	**Locomotives or Railcar**	Data valid for the year	1
		Country Code	2
		Locos/Rcars Code	3
		Type of Locos/Rcars	4
		Railway Enterprise Code 2.	5
		Total Num of the owned Locos/Rcars by Railway Ent.	6
		Total Num of the Not owned Locos/Rcars by Rail. Enterprise	7
		Type of Power Driven	8
		Length over Buffers	9
		Wheel set Gauge	10
		Maximum Axle Load	11
		Maximum Speed	12
Transport Equipment	**Coaches**	Data valid for the year	1
		Country Code	2
		Coach Code	3
		Type of Coach	4
		Railway Enterprise Code 2	5
		Total number of the owned coaches by the Rail. Enterprise	6
		Total num. of the Not owned coaches by the Rail. Enterprise	7
		Average Length over Buffers	8
		Wheel set Gauge	9
		Maximum Axle Load	10
		Maximum Speed	11
Transport Equipment	**Wagons**	Data valid for the year	1
		Country Code	2

		Wagon Code	3
		Type of Wagon	4
		Railway Enterprise Code 2.	5
		Total Num of the owned Wagons by the Railway Enterprises	6
		Total Num of the Not owned Wagons by the Rail Enterprises	7
		Average Length over Buffers	8
		Wheel set Gauge	9
		Maximum axle load	10
		Maximum speed	11
Entity Category	**Table Name**	**Field Name**	**No**
Combined Transport	**Combined Transport Quantity**	Data valid for the year	1
		Country Code	2
		Railway Enterprise Code 3.	3
		Total number of TEU Export	4
		Total weight of Combined Transport Export	5
		Total number of TEU Import	6
		Total weight of Combined Transport Import	7
		Total number of TEU Transit	8
		Total weight of Combined Transport Transit	9
		Definition of route (relation-1) Start Node 1	10
		Definition of route (relation-2) End Node 1	11
		Definition of route (relation-3) Via Node 1	12
		Definition of route (relation-4) Via Node 2	13
		Definition of route (relation-5) Via Node 3	14
Auxiliary	**Country** – ISO 3166	Numeric Code	1
		Country Code – according ISO 3166-2 three letters codification	2
		Short name of the country	3
		Official name of the country	4
Auxiliary	AGC, AGTC and TER Line Codes	International AGC, AGTC and TER Line Code	1
		Comments	2
Auxiliary	Pan-European Corridors	Pan-Eruropean Corridor Code (Short Name)	1
		Pan-European Corridor Name	2
		Comments	3
Auxiliary	West-Est, North-South country sorting number per AGC, AGTC or TER line	Data valid for the year	1
		Country Code	2
		AGC, AGTC or TER Line Code	3
		Sort Order Number	4
Auxiliary	Node Code - UIC & TER	Node code	1
		Short node name	2
		Full name of the node	3
Auxiliary	Line Load Limit	Line load limit code	1
		Line load limit comment	2
Entity Category	**Table Name**	**Field Name**	**No**

Auxiliary	Rail Loading Gauge	Rail loading gauge code	1
		Rail loading gauge comment	2
Auxiliary	Land Type	Land code	1
		Land (type) name	2
		Comment	3
Auxiliary	Track Type	Track code	1
		Track short name	2
		Track full name	3
		Track gauge	4
Auxiliary	Sleeper type	Sleeper code	1
		Sleeper name	2
		Description	3
Auxiliary	Level Crossing Protect.	Level crossing protection code	1
		Level crossing protection short name	2
		Level crossing protection full name	3
Auxiliary	Traction System	Traction system code	1
		Traction system name	2
		Traction system type	3
		Comment	4
Auxiliary	Locomotive Type	Locomotive or railcar code	1
		Locomotive or railcar short name	2
		Locomotive or railcar full name	3
		Locomotive or railcar driven power	4
		Locomotive or railcar usage - for pass, for freight, universal loco, etc.	5
Auxiliary	Coach Type	Coach code	1
		Coach classes	2
		Coach type	3
Auxiliary	Wagon Type	Wagon code	1
		Wagon group	2
		Comment	3
Auxiliary	Control (border) Type	Control code	1
		Control short name	2
		Control full name	3
Auxiliary	Inspection Type	Inspection Code	1
		Inspection short name	2
		Inspection full name	3
Auxiliary	Terminal Access	Terminal access code	1
		Terminal access short name	2
		Terminal access full name	3

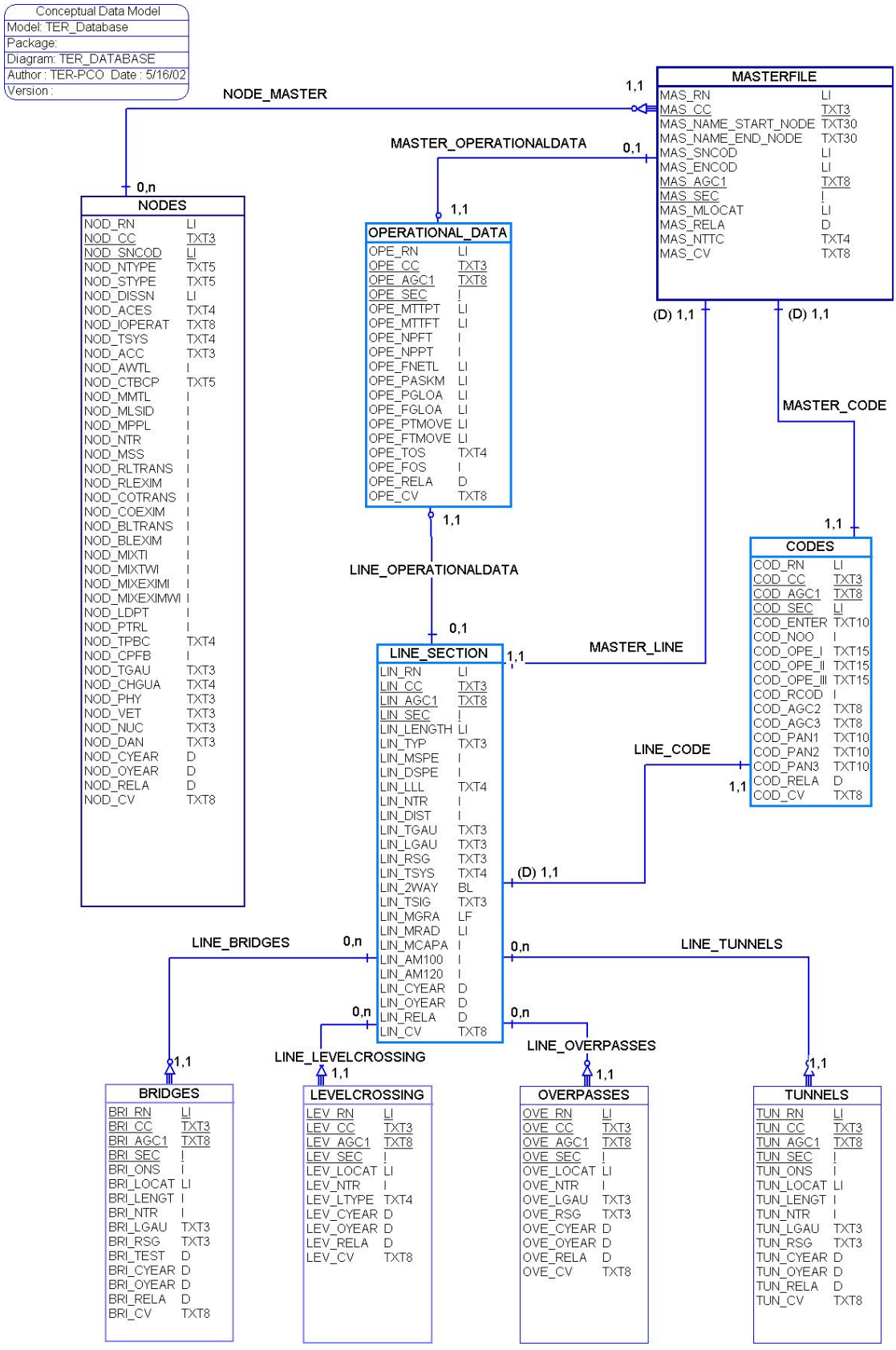
The aim of this database is to provide the necessary data for the preparation of pre-feasibility studies, assessment of investments, facilitation of railway border crossings, etc., for upgrading and modernization of the TER lines in the member countries.

At present TER Database is built for Access Database. The structure of the database was obtained from the Conceptual Data Model created using the tool Sybase Power Designer 8.

Data is available from 9 countries, but significant data was received only from 8 countries. The reference year for operational data is 2001. For most of the countries commercial data is missing. There is no data about projects on line sections, no matter of the project status.

The logical structure diagram of the actual TER database is presented bellow.

Actual Database Structure Diagram


Conceptual Data Model
Model: TER_Database
Package:
Diagram: TER_DATABASE
Author : TER-PCO Date : 5/16/02
Version :
NODE_MASTER
MASTER_OPERATIONALDATA
LINE_OPERATIONALDATA
MASTER_CODE
MASTER_LINE
LINE_CODE
LINE_BRIDGES
LINE_LEVELCROSSING
LINE_OVERPASSES
LINE_TUNNELS
MASTERFILE
MAS_RN LI
MAS_CC TXT3
MAS_NAME_START_NODE TXT30
MAS_NAME_END_NODE TXT30
MAS_SNCOD LI
MAS_ENCOD LI
MAS_AGC1 TXT8
MAS_SEC I
MAS_MLOCAT LI
MAS_RELA D
MAS_NTTC TXT4
MAS_CV TXT8
NODES
NOD_RN LI
NOD_CC TXT3
NOD_SNCOD LI
NOD_NTYPE TXT5
NOD_STYPE TXT5
NOD_DISSN LI
NOD_ACES TXT4
NOD_IOPERAT TXT8
NOD_TSYS TXT4
NOD_ACC TXT3
NOD_AWTL I
NOD_CTBCP TXT5
NOD_MMTL I
NOD_MLSID I
NOD_MPPL I
NOD_NTR I
NOD_MSS I
NOD_RLTRANS I
NOD_RLEXIM I
NOD_COTRANS I
NOD_COEXIM I
NOD_BLTRANS I
NOD_BLEXIM I
NOD_MIXTI I
NOD_MIXTWI I
NOD_MIXEXIMI I
NOD_MIXEXIMWI I
NOD_LDPT I
NOD_PTRL I
NOD_TPBC TXT4
NOD_CPFB I
NOD_TGAU TXT3
NOD_CHGUA TXT4
NOD_PHY TXT3
NOD_VET TXT3
NOD_NUC TXT3
NOD_DAN TXT3
NOD_CYEAR D
NOD_OYEAR D
NOD_RELA D
NOD_CV TXT8
OPERATIONAL_DATA
OPE_RN LI
OPE_CC TXT3
OPE_AGC1 TXT8
OPE_SEC I
OPE_MTTPT LI
OPE_MTTFT LI
OPE_NPFT I
OPE_NPPT I
OPE_FNETL LI
OPE_PASKM LI
OPE_PGLOA LI
OPE_FGLOA LI
OPE_PTMOVE LI
OPE_FTMOVE LI
OPE_TOS TXT4
OPE_FOS I
OPE_RELA D
OPE_CV TXT8
CODES
COD_RN LI
COD_CC TXT3
COD_AGC1 TXT8
COD_SEC LI
COD_ENTER TXT10
COD_NOO I
COD_OPE_I TXT15
COD_OPE_II TXT15
COD_OPE_III TXT15
COD_RCOD I
COD_AGC2 TXT8
COD_AGC3 TXT8
COD_PAN1 TXT10
COD_PAN2 TXT10
COD_PAN3 TXT10
COD_RELA D
COD_CV TXT8
LINE_SECTION
LIN_RN LI
LIN_CC TXT3
LIN_AGC1 TXT8
LIN_SEC I
LIN_LENGTH LI
LIN_TYP TXT3
LIN_MSPE I
LIN_DSPE I
LIN_LLL TXT4
LIN_NTR I
LIN_DIST I
LIN_TGAU TXT3
LIN_LGAU TXT3
LIN_RSG TXT3
LIN_TSYS TXT4
LIN_2WAY BL
LIN_TSIG TXT3
LIN_MGRA LF
LIN_MRAD LI
LIN_MCAPA I
LIN_AM100 I
LIN_AM120 I
LIN_CYEAR D
LIN_OYEAR D
LIN_RELA D
LIN_CV TXT8
BRIDGES
BRI_RN LI
BRI_CC TXT3
BRI_AGC1 TXT8
BRI_SEC I
BRI_ONS I
BRI_LOCAT LI
BRI_LENGT I
BRI_NTR I
BRI_LGAU TXT3
BRI_RSG TXT3
BRI_TEST D
BRI_CYEAR D
BRI_OYEAR D
BRI_RELA D
BRI_CV TXT8
LEVELCROSSING
LEV_RN LI
LEV_CC TXT3
LEV_AGC1 TXT8
LEV_SEC I
LEV_LOCAT LI
LEV_NTR I
LEV_LTYPE TXT4
LEV_CYEAR D
LEV_OYEAR D
LEV_RELA D
LEV_CV TXT8
OVERPASSES
OVE_RN LI
OVE_CC TXT3
OVE_AGC1 TXT8
OVE_SEC I
OVE_LOCAT LI
OVE_NTR I
OVE_LGAU TXT3
OVE_RSG TXT3
OVE_CYEAR D
OVE_OYEAR D
OVE_RELA D
OVE_CV TXT8
TUNNELS
TUN_RN LI
TUN_CC TXT3
TUN_AGC1 TXT8
TUN_SEC I
TUN_ONS I
TUN_LOCAT LI
TUN_LENGT I
TUN_NTR I
TUN_LGAU TXT3
TUN_RSG TXT3
TUN_CYEAR D
TUN_OYEAR D
TUN_RELA D
TUN_CV TXT8

Conceptual Data Model
Model: TER_Database
Package:
Diagram: TER_DATABASE
Author : TER-PCO Date : 5/16/02
Version :

LOCOMOTIVESRAILCARS

LOC_RN	LI
LOC_CC	TXT3
LOC_LRCARCOD	TXT5
LOC_TYPV	TXT3
LOC_ENTE2	TXT4
LOC_TNLR	I
LOC_TNNLR	I
LOC_TDRIVE	TXT6
LOC_BLENG	I
LOC_WGAU	I
LOC_MAL	I
LOC_MSPE	I
LOC_RELA	D
LOC_CV	TXT8

COACHES

COA_RN	LI
COA_CC	TXT3
COA_CCOD	I
COA_TYPC	TXT4
COA_ENTE2	TXT4
COA_TNCO	LI
COA_TNNCO	LI
COA_BLENG	I
COA_WGAU	I
COA_MAL	I
COA_MSPE	I
COA_RELA	D
COA_CV	TXT8

WAGONS

WAG_RN	LI
WAG_CC	TXT3
WAG_WCOD	TXT1
WAG_TYPW	TXT3
WAG_ENTE2	TXT10
WAG_TNWA	LI
WAG_TNNWA	LI
WAG_BLENG	I
WAG_WGAU	I
WAG_MAL	I
WAG_MSPE	I
WAG_RELA	D
WAG_CV	TXT8

GENERAL

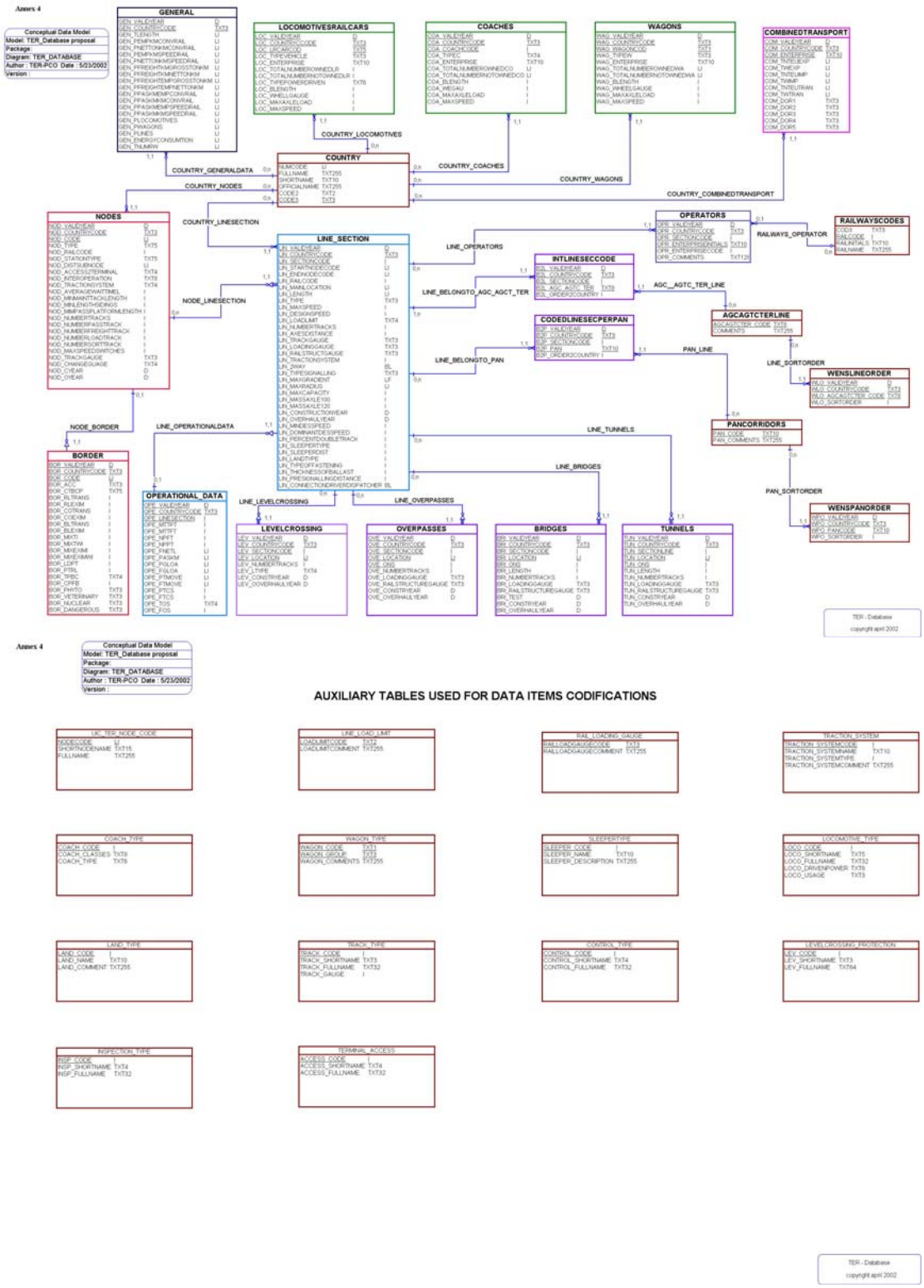
GEN_RN	LI
GEN_CC	TXT3
GEN_NC	TXT20
GEN_SC	LI
GEN_ISUM	LI
GEN_GDP	LI
GEN_FG_GDP	LF
GEN_TLENGT	LI
GEN_NPTY	LI
GEN_PKM	LI
GEN_FGPT	LF
GEN_TONNE	LI
GEN_FTKM	LI
GEN_FGFREIT	LF
GEN_TNUMRW	LI
GEN_RELA	D
GEN_CV	TXT8

COMBINEDTRANSPORT

COM_RN	LI
COM_CC	TXT3
COM_ENTE3	TXT10
COM_TNTEUEXP	LI
COM_TWEXP	LI
COM_TNTEUIMP	LI
COM_TWIMP	LI
COM_TNTEUTRAN	LI
COM_TWTRAN	LI
COM_DOR1	TXT3
COM_DOR2	TXT3
COM_DOR3	TXT3
COM_DOR4	TXT3
COM_DOR5	TXT3
COM_RELA	D
COM_CV	TXT8

The new database structure diagram which is under collection and it will be implemented is presented further on as follows:

New Database Structure Diagram



The process to translate the data from the actual database structure into the new one will be done by TER-PCO.

The structure of the TER Database contains four main groups of data:

1. Data for basic railway indicators and social information.
2. Data for infrastructure: line sections, bridges, tunnels, overpasses, and level crossings.
3. Operational data.
4. Data regarding transport equipment (cars, wagons, locomotives and railcars).

A reporting application using the actual TER Access 97 database is implemented and working. The reporting application provides more than 70 reports. The application will be develop further if it is requested. It is designed in Microsoft Visual Basic Version 6, using Jet Engine (drivers for Access 97).

The report is created using Crystal Report Version 4.6. A complete list of the available reports is presented further down:

List of available reports from the TER database included in reporting application

The reports included into the reporting application are structured into the following groups:

- General reports
- Infrastructure
- Rolling stock
- Operational data
- Combined transport
- Miscellaneous

- **General reports**
  - Line section length per Country and Traction System
  - Length per country and detailed traction system
  - Length per country and traction system
  - Crosstab length per country and traction system
  - Crosstab length per country and tracks number
    - **Length per AGC, AGTC or TER line**
      - Length per country, line and detailed traction system
      - Length per line, country and detailed traction system
      - Length Crosstab country, line and detailed traction system
    - **General data about TER countries and railways**
      - Latest general data about countries
      - List of all general data per country

- Infrastructure
  - **Tunnels**
    - List of all tunnels sorted per country and line
    - List of tunnels over 1000 meters
    - Tunnels per country and AGC, AGTC or TER Line
    - Tunnels per country and categories of length
    - Tunnels on PAN-European corridor in country
      - List of the tunnels per corridor
      - Number of tunnels per corridor and category of lengths
  - **Bridges**
    - List of all bridges sorted per country and line
    - List of bridges over specified length
    - Bridges per country and AGC, AGTC or TER Line
      - Number of bridges per line section
      - List of bridges
    - Number of bridges per country and categories of length
    - Number of bridges per line, country and categories of length
    - Bridges on PAN-European corridor in country
      - List of the bridges per corridor
      - Number of bridges per corridor and category of lengths
    - List of bridges with length between values
  - **Overpasses**
    - List of all overpasses sorted per country and line
    - List of overpasses for a selected country and line(s)
    - Number of overpasses per country and line
    - Number of overpasses per line and country
    - Overpasses per PAN-European corridor
      - List of the overpasses
      - Number of overpasses per country and line section
  - **Level crossings**
    - List of all level crossings sorted per country and line
    - List of level crossings for a selected country and line(s)
    - Number of level crossings per country and line
    - Number of level crossings per line and country
    - Level crossings per PAN-European corridor
      - List of the level crossings
      - Number of level crossings per country and line section
  - **Line sections**
    - List of line sections per country and line
    - Length per country and detailed traction system
    - Length per country and traction system
    - Crosstab length per country and traction system
    - Crosstab length per country and tracks number
    - Length per country, line and detailed traction system
    - Length per line, country and detailed traction system
    - Length Crosstab country, line and detailed traction system
    - List of line sections per PAN-European corridor and country

  - Length for PAN-European corridor
    - Per tracks numbers, country and line
    - Per traction system type
    - Per traction system group of type
    - Per track gauge
    - Per line type (pas/Freight/etc.)
- **Nodes**
  - List of all available nodes
  - List of nodes for a selected country
  - List of nodes on a PAN-European corridor
  - Borders
    - List of all borders for a selected country
    - List of all borders for a selected corridor

- Rolling stock

- **Locomotives**
  - List per country and type
  - Number per country and type of power driven
  - Number per country and vehicle type
  - Number per country and UIC code
  - Number per country and wheel gauge
- **Railcars**
  - List per country and type
  - Number per country and type of power driven
  - Number per country and vehicle type
  - Number per country and UIC code
  - Number per country and wheel gauge
- **Passenger Railway Vehicles**
  - List per country and type
  - Number of coaches per country and category
  - Number of coaches per country, type and wheel set gauge
  - Number of coaches per country, code and wheel set gauge
- **Freight Railway Vehicles**
  - List per country and type
  - Number of coaches per country and category
  - Number of coaches per country, type and wheel set gauge
  - Number of coaches per country, code and wheel set gauge

- Operational data

- List of line section operational data for the selected country

- Combined transport

- Miscellaneous

- TER countries list
- List of UIC railway stations
- Border stations

  - List for a selected country
  - List of borders for a selected corridor
- Railway Company Structure

GIS mapping

For GIS Mapping System in TER-PCO is using MapInfo Professional Version 6. This software allows to the developer to create tables with data and graphical GIS objects. These are in fact layers for the maps. It is possible only to create workspaces which contain maps and layouts. It is not possible with this software only to create GUI applications with GIS capabilities.

Users without a MapInfo Professional installation can open and view the workspaces installing the free software product MapInfo ProViewer Version 6.5. No updates can be made in MapInfo ProViewer.

The maps can be accessed using MapInfo Professional Version 6 or higher, MapInfo ProViewer Version 6.5 or other ESRI products (i.e. ArcView, ArcExplorer) .

The maps offer the possibilities to view analyze and print images and views for TER Border Crossing Stations, the TER / AGC / AGTC lines and theirs line sections as well as projects prepared for implementation and identified per corridors in various countries.

All these maps cover the whole TER region, separate member countries, selected areas, Pan-European corridors, etc.

The present GIS collection provides maps carried out in different analytical views that can be used for further data analysis.

The TER GIS maps are two dimensional, and can be grouped at present into the following:

1. TER member countries,
2. AGC, AGTC, TER lines,
3. TER network,
4. TER sections on the TER network,
5. TER border stations,
6. Pan-European corridors overlapping TER network.
7. Count of infrastructure objects (tunnels, bridges over 10m, level crossings, overpasses) per the line sections.

All these maps were drawn on the basis of the information stored in the TER database (actual data). At request we can analyze and create new maps and views.

There are 8 countries with GIS data. The list of maps available for each country is presented bellow.

List of existing maps

1. Maps for presentation of the Project (globally)
   - History of TER project graphical presentation
   - Map of the TER member countries and associate
   - Maps of the TER countries with TER network
2. Maps of the AGC, AGTC and TER lines for all the countries and per country
3. Maps for each PAN-European corridors
4. Map of all PAN-European corridors
5. Maps of TER Nodes per Country
6. Maps for TER Border Stations per Country
7. Maps for Minimum Radius of the curve per Country and Line Sections
8. Maps for Line Track Gauge per Country and Line Sections
9. Maps for Maximum Gradient per Country and Line Sections
10. Maps for the tracks situation
    - Single track / double track for TER network per Country
11. Maps for the type of the traction system
    - Detailed map of the traction system for TER network per Country
12. Maps for the line capacity (trains per day)
    - Map for the line capacity for TER network per Country
13. Maps for maximum allowed speed on the line
    - Map for maximum allowed speed on the line for TER network per Country
14. Maps for maximum design speed on the line
    - Map for maximum design speed on the line for TER network per Country
15. Maps for number of level crossings per section line
    - Map for number of level crossings per section line for TER network per Country
16. Maps for number of tunnels per section line
    - Map for number of tunnels per section line for TER network per Country
17. Maps for number of bridges per section line
    - Map for number of bridges per section line for TER network per Country
18. Maps for number of overpasses per section line
    - Map for number of overpasses per section line for TER network per Country

These maps are created for 8 TER member countries. Each map was saved as a graphical file, which can be included into other files. At request it is possible to create new thematic maps using figures available from the database. Not all the maps mentioned above were approved to be considered public and inserted on the web.

TER Project's Master Plan related decisions

At its 14th Session (2001) TER Steering Committee adopted the short-term strategy for a deeper integration of TER in the new European transport environment. A major item of this strategy is the elaboration of the TER Master Plan.

This strategy was fully supported and approved by the Steering Committee. It was appreciated that the funds available were not enough. After this Session, UNECE and TER

PCO felt that additional resources would be necessary for the implementation of this Master Plan. In 2002 actions were foreseen for identifying new sources for funding this work. Being found only a partial solution to this problem, it was considered that the elaboration of the Master Plan could no longer be delayed.

The 17th Session of TER Steering Committee adopted the final decision on the implementation of TER Master Plan in accordance with revised TOR. The decision covers the following items:

1. The representatives of UNECE and TER/PCO presented the basic ideas, scope and tasks of the revised TOR of TER Master Plan during the special meeting devoted to this issue on 29 May, 2003. The participants had an extensive discussion on the document prepared by TER/PCO and UNECE.
2. Unanimously the Steering Committee approved the implementation of Master Plan in accordance with revised TOR. In this respect it agreed upon the following:

   - The Master Plan would be implemented targeting the complete Master Plan option including 21 countries.
   - The successful implementation of the Master Plan lies with the full contribution of the member countries through their National Co-ordinators or especially designated experts.
   - No extra cash contribution for the implementation of this task would be required from the member countries.
   - A total sum from the TER Trust Fund would be allocated within the current and next year for covering the costs related to the implementation of the Master Plan, which would be budgeted according to the revised TOR.
   - The Master Plan has to be finished by September 2004 and the work is foreseen to start as soon as possible.
   - The Master Plan Co-ordination Group would apply a flexible approach during the elaboration of the work taking into consideration the real situation encountered, the requirements and resources available.
   - The countries, which would not provide adequate data required for the implementation of the Master Plan, would not be excluded from this exercise. In such cases required information would be taken from other sources available.
   - In implementing the Master Plan, TER would take into account similar or relevant information, studies, etc. elaborated within other organisations like UIC, European Commission, TRACECA, OSJD, etc.
   - Since exist already elaborated National Master Plans or strategic development programmes in various countries, they would provide

this information to the PCO before the end of June 2003 in order to facilitate the preparatory work for the implementation of this task.

- Considering the complexity of the traffic forecast issues, the shortage of time and limited resources available, this task would be approached on the basis of information provided by the countries and all other existing options.
- In case that the liaison person for providing data to the PCO is other than the National Co-ordinator, this designated expert would be the same during the whole period of the implementation of this task.
- In order to enable the none-TER member countries to take part in the implementation of the Master Plan, the Executing Agency was requested to address official letters to the competent authorities of the countries concerned.
- The representative of Moldova expressed its readiness to contribute to the implementation of the TER Master Plan.
- The successful implementation of this complex and difficult work can be accomplished only if the participating countries provide in time their inputs to the PCO according to the TOR and the request of the Co-ordination Group.

In accordance with the above decision TER PCO and the member countries are committed to implement whatever is required in order to fulfill the revised TOR for the Master Plan.

Revised abridged TOR of the TEM and TER Master Plans is presented further on.

Revised TOR for the elaboration of the TEM and TER Master Plans

I. MANDATE

The UNECE TEM and TER Projects Steering Committees at their sessions (TEM – thirty-fifth and thirty-sixth SC sessions, Trieste, June 2001 and Geneva, December 2001) (TER-Antalya, June 2001) adopted a new short-term strategy for the further Integration of the Projects in the new European transport context. The new strategy includes the review of priority transport needs of the member countries, the elaboration of an updated inventory of these needs and of a realistic plan for covering them, the TEM and TER Master Plans.

The TEM and TER PCOs, in close collaboration with the UNECE, prepared the TOR for the elaboration of the Master Plans. The content of the TOR was further discussed in the framework of TEM and TER: TER WP.1 (Brioni, May 2002) – (TEM Advisory Group of Former Project Managers). Thereafter, the final version of the TOR for the elaboration of the TEM and TER Master Plans was established. (ITC sixty-fifth session, 18-20 February 2003, TRANS/2003/7/Add.1).

The start of the work for the elaboration of the Master Plan had originally been envisaged at the beginning of 2003 and its completion at the end of the same year. The lack of resources for co-financing the work was the reason for the project not having started according to its original plans.

For this reason, TEM and TER PCOs, with the support of the UNECE Transport Division, have reviewed the original TOR and relevant cost estimates, and prepared the present revised TOR with new cost calculations and timetable.

The basic differences between the original and the reviewed TOR and budget are: Less work to be done by the consultant(s), with equally less costs involved, at the expense of the TEM and TER PCOs, member countries' experts and the UNECE Transport Division, who would have to cover a higher spectrum of tasks and related work.

II. SCOPE OF THE PROJECT

The project aims at the elaboration of a strategic plan of action for the implementation of the TEM and TER Project objectives in terms of updated and prioritized road, rail and combined transport infrastructure needs of TEM -TER member countries i.e. (1) identification of investment priorities, (2) establishment of a timetable for their realization, (3) assessment of cost involved and appropriate financing arrangements.

In order to secure the necessary continuity of the TEM and TER Networks irrespective of country membership, it is proposed that the TEM and TER Master Plans cover also a number of non-TEM and/or TER countries, including observers, i.e. Ukraine, Belarus, FYROM, Serbia and Montenegro and the Republic of Moldova.

Since the necessary financial resources for the implementation of the work have not been secured yet, it is proposed that the work starts immediately based on two possible options: (i) the elaboration of **the complete TEM and TER Master Plans** based on the revised TOR; (ii) the elaboration of **the limited TEM and TER Master Plans** based on the same revised TOR, but limited to the TEM and TER country membership. This leaves open the option for completion of the work in a later stage. According to the above, the following countries will be included in the work:

Table 1: The complete Master Plan option

Complete TEM Master Plan (21 countries) **13 TEM member countries:** Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Italy, Lithuania, Poland, Romania, Slovakia, Turkey **Plus 8 more countries:** Belarus, F.Y.R.O.M, Greece, Republic of Moldova, Russian Federation, Serbia and Montenegro, Slovenia, Ukraine
Complete TER Master Plan (21 countries) **16 TER member countries:** Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Greece, Hungary, Italy, Lithuania, Poland, Romania, Russian Federation, Slovakia, Slovenia, Turkey **Plus 5 more countries:** Belarus, F.Y.R.O.M, Republic of Moldova, Serbia and Montenegro, Ukraine

Table 2: The limited Master Plan option

Limited TEM Master Plan (13 countries)
13 TEM member countries: Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Italy, Lithuania, Poland, Romania, Slovakia, Turkey
Limited TER Master Plan (16 countries)
16 TER member countries: Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Greece, Hungary, Italy, Lithuania, Poland, Romania, Russian Federation, Slovakia, Slovenia, Turkey

Considering the particular need for the elaboration of a wider infrastructure investment plan covering Central, Eastern and South Eastern Europe, (the complete Master Plan option), and its significance for the UNECE TEM and TER Projects**, it is strongly recommended that the above-mentioned non-TEM – TER member countries be included in the scope of the work.**

A clear decision as to the scope of the work has to be taken within the TEM and TER Projects. However, it must be clear that, irrespective of that decision, the real inclusion of the countries in the Master Plan work will be assured only through their actual contribution i.e. nomination of their Experts and provision of all necessary information.

III. THE PROJECT's OBJECTIVES AND TASKS

Table 3: The Project's objectives

Elaborate a consistent transport investment strategy as a complete backbone road, rail and combined transport network in the TEM and TER Region that would support:
The elaboration of TEM and TER Projects' objectives The European transport infrastructure integration The extension of TEN-T The practical implementation of Pan-European Transport Corridors The promotion of intermodal operation and transport modes complementarity The provision of maximum effectiveness of transport infrastructure

Table 4: Tasks to be executed

➢ Review of related TEM and TER work ➢ Review of related European initiatives' policies and studies and their interconnection with the TEM and TER work ➢ Presentation of the socioeconomic framework of the TEM and TER countries and alternative scenarios of growth

- Identification of the method of work (definitions – assumptions)
- Identification of criteria of priority infrastructure needs
- Inventory of bottlenecks, missing links and other priority transport infrastructure needs and assessment of their elaboration costs involved
- Elaboration of a realistic Master Plan based on investment priorities
- Addressing funding questions and financing arrangements
- Addressing border crossing questions
- Conclusions, recommendations and dissemination of results

IV. ORGANIZATION AND EXECUTION OF THE WORK

Table 5: Who does what

Who	**What**
Project Central Offices-Project Managers	Mainly responsible for the work, its administration and reporting
National Coordinators or Country Experts	Provision of data required at national level
Participating/Invited transport related European and International bodies	Offering thematic support and guidance
External consultants	Technical and scientific expertise
Director and Regional Adviser of the UNECE Transport Division	Overall coordination and guidance

Table 6: Organization of the work

Who	**What**
TEM Master Plan Expert Group consisting of: - Project Manager and his Deputy - External Consultants - National Coordinators/Country Experts - Experts from invited bodies - Director and/or Regional Adviser of the UNECE Transport Division	The TEM Master Plan Expert Group will meet 2 times during the project period for the elaboration of the specific tasks assigned to it according to the work plan.
TER Master Plan Expert Group consisting of: - Project Manager and his Deputy - External Consultants - National Coordinators/Country Experts - Experts from invited bodies - **Director and/or Regional Adviser of the UNECE Transport Division**	The TER Master Plan Expert Group will meet 2 times during the project period for the elaboration of the specific tasks assigned to it according to the work plan.
Master Plan Coordination Group: - **TEM and TER Project Managers and their Deputies** - External Consultants - Director and/or Regional Adviser of the UNECE Transport Division	The Master Plans Coordination Group will meet 4 times during the period of the project for the evaluation and control of the progress of work and for taking necessary relative decisions.

Note: Experts from non-TEM and TER member countries concerned will be invited and nominated as national coordinators. The Master Plans should be elaborated in a way to

assure continuity irrespective of TEM and TER country membership, at least for the entire Pan-European Corridors.

V. OUTPUTS AND DELIVERABLES

Table 7: TEM and TER Master Plans: Outputs and deliverables

1. **Organization, monitoring and co-ordination of the work**
2. **TEM and TER Projects' background, objectives and plans**
3. **TEM and TER Projects' environment in Europe**
4. **Socio-economic framework of the countries concerned and alternative scenarios of growth**
5. **Methodology and main assumptions for the work**
6. **Collection and analysis of required data**
7. **Inventory of priority infrastructure needs and assessment of their costs**
8. **Implementation Plans**
9. **Inventory of specific priority projects for implementation**
10. **Definition of technical and institutional actions required**
11. **Inventory of border crossing problems and recommendations**
12. **Conclusions' recommendations**
13. **Dissemination and public awareness actions**

An important part of the successful implementation of the work lies with the contribution of the national coordinators and/or national experts

Since the revised TOR foresees an important contribution from the TEM and TER Project personnel, the success of the work is highly based upon the strength and skill of the TEM and TER PCOs human resources. Thus, the extension of the mandate of the present Project personnel for at least during all the year 2004, seems to be indispensable.

A relevant decision for the extension of the assignment of the present projects' personnel to cover at least all the year 2004 is highly recommended.

A detailed description of the work plan and the Master timetable is following the presentation of the Budget.

VI. THE ORIGINALLY ESTIMATED FULL COST OF THE WORK

The original TOR presented to the UNECE ITC sixty-fifth session, 18-20 February 2003, TRANS/2003/7/Add.1, was based on the full estimated cost for the work, mounting to Euro **1,544,000.**

Table 8: Analysis of originally proposed budget

Concept of Expenditures	Amount in EURO
Management labour costs (35 person months)	**350,000**
Labour cost (93 person months)……..	**930,000**
Travel costs (124 trips)	**124,000**
Consumable	**60,000**
Overheads	**80,000**
Total	Euro **1,544,000**

The original proposal was that this cost be covered as follows: ***By Self-financed Euro 688,000 and by Donors Euro 856,000.***

VII. REVISED BUDGET PROPOSED

Based on the fact that that the elaboration of the Master Plans represents a major activity for the Projects, and that the TEM and TER Projects should proceed based on their own resources, the original TOR and its cost elements have been revised. The breakdown of the new estimated cost for the elaboration of the work is based on the revised TOR. It reflects, on one side, the minimum costs to be covered by the Projects mounting to a grand total of US$ 1,160,000[3], out of which, US$ 150,000 direct in cash payment by the Project Trust Fund and, on the other side, the additional in-kind contribution expected by member countries, the PCOs and the UNECE, amounting to US$ 1,010,000. The revised budget is presented below.

[3] This amount does not include the full estimated cost of US$ 380,000 for the engagement of the external consultants, with the understanding that the cost represents only a nominal fee that will be increased accordingly in case extra budgetary resources can be ensured from potential donors, and which increase would be followed by relevant modifications on the TOR with regard to the actual work expected to be covered by them.

Table 9: Detailed revised analysis of the project cost, in US$

Category of cost	TEM & TER PCO		Participating countries		External Consultan(s)		UNECE Secretariat		Total cost	
	In cash	In kind	In cash	In kind	In cash	In kind	In cash	In kind	In cash	In kind
Labour		440,000	-	440,000	80,000[4]	-	-	40,000	80,000	920,000
Travel[5]	8,000[6] 25,200[7]	- -	- -	- 58,800[8]	12,000[9] -	- -	8,000[10] -	- -	28,000 25,200	- 58,800
Consumable	10,000	-	-	21,200	-	-	-	10,000	10,000	31,200
Unexpected	6,800	-	-	-	-	-	-	-	6,800	-
Total	50,000	440,000	-	520,000	92,000	-	8,000	50,000	150,000	1,010,000

Grand Total US$ 1,160,000

Out of the total costs covered in cash amounting to US$ 150,000, US$ 100,000 will be earmarked for the TEM Project and US$ 50,000 for the TER Project. Higher costs of the TEM Master Plan are due to the necessity to cover more non-member countries and deal not only with the existing major highways, but also with mostly not yet existing new motorway and expressway networks of the region. Furthermore, the TEM Master Plan will address additionally and separately also the truck and coach components.

Considering that the contribution of the external consultants would be a crucial element for quality outputs of the Master Plans, and that the in-kind contribution by the member countries, the TEM and TER Projects, as well as UNECE is amounting to approximately US$ 1 million, it is obvious that voluntary contributions from donors of up to a total of US$ 400,000, will be crucial to cover the external consultants fees, plus some other minor costs, thus assuring the elaboration of a high quality work.

[4] This amount represents only a nominal fee for the external consultants out of a full estimated cost of US$ 380,000 which will be increased accordingly in case extra budgetary resources can be ensured from potential donors.

[5] Calculations based on trip cost estimate of US$ 1,000 per person –trip

[6] Scheduled missions 2X2 persons for TEM and 2X2 persons for TER

[7] 2 missions X2 projects X21 countries=84 missions X US$ 300 for the accommodation expenses of country experts

[8] Estimated ticket cost only 2 tickets X 2 Projects X 21 countries = US$ 700

[9] 2x6= 12 (if different consultant per Project)

[10] (2x2)+(1x4)=8 missions covered by the Projects' budgets

VIII. REVISED PROJECT WORK PLAN, DESCRIPTION OF WORK

The revised Project Work Plan is presented in Work Packages in the following pages:

Work Package Description			
Title: **Project Management**		**WP No: 0**	
Start: **Month 1**	Duration: **Months 12**	Number of meetings	
Parties involved	Task / Activity of partner	Expert Groups 2 for TEM 2 for TER with following attendance	Coordination Group 4 with following attendance
TEM Project Central Office	**TEM Work Administration**	**X**	**X**
TER Project Central Office	**TER Work Administration**	**X**	**X**
UNECE Transport Division	TEM & TER Co-ordination	**X**	**X**
TEM National co-ordinators	**Participation in Expert Group**	**X**	**-**
TER National Co-ordinators	**Participation in Expert Group**	**X**	**-**
External Consultant(s)	**Technical and Scientific Advisors**	**X**	**X**
Observers		**X**	**-**
Objectives: To ensure the smooth execution of the Project and the management of the complex activities and numerous partners from different countries and professions.			

Description of the work / tasks

Each Project will form an Ad hoc Expert Group, called the TEM or TER **Master Plan Expert Group**, consisting of the Project Manager as leader, his deputy, the external consultant as scientific and technical assistants and the Projects' national coordinators/experts from each member country. Experts from other countries not members to TEM and/or TER Projects, part of the TEM and TER Region, will also be invited and nominated as national coordinators.

The Master Plans' Expert Groups will meet two times during the period of the project for the elaboration of the specific tasks assigned to them according to the work plan. The meetings be held at the PCOs.

Master Plans to be elaborated in such a way as to secure continuity of the Projects' implementation plans irrespective of country membership as well as their entire alignment with the Pan-European Corridors.

For the needs of the work, the Project Managers, their Deputies, the external consultants, and the Director and/or the Regional Adviser responsible for the TEM and TER Projects of the UNECE Transport Division, forming the **Master Plans Coordination Group**, will meet four (4) times during the period of the Project for the evaluation and control of the progress of work and for taking necessary relative decisions. Two (2) meetings will be held at the TEM PCO in Warsaw and two (2) at TER PCO in Budapest.

Administrative/organizational tasks:
Preparation of TOR for the consultant(s)
Preparation of TOR for the work of the national coordinators/Experts
Letters from UNECE to the non TEM/TER member countries for nomination of national coordinators/Experts
Establishment of list of national coordinators/Experts for the work from each one of the Projects
Elaboration of Action plan indicating dates for convening the meetings and submissions of deliverables

Expected results/Outputs-deliverables: Organization, monitoring system and co-ordination of the work

Milestones and Criteria: Formation of the groups and their first meetings

Interrelation to other work packages: With all

Number of missions of the Projects' personnel : TEM: 2X2=4 missions, TER: 2X2=4 missions
Number of missions of the UNECE personnel: **8 missions**

Number of missions of for consultants: 12 missions

Work Package Description		
Title: **Review of the development of TEM and TER Projects**		**WP No: 1**
Start: **Month 1**	Duration: **Months 1**	Remarks
Parties involved	Task / Activity of partner	
TEM PCO	**1.1 to 1.5**	
TER PCO	**1.1 to 1.5**	
UNECE	**1.1 to 1.5**	

Objectives
Review of related work done and developments within the TEM and TER Projects

Description of the work / tasks

Task 1.1 Introduction of the TEM and TER Project objectives and degree of their attainment
Task 1.2 Introduction of the TEM and TER Technical characteristics/standards and operational parameters, respective decisions and guidelines for implementation
Task 1.3 Introduction of the existing TEM and TER networks and plans
Task 1.4 Introduction of the TEM and TER GIS mapping and database management systems
Task 1.5 Introduction of the TEM and TER Projects' Master Plans related decisions

Expected results/Outputs - deliverables
1. TEM and TER Projects' background, objectives and plans

Milestones and Criteria
Presentation of respective report(s)

Interrelation to other work packages: Provides the necessary data to other WPs

Work Package Description		
Title: **TEM and TER environment in Europe**		**WP No: 2**
Start: **Month 1**	Duration: **Months 2**	**Remarks**
Partners involved	Task / Activity of partner	
TEM PCO	**2.1, to 2.7**	
TER PCO	**2.1 to 2.7**	
UNECE	**2.1, to 2.7**	

Objectives
Review of related European initiatives, policies and studies and their interconnection with the TEM and TER Projects

Description of the work / tasks

Task 2.1 Collection and review of existing relevant studies, assessments and works
Task 2.2 Pan-European Transport Corridors (PETCs) and the TEM and TER Projects
Task 2.3 Transport Infrastructure Needs Assessment (TINA) and the TEM and TER Projects
Task 2.4 Trans European Transport Networks (TEN-T) and the TEM and TER Projects
Task 2.5 European Union railway infrastructure package and its impact in the TER region
Task 2.6 TIRS, CARDS and other
Task 2.7 Overview of the TEM and TER Projects role and perspectives in the Pan-European context

Note: TEM work will include a review of truck and coach related initiatives, documents and studies prepared by IRU.

Expected results/Outputs - deliverables
1. TEM and TER Projects' environment in Europe

Milestones and Criteria
Presentation of the overview of the TEM and TER role and perspectives

Interrelation to other work packages: Provide data to other WPs

Work Package Description		
Title: **Socio-economic framework of the CEE countries**		**WP No: 3**
Start: **Month 1**	Duration: **Months 3**	**Remarks**
Partners involved	Task / Activity of partner	
TEM PCO	**3.1**	
TER PCO	**3.1**	
External consultants	**3.1, 3.2**	**Main responsible**
UNECE	**3.1, 3.2**	

Objectives
Analysis of the socio-economic framework of the countries in TEM and TER Region

Description of the work / tasks

Task 3.1 Presentation of the economic and social characteristics of the countries in the TEM and TER Region
Task 3.2 Alternative scenarios of growth

This work will be among the main responsibilities of the external consultants, to be elaborated with the support of the TEM/TER PCOs as well as the UNECE Transport Division. The work will be based on existing studies/data available from UNECE, EC, World Bank and other sources aiming at presenting realistic DGP estimates up to 2020 based on alternatives scenarios of growth. Truck and coach transport components socio-economic aspects will be considered in the framework of the TEM respective work.

Expected results/Outputs-deliverables

1. Socio-economic status and scenarios of growth in the countries of the TEM and TER Region

Milestones and Criteria
Presentation of report

Interrelation to other work packages: Provide data for the continuation of the work.

Work Package Description		
Title: **Methodology**		**WP No: 4**
Start: **Month 2**	Duration: **Months 3**	**Remarks**
Partners involved	Task / Activity of partner	
TEM PCO	**4.1 to 4.3**	
TER PCO	**4.1 to 4.3**	
External consultants	**4.1 to 4.3**	**Main responsible**
UNECE	**4.1 to 4.3**	
Objectives Methodology of work and main assumptions		

Description of the work / tasks

Task 4.1 Definition of bottlenecks, missing links and other priority transport infrastructure needs on main road, rail and combined transport corridors of the TEM and TER Region

Task 4.2 Review and identify the necessary parameters and assumptions for the work

- Social, environmental and safety aspects
- Interoperability in terms of railway rolling stock and railway equipment
- Interoperability between modes, alternative links by modal split, interchanges and multimodal transfer points
- International connections, extension, interrelation and dynamism towards neighboring regions
- Intelligent Transport Systems and other operational aspects
- Transport forecasting
- Investment requirements, available resources, necessary measures

Task 4.3 Identify the main criteria of priority infrastructure needs on the main road, rail and combined transport corridors of the TEM and TER Region.

This work will be among the main responsibilities of the external consultants, to be elaborated with the support and in cooperation with TEM/TER PCOs and the UNECE Transport Division. This work will be based on:

- the EU Guidelines for the development of TEN-T (council Decision 1692/96/EC) and its revisions
- the UNECE AGR, AGC, AGTC, TEM and TER technical standards and recommendations
- the UNECE recommendations for definition of transport infrastructure capacities, technical standards, Bottlenecks, Missing Links and Quality of Services of infrastructure networks (TRANS/WP.5/60)
- the use of global criteria for identification of backbone networks, such as those used for TINA and the identification of the Crete Corridors and their adjustments and additions endorsed at the 3rd Pan-European Conference of Helsinki

Note: TEM work will include collection, analysis and processing of data on truck and coach transport as well as on infrastructure-related elements.

Administrative /Organizational Tasks

Establish criteria for assessment of project priorities
Preparation of diagram of required information
Preparation of the questionnaire to be fulfilled by the member countries concerned through the National Coordinators/Experts
Establish the Guidelines for the data collection from countries concerned

Expected results/Outputs-deliverables

Methodology and main assumptions for the work

Milestones and Criteria

Setting up the methodological characteristics of the project

Interrelation to other work packages: Input required from other WPs.

Work Package Description		
Title: Priority infrastructure needs in CEE countries		**WP No: 5**
Start: **Month 5**	Duration: **Months 3**	**Remarks**
Partners involved	Task / Activity of partner	
TEM PCO	**5.1, to 5.7**	**TEM main responsible**
TER PCO	**5.1, to 5.7**	**TER main responsible**
External consultants	**5.1, to 5.7**	**For technical assistance and quality control**
TEM 21 national co-ordinators from the Region	**5.1, 5.2, 5.6, 5.7**	
TER 21 national co-ordinators from the Region	**5.1, 5.2, 5.6, 5.7**	
UNECE	**5.1, to 5.7**	

Objectives: Inventory **o**f bottlenecks, missing links and other priority transport infrastructure needs on main road, rail and combined transport corridors of the TEM and TER Region

Description of the work / tasks

Task 5.1 Collection of necessary information

Task 5.2 Analysis and control of information obtained

Task 5.3 Review and update the TEM and TER Region traffic forecasts

Task 5.4 Establish alternative scenarios for the TEM and TER Region Master Plans

Task 5.5 Review and prioritize proposed projects and plans to address road, rail and combined transport infrastructure needs incorporating national, regional and European concerns

Task 5.6 Identify interconnections between TEM and TER Networks as well as between TEM and TER with other components of the network (Sea Ports-Inland Ports-Airports-Short Sea Shipping connections-Inland Waterways)

Task 5.7 Identify possible connections and extensions of the TEM and TER Networks with neighbouring regions (Baltic Sea, Mediterranean Sea, Black Sea, Caspian Sea, North Africa, Euro-Asian, Trans-Africa)

The external consultants are expected to offer their scientific and technical assistance and guidance as well as their quality evaluation and possible recommendations for improvement of the work

Note: TEM work will focus also on the truck and coach elements concerned

Expected results/Outputs-deliverables

1. Collection of data required
2. Inventory of priority infrastructure needs and assessment of their costs

Milestones and Criteria

Elaboration of diagram of information required and their collection described

Interrelation to other work packages: Provide data for the continuation of the work

Work Package Description		
Title: Elaboration of Master Plans		**WP No: 6**
Start: **Month 8**	Duration: **Months 2**	**Remarks**
Partners involved	Task / Activity of partner	
TEM PCO	**6.1 to 6.4**	
TER PCO	**6.1 to 6.3**	
External consultants	**6.1 to 6.4**	**Scientific and technical assistance**
UNECE	**6.1 to 6.4**	

Objectives

Elaboration of a realistic Master Plan of action covering the identified priority needs on main road, rail and combined transport corridors, the *TEM and TER Region Master Plans*

Description of the work / tasks

Task 6.1 Elaboration of the TEM and TER Region Backbone Network
Task 6.2 Elaboration of the TEM and TER Region Master Plans and their alternative implementation scenarios
Task 6.3 GIS presentation of the TEM and TER Region Master Plans
Task 6.4 Only For TEM: Separate maps and tables showing the forecasted truck and bus volumes, identification of capacity bottlenecks related especially to the truck and coach transport (e.g. climbing lanes, tunnel, size, weight or environmental limitations) illustrated by separate maps; establishment of ranking of construction priorities on the basis of defined bottlenecks in 2005, 2010. 2015 and 2020 from the point of view of truck and coach transport in the individual TEM countries.

External consultants are expected to offer their scientific and technical assistance on the work

Expected results/Outputs-deliverables

1. TEM and TER Region Master Plans
2. GIS presentation of the TEM and TER Region Backbone networks and Master Plans

Milestones and Criteria: Presentation of the Master Plans

Interrelation to other work packages: Provide data for the continuation of the work

Work Package Description		
Title: Addressing funding questions		**WP No: 7**
Start: **Month 8**	Duration: **Months 3**	**Remarks**
Partners involved	Task / Activity of partner	
TEM PCO	**7.1 to 7.7**	
TER PCO	**7.1 to 7.7**	
External consultants	**7.1 to 7.6**	**Quality control and recommendations**
UNECE	**7.1 to 7.7**	

Objectives

Addressing funding questions for the implementation of the TEM and TER Region Master Plans

Description of the work / tasks

Task 7.1 Inventory of specific projects for the implementation of the Proposed TEM and TER Region Master Plans

Task 7.2 Estimate of budget for the implementation of the Proposed TEM and TER Region Master Plans

Task 7.3 Possibilities of stage construction

Task 7.4 Definition on a macro-scale of the necessary technical and institutional actions for assisting the implementation of the proposed TEM and TER Region Master Plans

Task 7.5 Estimate of financial resources available

Task 7.6 Remarks on the perspectives to construct the TEM and TER Region Backbone Networks

Task 7.7 For TEM only: Considerations regarding the optimum usage of truck and coach operations road user charges

External consultants are expected to offer quality control and possible recommendations for the improvement of the work

Expected results/Outputs-deliverables

1. Inventory of specific priority projects for implementation
2. Estimate of implementation costs
3. Definition of technical and institutional actions required

Milestones and Criteria: Inventory of projects

Interrelation to other work packages: Contributes to the completion of the work

Work Package Description		
Title: Addressing Border crossing questions		**WP No: 8**
Start: **Month 8**	Duration: **Months 3**	**REMARKS**
Partners involved	Task / Activity of partner	
TEM PCO	**8.1**	
TER PCO	**8.1**	
UNECE	**8.1**	

Objectives
Addressing Border crossing questions.

Description of the work/tasks

Task 8.1 Border crossing problems inventory on the TEM and TER Region Backbone Networks and improvement recommendations

Note: TEM work will mostly be related to the truck and coach transport components

Expected results/Outputs-deliverables
1. Inventory of border crossing problems
2. Recommendations for improvement

Milestones and Criteria
Presentation of reports

Interrelation to other work packages
Contributes to the completion of the work

Work Package Description		
Title: **Conclusions/Recommendations – Public awareness actions and dissemination of results - Follow-up preparations**		**WP No: 9**
Start: **Month 3**	Duration: **Months 10**	**Remarks**
Partners involved	Task / Activity of partner	
TEM PCO	**9.1 - 9.4**	
TER PCO	**9.1 - 9.4**	
External consultants	**9.1**	**Quality control and recommendations**
UNECE Transport Division	**9.1- 9.4**	

Objectives

Presentation of conclusions and recommendations. Develop necessary actions to increase awareness for the Project implementation to the stakeholders and interested parties and disseminate the results of the present work and the importance of the TEM and TER Region Master Plans.

Description of the work / tasks

Task 9.1 Presentation of final report with conclusions and recommendations
Task 9.2 Presentation of projects' results on the WEB pages
Task 9.3 Publication of a project newsletter, brochures and a summary report, findings and conclusions
Task 9.4 Organization of workshops to present the progress of the project and the final results.

External consultants are expected to offer quality control and possible recommendations for the improvement of the work

Expected results/Outputs-deliverables

1. Final Report
2. Dissemination
3. Public awareness
4. Follow-up preparations

Milestones and Criteria
Preparation of the basic reports and material for presentation

Interrelation to other work packages
Completion of the work

IX. Reviewed Work Time Plan

	WP	YEAR 2003				YEAR 2004								
		MONTHS												
		1 SEPT	2 OCT	3 NOV	4 DEC	5 JAN	6 FEB	7 MARCH	8 APR	9 MAY	10 JUNE	11 JUL	12 AUG	SEP
	WP0													
	WP1													
	WP2													
	WP3													
	WP4													
	WP5													
	WP6													
	WP7													
	WP8													
	WP9													

1.3 TER Environment in Europe

Collection and review of existing relevant studies, assessments and works

Studies elaborated until 2000

Many Projects and studies related to the transport infrastructure of the region were elaborated particularly in the last 10 years i. e. after 1990. Some of them are already obsolete and of no significance. Others are already in the bookshelves.

Some of the most important studies have been carried out under the framework of the European Union's PHARE Multicountry Transport Programme.

Updating of Transport Infrastructure Costs, elaborated in 1999 by COWICONSULT (Denmark), containing updated cost estimates for upgrading transport infrastructure in the 10 accession countries. The detailed data served as a basis for cost estimates for infrastructure investment projects in the region and were feeded into the TINA process.

Balkan Transport Study, finalised in 1997 by GIBB (Great Britain), provides a strategic plan for the development of infrastructure, including transport bottlenecks and administrative and institutional deficiencies, potential benefits and costs of developing in the countries situated on Adriatic-Black Sea corridor: Albania, Bulgaria, FYROM, Hungary, Romania and Slovenia.

Traffic Forecast for the Ten Pan-European Corridors of Helsinki, elaborated in 1999 by NEA (Holland) (The Netherlands), formulating a consistent methodology for preparing traffic forecasts and the development of a set of traffic scenarios for all 13 Phare countries.

Transport and the Environment, elaborated in 1999 by GIBB (Great Britain), providing a policy guidelines to integrate environmental issues into transport policy together with an Action Plan and a Strategic Planning framework with the focus on environmental legislation.

Development of Branches on Corridor V, elaborated by PROGNOS AG (Switzerland) in 2000, identifying bottlenecks and priority projects, pre-feasibility studies and the identification of financing sources. The study was conducted for Bosnia and Herzegovina, Hungary, Slovakia and Slovenia.

Costs and Benefits of Enlargement for the Transport Sector, elaborated by Halcrow Fox (Great Britain) in 1999, containing estimates of the costs and benefits of taking on the transport acquis in 10 Phare countries together with an overall comparative assessment.

The PHARE assistance programme of the European Union to the Central and Eastern European Countries was followed by the ISPA (Instrument for Structural Policies for Pre-Accession, established by the European Council Regulation No. 1267/1999. ISPA provided assistance to contribute to the preparation for accession to the European Union of the following applicant countries: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia (ISPA beneficiary countries).

The EU assistance under ISPA included projects, groups of projects or project schemes in the field of environment or transport as well as feasibility and technical studies needed for carrying out a project.

Eligible projects for transport component were transport infrastructure projects which promoted sustainable mobility, and in particular projects of common interest and those enabling beneficiary countries to comply with objectives of

the Accession Partnerships, including interconnection and interoperability of national networks as well as with the Trans-European networks together with access to such networks.

Taking into consideration that 8 out of the total 10 ISPA beneficiary countries are members of the TER Project, this financial instrument was very important for TER participating countries.

In the third Pan-European Transport Conference held in Helsinki in 1997 all Pan European corridors established overlapped on TER lines, the importance and use of the links between Europe and Asia being considered to have a further weight.

Recent studies

Special studies, mostly by the European Commission, have been devoted to the transport system in Balkans, which are also of great interest for TER Project. These were TIRS (Transport Infrastructure Regional Study) and the REBIS (Regional Balkans Infrastructure Study) which fulfilled the function of TINA in Balkan countries and covered also TER member countries Bosnia and Herzegovina and Croatia, completed in June 2003.

The purposes of the study inter alia were:

- to assess the strategy transport network of the region in the light of updated economic developments and traffic forecasts and suggest some modifications if required;
- to create a proper investment plan for the short-term priority projects, suitable for international financing, which have been identified in the TIRS study;
- to establish a methodology and proper procedures and to monitor the implementation of the transport projects on the strategic network;
- to define a list of medium and long term projects, needed to improve the transport networks and suitable for international financing;
- to identify suitable local counterpart institutions in each of the recipient countries and to strengthen them through training;
- to provide guidance for the realisation of national transport plans and for feasibility studies for the specific projects selected in the subsequent investment programme.

Finally, the recent relevant transport studies, regarding inter alia the railway and transport infrastructure in the region and especially the European Union accession countries, should be mentioned.

The first of them was the PLANTIS Study, which should formulate the investment

requirements of the EU Trans-European Network including its extension to the Central and Eastern Europe, which, nevertheless, produced not fully satisfactory results both for accession countries and EU.

An important document represents the Report of the European Commission's High-Level Group on the Trans-European Transport Network of June 2003.

The High-Level Group was mandated by the Vice-President of the Commission in charge of Transport and Energy to identify priority projects of the Trans-European transport network up to 2020 on the basis of proposals from the Member States and the acceding countries. This exercise was part of a broader review of the Community guidelines for the development of the Trans-European transport network. The Group was chaired by Mr. Karel Van Miert.

One of the major tasks of the Group was to select a restricted number of priority projects on the transport network of the expanded Union. Such projects were essential to complete the internal market on the scale of the European continent and to reinforce economic and social cohesion. The Group also studied the obstacles of a financial, legal and administrative nature to the implementation of these priority projects.

In accordance with the Group's mandate, the list of priority projects included only the most important infrastructure for international traffic, bearing in mind the general objectives of the cohesion of the continent of Europe, modal balance, interoperability and reduction of bottlenecks. In addition, an assessment was made as to how well each project fits the objectives of European transport policy, the added value for the Community and the sustainable nature of its funding up to 2020. The Group established its own methodology to assess and identify, amongst the candidate projects proposed by the present and future Member States the new priority projects to be carried out until 2020.

The Group also identified several „horizontal" or cross-cutting priorities aimed at a better management of the European transport system, the effectiveness of which will be closely connected to the introduction of accompanying regulatory measures. The integration of traffic management systems on the basis of common techniques and standards for an optimised use of the existing networks will require incentive aid. A group of measures to manage more efficiently the allocation of capacities, particularly for freight transport, appears moreover unavoidable, with regard in particular to requirements imposed by the sustainable development of transport. In this context, the Group recommended particularly keenly the gradual introduction, with the support of all market operators, of a European rail network dedicated to freight transport.

The priority projects selected by the Group are those which contribute most to promoting transnational traffic on the major Trans-European axes. This selection procedure has made it possible to highlight a certain number of major Trans-European axes. The identification of European axes characterised by major flows unavoidable for geographical or economic reasons facilitates the ordering of priorities and the establishment of consistency between the national plans. Consequently, the Group asked for this initial identification to be completed in the context of the revision of the guidelines by more detailed analyses of traffic flows in a Union of 27 countries.

The definition of a core network comprising these axes will constitute an indispensable working tool for further revisions of the list of priority projects. Recourse to a group of highlevel experts appointed by the transport ministers has, moreover, permitted the identification of broad guidelines for the Trans-European network and the incentives needed for its development. Given the strong territorial dimension and financial

implications of the network, the work of a group of this kind constitutes and important prerequisite of any substantial revision of the Community guidelines.

The most recent TEN-STAC study aimed at establishment of scenarios, traffic forecasts and analysis of corridors on the Trans-European network is under elaboration by the NEA Transport Research and Training BV in collaboration with these partners: COWI, IWW, ESTEAR, PWC, TINA, IVT, HERRY and MKmetric and should be terminated in March 2004.

A principal objective of the study is to test different alternatives of development and realisation of TEN-T policies for the Community. This challenge required the specification of scenarios, three of which have been chosen in agreement with the Commission for the horizon year 2020. It was proposed that all scenarios incorporate the same socio-economic assumptions and basic policy actions to ensure the realisation of White Paper in terms of liberalisation and harmonisation for 2020.

The accompanying measures to be applied on TEN corridors will address measures as: interoperability, management of slots, dedicated freight network, which is in fact priority freight network and intermodal policy. All accompanied measures will be adapted to corridor specificity and will address also the problems identified on each corridor.

The focus will be concentrated on accompanying measures dedicated to the selected infrastructure projects in order to support the operational, institutional and organisational frameworks addressing the intermodal transport. These measures will maximise the effect of the realisation of the specific infrastructure projects.

Pan-European Transport Corridors (PETCs) and the TER Project

Second Pan-European Transport Conference 1994

The second Pan-European Transport Conference held in Crete in 1994 endorsed the Progress Report Toward Indicated Guidelines for further Development of Pan-European Transport Infrastructure. This report was based on the Declaration adopted by the first Pan-European Transport Conference in Prague in 1991, which was jointly submitted by the European Commission, the Secretariats of the European Conference of Ministers of Transport and the United Nations Economic Commission for Europe.

In this report, nine multimodal Pan-European transport links were identified as being of European interest and were considered to be a basis for future work on transport infrastructure development in Central and Eastern Europe. These Pan-European transport links are now commonly called the Corridors.

The progress report towards indicative guidelines for further development of Pan-European transport infrastructure also introduced a three-layer concept for transport infrastructure development at a Pan-European level:

• *The first layer* set long-term perspectives for infrastructure development at Pan-European level. These are reflected in the international instruments (AGR, AGC, AGTC) developed under the auspices of UNECE.

• *The second layer* introduced a set of medium term objectives in various parts of Europe running up to 2010. For the European Union, these objectives provided the guidelines for the development of Trans-European Transport Networks (TENs), which were adopted in July 1996. For Central and Eastern European Countries road and rail infrastructure, they

predominately overlap the TEM and TER networks developed under the auspices of the UNECE.

• *The third layer* introduced the short-term priority actions implementing the second layer.

The nine Crete Corridors constituted a set of eight road and rail links (which totalled 18000 km for both modes) and the river Danube (other inland waterways, airports and ports were not included in the Corridor concept). It was accepted from the outset that the main focus for action would be to increase the capacity of existing infrastructure in order to meet the expected traffic volumes and travel speeds (particularly on the railway network).

Third Pan-European Transport Conference 1997

The third Pan-European Transport Conference held in Helsinki in June 1997, following a detailed analysis by the parties concerned, confirmed by competent bodies of the UNECE (Steering Committees of TEM and TER Projects) and endorsed by the ECMT at its Ministerial Conference in Berlin in April 1997, came to the conclusion that the nine Pan-European transport corridors in CEE and the guidelines adopted for the development of Trans-European Transport Network continued to constitute a valid basis for coherent infrastructure development at Pan-European level.

No changes or adjustments to the set of nine corridors appeared to be necessary in the near future. In the light of the consideration of the peace process in the successor states of the former Yugoslavia, it seemed appropriate to propose the establishment of a new corridor (Corridor X) which broadly follows the traditional transport route to South Eastern Europe which was widely used before the outbreak of hostilities. The effective development of this corridor would however require the co-operation of all the countries concerned.

Other extensions and additions were concluded by the Conference, which were the following:

Corridor V:

- Extension beyond Moscow towards Volga region (Nizhny Novgorod) connecting to Trans-Siberian route.
- Addition of new branch from Adriatic coast (port Ploce) via Sarajevo and Osijek to Budapest.
- Corridor VI:
- Additional branch, leading to Corridor IV and connecting Katowice via Ostrava-Breclav as a rail route, and via Ostrava-Brno as a road route.

Other developments of links were also suggested:

- (Baltic Sea-Gdansk and Black Sea-Odessa, Constanta) through Warsaw
- Kowel and rail link between Baltic Sea and the Northern Adriatic.

It also became apparent that, in certain areas, particularly those surrounding or linked to sea basins, the corridor concept, based on the development of links between major activity centres, did not adequately address transport infrastructure needs. A more comprehensive approach, reflecting the complex structure of transport requirements in these areas, most of

which are strongly influenced by the sea, therefore needed to be adopted. The countries concerned endorsed this complementary concept of Pan-European Transport Areas. The proposed areas were the following:

- Barents Euro - Arctic Area
- Black Sea Basin Area
- Mediterranean Basin Area, and
- Adriatic/Ionian Seas Area.

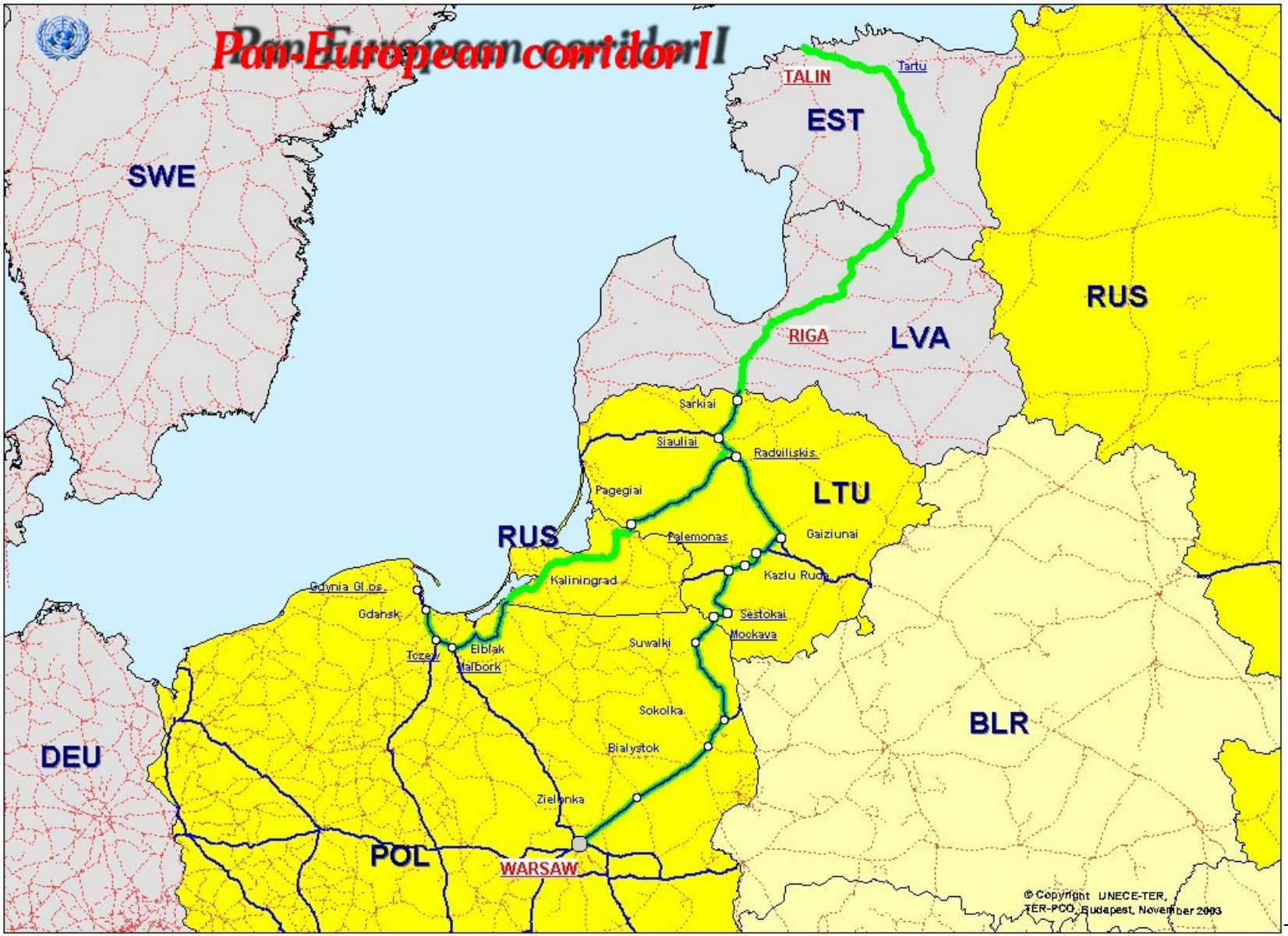
Overview and Present State of the Corridors

The construction costs for the corridors were estimated by the countries themselves and are presented in the table below. The investments for the TINA countries were presented in the final report "TINA – A Common Transport Infrastructure Needs Assessment" of October 1999. The figures for investments on corridors outside TINA countries were included where available. However, a detailed analysis of the investment measures in the non-TINA countries should be based on defined assumptions and criteria as laid down in the guidelines for the Trans-European Transport Network.

The presented costs for the construction of the corridors gave a rough estimation, because not all necessary measures were included.

Based on projects already underway or ready for implementation, and possible investments identified by the proposing countries, cost estimates led to a total investment volume of 72 860 M Euro for the Corridors until the year 2015. Of this amount, 32 580 M Euro was assigned for rail mode and 39 625 M Euro for road mode.

The maps of the Pan-European corridors are following: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Siauliai
Radviliskis
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Pagegiai
Palemonas
Gaiziunai
RUS
Kaliningrad
Kazlu Ruda
Gdynia Gl.ps.
Gdansk
Sestokai
Mockava
Suwalki
Tczew
Elblak
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BLR
Bialystok
DEU
Zielonka
POL
WARSAW
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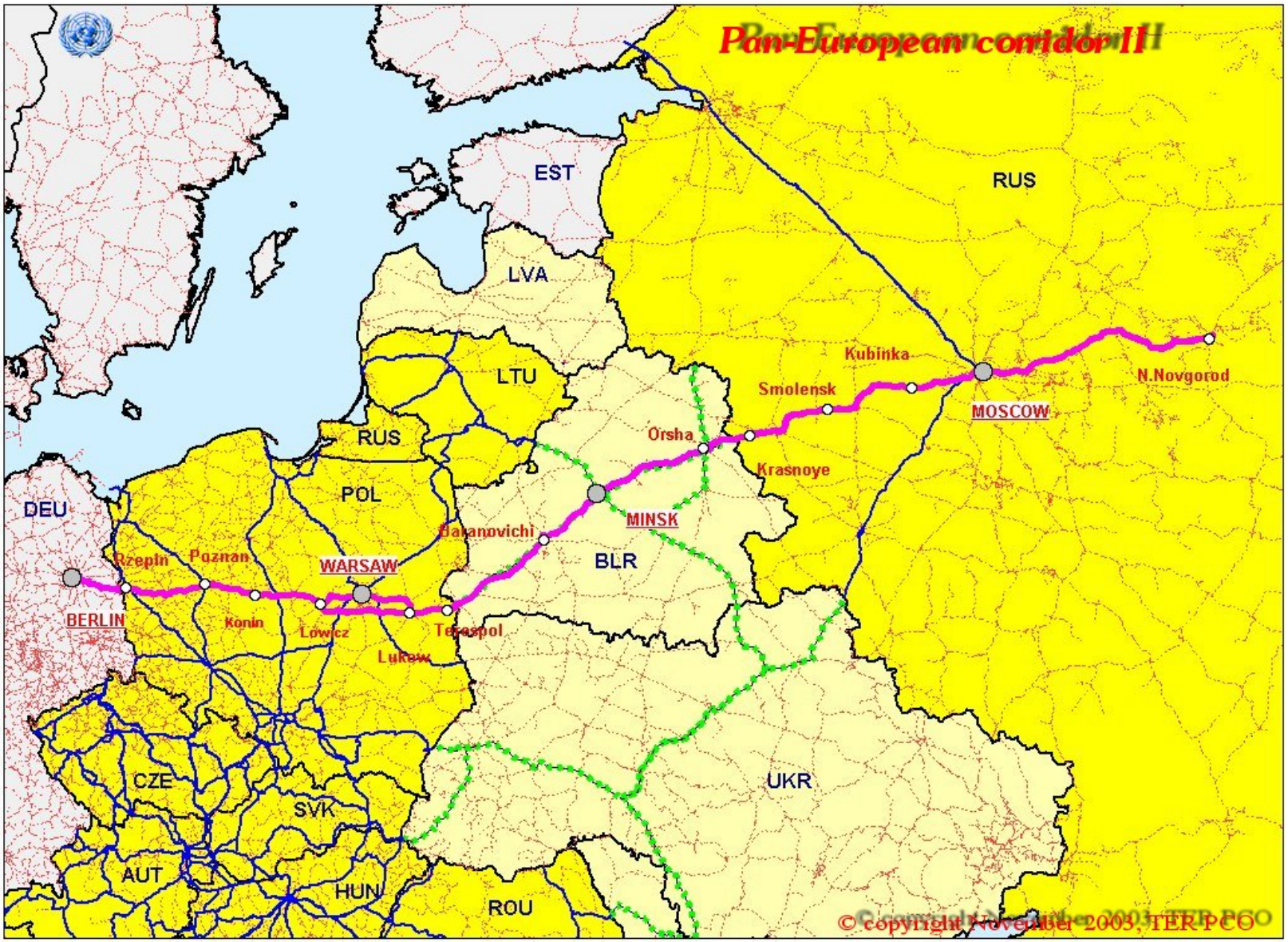
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N.Novgorod
Smolensk
MOSCOW
Orsha
Krasnoye
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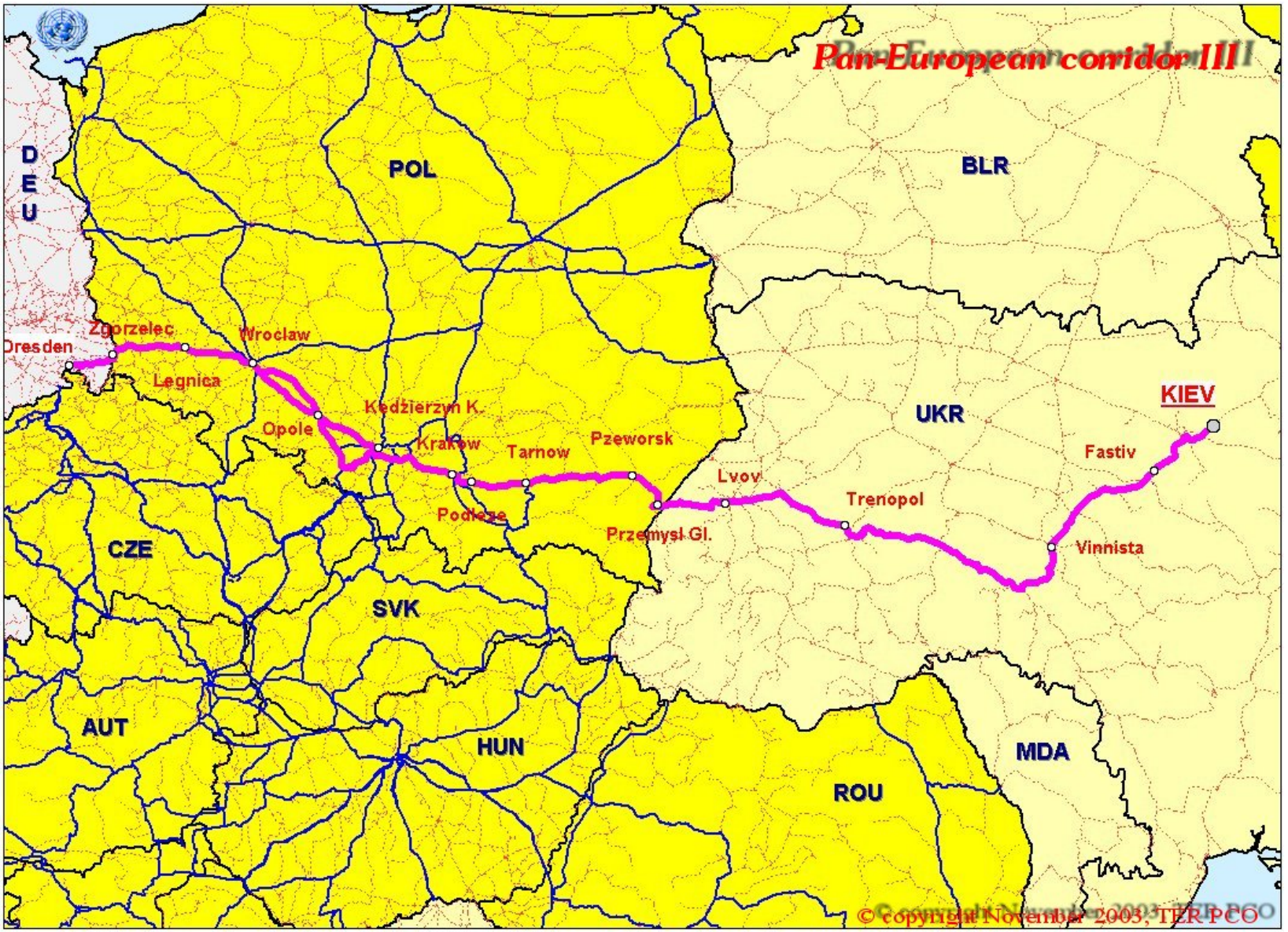
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MDA
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Dresden
Wroclaw
Legnica
Kedzierzyn K.
Opole
Krakow
Tarnow
Przeworsk
Podlesie
Przemysl Gl.
Lvov
Trenopol
Vinnista
Fastiv
KIEV
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Pan-European corridor IV
POL
UKR
DEU
CZE
SVK
AUT
HUN
MDA
ROU
SVN
HRV
BIH
SCG
MKD
ALB
GRC
ITA
BGR
TUR
Decin
Lovosice
PRAGUE
Pardubice
Cheb
Kolin
C.Trebova
Pizen
Brno
Breclav
Lanzhot
BRATISLAVA
WIEN
Sturovo
Komarom
BUDAPEST
Hegyeshalom
Gyor
Tatabanya
Mezotur
Lokoshaza
Arad
Coslariu
Brasov
Timisoara
Simeria
D.T.Severin
BUCURESTI
Medgidia
Craiova
Vidin
Constanta
Mezdra
SOFIA
Plovdiv
Dimitrovgrad
Dupnitza
Kulata
Svilengrad
Kapikule
ISTANBUL
Thessaloniki
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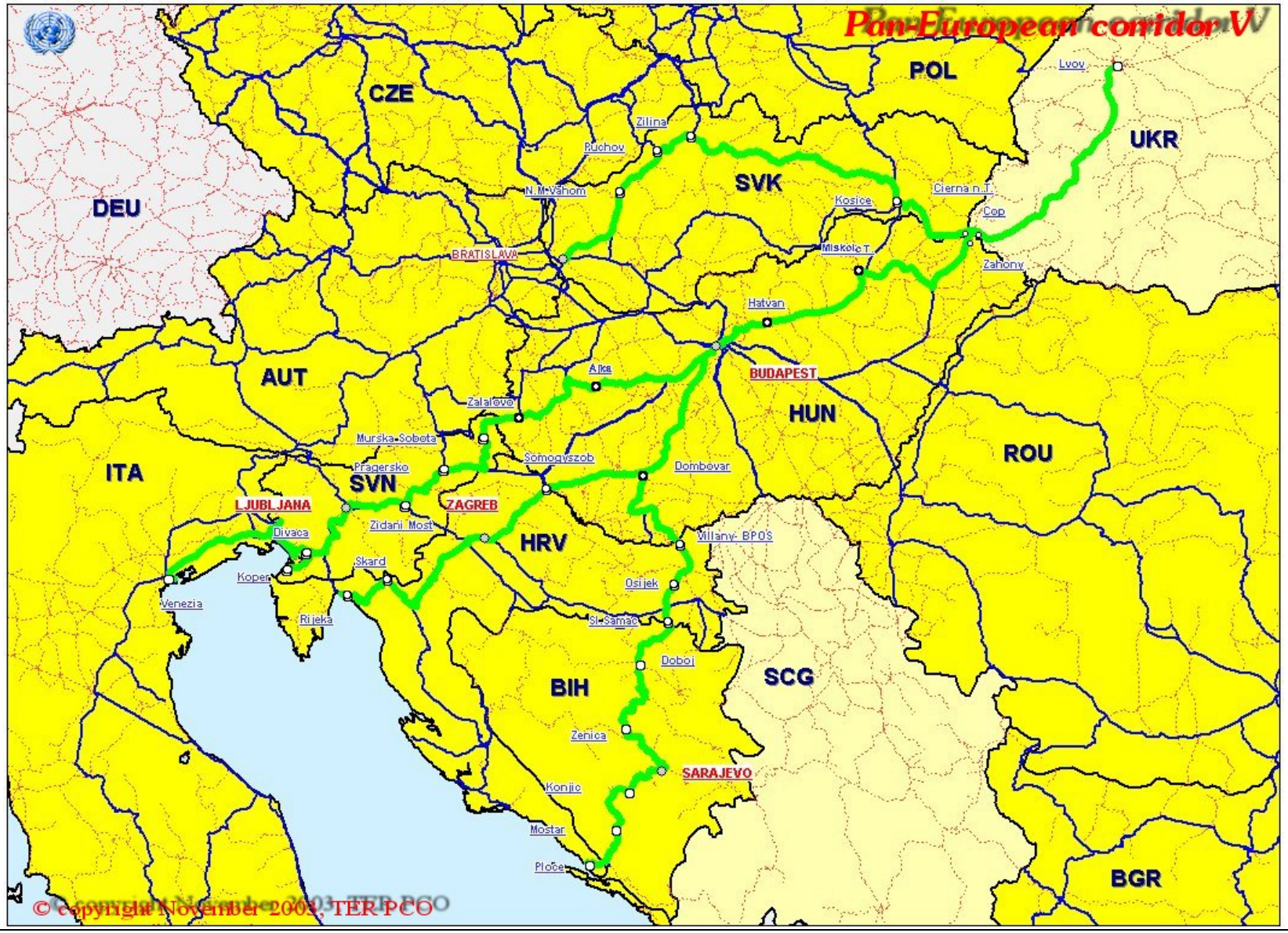
Pan-European corridor V
POL
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Zilina
Ruchov
N. M.Vshom
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Cierna n.T.
Cop
Miskolc T.
Zahony
BRATISLAVA
Hatvan
BUDAPEST
Aika
Zalalövo
Murska-Sobota
Somogyszob
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Pragersko
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Zidani Most
Divaca
Skard
Koper
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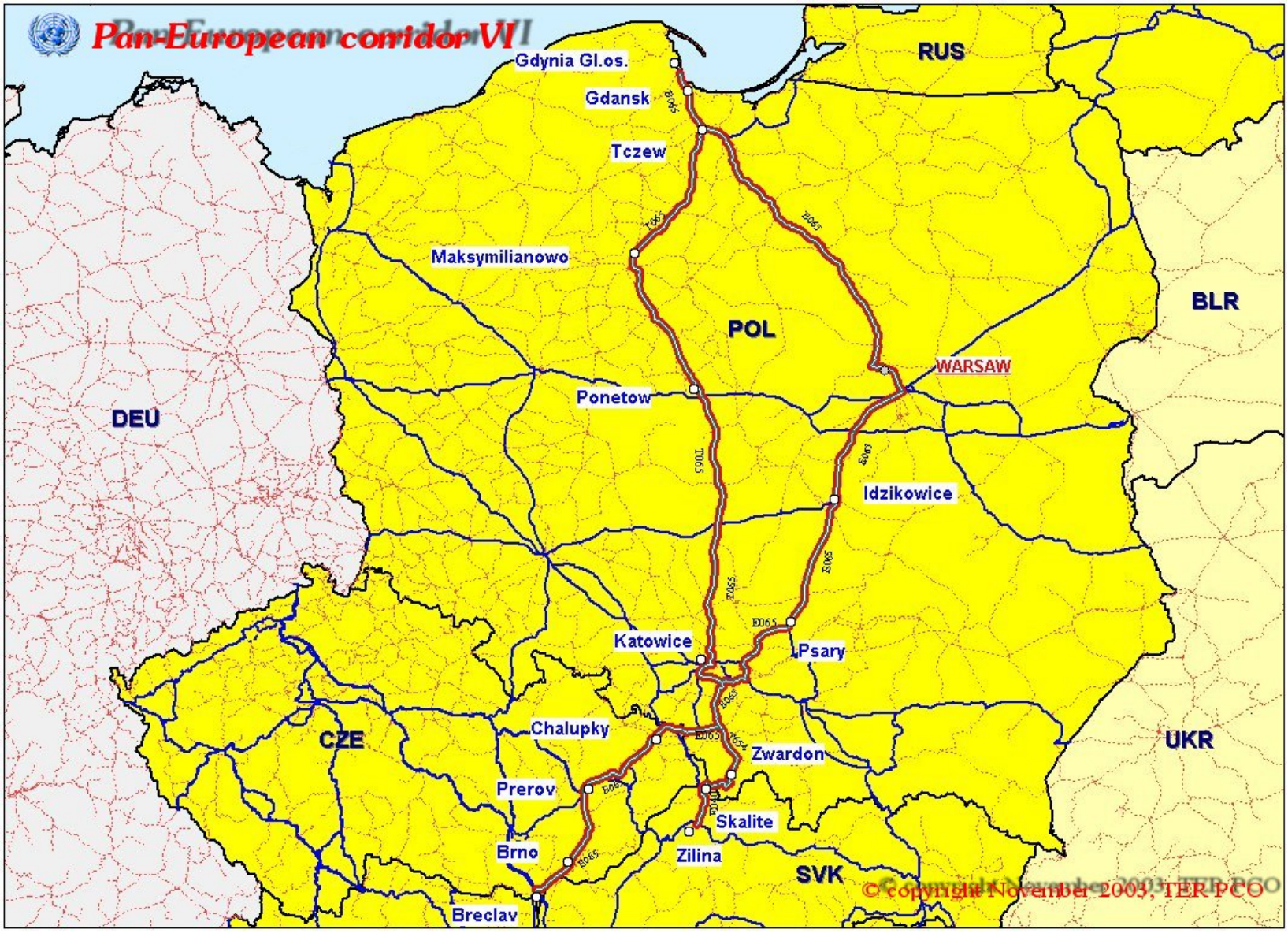
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Gdynia Gl.os.
Gdansk
Tczew
Maksymilianowo
Ponetow
Idzikowice
Katowice
Psary
Chalupky
Zwardon
Prerov
Skalite
Brno
Zilina
Breclav
RUS
BLR
POL
DEU
CZE
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UKR
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Pan-European corridor VIII
ROU
SCG
Varna
SOFIA
BGR
Karnobat
Stara Zagora
Burgas
Gueshevo
Plovdiv
Skopje
MKD
Durres
GRC
TUR
TIRANA
ALB
TUR
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Pan-European corridor IX
Buslovskaya
Vyborg
St.PETERSBURG
Siverskiy
Luga
Malay Vishera
Bologye
Lihoslavi
Povarovo
Pskov
Dno
Loknya
Nevel
Vitebsk
Maloyaroslavets
Suhinichi
Bryansk
Suzemka
Mogilev
Osipovichi
Gomel
Repki
Chernigov
Konotop
Fastov
Zhmerinka
Vapnyarka
Sloboka
Ungeny
Pascani
Iasi
Bendery
Razdelnaya
Adjud
Marasesti
Ploiesti
Videle
Giurgiu
Russe
G.Oriahovitza
Dubovo
Stara Zagora
Dimitrovgrad
Svilengrad
Alexandroupoli
Kuziai
Klaipeda
Kaunas
Kybartai
Kaliningrad
MOSCOW
VILNIUS
MINSK
KIYEV
BUCUREST
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SVK
UKR
AUT
BUDAPEST
Salzburg
Bischofshofen
GRAZ
Swarzach
St.Velt
Spittal-M.
Spielfeld
Villach
Sentilj
Warmbad
Rosenbach
Maribor
ITA
SVN
Jesenice
Sarbogard
HUN
Kiskunhalas
Pragersko
LJUBLJANA
ZAGREB
Zidani Most
SUBOTICA
Precec
Dobova
Novoselec
Banova Jaruga
Tovarnik
Vinkovci
NOVI SAD
ROU
Novska
S.Petrovo Selo
S.Caprag
INDIJA
Slovanski Brod
Tenja
Zavija
HRV
BEOGRAD
BIH
PARACIN
SCG
NIS
SOFIA
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MKD
ALB
THESSALONIKI
GRC
Pan-European corridor X
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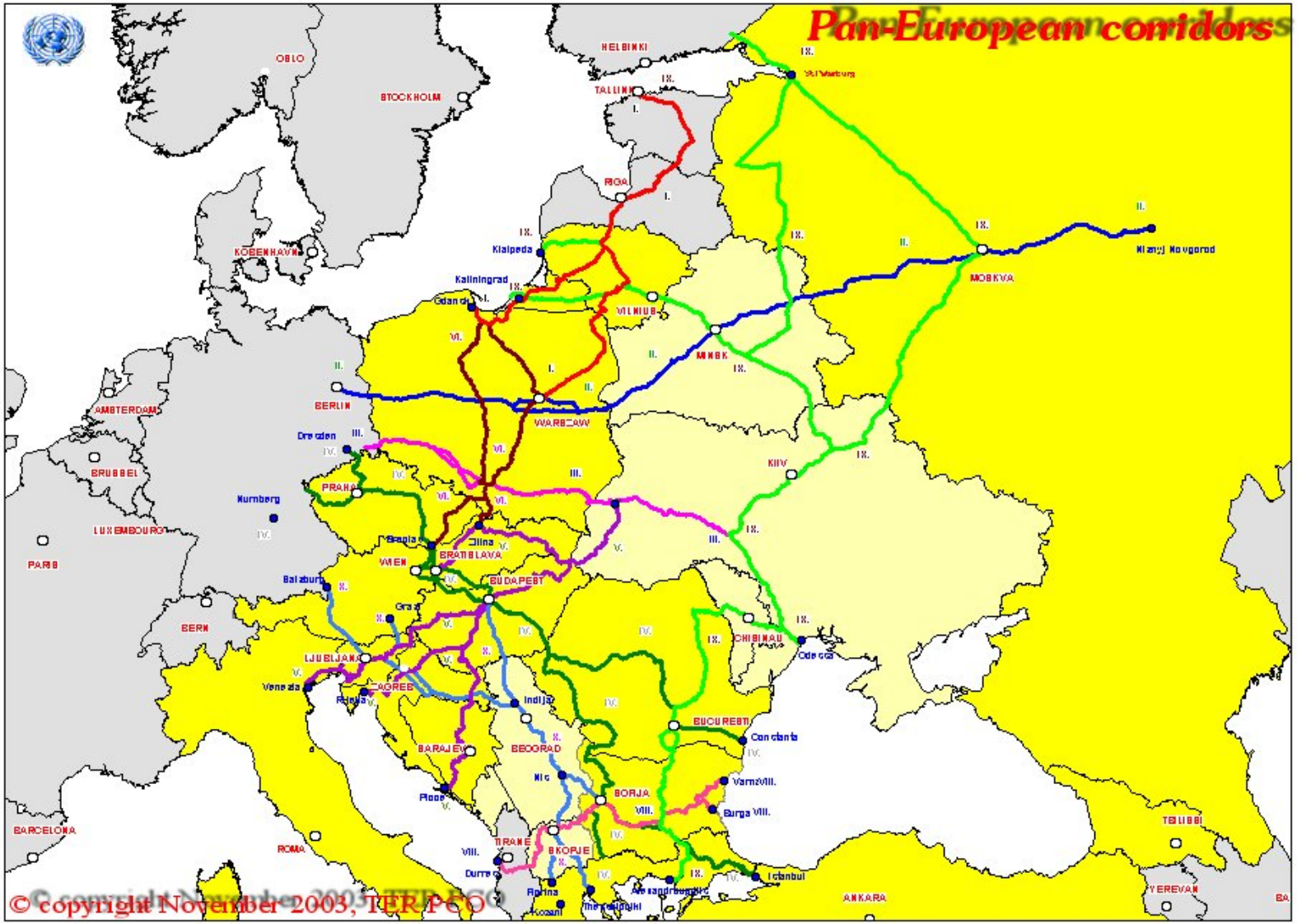
Pan-European corridors
HELSINKI
OSLO
STOCKHOLM
TALLINN
RIGA
KOBENHAVN
Klaipeda
Kaliningrad
Gdansk
VILNIUS
MINSK
MOSKVA
Niznij Novgorod
BERLIN
AMSTERDAM
WARSZAWA
Dresden
BRUSSEL
PRAHA
KIEV
Nurnberg
LUXEMBOURG
PARIS
Brno
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BRATISLAVA
WIEN
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BARAJEVO
BEOGRAD
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Burgas
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BARCELONA
ROMA
TIRANE
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Istanbul
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ANKARA
YEREVAN
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Lengths and Costs of the Corridors:

	Length in km	Cost in M Euro
Corridor I: Total		3 835
Rail	1710	2278
Road	1630	1557
Corridor II: Total		8404
Rail	2310	3635
Road	2200	4768
Corridor III: Total		5575
Rail	1650	1860
Road	1700	3715
Corridor IV: Total		16814
Rail	4440	8583
Road	3740	8231
Corridor V: Total		13378
Rail	3270	5671
Road	2850	7707
Corridor VI: Total		12471
Rail	1800	5719
Road	1880	6752
Corridor VII: Total		2415657
Corridor VIII: Total		2547
Rail	1270	1127
Road	960	1420
Corridor IX: Total		7344
Rail	6500	2606
Road	5820	4738
Corridor X: Total		1837
Rail	2360	1100
Road	2150	737
Rail: Total	25310	32579
Road: Total	22930	39625
Total	48340	72861

Regarding the co-ordination and monitoring of development of the Corridors, each of them has its Steering Committee and a secretariat in some of the EU member and accession countries and special Corridors and Areas Co-ordination Group are headed by the European Commission, in which also the UNECE takes active part.

The UNECE submitted to the EC the proposal for the establishment of a harmonized system of corridors data that was requested during the 4th meeting of the Corridors Co-ordination Group and underlined its readiness to offer its contribution towards the introduction and implementation of such a system in close co-operation with the countries concerned.

Transport Infrastructure Needs Assessment (TINA) and the TER Project

The establishment of TINA process

In July 1996, the European Parliament and Council adopted a decision on Guidelines for the development of the Trans-European Transport Network. In the Agenda 2000, the Commission identified the importance of transport for the Union's Pre-Accession Strategy. It therefore proposed that substantial funds be allocated for the transport infrastructure investments in the candidate countries in Central Europe.

In April 1997, the EC proposed a structure for transport networks serving the entire continent to the third Pan-European Conference, in which the Trans-European Transport Network of the European Union and its extension to the future new Members in Central Europe plays a prominent role. This structure was included into the declaration of Helsinki Conference.

TINA results and recommendations

The starting point for the TINA work was the backbone network based upon the Pan-European Transport Corridors confirmed with some adjustments at the third Pan-European Transport Conference in Helsinki.

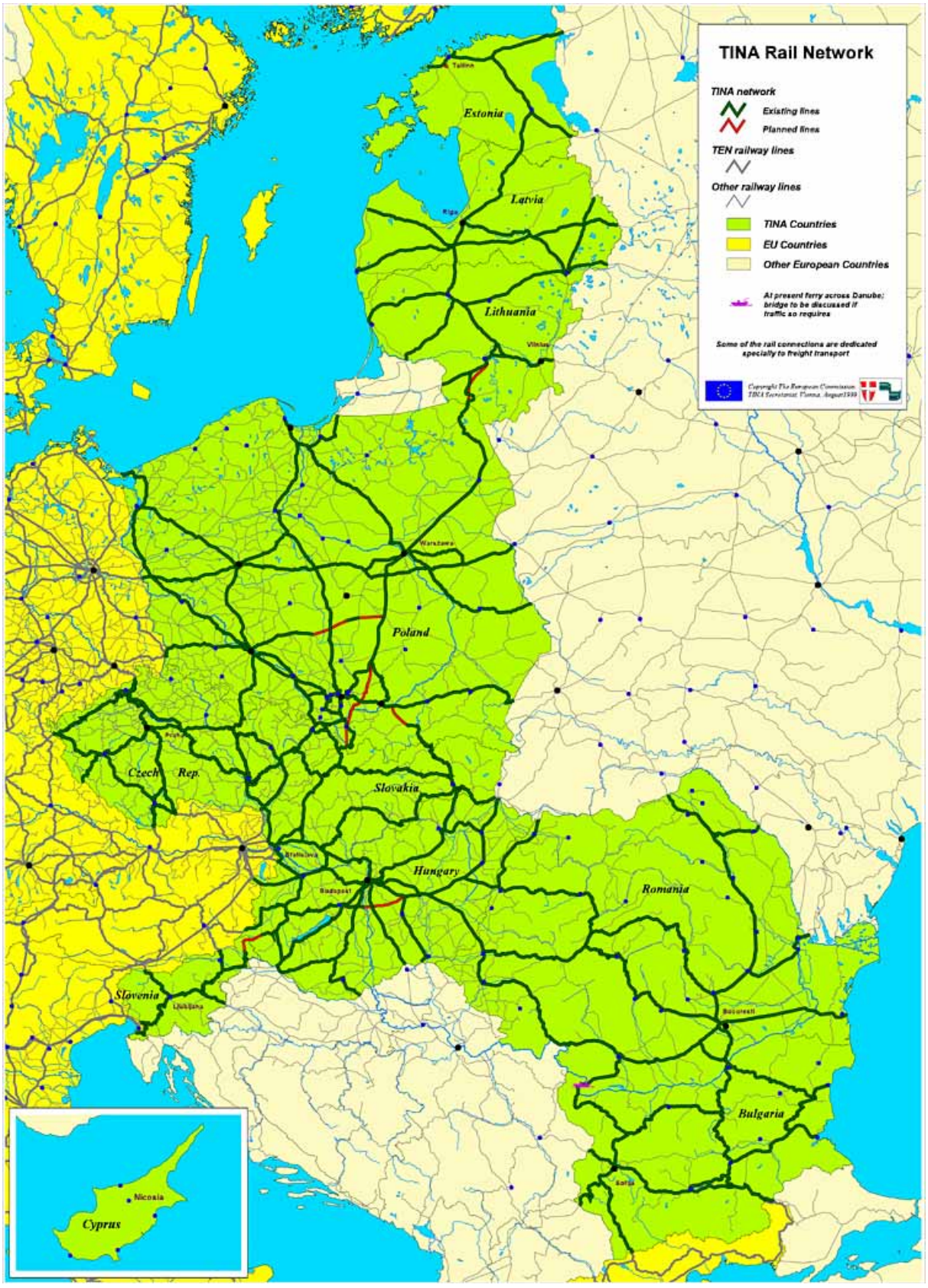
For this backbone network, construction costs were estimated on a common basis using existing information and inputs from TINA countries. These investments costs estimates were available per mode and per country. The costs were also broken down for each section of the network.

The results of the estimated transport infrastructure needs for the 11 accession countries amounting to Euro 91,596 billion were presented in the final report of TINA in October 1999.

TINA report contained an interesting paragraph with recommendations for follow up actions, the most important of which should focus on monitoring the implementation of the network and, during the accession process, adapting it to developments in transport and economic conditions.

A concise investment strategy would be needed to be implemented over the next 15 to 20 years. This will require a smooth transition from pre-accession support under ISPA to the support schemes available for Member States, with careful co-ordination between the different financial institutions. In this respect, TINA could be a useful forum for the development of transport network strategies jointly between countries concerned, funding and lending institutions, and the Commission**.** In addition, investment schemes would be

dependent on specific project proposals being made, which have to meet a number of economic, financial and institutional criteria. The establishment and development of common methodologies and organisational approaches would permit the identification and continuous development of project pipelines. The TINA process should support this co-ordination. TINA Rail Network established follows:


TINA Rail Network
TINA network
Existing lines
Planned lines
TEN railway lines
Other railway lines
TINA Countries
EU Countries
Other European Countries
At present ferry across Danube; bridge to be discussed if traffic so requires
Some of the rail connections are dedicated specially to freight transport
Estonia
Latvia
Lithuania
Poland
Czech Rep.
Slovakia
Hungary
Romania
Slovenia
Bulgaria
Cyprus
Nicosia

The TINA process in future would need to be co-ordinated with that going on inside the Union on the Trans European Transport Network. This will require the use of similar, if not identical, methodologies and common reporting framework, particularly as regards the establishment and maintenance of a database using GIS techniques. Following core actions were recommended to be primary undertaken by the Commission, EIB, and other IFIs:

- Establish priorities amongst possible investment measures using the criterion of sustainable mobility and an investment project pipeline for external financing.
- Promotion of institution building, and organisational and regulatory measures favouring the competitiveness of rail.
- Promotion of PPP schemes for TENs projects in the future enlarged Union.
- Promotion of Intelligent Transport Services for the benefit of the TINA network.

The experience gained in TINA could furthermore constitute a useful basis for the discussions on planning of transport infrastructure development in the context of Stability Pact for South -Eastern Europe and co-ordination of the integrated development of infrastructure in Central Europe.

It was recommended that TINA continue its work in order to facilitate the integration of transport infrastructure the candidate countries into the EU.

TER participation in the TINA process

The European Commission DG VII and the UN ECE took the joint decision to involve TEM and TER Projects in the TINA activity. On the basis of this decision, the Co-operation Agreement between the TINA Secretariat in Vienna and the UNECE TER Project was signed on 8. 06. 1998, in which both parties agreed to co-operate in carrying out the assessment of the railway infrastructure needs in the countries acceding to the European Union. The TER Project Central Office took the obligation to supply the TINA secretariat the data on major rail infrastructure and traffic flows of its member countries participating in the TINA process.

Trans-European Network (TEN-T) and the TER Project

The establishment of the TEN-T

A fully integrated transport network is a prerequisite for a real freedom of movement of goods and people and for bringing together the peripheral, island or isolated areas with the central regions. A modern, interconnected and interoperable network allows, through a better use of transport, to enhance the competitiveness of the European economy as a whole. Without implementing the necessary infrastructure and an appropriate regulatory framework for an efficient network management, the concepts of the internal market and the territorial cohesion of the European Union will remain unfinished.

The decision to develop an integrated transport network in the European Union was taken in July 1996. This can probably be regarded as the single most reaching decision since 1992, when transport policy became an integral part of the affairs of the European Union.

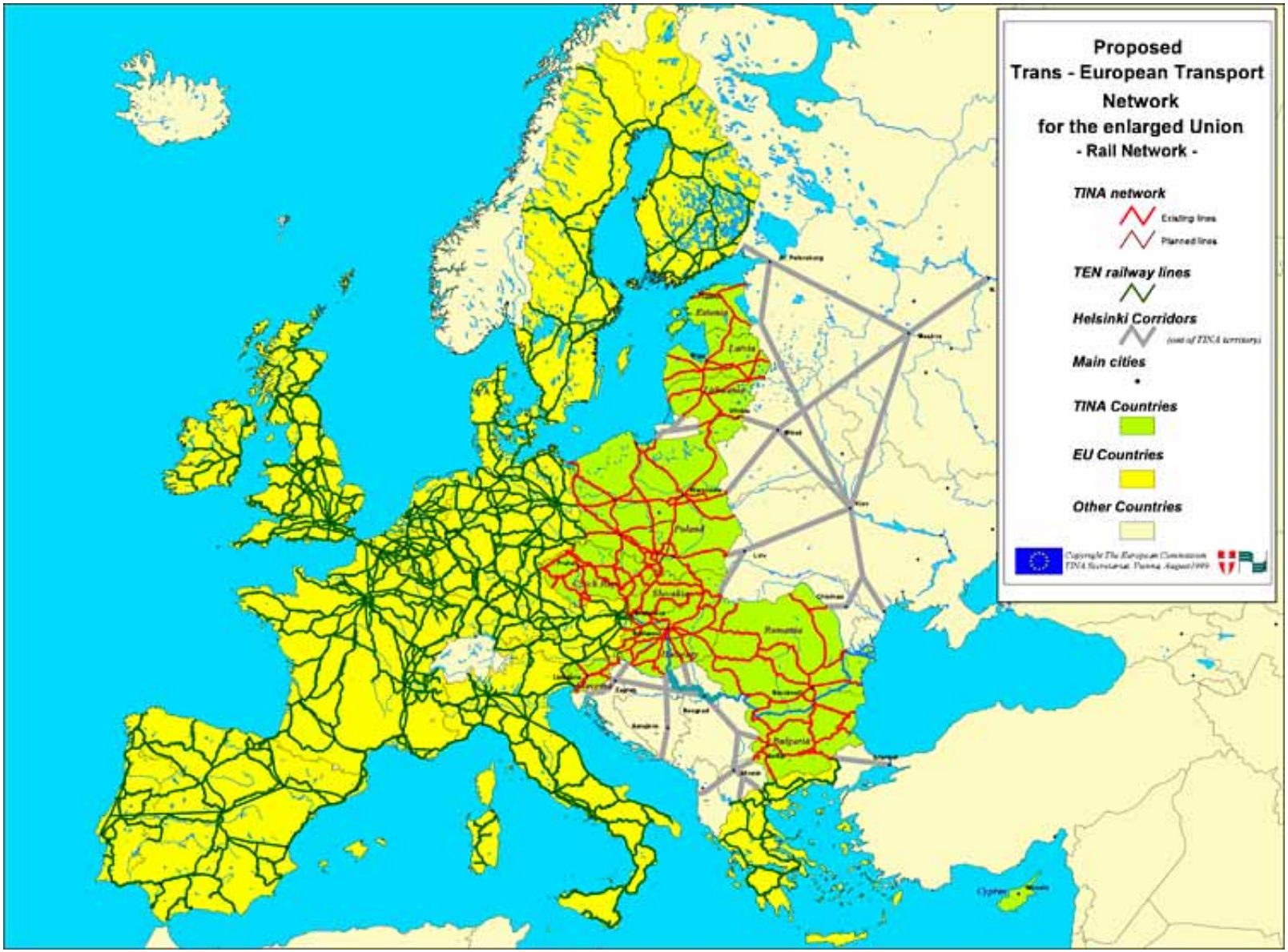
At its meetings in Corfu in June 1994 and in Essen in December of the same year, the European Council endorsed a list of 14 priority transport projects, listed in the table below. It also invited the member states concerned to take all the measures necessary to advance these projects by in particular speeding up the administrative, regulatory and legislative procedures.

PROJECT	LENGTH (Km)	MECU	FINANCING
1.High Speed train (HST) /Combined transport North-South	958	115102	Partly secured, some difficulties remain
2.Paris-Brussels-Koln-Frankfurt-Amsterdam-London	1176	17232	Some delays , now all sections on track
3. High Speed Train South	1601	14072	Partly secured, some difficulties remain
4.HST eastern France-south-western Germany TGV	551	4777	Largely secured
5.Betuwa Line	160	4094	Possibility for PPP being explored
6.HST/Combined Transport -Lyon - Turin- Trieste	734	18260	Partly secured, some difficulties remain
7.Greek Motorways	1580	9242	Tree PPP schemes on PATHE, support from WRDF & Cohesion Fund
8.Multimodal link Portugal-Spain-Europe		6212	Support from ERDF & Cohesion Fund expected, some difficulties remain
9.Conventional rail link	502	357	No difficulties
10.Malpensa Airport		1047	Financing in place
11.Oresund Fixed road / rail Link	52.5	4158	Financing in place
12.Nordic Triangle Multimodal corridor	1800	10070	Partly secured, some difficulties remain
13.Ireland-UK-Benelux road link	1530	3629	Uncertainties remain
14. West cost Main Line	850	3000	3000 Financing secured PPP, between private infrastructure and services companies, with public subsidy

Subsequently, on 23 July 1996, the European Parliament and the Council adopted Decision No. 1692/96/EC on Community guidelines for the development of the Trans-European transport network, that included a much larger list of projects of common interest.

This decision set 2010 as its target date for completing the network. The guidelines were intended to encourage the Member States, and if necessary the Community, according to its

budgetary resources, to carry out projects of common interest aimed at ensuring the consistency, interconnection and interoperability of the Trans-European transport network as well as access to this network.TEN Network for the enlarged EU follows:


Proposed
Trans - European Transport
Network
for the enlarged Union
- Rail Network -
TINA network
Existing lines
Planned lines
TEN railway lines
Helsinki Corridors
Main cities
TINA Countries
EU Countries
Other Countries
Poland
Romania
Bulgaria

TEN-T objectives

The aims of the Trans-European Transport Network are:

- To support the Single Market and
- To promote social and economic cohesion.

TEN-T comprise transport infrastructure, traffic management systems and navigation systems.

The transport infrastructure comprises road, rail, and inland waterway network plus airports, seaports, and inland waterway ports.

The traffic management systems and the navigation systems include the necessary technical installations, information systems and telecommunication systems to ensure harmonious operation of the networks and efficient traffic management.

The further objectives of this transport network are to:

- Ensure best possible safety conditions and environmental considerations
- Offer high quality infrastructure on acceptable economic terms allow optimal use of existing capacities
- Encourage intermodality (to ensure best use of the entire system) be, insofar as possible, economically viable
- Facilitate access to all regions of the Union
- Connect to networks of EFTA, CEEC and the Mediterranean countries
- Promote projects of common interest (remove bottlenecks between member states and connect peripheral regions with the central region of the Union).

TEN-T financing

Basically, member states are to develop and finance their own parts of TEN-T. Some financial support from the Union is, however, possible once a link is accepted as part of TEN-T. (This has had the effect that some road links have been put on the map that should probably not have been included).

There ways of financial support are available:

The TEN-T budget of the Community

The Regional Fund incl. a special Cohesion Fund for the less developed countries

The European Investment Bank (loans)

The European Investment Fund (guarantees).

The annual TEN-T budget has been about 0,4 billion Euro of which 75% was used for the 14 priority projects, The Regional and Cohesion Funds allocated about 3 billion Euro to TEN-T annually, while the European Investment Bank granted loans of app 6 billion Euro

a year to TEN-T. These amounts of money have supplied investments of member states. It may be interesting to note that the total predicted investments needed to upgrade/extend TEN-T in the period from 1995 to 2010 amounted to about 400 billion Euro.

Review of European Union Railway Infrastructure Package – Impacts on TER region

EU Legal Framework in the Railway Sector

A sharp turn in the European railway policy with the Directive 91/440 happened in 1991. This Directive and the following ones aim to improve the efficiency of the railway system by **clarifying the responsibilities of the different actors** (State, railways undertaking, infrastructure manager…) and by implementation of new rules. A vertical separation is substituted to the monolithic railway system.

To fulfil this aim, the directives distinguish the management of railway operation and infrastructure from the provision of railway transport services. According to the contestable markets theory, the directives organize for the railway service management the increasing implementation of competition and open access with rules and charges. Moreover, the Directive lay down the management independence of railway undertakings from State.

As the TER Master plan concerns mainly the infrastructure manager (developing and controlling the railway network), the analysis is focused on the responsibilities of the infrastructure manager as defined by the European Directives.

The current responsibilities of the infrastructure manager are defined by the European Directives 91/440, 95/18, 95/19. The Directives 2001/12, 2001/13, 2001/14 define the future responsibilities of the infrastructure manager.

The references of the different directives on the Community railways are:

(i) Council Directive 91/440/EEC of 29 July 1991 on the development of the Community's railways (*Official Journal L 237, 24/08/1991 P. 0025 – 0028)*

(ii) Council Directive 95/18/EEC of 19 June 1995 on the licensing of railway undertakings (*Official Journal L 143, 27/06/1995 P. 0070 – 0074)*

(iii) Council Directive 95/19/EEC of 19 June 1995 on the allocation of railway infrastructure capacity and the charging of infrastructure fees (*Official Journal L 143, 27/06/1995 P. 0075 – 0078)*

(iv) Directive 2001/12/EEC of the European Parliament and of the Council of 26 February 2001 amending Council Directive 91/440/EEC on the development of the Community's railways (*Official Journal L 075, 15/03/2001 P. 0001 – 0025*)

(v) Directive 2001/13/EEC of the European Parliament and of the Council of 26 February 2001 amending Council Directive 95/18/EEC on the licensing of railway undertakings (*Official Journal L 075, 15/03/2001 P. 0026 – 0028*)

(vi) Directive 2001/14/EEC of the European Parliament and of the Council of 26

February 2001 on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification (*Official Journal L 075, 15/03/2001 P. 0029 – 0046*)

(vii) Directive 2001/16/EC of the European Parliament and of the Council of 19 March 2001 on the interoperability of the Trans-European conventional rail system.

(Official Journal L110/1)

Current Responsibilities of Infrastructure Manager

The Directive 91/440/EEC defines the **infrastructure manager** as "any public body or undertaking responsible in particular for establishing and maintaining railway infrastructure, as well as for operating the control and safety systems". The directive 95/19/EEC adopts the same definition for the infrastructure manager.

The directive 95/18/EEC defines the **licensing authority** as "the body charged by a Member State with the issue of licences". *Nevertheless, nowhere the hereby directive specify that the licensing authority is the infrastructure manager*.

Moreover the directive 95/19/EEC considers also the existence of an **allocation body** defined as "the authority *and/or* infrastructure manager designated by the Member States for the allocation of infrastructure capacity". But in other words, the infrastructure manager is not inevitably the allocation body of the of railway infrastructure capacity.

(i) Organization and accounts

The infrastructure manager can be a distinct division within a single undertaking or the infrastructure manager can be a separate entity. The accounts for the management of railway operation and infrastructure and for the provision of railway transport services are kept separate. No transfer of aid between the two areas of activity is possible. If the infrastructure manager is the allocation body, he shall ensure a fair and non-discriminatory allocation of the railway infrastructure capacity and an optimum effective use of the infrastructure.

In case of infrastructure capacity allocation in the interests of public service, decided by the State member, the infrastructure manager may have compensation by the State member for any financial losses.

(ii) Charging

A fee for the use of the railway infrastructure is charged, payable by railway undertakings and international groupings using that infrastructure. The rules for determining this fee are defined by Member States after consulting the manager. The Directive 95/19/EEC adds that these rules may authorize a marketing of the available infrastructure capacity "*efficiently"*.

According to the Directive 91/440/EEC, the user fee, which shall be calculated in such a way as to avoid any discrimination between railway undertakings, may in particular take into account the mileage, the composition of the train and any specific requirements in terms of such factors as speed, axle load and the degree or period of utilization of the infrastructure.

The Directive 95/19/EEC is more general and consider that the fees shall be fixed according to "the nature of the service, the time of the service, the market situation and the type and degree of wear and tear of the infrastructure" Information on the determination of

the fees and on modification of the infrastructure quality and capacity shall provide by the infrastructure manager to the State member and to the railway undertaking.

(iii) Access to the infrastructure

The Drective 95/18/EEC considers the allocation of licence for railway undertaking defined as "authorization issued by a Member State to an undertaking, by which its capacity as a railway undertaking is recognized".

The licence is necessary to provide the rail transport services. However, "such a licence shall not itself entitle the holder to access to the railway infrastructure". These licence are issued by a licensing authority, body charged of this function by a Member State. Nevertheless, the directive doesn't specify if it's licensing authority is the infrastructure manager.

The licensing authorities of the Member State controlled before the start of activities that railways undertaking will at any time be able to meet the requirements relating to good repute, financial ftness, professional competence and cover for its civil liability. These requirements are defined for the state member and for the licensing authority. If a railway undertaking can no longer meet the requirements of the Directive, the licensing authority shall suspend or revoke the licence.

It is interesting to note that the next Directive 95/EEC did not mention licensing authority introduced in the previous directive and consider only the infrastructure manager and an "allocation body".

The infrastructure manager concludes with railway undertakings engaged in international combined transport of goods and international groupings the necessary administrative, technical and financial agreements. The Directive 95/EEC gives more details on the allocation procedure compared to the Directive91/440. The railway undertaking submits an application for infrastructure capacity to the infrastructure manager, if the latter is the allocation body. He takes a decision "on the application as soon as possible, but no later than two months after all relevant information has been submitted". The railways undertaking has to obtain a safety certificate relating to "the technical and operational requirements specific to rail services and the safety requirements applying to staff, rolling stock and the undertaking's internal organization". The traffic rules are those "applied" by the infrastructure manager. The

directive 95/19/Ec indicates that the safety certificate is issued "by the authority designated for the purpose by the Member State". *But the infrastructure manager is not inevitably this authority.*

In case of problem on the allocation of infrastructure capacity or the charging of fees, the States members have to implement an independent body to appeals by railway undertaking.

(iv) Interoperability of conventional rail system

The conditions to be met by Directive 2001/16/EC concerns the design, construction, putting into service, upgrading, renewal, operation and maintenance of the parts of the conventional rail system. The objectives of implementing this Directive are: facilitate, improve and develop international rail transport services within the EU and with third countries, contribute to the progressive creation of the internal market in equipment and services to ensure a good functioning of the Trans-European conventional rail system as well as contribute to the interoperability of the Trans-European conventional rail system.

Future responsibilities of Infrastructure Manager

The directives 2001/12/EEC, 2001/13/EEC and 2001/14/EEC amend respectively the Council Directives 91/440/EEC, 95/18/EEC and 95/19/EEC. Nevertheless they are in the continuity of the first directives. They were subjected to bargaining between the European Parliament and the European Council.

These recent directives introduce new arrangements and provisions than in previous directives and give further information on the rules and actors. In particular, the directives consider the case where the functions of the infrastructure manager on a network or part of a network may be allocated to different bodies or undertakings. Moreover they have as goal to increase the open access and to organize competition in the European railways system. As for the previous directives, the analysis is focused on the infrastructure manager. Others points linked to this question are also mentioned.

In the Directive2001/12/EEC, the ***infrastructure manager*** is defined more precisely compared to the definition of the Directive 91/440/EEC. The *infrastructure manager* is "any body or undertaking responsible in particular for establishing and maintaining railway infrastructure". But the responsibility of the management of infrastructure control and safety systems by the infrastructure manager *is* an eventuality and not an obligation. In other words, the directive considers that these activities may be completed by a distinct body to the infrastructure manager. *Moreover the infrastructure manager functions may be allocated to different bodies or undertaking*. This possibility of decomposition for the infrastructure manager is not spell out in the previous directives but the latter distinguished already "infrastructure manager", "allocation body" and "licensing authority".

The directive 2001/14/EEC introduced a new notion with "**applicant**". Applicant is defined as "a licensed railway undertaking and/or an international grouping of railway undertakings, and, in Member States which provide for such a possibility, other persons and/or legal entities with public service or commercial interest in procuring infrastructure capacity, such as public authorities under Regulation (EEC) No 1191/69(12) and shippers, freight forwarders and combined transport operators, for the operation of railway service on their respective territories. In other words, different actors and non only some railways undertakings.

- Organisation and accounts

An effort is demanded to ensure that separate profit and loss accounts and balance sheets *are kept and published*, for business relating to the provision of transport services by railway undertakings and also for business relating to the management of railway infrastructure.

Moreover, **the task for the accounts is no easy**. The infrastructure manager have to balance "income from infrastructure charges, surpluses from other commercial activities and State funding on the one hand, and infrastructure expenditure on the other" and reduce the costs of provision of infrastructure and the level of access charges "with due regard to safety and to maintaining and improving the quality of the infrastructure service".

The infrastructure manager have to draw up a ***"business plan including investment and financial programs"*** within the framework of general policy fixed by the State. The plan shall be designed to ensure optimal and efficient use and development of the infrastructure while ensuring financial balance and providing means for these objectives to be achieved.

As previously, the infrastructure manager may benefit from Member states important financing. But to insure the financial situation during the years, the resources of infrastructure manager granted by the Member States is implemented through *a contractual*

agreement covering a period of not less than three years which provides for State funding or through the establishment of appropriate regulatory measures with adequate powers.

- Charging

On this question the directive 2001/14/EEC has the same principles of charging as defined previously. The infrastructure charging schemes have to encourage in particular the infrastructure manager to minimize disruption and improve the performance of the railway network.

While respecting the management independence the specific charging rules are established by the state member or the infrastructure manager. As it was considered in the directive 91/440/EEC, the infrastructure manager determine and collect the charge for the use of infrastructure except if the infrastructure manager is not independent in its legal form, organization and decision-making from any railway undertaking.

The charging is relating to four packages of services described precisely by the directive 2001/14/EEC: the minimum access package, track access to services facilities and supply of services,additional services, and ancillary services.

For the minimum access package and for the track access to services facilities and supply of services, the principle of charging seems to be the marginal cost. Indeed, the charge is set at "the cost that is directly incurred as a result of operating the train service".

For the additional services and the ancillary services the principle of charging seems to be the full cost. In effect, if these two kind of services are provide by one supplier, the charge imposed for such a service shall relate to the cost of providing it, calculated on the basis of the actual level of use.

Nevertheless, the infrastructure manager may introduce additional charges and exceptions and discounts in the infrastructure charge. Two types of additional charges may include:

  - Charge of scarcity for "the identifiable segment of the infrastructure during periods of congestion".
  - Charge for the cost of the environmental effects caused by the operation of the train. The additional charge, function of the magnitude of the effect caused, is conditioned by the implementation of such charging is applied at a comparable level to competing modes of transport.

- Allocation and access to the infrastructure

For the allocation of capacity in the form of a train path to applicants, the directive adopts the rules following:

  - The infrastructure manager or the allocation body – if the infrastructure manager is not independent in its legal form, organization or decision-making functions of any railway undertaking - have to be equitable and non discriminatory for the allocation capacity with all applicants.
  - The allocation capacity proceedings have to be transparency. All the necessary information required to use access rights are to be published.

– The commercial confidentiality of information provided to the infrastructure managers and the allocation bodies have to be respected.

Then the implementation of these principles leads to the definition of obligation for the infrastructure manager. In particular the infrastructure manager or the allocation body have to produce for applicant a "**network statement**" given details on general rules, deadlines, procedures and criteria concerning the charging and capacity allocation schemes. It shall also contain such other information as is required to enable application for infrastructure capacity.

For the applicant request accepted, the infrastructure manager or the allocation body defines with an applicant a "**framework agreement**" as a legally binding general agreement on the basis of public or private law, setting out the rights and obligations of each partners in relation to the infrastructure capacity to be allocated and the charges to be levied over a period longer than one working timetable period.

The infrastructure manager shall as far as possible meet all requests for infrastructure capacity including requests for train paths crossing more than one network, and shall as far as possible take account of all constraints on applicants, including the economic effect on their business.

The infrastructure manager shall consult interested parties about the draft-working timetable and allow them at least one month to present their views. In this case, the infrastructure manager makes an effort to coordinate all requests.

If in spite of this coordination and in case of dispute relating to the allocation of infrastructure capacity, a dispute resolution system shall be made available in order to resolve it.

If a section of infrastructure is congested as demand for infrastructure capacity cannot be fully satisfied during certain periods even after coordination of the different requests for capacity, the infrastructure manager develop a "*capacity enhancement plan*" defined as a measure or series of measures with a calendar for their implementation which are proposed to alleviate the capacity constraints.

For a congested infrastructure section, some priority criteria to allocate infrastructure capacity are defined. Theses criteria are relating the importance of a service to society (public-service rail freight), relative to any other service. The State member grants the infrastructure manager compensation corresponding to loss induced by theses services.

For the open access to the network, the directive consider now that all the railway

undertakings shall be granted the access to the Trans-European Rail Freight Network defined in Article 10(a), after the 15 March 2008, to the entire rail network, for the purpose of operating international freight services. It means that the open access is not restricted to some type of railways undertakings. Only the international freight businesses are affected and not the passenger traffic and the cabotage. Only the tracks of the TERFN are opened to competition.

To control the open access, the directive 2001/14/EEC implements a "**regulatory body"**. It can be the Ministry responsible for transport matters or any other body. This regulatory body shall be independent in its organization, funding decisions, legal structure and decisionmaking *from any infrastructure manager*, charging body, allocation body or applicant.

Proceedings are developed with this "regulatory body". Any applicant can lodge a complaint with this body if it feels that it has been treated unjustly or, has been the subject of discrimination or has been injured in any other way. This regulatory body shall decide at the earliest opportunity on appropriate measures to correct undesirable developments in these markets.

The directives 2001/12/EEC and 2001/14/EEC admits some exceptions in the implementation of this independent body to ensure equitable and non-discriminatory access to infrastructure.

Ireland, United Kingdom for the north Ireland, Greece as islands with a rail link to only one other Member State or without direct rail link to any other Member State can postpone this implementation for a period of five years from 15 March 2003.

The previous directive 91/440/EEC, 95/18/EEC and 95/19/EEC were not sufficiently accurate. In their application at the national level in many cases, there is confusion between the railway actors, in particular for the infrastructure manager functions. In fact the infrastructure manager is not a body independent in its organization, funding decisions, legal structure and decision from railways undertakings. Moreover, the infrastructure managers with the support of the railway undertaking limit sharply the open access and competition.

In order to stimulate more the European railways system, the directives 2001/12/EEC, 2001/13/EEC and 2001/14/EEC clarify the principles and rules for each actor in particular for the infrastructure manager. They define a lot of responsibilities for the infrastructure manager.

They consider also a **situation with not a monolithic infrastructure manager but with different bodies** for the allocation of railway capacity, the allocation of licences, the control of the safety, the control of the implementation of the equitable and non-discriminatory charging and allocation principles.

Railway Dynamics Resulting from the Implementation of the EU Directives

The split of the operation from the infrastructure introduces new legal relations between involved actors. This has the advantage of bringing clearer financial flows and decision structures within the railway business. However, the mentioned separation leads to an increase of the production complexity and, often reduces the efficiency of the railway system.

The most common difficulty is the disruption or even the disappearance of vital information flows, mainly caused by a rapid structure change, by employees who aren't used to the new decision and competition context and by an insufficient identification of the system by the top management. One should not forget that the railway system is intrinsically complex.

On the other hand, a better transparency of financial relations between production entities allows to better defining the origin or weaknesses of the railway system. Moreover, a clear view of monetary flows facilitates the coming of new actors on the market.

The railways have become more eager to exploit the different business opportunities. These different business areas are e.g. real estate, bus, parking, telecommunications, consulting and power supply.

There has been a change in perspective. Earlier the motivation was to achieve some goals usually set by the authorities as some proxy of the social optimum, in the new business environment the focus is to regulate the business so that the companies' profit maximisation is also the social optimum. This holds at least for the operating companies. For the infrastructure management there is a much closer contact with the authorities, and the commercial activity is still not dominating in most cases.

There has been a shift of focus in the European railways; from focus on national railways to an international focus, although awaiting further progress in the international traffic.

Produced tonne-kilometres on rail have been a rather constant figure for the last thirty years, while passenger kilometres on rail have increased in some countries. The overall growth in passenger kilometres and tonne kilometres is decreased, so the market share of railways has decreased. The productivity in terms of labour seems to have risen in most countries. This can have at least two reasons. More flexibility and independence from authorities can lead to a different production process with more technology and less personnel. On the other hand many services that before were served by the railway company is now outsourced or put into different units, reducing the staff in the main railway undertakings.

New General Context

The following sections attempt to summarise this new situation and focus, more particularly,to some typical processes for the railway industry:

(i) Infrastructure

(a) Planning and financing of infrastructure development projects

Infrastructure projects aim to develop significantly network capacity either by investing directly in infrastructure (creation of new links) or by upgrading the equipment (safety installations) and the operational procedures.

Those projects go usually through a cycle involving: identification of the demand, planning of the works, and financial planning. Depending on the project, commissioning regularly extends over a decade or more. Partial decision-making processes may suffer from high inertia.

Infrastructure projects need long-term planning and financing.

Usually, an infrastructure project is considered whenever the existing network cannot satisfy a supposed capacity demand. Infrastructure managers need, thus, to anticipate future demands of their customers, the train operators. Meanwhile, there are more and more new train operating companies and of smaller size. Most of the newcomers try to exploit niche market segments; and their long-term existence is questionable. It is therefore doubtful to base demand forecasting upon the only forecasts of the service providers (transport companies), who also tend to hide their own forecasts in a competitive environment. This situation leaves often infrastructure managers in front of a blank sheet. They need to create within their cmpany new competences forecast demand with diferent transport market segments.

This is especially true for freight transport.

Smooth and efficient management of infrastructure projects requires steady flow of capital input. Founding is normally provided by public authorities, sometimes with the contribution of the private sector. Depending on the adopted financing model, public founding requires political decisions to be taken repeatedly, in regular time intervals. Credits may be valid for a limited time, over a one- or two-years period, and then cancelled if not used. Planners may then face uncertainty, which hampers long-time coordinated planning. Moreover, involvement of private investors and public-private partnership depends on how credible is the ommitment of the public authorities. To summarise, investment on infrastructure should be ensured over a long time period.

(b) Management and planning of infrastructure maintenance and renewal

Planning of the maintenance and the renewal of infrastructure is based on a fair knowledge of:

- the infrastructure itself
- its condition
- the degradation laws for the different elements of the infrastructure
- the traffic load on the network

To manage those data infrastructure managers need an information system that integrates through the whole company both vertical (from strategic to operational planning) and horizontal (for each one element of infrastructure) data flow.

Some infrastructure managers have already such a database available, more or less complete, which may be used for planning. Resorting to databases seems to be the only solution to anticipate efficiently the long-term demands for maintenance and renewal, which is paramount in order to plan the medium-term works on their network.

On the other hand, creation of those databases requires huge initial investments and

subsequent maintenance costs. One of the most sensitive issues is to keep the data up-to-date, and it is closely linked with the development of the structure of the company.

Updating of the database ensures that data corresponds to the physical condition of the infrastructure. It also helps validating the degradation laws for each infrastructure component.

Those laws are a key element in planning maintenance and renewal and are instrumental in setting up long-term policies for it.

Increased commissioning of the maintenance works to the private sector raises the question of the information flow continuity. There are also plans, for some national networks, to split them in several sectors to be managed by private contractors over extended time periods. The latter commit themselves to maintain network condition over the contract period, but they should be free to choose their own maintenance policy and probably not prone to reveal it to their competitors. Under those circumstances, it would become difficult to keep an infrastructure database up-to-date and, especially, to track the evolution of the infrastructure behaviour over the time. There is a real risk to lose track of a key element essential to the strategic planning of infrastructure. Therefore there is an urgent need to ensure flow of information, not subjected to the particular organisation of the maintenance procedures.

Maintenance and renewal contracts should include clauses on providing back information.

(c) Financing of infrastructure maintenance and renewal

Outsourcing over extended time periods infrastructure maintenance and renewal becomes frequent. It has the advantage to create competition, driving down the costs and improving the quality. Contractors are committed to maintain the network condition throughout the contracting period, being free to define their maintenance policy.

This is not fully sufficient to ensure network durability. As a matter of fact, geometric

condition of the track may be kept through efficient maintenance and without renewal. By doing so, infrastructure grows older and older, and the requirements for corrective actions increase exponentially. Eventually, the network experiences shortage of maintenance equipment and capacity loses as well, that lead to system unbalance. Pushed to the limit, maintenance of the network is not possible anymore and speed restrictions become unavoidable. To revert from such degradation, huge investments are needed over short time periods, and this is never a pleasant situation. Consequently, infrastructure managers must remain in control of the medium- and long-term maintenance policy, even if maintenance is outsourced. They must set frame conditions that force the contractors towards an acceptable mix of maintenance and renewal.

(ii) Access to the network

(a) Train-paths allocation

Railway reform includes provision for free access, to allow operation of rail services by companies that are independent of the infrastructure owners. Train operators that meet predefined criteria may ask for sufficient capacity for a route they're operating. European infrastructure owners are often affiliated with train operators that were originated from their old integrated company (historical operators). There is a real risk of preferential treatment while assigning train paths.

To counteract, some countries created independent bodies in charge of train paths assignment, to ensure fair competition among train operators. Other countries created independent units within the infrastructure company. Obviously enough, this solution ensures no full independence between the infrastructure manager and the historical train operator. Finally, some countries have not implemented yet free access despite the European directive.

(b) Traffic management

Railway reform did not result in significant changes for train traffic management. Railways traditionally tried to centralize and to optimise train traffic, often with the help of advanced technology.

However, to increase European rail transport efficiency and quality requires coordination among national traffic centres. Very often still, traffic management centres are aware of delays of incoming international trains only a couple of minutes before those trains reach the border stations. That leaves neither enough time to assess the consequences of those delays to the ongoing national traffic, nor to plan acceptable solutions. It is therefore mandatory to organize communication between national traffic centres.

The management of abnormal situations is furthermore complicated by the number of different train operators. In fact, the final quality of the product (the train service) requires tight collaboration between the traffic centre and all the train operators impacted by a delayed train. Train traffic managers take decisions on train operations and alter thus the quality of the final product. Train operators must be informed on those decisions, in order to provide information and help their own customers (the passengers or the shippers). This problem is particularly acute in passenger traffic, when there are transfers in stations, and become crucial when trains of different operators are involved in a station transfer. It may happen that trains, run by private operators, experiencing difficulties are left over the network, due to information and coordination lack.

The question is then to set up nodes for interactive information exchange on train traffic, open to train operators, who may thus enquire information and find a partner able to help in problem management and in finding solutions acceptable to all involved parties.

(c) Rolling stock certification

Focus is currently set on rolling stock interoperability, especially for locomotives. Generally speaking, border crossing of coaches and wagons is operational for more than a century.

Border crossing of powered and driven engines faces both problems of current specification and of safety systems that usually vary among countries. Consequent industrial efforts and technological breakthroughs let now build interoperable locomotives at acceptable costs. In near future, the European market should offer a fair selection of affordable interoperable locomotives. Historical train operators, prone until now to sustain only national industries, are starting to place orders to foreign manufacturers.

Meanwhile, certification of rolling stock faces still two important difficulties. Firstly, some certification bodies have not sufficient resources to certify rolling stock and entrust the national historical operator with this task. There is a temptation for the latter to impede certification of the rolling stock of a rival company willing to penetrate its own national market. Certification authorities should be truly independent bodies having available all the required resources.

There is a second difficulty with the certification of rolling stock that creates an antinomy with the previous one. A certification process that is fully independent of the infrastructure manager creates a strong discrepancy in the railway system. Track maintenance is heavily dependant on the strongly interacting couple track-locomotive. Some axle configurations help manufacturing more affordable locomotives, on the one hand, but are very aggressive agains the track by accelerating early wear, on the other hand. Using those locomotives helps the train operator to provide less expensive services to the detriment of maintenance costs borne by the infrastructure owner. Moreover, the higher maintenance costs more than offset the train operators' savings, leading thus to decreased global efficiency for the railway system.

However, infrastructure managers may try to correct this effect by including the higher maintenance costs in the train path prices.

The Challenges of Infrastructure Manager

The new environment with the possibility of multiple operators running on the same network creates many new challenges for the infrastructure managers. Even if there is yet no competition on track there might very well be competition for track. The infrastructure

managers are in a position where it is extremely important to create a fair competitive environment, where actual as well as potential operators must be ensured a nondiscriminatory treatment.

There are a few obstacles that might jeopardize this process:

- The work force occupied in the old railway companies were off course in general offered a job in the new infrastructure company or the new operator. The close connection between persons and responsibilities might create unfair business environment.
- The new operators have been granted capital from the old railway company that never has been paid by commercial income. This gives the operators a benefit relative to newcomers, and as this probably is inevitable or even recommendable, the infrastructure manager should keep this in mind.
- New entrants have on the other hand the advantage of being able to optimise the capital according to modern technology and market demands.
- Opening up for the railway companies to search for business opportunities in the railway sector may increase the efficiency of the services produced. There might be market forces that alter the service production dramatically. In some areas the railway operator might replace trains by busses. Such market adjustments will generally, in absence of great external effects, be beneficial for the society.
- To create a fair and efficient scheduling tool for a multi-operator network is extremely difficult. The IMPROVERAIL-project gives some guidelines on how this can be done. The use of the price mechanisms is one way of allocates the track in time and space.

Possible impact to TER countries from the Implementation of the EU Directives

The scope of this section is to explore the effects of the implementation of the EU directives in TER Region. The analysis will be based on a comparison of statistical material for the rest of Europe and the aim has been to go beyond hard facts to explain and explore the effects on the business.

The focus of the work has been to provide IM's with both railway experience and railway knowledge with new information and perspectives that can be beneficial. Therefore, a descriptive and informational form is chosen, based on all the information provided.

Possible Impacts from the Implementation of EU Directives[1]

Impact	*Indicator*	*Situations to be looked*		*Results Observed*
		BEFORE	AFTER	
Separation of train operation from infrastructure management in accounts and for most countries a more fundamental change has been introduced	91/440-demand for separation of accounts	Integrated railway company	Separation of accounts	Most countries have undertaken a more radical separation than the requirements from 91/440
The assets of the railway company are separated, at least in accounts between the successor operator and the IM	Asset stock	Assets obtained through commercial activity and directly from government owned by the railway company	Infrastructure owned by IM, rolling stock by operator. National differences on how this separation is done for other assets as station buildings, offices etc.	The new operator has an advantage relative to newcomers from the assets granted in the separation
Tendering of lines to multiple operators opens up for potentials for higher level of efficiency	Competition for track	None or very limited	In some zones competition for track is real, other regions still is dominated totally by one company	A trend for increased competition for track

[1] Taken from IMPROVERAIL project

This has the potential of better meeting different market segments' demands and to increase the competition for track	Competition on track, different infrastructure or market segments	Rare	Common in some areas, but owner structures indicates that real competition may be lower than one may expect	Multi-operator environment leads to new tasks. The demands for infrastructure of special types to be used exclusively for high-speed trains etc. This will be a new problem for the IMs to solve
Is the optimal competitive environment, but is not very common at all	Competition on track, same infrastructure	No competition	Not very common. Only density populated areas and intercity-traffic between large cities seems to be profitable enough	
Railways have always been in competition with other modes. Cutting the link between the authorities and the operators increases the need for the operators to run on a surplus, and thus increases the operators demands for the IMs	Competition with other modes	Competition between modes, but no direct need for the railway company to be competitive.	Need to be profitable for operators. Demand for the IMs to arrange for an efficient infrastructure to function optimally. Claims for compensation from operators if IM fail	
May result in cost-reduction	Competitions for internal services	Low incentives for cost reduction and other aims than cost-minimisation such as public job creation schemes reduced the likelihood for outsourcing etc.	Outsourcing more common. The IMs are focussing on core businesses.	The massive reduction of personnel can partly be explained by outsourcing. Adding up the outsourced personnel the increase in labour productivity may be less substantial

Increased at operator level. More uncertain at IM level	Customer focus	Customers for railway company were passengers and shippers	The IMs have two levels of customers. Direct customers (the operators) and the end-users	Uncertain how well the IMs are able to provide the infrastructure that the end-users need
Radical reduction of working stock	Employment			The number of employees has fallen across Europe; Both in real terms and relative to vehicle-km, freight-km and passenger-km. In other words: The productivity of the work force has increased.
IMs often more close to public authorities than former railway company	Financing			Financing a plan of investment in infrastructure requires the long-time commitment of the public authorities.
Regulatory environment changed	Level of Liberalisation	Public	Partly liberalised	Competition on operator level in many countries. The infrastructure managers are monopolists under public control
No great impacts so far, although the counterfactual evolution off course is unknown	Market share of railways			
Reduction of national juridical and "cultural" differences	National differences	Standards and regulations decided domestically. Little attention was given to national feasibility. A consequence of this is that international traffic was slow and almost impossible	Gradually, the national differences are reduced	For the future, much higher level of especially international freight transport is expected

		on some routes		
More infrastructure specialised for certain train types	New Infrastructure	Standard gauge	High speed trains demands specialised infrastructure. More specialisation on track demands more specialised infrastructure	New markets established for railways. Especially fast-going long distance trains have evolved dramatically
Certification, data collection, track allocation,	New issues arise in multi-operator environment	The monopolist could do the overall maximisation on short term (optimal conduct given infrastructure) and long term (optimal conduct when infrastructure investments are undertaken)	The cleft between operating trains and the provision of infrastructure is the main	
More complex production structure	New production environment	Main focus was on providing railway services according to public and passenger demands	Increasing complexity and variation in the production process of railway services. More producers of services	The diversity of products produces (defining train operation as one single product has not changed dramatically. What has changed is the focus and attention to each product, as new producers visualises the products for which they are responsible. There are now more entities producing almost the same number of products
Increasing number of operators	Number of operators	One, some other freight companies with limited transport in some areas	Multiple, but for many countries few operators for passenger trains running on the same	More competition, but the successor of railway company has a dominant position in most countries

			infrastructure.	
Increased transparency of money flows	Separation of train operation from infrastructure management in accounts and for most countries a more fundamental change has been introduced	High level of cross-subsidisation inside the railway company	All costs related to infrastructure and operations respectively shall be visible. All money-flows between these two activities will be visible	Increased focus on efficiency of production processes, revenues and of the funding of the infrastructure
Increased demand for quick decisions and action	Speed of decision making processes	Slow adaptation to new market behaviour etc.	More direct effects of market behaviour. Pro-active management at operators and IM because of commercial orientation has increased the speed of decision-making processes. On the other hand many IMs are closer to the authorities now	The operators are changing from passive-adaptive behaviour to market-demand changes to pro-active market behaviour with the use of branding, specialized services, and campaign pricing. The demands for the IMs to increase the flexibility of scheduling procedures have risen and will probably rise in the future.

Activities within TER Project related with the EU Railway Directives

In the last years, many meetings were dedicated on the implementation of the EU Directives and "acquis communautaire" in the TER countries, as well on sharing experiences achieved in this process. The most important ones are outlined further on together with main conclusions adopted.

(i) Conference on Restructuring Railways and its impact on Public Services in Transport in the context of the EU railway policy and Directives, Brussels, 13-15 December 1999.

On 13-15 December 1999 in the premises of the European Commission in Brussels, UNECETER in co-operation with the European Commission, UIC and CER organized a Conference on Restructuring Railways and its impact on Public Services in Transport in the context of the EU railway policy and Directives 91/440/EEC, 95/18/EEC and 95/19/EEC. The Meeting was attended by representatives of the Ministries of Transport and the railway companies from 10 countries.

It was estimated that the environment in which service of public interest in transport come about have changed; the consumers have become more demanding in terms of choice, quality and price due to the affordability of private cars and the intermodal competition in inland passenger transport. The global competition forced operators to supply more efficient services, meaning that national operators should had to withstand competition of enterprises coming from a more competitive market and on financial side pressure on state budgets and the possibility to attract private founds for the maintenance and development of infrastructure networks have had an impact on the state's role with regard to this subject.

The adoption of legal framework to the current trend towards the privatization of services of general economic interest and the increase of efficiency of railways in general was highly recognized.

From the discussions came out that the introduction of competitive pressures and more initiative for transport operators would likely enhance the efficiency of services, would deliver products tailored to the needs of the customer, who becomes more demanding, shows more need for mobility and individual alternatives for collective transport.

By safeguarding fair competition taking into account specific features in the countries and the various modes of transport it was recognized that an inland transport passenger transport with more transparency, increased efficiency and effectiveness, legal security and compliance with the general and specific regulatory framework can be achieved.

Contracting public passenger transport services on the basis of tendering concessions for a limited duration establishes the necessary competitive environment. By moving away from a mixed system of obligations imposed by the state and of public service contracts to the application of contracts negotiated between the state and the railway operator to all types of public services, including urban, suburban and regional services, would clarify both the service to be provided and the compensation to be paid. The market forces could be introduced with regard to the operation of services through open tendering of exclusive concessions.

(ii) UNECE Working Party on Rail Transport (SC2)

In line with EU Directive 91/440/EEC TER countries approached since 1997, in a substantial way, the problem of selecting a number of criteria for productivity in railway transport based on which the TER member would assess annually the efficiency of the

railway activity. From about 60 possible criteria, the TER countries agreed to propose 8 based on which data would be provided by all countries every year. ECE Working Party on Rail Transport (SC2) being informed about TER activity in this field asked PCO to report on the results obtained in this field.

Since 1999, ECE-SC2 adopted this set of 8 criteria, which were included in an annual report on the productivity of railway sector in all the ECE member countries. This report became also an agenda item of SC2. The set of criteria selected is made up of the following:

1. Labour productivity
2. Productivity of freight transport
3. Productivity of passenger transport
4. Productivity of traffic
5. Productivity of locomotives
6. Productivity of wagons
7. Productivity of lines
8. Energy consumption

(iii) Conference on Train Path Allocation systems, Budapest, 25-27 October 2000

On 25-27 October 2000, a Conference on Train Path Allocation systems was jointly organized by the UNECE-TER and the European Commission – D. G. Enlargement (TAIEX Office) in Budapest, Hungary. Representatives of the Ministries of Transport, railway companies, research institutes and consultants from 19 countries took part in a broad exchange of views on the implementation of specific items from EC Directives 91/440, 95/18 and 95/19 and Railway Infrastructure Package under preparation at that moment by EC. Comprehensive discussions were dedicated to new ways for increasing the profitability of rail transport and its competitiveness vis-a-vis other modes of transport.

It was noted that the restructuring process is taking place in most of the European railways, closely linked with the questions related to Train Path Allocation and in general with any tool conceived to increase the profitability of the railway activity as a whole. In view of these conditions it was felt that the Conference took place at the most appropriate time when new measures stimulating railway efficiency have to be implemented.

All CEEC railways explained that they are involved, in one way or another, in the process of implementing the EC Directives 91/440, 95/18 and 95/19. After adoption of the Railway Infrastructure package by the EU, it should receive appropriate consideration by all European countries. This process should continue in order to ensure that the railways become more market oriented and more efficient.

For improving Train Path Allocation, solutions have to be looked for in the allocation regime (allocation criteria should provide guarantees that the business objectives of the differentstakeholders are balanced and that they will ensure an optimal utilisation of capacity) and the allocation process (this process and the timing of various steps should be synchronised as much as possible, shorter response times in transport may affect the planning of international paths of a good quality, flexibility and transparency in this process should be ensured).

Institutional arrangements should that new applicants for train paths have to be treated in a fair and non-discriminatory way.

International Capacity Allocation is the responsibility of the National Capacity Manager. A good co-ordination between Capacity Managers from different countries is required for the allocation of paths to international services in regular planning, of reserved paths to international services and of left free capacity to international services.

(iv) Seminar on harmonization of railway legislation in CEEC in accordance with the EU Directives, Brussels, 18-19 June 2001

A seminar on harmonization of railway legislation in CEEC in accordance with the EU Directives was jointly organized by UNECE-TER and European Commission – D. G. Enlargement (TAIEX Office) on 18-19 June 2001 in Brussels, Belgium in the premises of the European Commission.

New Infrastructure Package Directives (2001/12/EC, 2001/13/EC, and 2001/14/EC) and requirements for its implementation in the candidate countries to EU was highly debated. The need for the implementation of these Directives was recognised by all participants from candidate countries to EU.

(v) Seminar on "International rail freight – TERFFs and prospects for TERFN, Salzburg, 28-29 November 2001

On 28-29 November 2001, UNECE-TER organised in Salzburg, Austria a Seminar on "International rail freight – TERFFs and prospects for TERFN". It had the consultancy support of Ove Arup from the UK who carried out a study in 1999 on the possibilities of the extension of TERFFs from the EU to the CEEC.

Directive 2001/12/EC was highly debated particularly in relation to the EU approach to the TERFN and development of the concept One Stop Shop.

The participants from the railway companies agreed that application of this concept (TERFFs) by the railways of CEEC may enable them to increase their contribution to the international railway traffic as well as to obtain additional income.

Continuing to make efforts in finding solutions to the implementation of TERFFs, the railways prepare themselves for the next more advanced and more complex phase:

implementation of TERFN.

TERFN, as a new system which will be implemented in the EU countries according to Directive 91/440 amended by the Directive 2001/12/EC art. 10. and Annex 1 on Access rights and TERFN, is under development although difficulties have to be ascertained and resources for adoption to be found.

Fast progress of railway reform in CEEC in line with the EU Directives was confirmed. The emerging Infrastructure Managers (IM) would benefit from a stronger focus for international co-operation which the TERFFs concept provides.

Use of Public Private Partnership (PPP) for financing projects wherever necessary to improve infrastructure and rolling stock in support of the TERFFs concept was appreciated.

Need for clear support for initiatives to improve international rail freight was recognised and approaches to Ministries at a higher level were considered very useful. Governments retain still considerable influence over railway policy and management and their positive attitude and direction in some cases, is a prerequisite for action.

(vi) Workshop on New Trends in Railway Reform Policy, Helsinki, 5-6 March 2002 and Warsaw, 7-8 March 2002.

A Workshop on New Trends in Railway Reform Policy, jointly sponsored by the UNECE Trans-European Railway (TER) Project, the Ministry of Transport and Communications of Finland, the Finnish Railways Ltd. (VR), the Polish State Railways (PKP) and the World Bank, took place in Helsinki (5-6 March 2002) and Warsaw (7-8 March 2002).

The Workshop brought together speakers and participants from both industrialized and transition countries that have taken the lead in railway restructuring reforms. Managers, consultants and strategic investors from 25 countries, together with representatives of the European Union, the United Nations Economic Commission for Europe (UNECE) and the International Financial Institutions (IFIs) attended the meeting.

The issues debated included: complex economic and financial problems of countries in transition; private versus public approach in developing the railway sector in transition countries; investment planning and financing of projects; downsizing the staff – an element of restructuring the railways; options for financing labour redundancies in the railways; railway reform in various countries; role of IFIs and international organizations in assisting countries in transition.

(vii) Seminar on modern rolling stock and European Rail Traffic Management System (ERTMS), May 2002, Gmunden, Austria

A UNECE Trans-European Railway (TER) Project Seminar on modern rolling stock and European Rail Traffic Management System (ERTMS) technology was jointly organised with Alstom Ferroviaria on 23 June, 2003 in Torino (Savigliano), Italy.

The Seminar offered the participants the possibility to get acquainted with new modern railway rolling stock, to visit the factory in Savigliano and have discussions with the representatives of the factory on: Tilting Trains – Pendolino, Electric Multiple Unit (EMU) and Diesel Multiple Unit (DMU), European Rail Traffic Management System – European Train Control System (ERTMS-ETCS), consultancy in planning, and supply of such equipment.

Following a broad exchange of views between the participants and the representatives of the Alstom it was agreed that the upgrading of the railway infrastructure in Central and Eastern European Countries in order to ensure the running of modern rolling stock is an on going process. For this purpose financial resources are available from public funds or international financial assistance. However, it was recognized that having an upgraded network is not enough for ensuring its efficiency and offer rail services of higher quality. The introduction of new mobile material (rolling stock) should accompany the process of modernization of infrastructure in order to ensure the overall efficiency of the railway operators. Country representatives expressed the views that financial assistance is also needed in order to replace the old rolling stock by new one.

(viii) Meeting of Directors General of Railways from Central, Eastern Europe and Caucasus Region, Lucerne, 28-29 October 2003

UNECE-TER Project together with Swiss Federal Railways (SBB) organized a meeting of Directors General of Railways from Central, Eastern Europe and Caucasus Region on 28 and 29 October 2003 in Lucerne, Switzerland.

The meeting was attended by the General Directors or their deputies from 9 countries as well as the President of UIC, Mr. Benedikt Weibel, CEO of SBB and the Deputy Executive Director of CER, Mr. Karl Henrik Lundstrom.

The agenda of discussions concentrated on important issues like: new developments destined to increase the revenues from railway activities (modernization of infrastructure, restructuring of railways, implementation of EU Directives in this field etc.), new services offered in passenger traffic and in promoting freight and/or combined transport.

It was agreed that the railway companies should pursue policies viewing the increase of their competitivety and as a result of it, their profitability in order to ensure and maintain a significant segment of the transport market.

Between continuation of railway reform and increase of railway profitability is a close relationship.

New measures for increasing the quality of all kind of railway services remain as a permanent task to be further on fulfilled.

Technical harmonization of the rolling stock, railway equipment and implementation of railway interoperability should receive more and more attention and necessary funds be allocated.

Combined transport should be further developed. Only appropriate railway infrastructure of satisfactory quality and capacity could meet the objective of transferring traffic from road to rail.

An enhanced co-operation among the infrastructure managers, railway operators, combined transport operators, public authorities etc. could ensure the increase of the competitive force of the railways.

Implementation of TER Master Plan in Central and Eastern Europe could represent a step forward in the prioritization of projects for modernization of railway infrastructure and increase of the quality of railway services.

(ix) TER Working Parties on Infrastructure (WP1) and on Economic, Financial and

Management (WP2).

Within TER Project all important issues related to the development of railway sector, its modernization, increase of efficiency and quality of services were and are currently debated (annually) by the two permanent working parties: on Infrastructure (WP1) and on Economic, Financial and Management Matters (WP2)

TIRS and CARDS

CARDS countries

A special attention is paid to the 5 Balkan countries – Albania, Bosnia and Herzegovina, Croatia, Serbia and Montenegro and former Yugoslav Republic of Macedonia, two of which are member countries of TER.

Transport infrastructure in these countries is generally below European standards and has been severely affected by direct war damage, which destroyed or rendered unusable important components of the infrastructure in the Serbia and Montenegro and in Bosnia and Herzegovina, including roads, railway lines and airports. The destruction of bridges across the Danube and Sava rivers is still severely impeding road and rail traffic flows and inland navigation in addition to the indirect damage from the conflicts as well as negligence and

under-investment, which led to severely curtailing periodic and current maintenance and renewal activities.

CARDS Programme and TIRS study

In the region, the European Union is playing a central role in repairing the damage of conflict,and equipping the countries of the region to promote economic development and regional integration. The EU policy – known as the Stabilisation and Association Process (SAP) – is designed to help each of the countries of the region to implement fundamental economic and political reform. The Balkan region is part of Europe, and the future of the region is intimately linked to that of the rest of the continent.

The SAP draws on experience in the candidate countries, and offers each of the Balkan countries a demanding contractual relations with the EU in which the Union undertakes to assist them in implementing reforms in exchange for a proven commitment on the part of each country to carry out such reforms. The objective is to give the countries of this region a credible prospect of membership in the European Union. The SAP is a long-term policy modelled on the EU previous experience of reform in Central and Eastern Europe.

The European Commission launched for these countries a special Regional Programme called CARDS, in the framework of which the Transport Infrastructure Regional Study (TIRS) was elaborated, completed in February 2002 and aimed at establishment of list of priority projects for transport infrastructure in the region.

In the course of the first phase of the TIRS study using the "bottom-up" approach and financed by France, selection of short-term priority projects and medium-term investment proposals was carried out, while the second phase, using the "top-down" approach, to be financed by the EU will concentrate at the definition of a longer term (2015) transport infrastructure plan.

Overview of the TER Project role and perspectives in the Pan-European context

TER Project involvement in European international co-operation

Apart from the TER involvement in the monitoring and development of Pan-European Transport Corridors, and in the extension of the Trans-European Network of European Union to its new member states, the TER international co-operation with other European institutions and bodies involved in the transport field is expected to continue and intensify. Among these bodies we include the well known UIC, CER and ECMT. In addition to these are a number of important intergovernmental bodies including:

Southeast European Cooperative Initiative (SECI) is a forum in which representatives of the participating states meet to discuss common regional economic and environmental problems calling for concerted action and take into account region-wide plans for dealing with these problems. Meetings of representatives are followed by the convening of ad hoc working groups of technical experts, who are responsible for the development of concrete proposals.

The Central European Initiative (CEI) seeks to promote regional peace and stability, as they are both essential ingredients of political and economic renewal. CEI countries have successfully mixed political and economic co-operation in a creative and productive blend.

Fora for debate about many aspects of the region's future are now running in parallel with pragmatic actions on the economic front.

The CEI has established a series of creative and productive relationships with other

international and regional bodies, seeking always to complement and not duplicate existing activities. The CEI maintains permanent structures as auxiliary bodies of the grouping in London and Trieste. The Secretariat for CEI Projects at the EBRD (CEI-EBRD Secretariat) is based in London at the offices of the EBRD. The Secretariat advises the CEI committees on investment projects, develops methodology and technical co-operation, supports the CEI strategies for economic sectors and infrastructure, and is responsible on a day-to-day basis to the EBRD First Vice President.

The CEI Executive Secretariat (CEI-ES) in Trieste, Italy, provides training, information, documentation, project administration, liaison between CEI fora and manages "institutional projects", including training programmes. The Italian central and regional governments support the Secretariat.

TER project and CEI co-orporated closely in the last 10 years in various field of interest for both organisations: data collection, financing investment projects, facilitation of Border Crossings etc.

Furthermore, the increased need for modal integration, interoperability and complementarity generated new conditions in the process of transport, distribution and management of goods.

TER Project was particularly interested and began co-orporated with various bodies in this field for several years. Transport evolutions and needs brought the necessity for the development of new infrastructure facilities capable to respond the current needs. These are the Freight Villages, where the users and transport operators develop new ways and methods of management of goods (logistics) and where they could exploit and evaluate the use of the different means of transportation that are now functioning supplementarily in the transport chain.

Freight Villages serve the concentration of cargo carried by different means and kinds of transport or needed to be transhipped from a short distance transport to a long distance transport by the same means of transportation, or by any other. They assist the optimal use of different transport modes by concentrating them in the same area and giving the freedom of the best choice according to the real market and transport conditions, including the change of vehicles for long distances to smaller ones suitable for short distances. This is increasing the efficiency of transport operations and decreasing the costs.

EU Framework RTD & D activities are aiming to help the preparation of policy making, industrial and related service sectors and generate a strategic vision of research in all sectors throughout Europe.

The structure of the programme comprises the following elements:

- A set of key actions oriented to solve clearly identified socio-economic problems by developing critical technologies and clustering research and demonstration projects of strategic common challenges in innovative products, processes and organisation,
- sustainable mobility and intermodality, land transport and marine technologies and new perspectives in aeronautics.
- RTD on generic technologies helping to develop the scientific and technological base in following critical areas: materials and their production and transformation, measurement and testing.

- Support for more efficient utilisation of research infrastructures to provide an attractive environment in the fields covered by this programme.

The main priorities of the programme are concentrated in the following objectives:

- to promote a long–term balance between the growing demand for mobility on the one hand and the necessity to respect environmental, safety, social and economic constrains on the other. Some parameters to guide the key action's activities should be to enable the transport sector to contribute to the environmental quality standards for air quality and noise in a cost-effective way, as well as to increase the use of public transport.
- to improve the overall cost-effectiveness and functions of transport operations and infrastructure with particular attention paid to how to best integrate the respective strengths of all modes of transport in order to provide door-to-door services for both passengers and freight. The aim is also to support Union's policy in the field of transport charging across Europe and integrate information technologies and second generation satellite navigation and positioning systems in the transport sector.
- to ensure a high level of safety and user-friendliness at an affordable cost for the individual user as well as for society. Parameters to be taken into account include the development and promotion of the use of new technological and behaviour-oriented tools to reduce the number, severity and impact of accidents, both in terms of safety and pollution prevention. The parameters should also significantly reduce the total number of fatal and other severe accidents, in particular in truck and coach traffic and to improve travellers' perception of security and to reduce loss or damage of goods.

1.4 TER Project Strategy/Action plan

1st Report on the Implementation of the

TER Project Action Plan - TABLE 1

Priority	**Action: A1**	**Title: Review of TER priorities**		
Total time required for execution[11]		**24 months**		
Parties involved		**UNECE, TER, Member Countries**		
Task No	Tasks Description	Starting month	Duration in months	First report (22 months, July 2001-April 2003)
1st	Review bottlenecks, missing links and other priority transport infrastructure needs on main rail and combined transport TER corridors of participating countries	**1** **24**	**12**	This action is related with the elaboration of the Master Plan. During the reporting period the PCO in close cooperation with the UNECE Transport Division and the TEM PCO, prepared the TOR. The UNECE, TER and TEM PCOs tried to secure necessary co-financing for the implementation of the work from: the EC DG REGIO-ISPA, DG TREN, World Bank, EBRD, CEI, UIC, IRU, ASECAP, the UNECE member countries through ITC, and the EU member countries through their Permanent Missions in Geneva. The elaboration is expected to start in June 2003 and be completed by May 2004.
2nd	Elaborate Master Plan aiming at covering the identified priority needs	**1** **24**	**12**	
3rd	Investigate alternative links within the TER region incorporating intermodal approach	**1** **24**	**12**	
4th	Support the implementation of EU Directives	**1**	**24** **36**	This action is pursued by the PCO. Relevant seminars were organized together with the World Bank and UIC in 2002. A new seminar is scheduled within 2003.
5th	Assist in the harmonisation of legislative/administrative status on TER network operation and the removal of obstacles to transport including border crossings	**1**	**24** **36**	This action is pursued in the framework of the WP 2 and respective seminars on facilitation of Border crossing procedures and measures taken (Venice, 14-16 October 2002. Next seminar for follow – up and reporting will be held in Bratislava, in September 2003
6th	Selection of pilot actions and support their implementation with involvement of TER in securing financial resources	**1**	**24** **36**	Efforts for launching a Project on the Promotion of the Freight Villages concept under 100% finance by EC DG REGIO-ISPA are ongoing. This task should be further explored and if necessary be executed partially

[11] The application of the action plan is a complex and long-term procedure. The present actions represent only a first part for a period of two years and should be incorporated to the Projects Work Plan

7th	Achievement of joint declaration for facilitation of border crossing in the countries concerned	**10** **24**	**3** **3**	Currently postponed. Task under consideration for possible execution within 2004. A draft text could be considered for the next Bratislava Seminar.

Expected results

- Inventory of bottlenecks, missing links and needs on rail and combined transport systems on TER network
- The establishment and presentation of clear and realistic plan for meeting priority infrastructure needs on rail and combined transport systems of TER network
- Improvement of rail and combined transport systems in the TER region
- Increase the use of combined transport
- Improvement of border crossing operations within TER region

Milestones and Criteria: elaboration of Master Plan –The elaboration of the Master Plan was delayed due to lack of necessary financing. The work is expected to start in June 2003 and be completed within one year.

1st Report on the Implementation of the

TER PROJECT ACTION PLAN-TABLE 2

Priority : A	**Action: A2**	**Title: TER Integration into Pan European Transport**
Total time required for execution		**24 months**

Parties involved:

UNECE, TER, EC (DG TREN, REGIO, ENLARGEMENT), PETC & PETRA IFIs, N (Europlatforms, UNICE, Eurochambres, IRU, UIC, UIRR, CER) Universities and Res Institutions

Task No	Tasks Description	Starting month	Duration in months	First report (22 months July 2001-April 2003)
1st	Establishment of regular dialogue and institutional co-operation with EC DG TREN, REGIO, ENLARGEMENT	**ASAP**	**24** **36**	**Is constantly pursued with the support of the UNECE Transport Division. Efforts will continue.**
2nd	Incorporation of selected TER activities into EU-ISPA overriding interest	**ASAP**	**24** **36**	**Efforts made in the fields of the elaboration of the Master Plan and Promotion of the Freight Villages concept. No results as yet. Efforts will continue.**
3rd	Strengthening TER as monitoring & management instrument of Pan-European Corridors Development	**ASAP**	**24** **36**	**Efforts made in cooperation with UNECE and TEM The contribution of UNECE, TER and TEM Projects in the establishment and monitoring a data collection and presentation system for the Pan-European Corridors was agreed last year at the Pan-European Corridors Coordination Group. Actions will follow.**
4th	Promotion of active participation of all TER members at national level.	**5**	**20** **32**	**Was pursued to a certain degree. Further efforts need to be pursued by member countries.**
5th	Contribution of TER to the development of the Freight Villages concept in CE & SE Europe	**5**	**20**	**Pursued successfully. One seminar already organized in the year 2002 in Munich. In June 2003 a second will be hosted at Verona Freight Village. The specific Project proposal is under discussion with EC.**
6th	Establishment of regular dialogue and co-operation with non-Governmental Organisations (Europlatforms, UNICE, Eurochambres, UIC, UIRR, CER) Universities and Research Institutions	**5**	**20** **32**	**Pursued successfully with Europlatforms, Eurochambres, UIC, CER, UIRR. Further steps could be taken in this direction in particular with regard to the cooperation with Universities and research institutions. Initiatives from member countries are recommended.**
7th	Involvement of TER in the EU Research and Development Programs Framework	**3**	**22** **32**	**Already some results in connection with the EC European Transport Information System Project (ETIS). More efforts needed.**

Expected results

- **Improvement to the Pan-European Transport Cooperation in CE & SE Europe and monitoring PETC and PETRA development**
- **Improvement of rail/combined transport networks in CE &SE Europe with emphasis on interchanges between modes**
- **Increase the application of PPP in the CE & SE**
- **Contribution to the European Transport Research & Development efforts**
- **Active participation of all TER members**

Milestones and Criteria:

MoU with EC DG TREN, and PETC and PETRA for joint actions. So far, letters have been exchanged between EC and UNECE. Final agreement is expected.

1st Report on the Implementation of the

TER PROJECT ACTION PLAN - TABLE 3

Priority : B	**Action: B1**	**Title: Cooperation of TER with ot countries and fora**
Total time required for execution		**12 months**
Parties involved: UNECE, TER, TEM, CEI, TINA Successors, BSEC, NGOs (CLECAT, F ESPO, EIA, ECSA)		

Task No	Tasks Description	Starting month	Duration in months	First report (22 months July 2001-April 2003)
1st	Develop close co-operation with other related initiatives and projects CEI, TINA Successors, BSEC etc.	13	12 24	**Pursued successfully with CEI. Draft MoU is under consideration. Contacts with BSEC should follow.**
2nd	Develop co-operation with other European NGOs (CLECAT, FEPI, EIA, ESPO, ECSA)	13	12 24	**Actions under discussion with FEPI. Possibilities should be explored with the other organizations.**
3rd	Connection of TER plans with TEM and other components of the network (Roads, Sea Ports – Inland Ports – Air Ports – SSS Connections – Inland Navigation)	13	12 24	**To be explored.**
4th	Connection and extension at the possible level TER network with neighboring regions (Baltic, Mediterranean, Black Sea, Caspian Sea, N Africa, Euro-Asian, Trans-African)	13	12 24	**To be explored.**
5th	Further strengthening of TER interest in the application of new technology & techniques (ITS, Telematics, informatics etc.)	13	12 24	**Actions on ETCS started and are pursued. Further actions to be explored.**
6th	Preparation of new map for TER network, extensions, alignments and dynamism towards neighbouring regions, incorporating Intermodality and multimodal transfer points	4 24	6 12	**To be implemented in the framework of the Master Plan.**
7th	Organisation of a high level meeting under UNECE for promotion of the co-operation with all parties concerned for the attainment of TER objectives	19 24	6	**To be explored.**

Expected results

- **Speedier attainment of TER objectives**
- **Creation of the most advanced European transport cooperation and Synergy**
- **Placement of TER in the leadership of transport development in the region**

Milestones and Criteria: Organisation of a the High level meeting under UNECE – Far from sight for the time being.

1st Report on the Implementation of the

TER PROJECT ACTION PLAN - TABLE 4

Priority : B	**Action: B2**	**Title: TER Visibility**
Total time required for execution	**12 months**	
Parties involved: UNECE, TER, Transport Press		

Task N	Tasks Description	Starting m	Duration in month	First report (22 months July 2001-April 2003)
1st	Elaboration of a European Transport Press List & Dispatch regularly Press Releases on projects actions	**1**	**24** **36**	**Pursued systematically.**
2nd	Creation of TER Project Website within the UNECE Website and constantly update it	**1**	**24** **36**	**Pursued systematically.**
3rd	Creation of TER Brochure	**4** **24**	**3** **4**	**Under preparation. To be completed by September 2003.**
4th	Feed back members with TER news	**4**	**21** **33**	**Pursued systematically.**
5th	Continuation and further strengthening of co-operation with UN/ECE ITC and its subsidiary Bodies	**4**	**21** **33**	**Pursued systematically.**
6th	Presence in other European Transport fora	**1**	**24** **33**	**Pursued systematically.**
7th	Organization / Participation in regional and national events for presentation of the project	**10**	**13** **25**	**Initiatives are expected by the member countries.**

Expected results

- **Improvement of acceptance and recognition of TER work**
- **Increase of high level support from country members and international community**

Milestones and Criteria:

Creation of Website, Publication of Brochure, regular dispatch of Press Releases and TER news letters – Mostly achieved.

1st Report on the Implementation of the

TER PROJECT ACTION PLAN - TABLE 5

Priority : C	**Action: C1**	**Title: Assessment, Review and Further Planning**	
Total time required for execution			-
Parties involved: UNECE, TER			
Tasks Description		Starting month	Duration in months	First report (22 months July 2001-April 2003)
Assessment of results and current plans, review and elaborate future actions		**22 and 32**	**3 and 3**	**Most of tasks seams to have been advanced except that of the Elaboration of the Master Plan. An extension of one year is proposed. Next report in May 2004.**

TER Project Tasks for Consideration -Table 6

Tasks proposed for consideration -Table 6	Review of proposals at the first Interim report
Efforts for active participation in Stability Pact in the SE Europe	Feasibility under question.
Institutional participation/membership of related European Organizations (EC, ECMT, IFIs, NGOs) as associated members or as observers in TER	Feasibility under question.
Creation of national TER Steering Committee under national project offices, for co-ordination of efforts at national level with parties concerned	Feasibility under question. Action entirely at the hands of member countries.
Assurance of continuity of TER main links irrespective to membership	Important question for consideration in the framework of the Master Plan.
Regular evaluations of the project at the end of every Phase and try to specify criteria for assessment of the degree of Success or failure	Highly recommended for the end of the year 2004.
Concentration of TER efforts on achievement of their specific and general objectives	To be pursued at the completion of the Master Plan
Try for a joint Transport Ministers Council from member countries for political support of TEM TER Projects	Feasibility under question.
Strengthen TER PCOs by securing more financial and human resources	Efforts already broad results with regard to human resources. All possibilities should be explored for the future. Member countries initiatives and proposals are needed.

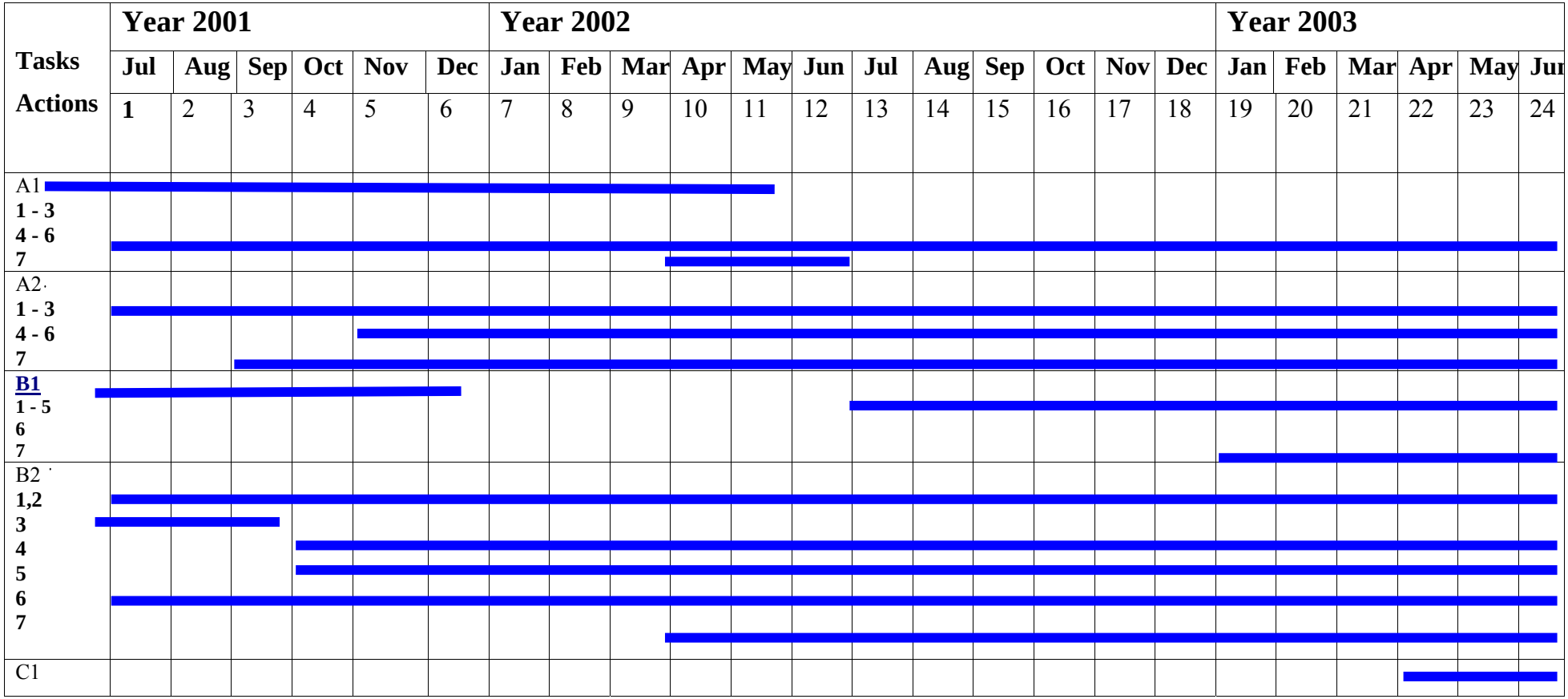
TER PROJECT ACTION PLAN ABRIVIATIONS/EXPLANATIONS

TABLE 7

Master Plan	By Master Plan it is understood the plan of actions for implementation in terms of up-dated prioritised requirements of the TER members in accordance with the Project's objectives
ISPA	Instrument for Structural Policies for Pre-Accession
PETC	Pan European Transport Corridors
PETRA	Pan European Transport Areas
Freight Village	Synonym to Transport/Logistic Centre
Europlatforms	European Network of Transport/Logistic Centres
UNICE	Union des Confederations de l' industrie et des employeurs d' Europe
Eurochambres	Association of European Chambers of Commerce and Industry
UIC	International Union of Railways
UIRR	Union International des societes de transport combine Rail-Route
CER	Community of European Railways
CEI	Central European Initiative
TINA	Transport Infrastructure Needs Assessment
BSEC	Black Sea Economic Cooperation
NGOs	Non Governmental Organisations
CLECAT	European Liaison Committee of Freight Forwarders
FEPI	Federation of European Inland Ports
EIA	European Intermodal Association
ESPO	European Sea Ports Organisation
ECSA	European Community Shipowners Association
SSS	Short Sea Shipping
ITS	Intelligent Transport Systems
ITC	Inland Transport Committee
ECMT	European Conference of Ministers of Transport
IFIs	International Financial Institutions

1st Report on the Implementation of the TER PROJECT ACTION PLAN

ORIGINAL MASTER TIME TABLE - TABLE 8



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EXTENDED MASTER TIME TABLE - TABLE 9

Tasks Actions	2001 and 2002						Year 2003												Year 2004					
	July 2001 to Decemeber 2002						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
	From 1st to 18th month						19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
A1																								
1 - 3																								
4 - 6																								
7																								
A2																								
1 - 3																								
4 - 6																								
7																								
B1																								
1 - 5																								
6																								
7																								
B2																								
1,2																								
3																								
4																								
5																								
6																								
7																								
C1																								

2. SOCIO-ECONOMIC FRAMEWORK OF TEM AND TER REGION AND ALTERNATIVE SCENARIOS OF GROWTH

Introduction

For many years the main emphasis in transport forecasting and modelling has been to enrich their behavioral content and improve data-collection methods as means to enhance their accuracy, predictability and reduce application costs. A parallel line of research has sought to improve transport modelling by emphasizing the use of readily available data and the communication of simpler model features and results. This stream of research has had an important impact in practice as it offers not only reduced costs in forecasting but also simplified data collection and processing requirements.

For TEM and TER Projects' Master Plan, consultants were asked to elaborate transport related scenarios of growth in a short time span, so the idea of not using any formal model –due to the above mentioned limitations- means that empirical heuristic approaches were applied.

This present work was defined as a top-down approach starting from the socio-economic external environment. First, the different social, economic and foreign trade elements were considered and proposals for socio-economic external scenarios that could influence a specific country's transport development were outlined. The relevant and consistent factors needed for the scenarios development are demography, GDP and its components and foreign trade development. The economic environment has an impact on transport, and may be very important as regards transport policy decisions. After all, it is well documented that traffic growth is proportional to GDP growth (for freight traffic, most of the time, is almost identical).

Based on the available data, projections of population, economy and trade in TEM and TER region were made up to the year 2020. This was done using a combination of official forecasts, international studies forecasts as well as trend line extrapolation.

More analytically, the work was based on:

- Statistics from UNECE, EUROSTAT and the World Bank
- EU official statistics produced and published for the negotiations with the new EU Member countries.
- Projects/studies: TEN-STAC, SCENARIOS, CODE-TEN, TINA, TIRS and REBIS (for Balkans)
- National studies, reports and documents provided by the countries at a country level

Secondly, the analysis of the interrelation between transport and the socio-economic environment took place, to complete the picture of the scenarios with the description of the state of the transport situation, now and in the future.

Needless to say that there was a risk involved in the elaboration of growth scenarios due to data availability, their quality and degree of detail. Hence, this is the reason why all the alternative scenarios were developed on a qualitative macro-scale.

2.1 Basic Assumptions

The future development of the world economy is of direct importance for the traffic forecasting on the TEM and TER system. At present, however, this development can only be predicted with a high degree of uncertainty. Therefore it was sensible to work with different scenarios for the future economic development, but in order to facilitate the use of the traffic forecasts later, only two scenarios of growth have been established (a moderate and an optimistic).

Due to the many countries participating in the TEM and TER Projects' Master Plan, the scenarios are global, though with major emphasis on the TEM and TER member countries.

For the scenarios, 2000 was chosen as the base year and data from years 1995-2000, 2001, 2002 and 2004 were employed to establish the trends to be used in forecasting. Trend forecasting of population, economy and trade started from this base line and has been prepared on a group-country[12] level (and then for each group on a country level) for 2020. The time horizon of most of the published studies normally extends to 2005 sometimes to 2010, with the exception of TINA where it is until 2015, but there were hardly any projections or trends up to 2020, except for population. Where projections were available they were used for the trend forecasting.

Concerning EU member countries before 1 May 2004, it was possible to take only one "trend" scenario, a moderate one. Nonetheless, an optimistic scenario for the EU member countries before 1 May 2004 is also provided. This latter scenario is not expected to be significantly different from the moderate one, for this group of countries.

Concerning the EU member countries after 1 May 2004 and the acceding and the non-acceding countries it appeared better to initially consider some contrasting hypotheses, which would be characterized by a significant difference in GDP growth (high and low), and two options for the transition period, in order to form the "borders" of scenario development area.

2.2 Economic and social characteristics of the countries in the TEM and TER region

The study area encompasses 21 countries, Austria, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Italy, Lithuania, Poland, Romania, Slovakia, Turkey, Belarus, F.Y.R.O.M, Greece, Republic of Moldova, Russian Federation, Serbia & Montenegro, Slovenia, Ukraine.

The work is based on existing studies and data available concerned the economic and social characteristics of each country, but also motorway and railway information. It appeared necessary to have a reliable overview of this data before preparing any assessment of the present and future demand, and before presenting realistic GDP estimates up to 2020 based on alternatives scenarios of growth. In the table below, are presented some significant indicators for each country, for the year 2003:

[12] There are three country groups, namely: EU member countries before 01/05/2004, EU member countries after 01/05/2004 and acceding countries, and Non-EU, non-acceding countries.

Table 1 Population, GDP, Exports-Imports (in 2003)

	Population (in million)	***GDP (in billion $)***	***Exports (Index: 2000=100)***	***Imports (Index: 2000=100)***
Austria	8,2	209,5	109,3	105,7
Greece	10,7	136,5	85,3	81,5
Italy	58,0	1214,0	91,9	96,0
Bulgaria	7,5	16,0	89,2	104,6
Czech Rep.	10,2	72,3	95,2	93,7
Hungary	10,0	69,1	87,4	87,0
Lithuania	3,6	14,2	103,4	98,9
Poland	38,0	198,1	105,1	96,9
Romania	22,3	47,1	116,1	116,1
Slovakia	5,4	24,4	104,7	101,7
Slovenia	1,9	22,7	95,2	91,7
Turkey	68,1	192,3	118,7	90,8
Belarus	9,9	15,1	100,8	98,8
Bosnia & Herzegovina	4,0	5,9	97,3	93,0
Croatia	4,5	23,1	100,3	105,5
Georgia	5,1	3,5	131,3	101,1
Fed. Rep. of Yugoslavia	10,6	16,3	63,9	101,2
F.Y.R.O.M	2,0	4,0	87,3	83,7
Russia Federation	143,4	362,5	108,5	106,3
Ukraine	48,3	43,6	89,4	95,4
Rep. Of Moldova	4,2	1,7	120,1	101,4

The situation obviously differs according to each country, because of their respective potentials and historical development time period they entered into the process of transition as well as the political developments.

Despite the unfavorable external conditions, most economies in the region managed to preserve some of their dynamism in 2003, but there was a general moderation of the pace of growth. The aggregate real GDP of all economies in transition is estimated to have increased by some 3% in 2002, which was a notable deceleration from the 5% average rate of growth in 2001. The adverse impact of the global slowdown has been strongest on Central Europe, where GDP grew by just 2%, making it the slowest growing sub-region among the economies in transition. Real GDP in South-Eastern Europe increased by 4% year-on-year, a rate which is just slightly lower than that recorded in 2001.

All the necessary economic, social and transport parameters that play a role while designing a network are identified and presented in end of this chapter as Table 1-20 as well as Figure 1-5.

Next, is presented an overview of the demographic and economic situation of each of the 21 countries in the region, as well as transport characteristics and data for each country.

Social, economic and transport characteristics of each country

(1) Austria

Social parameters

Austria is located in Central Europe, north of Italy and Slovenia. The total area that surrounds Austria is 83,858 sq km, land is 82,738 square kilometres and the remaining is water 1,120 sq km.

The population that was estimated on 2003 was 8,2 million inhabitants.

In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 0,9%.

Economic parameters

Austria with its well-developed market economy and high standard of living is closely tied to other EU economies, especially Germany's. Membership in the EU has drawn an influx of foreign investors attracted by Austria's access to the single European market. Through privatisation efforts, the 1996-98 budget consolidation programs, and austerity measures, Austria has brought its total public sector deficit down to 2.1% of GDP in 1999 and public debt - at 63.1% of GDP in 1998 - more or less in line with the 60% of GDP required by the EMU's Maastricht criteria. Cuts mainly have affected the civil service and Austria's generous social benefit system, the two major causes of the government's deficit.

The GDP, for 1999, was estimated at $210.045 billion USD, for 2002 reached at $204.066 billion. The GDP, for 2003, was estimated at 209.5 billion $.

Transportation

The rail sector in Austria has been identified as a priority market for UK Trade & Investment. Austria has a wide variety of transportation services, reflecting the diversity of its terrain and its central location in Europe. Austria is an important segment of the European railroad network, and the country’s importance in east-west travel is likely to increase with the opening of Eastern Europe.

Austria has 6,123km of railways nationwide (standard gauge 5,639km, narrow gauge 484 km.), of which 3,523 km are electrified, and 200,000 km of road network, all paved.

Total Traffic in Austria is estimated to increase by some 4% per annum for the foreseeable future. Today, two-thirds of all traffic is road traffic, but the figure is forecast to increase to as much as 75% by 2015.

The Austrian Overall Transport Concept (GVK-Φ) was published in 1991. It sets out the basic features of a transport policy, based on protecting the environment, life and health, and at the same time recognising the importance of an efficient transport system as an economic sector and creator of jobs. It aims to create an infrastructure, which meets every transport requirement and makes it possible to switch traffic to environmentally friendly forms of transport, whilst every effort is to be made to avoid unnecessary traffic.

(2) Belarus

Social parameters

Belarus is situated in the centre of Europe at the crossing of roads going from east to west and from north to south. The country is bounded by Latvia, Lithuania, Poland, Russia and Ukraine. The actual area of Belarus is 207,600 square kilometres.

The population of Belarus is 9.9 million (2003), the density being 50 people per sq. km. The average annual population growth is 0.5%, which is considered quite normal for a European country. The urban population accounts for 68% and the rural for 32%.

Economic parameters

The average of GDP growth rate, in 2003, was estimated at 6,00%, although the Gross Domestic Product was estimated at $15.1 billion.

Belarus stands fairly well if compared to other CIS countries. It is the biggest producer of potash fertilisers, fodder harvesters and industrial sewing machines. It ranks second in the manufacture of trucks, motorcycles, tractors, chemical fibres and yarn, commercial wood. It is the CIS third largest producer of metal-cutting machines, electric motors, tyres, timber, paper, cardboard, window glass, refrigerators and freezers, TV and radio sets, bicycles and textiles.

In fact it is industry that plays a major part in its economy, accounting for about 60% of the country's gross national product. Around 1400 factories, power stations, quarries and petroleum wells are in operation to attain the magnitude.

As part of the former Soviet Union, Belarus had a relatively well-developed industrial base, it retained this industrial base following the break up of the U.S.S.R. The country also has a broad agricultural base and a high education level. Among the former republics of the Soviet Union, it had one of the highest standards of living. But Belarusians now face the difficult challenge of moving from a state-run economy with high priority on military production and heavy industry to a civilian, free-market system.

Close relations with Russia, possibly leading to reunion, colour the pattern of economic developments. For the time being, Belarus remains self-isolated from the West and its open-market economies.

Transportation

The transportation complex of the Republic of Belarus is of crucial importance in supporting normal conditions for its diversified economy and social policy of the Government. Belarus has a well-developed transportation infrastructure, including railways and motorways, internal water waterways, oil and gas pipelines. The major trunks connecting the CIS member-countries with the European countries traverse its territory.

Being situated in the Central Europe, the Republic is a transit connecting link between East and West. Railway and motor transport account for the major portion of cargo and passenger traffic. Belarus has become a full member of the 'North-South' international transport corridor agreement.

With the addition of Belarus, the 'North-South' transportation corridor connects a transportation network from the Indian Ocean, to Iran and further on through Astrakhan following through Russia in the direction of Moscow and St. Petersburg. On the territory of Belarus, the primary direction of the international transportation corridor 'North-South' runs from the Belarussian border with Lithuania through Minsk and Orsha on to the Belarussian border with Russia over to Moscow, and the border with Poland to Minsk and Orsha on to the border with Russia and over to Moscow.

Two of nine international transport corridors which were identified as crucial at the Second Pan-European Transportation Conference at Crete traverse its territory: No.2 Berlin-Warsaw-Minsk-Moscow and No. 9 Helsinki-St.Petersburg-Pskov-Vitebsk-Gomel and further Ukraine- Moldova- Bulgaria with a branch Kiev-Minsk-Vilnius-Klaipeda.

Belarus has a well-developed transport system: 30% of all freight and 10% of passengers are carried by train. The total railroad length is 5,523 km. The total length of motor roads is 98,200 km.

(3) Bosnia and Herzegovina

Social parameters

Bosnia and Herzegovina, country of Southeastern Europe, is bounded in the north and west by Croatia and in the east and south by Serbia and Montenegro. Its area is 51,129 square kilometer. The main cities are Sarajevo, which is the capital, Zenica, Banja Luka, Tuzla, Mostar and Prijedor.

At the year 2003, the total population was estimated at 4.0 million inhabitants. About 40% of the total population was considered as urban. Nearly 60% of population still live in rural areas. The population growth rate, estimated in 2003, is 0.48%.

Economic parameters

Bosnia and Herzegovina's economy remains largely based on agriculture, with tobacco and fruit as the major products. Much of the industry is located in regions occupied by Serbs, and it was estimated that 80 per cent of the industrial plants were destroyed. Agriculture has always characterized the Bosnian way of life and has played an important role in the country economy as it employed during the war 20% of labor on full time, and at least the same percentage on half time.

In terms of industry, the highest increase of production was recorded in the area of energy products supply, when compared to the average production recorded in 1999. In the Republic of Srpska, the industrial production in 2000 increased by 5.6% compared to the average in 1999.

The country’s gross national product (GNP) per capita reached $1,900 in 2002, and GDP is $5.9 billion, in 2003.

Transportation

Bosnia and Herzegovina is one of the poorest countries in the region. As road transport accounts for over 95 percent of all goods and passenger movements, efficient and low cost road transport is essential to facilitating local, regional and even international commerce. In

an ethnically divided country like Bosnia and Herzegovina, road development is also an important integration factor.

The road network of Bosnia and Herzegovina consists of approximately 22,600 km, with 3,788 km of main roads (of which about 96 percent is paved), 4,842 km of regional roads and 14,000 km of local roads. Of these, 2,024 km of main and 2,724 km of regional roads are in the Federation of Bosnia and Herzegovina, and 1,764 km of main and 2,384 km of regional roads are in Republika Srpska. Despite the emergency program, a significant part of the main road network is still in poor condition.

The BiH railway network, with a total of 1,021 km, is connected with the port Ploce and the river ports Samac and Brcko. Main corridors Corridor 5c and Parallel 10 provide transport linkages to Mediterranean Europe, South East Europe, Croatia, and Yugoslav economies. Before the war, the railway driven transport system was functioning well. However, after the war, it deteriorated considerably.

(4) Bulgaria

Social parameters

The Republic of Bulgaria, situated in the Balkan Peninsula, is bounded in the north by Romania, in the east by the Black Sea, in the south by Turkey and Greece, and in the west by Yugoslavia and FYROM. The area of Bulgaria is 110,910 square kilometres.

The last official estimate (2003) of the population of Bulgaria is 7,5 million. Population density is about 80 people per square kilometre.

In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 11.9%.

Economic parameters

In 2003, GDP was $16.0 billion and GDP per capita touched $6500.

Sofia is an important part of the country's economy. With its modest size of less that one percent in territory, Sofia produces close to 30 percent of goods, services and tax revenues. After the 1997 crisis, Sofia growth rates exceeded the national average. About half of all foreign direct investments to Bulgaria go to Sofia.

Today, 52 percent of the labor force is employed in the private sector, which resulted from a rapid growth of SMEs. This strong development contributed to keeping unemployment levels down to about a third of the national unemployment rate (5.2 percent). In promoting Sofia's future economy, the City authorities will seek to sustain and improve Sofia competitiveness, encourage future SME growth, support a conductive business and investment climate, and better manage the environment.

Transportation

Bulgaria has an extensive transport infrastructure but in generally poor condition. Road and rail transport are the two most important modes of transport. In the freight area, road transport, which has a share of about 55% of the combined road plus rail market, largely complements rail transport, focusing on shorter distance, higher value, and more time

sensitive shipments. In the passenger area, on the contrary, road transport competes aggressively with rail transport and has gained a share of about 70% of the intercity transport market. The total length of the Bulgarian road network is 37,286 km. About 90% of the roads have an asphalt pavement.

Bulgaria is also crossed by five Pan European Corridors, corridors IV, VII, VIII, IX and X.

(5) Croatia

Social parameters

The country has an area of about 56,542 square kilometres.

The main cities are Zagreb, the capital and primary industrial centre, Split and Rijeka, two important seaports, and Osijek, an industrial centre.

The total population of Croatia according to the 1991 census was 4,784,265, it was estimated in 2003 at 4,5 million. Half the population lives in urban areas.

Economic parameters

Before the outbreak of war in mid-1991, close to two-thirds of the country's land was cultivated (sugar beet, wheat, and maize). Abundant mineral resources supported a productive mining industry. Other industries included oil refineries, iron and steelworks, shipyards, and plants producing chemicals, foodstuffs, machinery, cement and concrete, metal products, and textiles.

The GDP per capita, PPP method, for 1999, was estimated at 5,287 USD, for 2002 reached at $9,800.

The economic growth has started to recover in 2000, with an increase of 3.6%, whereas it was negative in 1999. The GDP, estimated in 2003, was $23.1 billion. The industrial production has risen by only 1.7% between 1999 and 2000. This positive trend has been observed at the end of the year, which leads to expectations of a better situation in 2001. The Chemical industry goes through the best growth (+10%), whereas the maritime industry contracts and loses 9 points.

Since late 1999, growth and production are recovering, though quite weakly. Important sectors for economy, such as the maritime industry, food industry and textiles are more active than the previous years. Besides, tourism is now in very good shape.

Agriculture is diversified in the plains in north and central part of the country (wheat, maize, sugar beet, hop and cow stock breading).

Transportation

Croatia has achieved a great deal in the transport sector in the short time since the independence, repairing most war damage, writing laws which are generally suitable for the transport sector of a sovereign state, and privatizing some transport enterprises.

The Croatian road network comprises 6930 km of state road, 10510 km of county roads and 10197 km of local roads, for a grand total of 28,123 km.

Part of this network is 593 km of high standard roads encompassing 417 km of motorways, 72 km of first stage motorways and 104 km of highways. The railway network catches 2,296 km.

The study network consists of three main routes corresponding to the Pan European corridors Vb, X and Vc and several other routes providing linkages between the Pan European corridors as well as servicing the Adriatic Coast which has huge development potential in tourism activities.

(6) Czech Republic

Social parameters

Czech Republic, in central Europe, is bounded in the south and east by Germany. Other border countries are Austria, Slovakia and Poland. Its area is about 78,866 square kilometres and covers 1 percent of the area of Europe. Its capital is Praha.

The total population of Czech Republic according to the 2003 census was 10,2 million inhabitants. In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 3,7%.

The country is divided into 13 regions and 1 capital city, Praha.

Economic parameters

Growth in 2000-02 was led by exports to the EU, especially Germany, and foreign investment, while domestic demand is reviving. Uncomfortably high fiscal and current account deficits could be future problems. Unemployment is gradually declining as job creation continues in the rebounding economy. Inflation is moderate.

Moves to complete banking, telecommunications, and energy privatisation encourage additional foreign investment, while intensified restructuring among large enterprises and banks and improvements in the financial sector should strengthen output growth.

The average year-on-year inflation rate for 2003 compared to 2002 was only 0.1% (the inflation slowed down 1.7 percentage points on 2002). Inflation rate calculated comparing the CPI in December 2003 and December 2002 reached 1.0%, which is 0.4 percentage points up on the inflation rate calculated comparing the CPI in December 2002 and December 2001. The month-on-month inflation amounted to 0.2% in December 2003.

The GDP per capita for 2002 was estimated at $15,300, and the GDP was $72.3 billion, in 2003.

Transportation

The Czech Republic (CR) has made good progress in privatising some transport operations, and now needs to concentrate on commercialising activities, identifying, which activities, will remain in the public sector, and completing remaining privatisation. CR published its transport policy in 1998, which commendably drew together different political views and sought to retain a significant role for the State *Transport Policy of the Czech Republic*.

However, CR has joined the European Union (EU) where transport is overwhelmingly market oriented. This has put pressure on transport organizations, particularly Czech Railways (CD), to compete successfully or become increasingly marginalized. In addition, the public cost of supporting transport activities, more than two percent of GDP in the case of the railways, is becoming increasingly unaffordable.

The Czech road network comprises 55,408 km of total road and rail network covers 9,462 km of surface.

(7) Former Yugoslav Republic of Macedonia (F.Y.R.O.M)

Social parameters

The FYROM, located in the south-central part of the Balkan Peninsula is bounded in the north by Serbia and Montenegro, in the east by Bulgaria, in the south by Greece and in the west by Albania. Its area is 25,333 square kilometres. The major cities are, the capital of the country Skopje, Bitola, Prilep, Kumanovo, Tetovo and Veles.

According to the 1994 census final results, the population on 20 June 1994 was 1,945,932. An estimated 60% of the population lived in urban areas. In 2003, the total population estimate was 2.0 million inhabitants.

Economic parameters

The national currency of FYROM is the denar (MKD) of 100 deni. The average exchange rate for the year 2000 was 65,19 MKD for one USD. The Gross Domestic Product, PPP method, in 1999, was estimated at USD 1,039 per capita. In 2003, the GDP was estimated at $4.0 billion.

Following a long recession in the first half of the 1990s, real economic growth turned positive in 1996 and accelerated to 2.9 percent in 1998, the highest growth achieved since independence.

Following 2 years of rapid growth, domestic demand was sluggish in 1999, the investment environment deteriorated with the onset of the Kosovo crisis in the first half of 1999.

On the supply side, growth during 1996-98 was spurred by a strong pickup in industry and a gradual recovery in transport and communication.

The main generators of the registered growth of GDP in 1999 were transport and telecommunications2 (13.7%) and construction (12.2%), resulting from the intensified activities related to the road infrastructure in the country, catering and tourism (9.2%), as a result of the increased presence of non-residents in the country, and trade (6.7%). Hence, the unfavourable developments in industry and mining were not only fully compensated with the increase in tertiary activities, but also there was an increase in value added activities.

Transportation

Although FYROM has a common border with Greece, the volume of trade with the European Union is low in comparison with exchanges between the EU and other former-Yugoslavian countries or Eastern and Central European countries.

The main issues in the transport sector of FYR Macedonia are associated either with the changing geographical patterns of trade and transport flows, or with the process of economic transition itself.

The road network totals 8,684 km (5,540 km paved) of roads of which some 4,900 km, or about 60%, have been modernized and about 3,300 still have earth surfacing. Roads are classified as Arterial, Regional and Local. Of the total network, 915 km are Arterial, 2,611 km are Regional and 4,690 km are Local. In addition to the national classification, about 520 km of the arterial roads are part of the European road network ('E" Roads). The arterial network serves seven major corridors in the country. The historically most important corridor is served by the 174 km arterial road No. 1, a section of the Trans-European E-75 highway, which runs roughly north south across the country from the border with the Federal Republic of Yugoslavia (Serbia/Montenegro) to the border with Greece. The next most important arterial road serving international and national traffic is the East-West corridor. The 302 km road runs from the Bulgarian border at Deve Bair through Skopje, Gostivar and Ohrid to the Albanian border and connects Skopje with Sofia, capital of Bulgaria, and Tirana, capital of Albania as well as linking the former Yugoslav Republic of Macedonia with ports on the Black Sea. The third most important corridor is also in the east-west direction and is served by a 330 km arterial road which runs from the Bulgarian border near Delcevo through Veles, Bitola and Ohrid to the Albanian and Greek borders.

The Macedonian Railways (MR) network consists of 699 km of open line that includes 226 km of direct station track. The entire network is single track and 233 km are electrified.

(8) Georgia

Social parameters

Georgia is located in South-western Asia, bordering the Black Sea, between Turkey and Russia.

The total area that surrounds Georgia is 69,700 square kilometres. The capital of the country is Tbilisi.

Georgia controls much of the Caucasus Mountains and the routes through them.

The population of the country is 5.1 million inhabitants (2003 est.).

Economic parameters

Georgia's main economic activities include the cultivation of agricultural products such as citrus fruits, tea, hazelnuts, and grapes; mining of manganese and copper; and output of a small industrial sector producing alcoholic and non-alcoholic beverages, metals, machinery, and chemicals. The country imports the bulk of its energy needs, including natural gas and oil products. Its only sizable internal energy resource is hydropower.

Georgia has been growing at an average rate of 6% per annum since 1994. Because of the dramatic downturn of economic activity especially during 1990-1994, the real GDP per capita is $588, which is roughly one third of the level in 1989. Living standards have not risen despite growth in GDP because growth has been concentrated in a narrow set of sectors, and there have been no effective mechanisms to redistribute its benefits. 51.8% of

the population fall below the national poverty line. The most promising opportunities for developing Georgia's economy continue to be in natural resources and agribusiness.

The country's role as an important oil and gas transit centre is rapidly increasing, while several foreign companies are already successfully exploiting Georgia's own oil and gas reserves. Potential exists for the development of Georgia's tourist industry. Georgia's geographical position makes it an important transport link between the Black and Caspian Seas and between Russia and Turkey.

The GDP, for 2003, was estimated at $3,5 billion.

Transportation

Georgia's roads consist of international motorways (1,474 kilometres), state highways (3,326 kilometres), and local roads (15,429 kilometres). The poor condition of roads in Georgia, caused by a lack of financing, represents a large barrier to investment and growth. According to Georgian MOTC, 80% of road maintenance and 100% of road construction are privatised. The funds available to the Georgian State Department for Roads (SDRG) for road maintenance are connected to a Road Fund. The funds available for SDRG have steadily declined each year since 1999. This development is not in line with the IDA credit terms for road projects, especially since overall Government revenues have been increasing. Apart from problems with loan arrangements, the result is that Georgia is not able to provide even a minimum amount of maintenance of the road network.

Georgia's fully electrified railway network covers 1,612 kilometres of track. The main route runs across the country, starting from Baku in Azerbaijan, via Tbilisi to Samtredia and then on to Batumi and Poti ports, as well as into Russia via Sukhumi. Today Georgian Railways is completely independent and has agreements with the railways of Azerbaijan and Armenia for transit and exchange of traffic. About 80% of the network is in mountainous terrain with grades reaching 4.9%, 247 km have curves with radii of less than 300 m. The main lines are all electrified with 50 cycles AC at 25 KV.

(9) Greece

Social parameters

The country consists of a large mainland, the Peloponnesus Peninsula, connected to the mainland by the Isthmus of Corinth, and more than 1,400 islands, including Crete, Rhodes, Corfu, and the Dodecanese and Cycladic groups. Greece has more than 14,880 kilometers (9,300 mi.) of coastline and a land boundary of 1,160 kilometers (726 mi). The total area of the country is about 131,940 square kilometres.

About 80% of Greece is mountainous or hilly. Much of the country is dry and rocky, only 28% of the land is arable.

Greece is located at the junction of three continents: Europe, Asia, and Africa. Greece's foreign policy, despite its joining NATO in 1952 and its accession to the European Community in 1981, has remained focused on the Balkans and the eastern Mediterranean region.

The largest and most important city is Athens, the capital, with a population of about 748,110. Piraeus, seaport of Athens, is the largest port of Greece (second largest in the Mediterranean Sea after Marseilles in France). Thessaloniki, is a seaport and an important

textile center. Patra, located on the northwestern part of Peloponnisos. Other sizable cities are Heraclion, Crete and Larisa.

The population of Greece at the 2003 census was 10,7 million.

In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 5,1%.

Economic parameters

Greece remains a net importer of industrial and capital goods, foodstuffs, and petroleum. Leading exports are manufactured goods, food and beverages, petroleum products, cement, chemicals, and pharmaceuticals.

Services, including tourism, make up the largest and fastest-growing sector of the Greek economy, accounting for about 62,7% of GDP in 1998. Over the last decade, real GDP growth has averaged 1,6% a year, compared with the European Union average of 2,2%. Inflation continues to be well above the EU average, and the national debt has reached 140% of GDP, the highest in the EU. In 2003, GDP was estimated at $ 136.5 billion.

Tourism is a major source of foreign exchange earnings. Although it is one of the country's most important industries, it has been slow to expand and suffers from poor infrastructure. With more than 10 million tourists visiting Greece in 1996, the tourist industry faced declining revenues, partly due to the strong drachma. Revenue from tourism exceeded $5.2 billion in 1998, having increased somewhat as Greek tourism benefited from problems in neighbouring countries and an economic recovery in the European Union.

Transportation

The road network of Greece is estimated to represent some 117,000 km of total main, regional and local roads. The rail network is estimated to represent 2,571 km of the surface.

At Svilengrad in Bulgaria, the branch of Corridor IX bends southwards to the near border crossing at Ormenio in Greece, where it joins Egnatia Odos and runs down towards the port of Alexandroupoli.

In Ardanio, 35 km east of Aleksandroupoli, Egnatia Odos is split and an eastern branch crosses the Greek/Turkish border at Kipi/Ipsala. Via Egnatia runs along D 110 to Silivri (175 km), where it joins Corridor IV.

In Haskovo in Bulgaria, where Cortidor IV and IX southern section split, Corridor IX southern section is split as well. One road section of Corridor IX goes southwards via Kardzali and Podkova to the Bulgarian/Greek border in Makaza. From the border, the alignment passes via Nimfea to Komotini on the Egnatia Odos, which links Makedonia with Thrace, the port of Aleksandroupoli. The other road section is Corridor IV, which passes Svilengrad to Turkey.

Svilengrad is a railway junction in southern Bulgaria close to two borders, where the common alignment of Corridor IV and Corridor IX south, splits to respectively. Turkey (border crossing Svilengrad/Kapikule) and Greece (border crossing Svilengrad/Ormenio). From Ormenio, the railway runs southwards along the border river to Turkey, Evros/Meric. At Prangio, the railway has a border crossing to Turkey, where it joins Corridor IV at Pehlivankoy (30 km), and is linked with Istanbul.

(10) Hungary

Social parameters

The country has an area of about 93,030 square kilometres and covers 1 percent of the area of Europe.

Hungary occupies the low-lying areas of the Carpathian basin. Two-thirds of the territory consist of below 200 meters.

The main cities are Budapest, the capital and primary industrial centre, Baranya, Heves, Zala, Somogy, Bikis etc.

The total population of Hungary according to the 2003 census was 10,0 million inhabitants. In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 2,4%.

Economic parameters

The Hungarian economy was primarily oriented toward agriculture and small-scale manufacturing.

Hungary has made the transition from a centrally planned to a market economy, with a per capita income one-half that of the Big Four European nations. Hungary continues to demonstrate strong economic growth especially after its accession to the European Union in May 2004.

By the end of 1997, Hungary had shifted much of its trade to the West. Trade with EU countries and the OECD now comprises over 70% and 80% of the total, respectively. Germany is Hungary's single most important trading partner. The U.S. has become Hungary's sixth-largest export market, while Hungary is ranked as the 72d largest export market for the U.S. Bilateral trade between the two countries increased 46% in 1997 to more than $1 billion. The U.S. has extended to Hungary most-favored-nation status, the Generalized System of Preferences, Overseas Private Investment Corporation insurance, and access to the Export/Import Bank.

The private sector accounts for over 80% of GDP. Foreign ownership of and investment in Hungarian firms are widespread, with cumulative foreign direct investment totaling more than $23 billion since 1989. Inflation has declined substantially, from 14% in 1998 to 4.7% in 2003, unemployment has persisted around the 6% level.

Germany is by far Hungary's largest economic partner. Short-term issues include the reduction of the public sector deficit to 3% in 2004 and avoiding unjustified increases in wages.

The GDP for 2003 was estimated at $69.1 billion, and the GDP growth touched, in 2003, the 3,70%.

Transportation

The new transport strategy which was in harmony with the efforts made in respect of Hungary's accession to the European Union and the EU's transport policy issued in 2001, for the period up to 2010, had a decisive impact on the national expressway and ordinary

road network development activity of the government. The aim of the strategy is to establish a balance between the economic and social demands and the transport development, maintenance and operating activities, which take into consideration the division of available sources as well.

In Hungary, 188,203 km of road was kept on record at the turn of the millenary. Of this amount 137,000 km were the length of public roads – within this, 30,000 km of state-owned national road network, 107,000 km were local roads owned by the local governments – and 53,000 km were the length of privately owned roads. Solid pavement was on 99 per cent of the national roads, on 60 per cent of the local roads situated in inhabited inner areas, on 5 per cent of local roads situated in the outskirts, and on 50 per cent of all public roads

The rail network covers about 7,875 km. Hungary and Austria jointly manage a cross-border, standard-gauge railway connecting Gyor, Sopron, and Ebenfurt (Gysev railroad) with a route length of 101 km in Hungary and 65 km in Austria; 156 km of this line is electrified (2002).

(11) Italy

Social parameters

The total land area of Italy is about 301,230 square kilometers.

Rome is Italy's capital and largest city. Other major cities include Milan, Naples, Turin, Genoa, Bologna, Florence, Venice, Messina, Verona, and Padua.

The total population of Italy at the 2003 census was 58.0 million. In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 5,3%.

Economic parameters

The Italian economy has changed dramatically since the end of World War II. From an agriculturally based economy, it has developed into an industrial state ranked as the world's fifth-largest industrial economy. Italy belongs to the Group of Eight (G-8) industrialized nations, it is a member of the European Union and the OECD.

Italy has few natural resources. With much of the land unsuited for farming, it is a net food importer. There are no substantial deposits of iron, coal, or oil. Proven natural gas reserves, mainly in the Po Valley and offshore Adriatic, have grown in recent years and constitute the country's most important mineral resource. Most raw materials needed for manufacturing and more than 80% of the country's energy sources are imported. Italy's economic strength is in the processing and the manufacturing of goods, primarily in small and medium-sized family-owned firms. Its major industries are precision machinery, motor vehicles, chemicals, pharmaceuticals, electric goods, and fashion and clothing.

Italy is in the midst of a slow economic recovery and is gradually catching up to its west European neighbours. Italy's economy accelerated from anemic 0,7% growth in 1996 to 1,4% in 1999 and continued to rise to about 2,9% in 2000, which is closer to the EU projected growth rate of 3,1%. Domestic demand and exports were the dominant factors in GDP growth, but it nevertheless remains one of the lowest among industrialized countries.

With respect to inflation, Italy is now firmly within norms specified for Economic and Monetary Union (EMU), a major achievement for this historically inflation-prone country. Consumer inflation fell from 3.9% in 1996 to 1.7% in 1999 but did rise again to 2.5% in 2000. The 1992 agreement on wage adjustments, which has helped keep wage pressures on inflation low, remains in effect.

Since 1992, economic policy in Italy has focused primarily on reducing government budget deficits and reining in the national debt. Successive Italian governments have adopted annual austerity budgets with cutbacks in spending, as well as new revenue raising measures. Italy has enjoyed a primary budget surplus, net of interest payments, for the last 7 years.

The deficit in public administration declined to 0,60% of GDP in 2003, down from 7% in 1995. The GDP, in 2003, was estimated at $1214.0 billion.

Italy's agriculture is typical of the division between the agricultures of the northern and southern countries of the European Union. The northern part of Italy produces primarily grains, sugarbeets, soybeans, meat, and dairy products, while the south specializes in producing fruits, vegetables, olive oil, wine, and durum wheat.

Transportation

The Italian road network covers approximately 45,000 kilometres, about 21,000 of which are part of the Anas network stretching from mountain passes to urban, port and airport systems and inter-modal centres and motorways. The remaining kilometres are managed by local authorities and motorway agencies. There are 6,500 kilometres of motorway, 5,500 of which are subject to toll charges, 3,300 kilometres are granted to the Motorway Association and associated companies, and over 1,200 are managed by Anas. The network managed by the Motorway group is the largest in the country and is used annually by more than 760 million vehicles. Some 80% of the traffic consists of cars and 20% of commercial vehicles. Italy's railway lines cover a total of 16,200 km, two-thirds of which are electrified, with 6,300 km of double track. Approximately 9,200 trains carry 1.3 million travellers daily but on Friday, the busiest day, the number of trains exceeds 10,000. As many as 472 million passengers and 88 million tons of goods are transported annually between roughly 2,700 stations across the country in 10,000 carriages hauled by 4,500 locomotives.

Railway transport in Italy is managed, for the most part, by the State Railways Company (Ferrovie dello Stato or FS), a holding company that carries out the strategic aims of the group and which is composed of 36 units, amongst which is Trenitalia which runs the passenger and goods transport unit, while Italian Railway Network (RTI) manages the infrastructure and is responsible for the equipment and the safety of the trains in circulation.

(12) Lithuania

Social parameters

Borders are on Latvia in the north (610 km of the border line), on Byelorussia in the east and south (720 km), and Poland (110 km) and the Kaliningrad region of the Lithuania is part of the economic region, known as the Baltic Republics, extending along the Eastern coast of the Baltic Sea. Its area is 65.200 sq. km. Lithuania Russian Federation (303 km) in

the southwest. The total length of the mainland borders is 1747 km, with the sea coastline extending for another 99 km. From east to west the country stretches 373 km, and the distance from the southern end of the country to the northern one is 276 km. The capital of the country is Vilnius.

Located in the centre of Europe, Lithuania is situated at one of the largest crossroads of the continent. It is divided by a straight line connecting Paris and Berlin with Moscow via Vilnius, whereas another straight line, connecting Helsinki with Athens, also crosses the centre of Lithuania.

The population of the country is 3,6 million inhabitants (2003 est.). In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 7,0%.

Economic parameters

The Statistics Department of Republic of Lithuania reports a 6.7% growth in GNP, O.3% rise in CPI and a 2.8 % drop in PPI, for year 2002. This makes Lithuania as one of the fasted growing economies in Central and Eastern Europe. The European Bank for Reconstruction and Development that the countries of that region averaged only 2.5% growth. The Statistics Department further reports that during the first quarter of 2003 Lithuania's economy grew at a rate that was 9.4% higher than over the same period in 2002, with highest growth experienced in energy (27%), construction (18.3%) and manufacturing (16.3%).

Unemployment remains high, still 10.7% in 2003, but is improving. Growing domestic consumption and increased investment have furthered recovery. Trade has been increasingly oriented toward the West. Lithuania has gained membership in the World Trade Organization. Privatisation of the large, state-owned utilities, particularly in the energy sector, is nearing completion. Overall, more than 80% of enterprises have been privatised. Foreign government and business support have helped in the transition from the old command economy to a market economy.

The GDP, for 2003, was estimated at $14.2 billion.

Transportation

All major Lithuanian cities are interconnected by 1997 km long network of railroad lines. Express passenger service is available along the major line interconnecting the cities of Vilnius, Kaunas, Siauliai and Klaipeda.

Lithuanian rail lines are an integral part of the major Central and Eastern European international rail system. In 1997 total 30,500,000 tons of goods were carried by Lithuanian rails. The same year the railroads carried 11,000,000 passengers of which almost 2 mil were international travellers. In 2002 railway network covers 1,998 km.

Over 63 thousand km, road system interconnects the country's cities, towns, and villages. Only 7 thousand km. of local roads, serving the smallest communities and settlements, are still without hard paved surface. Unlike some of the street in a number of cities and towns, all state roads appear to be maintained and are in excellent condition. 300 km long four lanes divided limited access expressway links the capital city of Vilnius with the port city of Klaipeda. At Kaunas, the second largest city in Lithuania, it connects with the “Via

Baltica" the major North-South international thoroughfare from Tallinn in Estonia to Warsaw, Poland. The road network covers 75,243 km.

(13) Republic of Moldova

Social parameters

Situated between the Danube, Prut and Nistru rivers, the Republic of Moldova occupies a territory of 33,843 square kilometres. It borders Romania in the West and Ukraine in the East and South.

The major cities of Moldova include the capital city, Chisinau, with 735,000 people, Tiraspol, Balti and Bender.

The Republic of Moldova is one of the most densely populated European countries. Its population grew from 3,000,000 in 1961 to nearly 4,300,000 in 1995. In 2003, the population was estimated at 4,2 million inhabitants. Population density increased, respectively, from 88 to 129 persons per square kilometre.

Economic parameters

The economy of Moldova depends heavily on agriculture, featuring fruits, vegetables, wine and tobacco. Industry accounts for only 20% of Moldova's labor force, while agriculture's share is more than one-third.

Moldova must import all of its supplies of oil, coal, and natural gas, largely from Russia. As part of an ambitious reform effort, Moldova introduced a stable convertible currency, freed all prices, stopped issuing preferential credits to state enterprises, backed steady land privatization, removed export controls, and freed interest rates. Yet these efforts could not offset the impact of political and economic difficulties, both internal and regional.

In 1998, the economic troubles of Russia, by far Moldova's leading trade partner, were a major cause of the 8.6% drop in gross domestic product, the value of the currency in relation to the dollar fell by half. In 1999, GDP fell again, by 4.4%, the fifth drop in the past six years, exports were down, and energy supplies continued erratic.

The economy returned to positive growth, of 2,1% in 2000, 6,1% in 2001, 7,2% in 2002, and 5,3% in 2003. In 2003, the Gross Domestic Product was $1.7 billion.

The government has liberalized most prices and has phased out subsidies on most basic consumer goods. A program begun in March 1993 has privatized 80% of all housing units and nearly 2,000 small, medium, and large enterprises. Other successes include the privatization of nearly all Moldova's agricultural land from state to private ownership, as a result of an American assistance program, "Pamint" ("land"), completed in 2000.

Inflation was brought down from over 105% in 1994 to 12% in 1997. Though inflation spiked again after Russia's 1998 currency devaluation, Moldova has made great strides in bringing it under control.

Transportation

Moldova is a "gateway" between the former Soviet Union countries and the West. Its transport and even telecommunication sectors can be considered as a "Hub" for the region.

The Pan European Corridor IX (Moscow-Kiev-Bucharest) crosses Moldova from East to West, traversing the capital city Chisinau. Moldova is a net importer of transport services. Moldova is well developed transport sector (albeit with institutional and physical deterioration problems) consists of 12,657 km of roads (excluding municipal, agricultural and forestry roads), 1,300 km of railroad (about 100 km electrified), and four airports, one of which is up to international standards.

Moldova's extensive transport infrastructure is seriously deteriorated. Road and rail transport are the two most important modes of transport. In the freight area, the modal split over the last six years has largely remained of about 72% and 28% for road and rail, respectively. Both road and rail freight traffic decreased as a result of the economic decline in Moldova during the last decade. Passenger traffic shows a similar decline, thought less acute, with road transport playing a leading role (80%), and constantly increasing to the detriment of railway transportation.

(14) Poland

Social parameters

The country has an area of about 312,685 square kilometres.

The capital, Warsaw, is situated in the center of the country. Poland` s surface area of 120,727 sq. miles ranks eighth in Europe. The country lies almost entirely on the North European Plain and is a land of gentle relief, rarely rising above 350 feet except along the southern border with the Sudety and Carpathian mountain ranges. Rysy is the highest mountain peak, 8200 feet above sea level.

The total population of Poland according to the 2003 census was 38,000,000 inhabitants.

Economic parameters

Poland today stands out as one of the most successful and open transition economies. The privatization of small and medium state-owned companies and a liberal law on establishing new firms marked the rapid development of a private sector now responsible for 70% of economic activity. In contrast to the vibrant expansion of private non-farm activity, the large agriculture component remains handicapped by structural problems, surplus labor, inefficient small farms, and lack of investment.

Warsaw continues to hold the budget deficit to around 2% of gross domestic product. Structural reforms advanced in pensions, health care, and public administration in 1999, but resulted in larger than anticipated fiscal pressures. Further progress on public finance depends mainly on privatization of Poland's remaining state sector.

The Polish economy grew rapidly in the mid-1990s, but growth has slowed considerably in recent years. The gross domestic product (GDP) grew 4.0% in 2000, but was expected to increase only by about 1.0% in both 2001 and 2002. Slowing growth has boosted unemployment, which stood at 17.4% at the end of 2001. Tight monetary policy and slow growth have helped temper inflation, which was down to 5.5% in 2001. Likewise, Poland's

current account deficit, which grew rapidly in the late 1990s, fell to 4.0% of GDP in 2001. In 2003, the GDP was estimated at $198.1 billion.

Agriculture employs 28,4% of the work force but contributes only 3,4% to the gross domestic product (GDP), reflecting relatively low productivity. Unlike the industrial sector, Poland's agricultural sector remained largely in private hands during the decades of communist rule.

Transportation

Major investments in transport infrastructure, including motorways, are clearly required as Poland's economy continues its rapid growth after its accession to the EU. However, the cost of the planned motorway program will be very high: nearly $1 billion per year (0.7% of GDP) sustained over some 15 years. Considering the competing demands on the State budget for financing many other investments in social and physical infrastructure, Ministry of Infrastructure is revisiting the timing and phasing of the motorway program and looking at other alternatives which could still meet Poland's transport needs in the coming years, but at lower cost.

The total length of the Polish road network is 364,656 km, although the rail network covers 23,420 km.

(15) Romania

Social parameters

The total area of Romania is about 237,500 square kilometres. Forests cover approximately 28 per cent of the total land area.

Bucharest is the capital with a population of 2,400,000 (2000), and it is also the prime industrial and commercial centre of the country.

Romania has a population of 22,3 million (2003 estimate). Population density is about 94 people per square kilometre. The population is about 55 per cent urban.

In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 3,8%.

Economic parameters

The Gross Domestic Product, in 2003, was estimated at $47.1 billion.

For the third year in a row, the growth has been negative in 1999. The decrease of the GDP has reached 20% in a 3-year period. The industrial production has decreased by 8.4%, to be compared to an 18% drop in 1998. Theses figures do not take into account the informal economy, considered by experts as close to 50% of the declared economy. However, the growth of GDP in 2002 was estimated at 4,9%.

In 1999, agriculture has strongly decreased compared with 1990, both in vegetal and animal activities. By the end of 1999, it represented 14.6% of GDP (13.9% in 1997). Agricultural trade balance also deteriorated, mainly because of a rise in meat imports.

The main Romanian partner, both for imports and for exports (34% of total food exports and 32% of food imports) is the European Union. Exports mainly concern Italy (32% of exports towards EU), Germany (23%), Greece (13%). The main providers are Germany (21%), Austria (12%), France (11%), the Netherlands (11%) and Greece (11%).

Romanian industry in general, and agriculture and consumables industry in particular have deeply suffered from the economic and financial transitions, which have lasted for 10 years. The privatisation of several State industries has somehow boosted the economy.

Transportation

Romania is a major crossroad for international economic exchange in Europe. The road network of Romania has a length of 198,603 km, including city streets, 0,15% motorways, 18,70% national roads and 81,16% country and communal roads. The rail network covers 11,385 km of the Romanian surface.

In terms of road surface types, 19 521 km are paved (24.84%), 19 431 km have a light asphaltpavement (24.72%), 27 029 km are gravel (34.38%) and 12 620 km are earth roads (16.06%).

The national roads correspond to the major road network and carries 70% of the total road traffic.

Romania is crossed by three Pan European Corridors, Corridors IV IX and VII (Danube river):

Corridor IV runs West-East from Nedlac at the Hungarian-Romanian border to Constanta on the Black Sea for one branch and North West-South East, from Timisoara to Vidin where it will cross the Danube River on a new bridge whose construction is to be financed mainly by the EIB.

Corridor IX runs North-South from the Moldavian-Romanian border to Giurgiu where it will cross the Danube River on the existing bridge between Giurgiu and Ruse in Bulgaria.

Besides the rehabilitation of the National Roads network, Romania has focus its major investments on the road sections of the Pan European corridors IV and IX within Romania and more particularly on roads along corridor IV.

(16) Russian Federation

Social parameters

Russia is occupies the vast area between Europe and the North Pacific Ocean. It has an area 17,075,200 square kilometres and a population of almost 143.4 million people (2003). All in all, 73 per cent of Russian citizens live in urban areas.

The capital of the Russian Federation is Moscow. With its 10 million population it is the largest city in the country, its principal economic and political center.

Economic parameters

The macroeconomic situation in August 2002 was characterised by slow growth in consumer prices, continuing economic growth, a new rise in household real money income

and the expansion of fixed capital investment. The situation in the financial markets remained relatively stable.

In September, consumer prices rose 0,4% month on month and in the first three quarters this year inflation slowed to 10,3% from 13,9% in the same period last year.

Industrial output expanded 3.8% in January-August year on year. Monthly dynamics of industrial output, excluding seasonal and calendar factors, show that industrial output growth has slowed down since May (100,6% in August against 100,9% in May).

With real GDP of $362.5 billion, 2003 was on the whole a positive year for the Russian economy. This growth was triggered primarily by increased domestic demand and increasing oil prices in the 2nd half of the year.

With a foreign trade surplus of USD 46.6 billion, a budget surplus of 1.4% of GDP, an 8.8% rise in disposable real income and a fall in unemployment from 9.0% in 2001 to 7.1% at the end of 2002, remarkable benchmarks were attained despite the difficult global economic climate. The rate of inflation fell from 18.6% in 2001 to 15.1% in 2002. This contrasted with a massive fall in gross capital investment to 2.6%, following growth of 8.7% in 2001.

Inflation was brought down from over 105% in 1994 to 12% in 1997. Though inflation spiked again after Russia's 1998 currency devaluation, Moldova has made great strides in bringing it under control.

Transportation

Due to Russia's favorable geographic position, the volume of international motorway links grew 12-15 % during recent years and the number of transportation means crossing our border into the EU countries increased by 10-15%. There have also been changes in the structure of traffic flow with an increase in heavy trucks and trailers.

The number of road sections with frequent traffic jams entering large congested cities has increased. A large number of road sections that run through developed areas over considerable lengths, do not have the required lane or shoulder width, as well as no dividing lines or flyovers at railway crossings with high traffic.

Within the next few years, the upswing in Russia's economy will stimulate the growth of automobile transportation and increase the load on network roads, especially on those providing international and interregional links. Therefore the Russian Federation's national program for improvement and development of motorway networks will construct a modern road system that meets western standards. The total roadway length is about 87,157 km.

Russia's railway system makes up the bulk of the world's largest and most intensively operated railway system. The former All-Union or Soviet Railways (SZD) was operated as an integrated system across eleven time zones over 148,000route kilometers with 62,000 locomotives, 1.5 million freight wagons, and 56,000 passenger coaches. SZD carried half of all the world's railway freight traffic and about one-fourth of all the world's passenger traffic. It had the highest traffic density of any railway in the world. Traffic density per route kilometer was 51 million gross tons in 1990.Daily train density averaged 40 trains for freight trains and 20 for passenger trains. The heaviest sections carried over 250 million gross tons annually and 300 trains daily.

(17) Serbia and Montenegro

Social parameters

The new country will have dual capitals - Belgrade, the capital of Serbia, will serve as the primary capital while Podgorica, the capital of Montenegro will administer that republic.

The total land area is 102,350 square kilometres (Serbia: 88,412 sq km, Montenegro: 13,938 sq km). Serbia and Montenegro have a diverse landscape. Serbia, which lies to the north, accounts for 86 per cent of the land area of the country. In the southeast ancient mountains and hills rise up from the plains, while a 199 km coastline on the Adriatic Sea forms the southwest boundary, where the republic of Montenegro is located.

The population of Serbia and Montenegro at the 2003 census was 10,6 million. Half of the population of the federation live in urban areas. About 94 per cent of the population live in the republic of Serbia. The country has a density of 102 people per square kilometre. Its largest cities include Belgrade, the capital, with a population (2000) of 1,168,000, Novi Sad (180,000), Niš (176,000), Kragujevac (146,000), Podgorica (118,000), Priština (118,000) and Subotica (108,000).

Economic parameters

The swift collapse of the Yugoslav federation in 1991 has been followed by highly destructive warfare, the destabilization of republic boundaries, and the break-up of important interrepublic trade flows. Output in Serbia and Montenegro dropped by half in 1992-93. Like the other former Yugoslav republics, it had depended on its sister republics for large amounts of energy and manufactures.

The break-up of many of the trade links, the sharp drop in output as industrial plants lost suppliers and markets, and the destruction of physical assets in the fighting all have contributed to the economic difficulties of the republics. Hyperinflation ended with the establishment of a new currency unit in June 1993, prices were relatively stable from 1995 through 1997, but inflationary pressures resurged in 1998.

Reliable statistics continue to be hard to come by, and the GDP estimate is extremely rough (The GDP was estimated in 2003, at $16.3 billion). In 2000, GDP represented only 40% of 1990 GDP, and 50% of 1996 GDP. The informal economy remains the safety net, which has prevented the country from collapsing so far. Industrial reform was hardly a priority for a country so close to collapse and with FRY industry badly damaged by the war years. In the 1980s the old Yugoslavia had set up a series of joint ventures with foreign companies and firms usually had Western equipment.

Transportation

The road network of the whole Federation is estimated to represent some 16,200 km of main and regional roads, and about 24,300 km of local roads. The rail network is estimated to represent 4,059 km of the surface.

The study network is organized around the backbone of Pan-European Transport Corridor X, which connects Salzburg and Thessaloniki through Ljubljana, Zagreb, Beograd, Nis and Skopje. The highway is a dual carriageway motorway from the Croatian border, up to

Leskovac, South of Nis. This motorway has been constructed at the end of the sixties, financed by a World Bank loan. South of Leskovac, the road becomes a so-called "Yugoslav expressway ", typical road infrastructure in the region before 1965, i.e. a single carriageway of two lanes with large shoulders, with limited access and separate level crossings. The last section before the Macedonian border, Bujanovac-Presevo, is a mere two-lane highway in very poor condition and requiring immediate rehabilitation.

Two branches stem from this main route in Serbia and Montenegro:

1. branch B, from the Hungarian border to Beograd, through Subotica and Novi Sad.

2. branch C, from Nis to Gradina on the Bulgarian border, through Pirot, with an old two lane highway in poor condition.

Other highway links in the study network are:

• the road from Pancevo to Moravita , towards Timisoara in Romania and Corridor IV,

• the road from Paracin to Zajecar and V.Cuka, towards the crossing of the Danube at Vidin and further Craiova and Bucharest,

• the North-South liaison between Novi Sad and Tuzla in B&H, one of the most heavily

trafficked highway in FRY, with more than 8,000 vehicles a day,

• the transversal liason from Paracin to Uzice, towards Sarajevo,

• the North-South liaisons from Belgrade to Podgorica and Bar and from Belgrade to Pristina

and further to Deneral Jankovic towards Skopje,

• the transversal liaison from Sarajevo to Shkoder, through Niksic and Podgorica in Montenegro,

• the transversal liaison from Nis to Bijelo Polje through Pristina in Kosovo,

• the continuation of the route along the Adriatic sea, from Dubrovnik to Bar, via Herceg Novi and Kotor in Montenegro,

• the liaison from Pristina to Albania through Prizren and Vrbnica.

(18) Slovakia

Social parameters

The capital, Bratislava, is the political, economic and cultural center of the country. Slovakia's total area is 49,035 sq km. The country's maximum length from east to west is about 416 km. and its maximum width from north to south is about 208 km.

The last official estimate (2003) of the population of Slovakia was 5,4 million.

In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 12,1%.

Economic parameters

Slovakia continues the difficult transition from a centrally planned economy to a modern market economy. The economic slowdown in 1999 stemmed from large budget and current

account deficits, fast-growing external debt, and persistent corruption. Even though GDP growth reached only 2.2% in 2000, the year was marked by positive developments such as foreign direct investment of $1.5 billion, strong export performance, restructuring and privatization in the banking sector, entry into the OECD, and initial efforts to stem corruption.

Economic stabilization measures successfully halved current account deficits that had reached almost 10 percent of GDP by 1998, while lowering the fiscal deficit and building up foreign reserves (1999-00). The Slovak Republic has recovered from a 1999 slowdown and has managed to restore healthy growth levels. Privatization of large public enterprises reached the telecom, gas, transportation, and power sectors, which combined with green-field investment, reached record high FDI inflows for the region. Financial markets and the international community responded favorably. Spreads on sovereign bonds fell by more than 50 percent and the country regained its investment grading in late 2001. The Slovak Republic joined the OECD in 2000; the economic transformation over the last four years has positioned the country well for the European Union accession.

In 2003, GDP was $24.4 billion.

Transportation

The total length of road network is 42,717 km. About 90% of the roads have an asphalt pavement.

Strategic objectives of the transport policy for Slovakia follow below:

Road network:

Create a separate Motorway Agency (eventually to be privatized) to finance, build and operate the own-revenue generating road network.

Reformulate the financing of the development and maintenance of Class I, II and III and local roads, with focus on bridges.

Reallocate responsibility for Class II and Class III roads to new regional governments and restructure the SRA to administer Class I roads and provide technical services to regional road agencies.

Rail network:

- Improve the financial health of the railways
- Dispose of all non-railway and non-essential railway activities and concession specific multi-modal services
- Prepare proposal to create freight, long-distance passenger and regional passenger subsidiaries
- New regional governments to be responsible for financing PSO for regional passenger services

(19) Slovenia

Social parameters

The country covers an area of 20,273 square kilometers.

Slovenia is the third most forested country in Europe, right after Finland and Sweden, as forests cover half the territory, as much as 10,124 square kilometres and it has 46.6 km of seacoast - an inch per inhabitant.

The republic of Slovenia has a population of 1,9 million (2003 est) and its capital city is Ljubljana.

In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 3,3%.

Economic parameters

Slovenia is among the most successful of the countries in transition from socialism to a market economy. It boasts a stable growth in GDP and ranks among the countries with the lowest degree of risk.

Slovenia, with its historical ties to Western Europe, enjoys a GDP per capita substantially higher than that of the other transitioning economies of Central Europe. Despite the economic slowdown in Europe in 2001-2003, Slovenia maintained 3,1% growth. The GDP, for 1998, was estimated at $19.585 billion USD, for 2002 reached at $21.960 billion USD. The GDP, in 2003, was estimated at $22.7 billion.

Structural reforms to improve the business environment allow for greater foreign participation in Slovenia's economy and help to lower unemployment. Further measures to curb inflation are also needed.

Transportation

Representing the fastest link between the North Adriatic, and Central and Eastern Europe in addition to being part of the Transport European Network (TEN) since it links Barcelona with Kiev, corridor no. V is given more attention at the moment. As part of this corridor, Slovenia would like to see transport run smoothly as soon as possible on what has been labelled the Slovene transport backbone, namely a diagonal transport route running from Pince near Lendava on the Slovene-Hungarian border, to the Port of Koper, in the southwestern corner of Slovenia.

The Slovene transport axis was given international approval when what is termed European transport corridors were defined, namely corridor no. V Venice - Trieste/Koper - Ljubljana - Budapest - Kiev, which was declared a priority at the Pan-European Transport Conference in Crete in 1994, and corridor no. X Salzburg - Ljubljana - Zagreb - Belgrade - Thessalonike, which was approved at the Pan-European Conference in Helsinki in 1997.

Known as the fifth and the tenth transport corridors, the railway and road transport routes are two out of ten pan-European transport corridors going across Slovene territory which further highlight the role of the country in its integration into the transport networks.

A further 554 kilometres of motorways, highways and roads leading to the motorway network in the directions from east to west (corridor no. V) and north to south (corridor no. X) are to be built under the national programme by the end of 2004. Two thirds or slightly more than 400 kilometres of these roads will overlap with pan-European transport corridor no. V.

There is a total length of 6,253 km of public roads in Slovenia. They are classified according to their importance and their connecting function into: Motorways, Expressways, Main Roads - Category I, Main Roads - Category II, Regional Roads - Category I, Regional Roads - Category II and Regional Roads - Category III.

Also as part of pan-European transport corridor no. V, Slovenia is speedily renovating its railway infrastructure in addition to building a 25-kilometre direct railway line with neighbouring Hungary.

(20) Turkey

Social parameters

Turkey is roughly rectangular in shape and is 1,660 kilometers wide.

The actual area of Turkey inclusive of its lakes is 814,578 square kilometres, of which 790,200 are in Asia and 24,378 are located in Europe.

Turkey has a population of 68,1 million (2003 estimate) and is generally divided into seven regions: the Black Sea region, the Marmara region, the Aegean, the Mediterranean, Central Anatolia, the East and Southeast Anatolia regions. In 2002, the long-term unemployment rate (12 months and more) as a percentage of the total active population was 3,2%.

Economic parameters

Turkey's dynamic economy is a complex mix of modern industry and commerce along with a traditional agriculture sector that in 2001 still accounted for 40% of employment. It has a strong and rapidly growing private sector, yet the state still plays a major role in basic industry, banking, transport, and communication. The most important industry - and largest exporter - is textiles and clothing, which is almost entirely in private hands.

The average growth rate of 5,4 % for the last 5 years, in 2002 it was estimated at 7,8% (the Gross Domestic Product was estimated at $192.3 million), which is well above many OECD countries, implies a dynamic and growing economy.

Turkey has a number of bilateral investment and tax treaties, including with the United States that guarantee free repatriation of capital in convertible currencies and eliminate double taxation. Nonetheless, foreign direct investment has totalled only $15.7 billion as of November 2002, a modest sum reflecting investor concerns about political and macroeconomic uncertainty, burdensome regulation, and a large state role in the economy.

The Turkish privatization board is in the process of privatizing a series of state-owned companies, including the state alcohol and Tobacco Company and the oil refining parastatal. In 2004, the Privatization Board is scheduled to privatize the telephone company and some of the state-owned banks.

Meanwhile, the public sector fiscal deficit has regularly exceeded 10% of GDP - due in large part to the huge burden of interest payments, which account for more than 50% of central government spending. Inflation, in recent years in the high double-digit range, fell to 26% in 2003.

Transportation

Turkey's geopolitical position as a link between the East and the West makes the transport sector crucial for the economic development of the region. The severe fiscal instability and the recent external developments with regard to EU accession and the growing role of Turkey in trade between Central Asia and the South Caucasus make the focus on transport even more important.

Transport demand in Turkey has grown significantly over the past five decades. Overall, demand has grown at an annual rate of nearly 8% since 1950. Demand for road transport has grown at an annual rate of about 7.6% while rail transport demand has grown at about 2%, demand for water transport by 5% and air at over 16% per year. As in most developing countries, road transport is becoming a much more significant factor for both freight and passenger transport.

Transport in Turkey has grown beyond the railway. Rail market shares have declined. It is not likely that much new traffic can be attracted to the railway without significant investment in new and very expensive railway infrastructure, or major changes in railway service. The total rail network is about 8,607 km (2002).

Road transport represented about 37% and rail 55% of the total transport market in 1950. By 2000, road transport represented 93% of the total market, rail about 4%, water about 2% and air 1% of the total intercity transport market in Turkey. While the current rail transport task is not insignificant, it is certainly much less important to the economy of Turkey than in the past. Although TCDD's rail traffic market shares have declined significantly, overall railway traffic has grown somewhat. Total TCDD railway traffic units have grown at about a 2% annual rate. Freight services have grown at an annual rate of about 2,3%. Suburban services have lost traffic at about 3% per year, while intercity passenger traffic has increased by about 1% per year.

(21) Ukraine

Social parameters

The total area of Ukraine is about 603,700 square kilometres. Its border countries are Russia, Romania, Hungary, Slovakia, Poland and Belarus.

It has developed a varied industry, concentrated mostly in and around big cities, such as Kiev, which is the capital of the country. Its population is 48,3 million, estimated in 2003.

Economic parameters

After Russia, the Ukrainian republic was far and away the most important economic component of the former Soviet Union, producing about four times the output of the next-ranking republic. Its fertile black soil generated more than one-fourth of Soviet agricultural

output, and its farms provided substantial quantities of meat, milk, grain, and vegetables to other republics.

Ukraine depends on imports of energy, especially natural gas, to meet some 85% of its annual energy requirements. Shortly after independence in December 1991, the Ukrainian Government liberalized most prices and erected a legal framework for privatisation, but widespread resistance to reform within the government and the legislature soon stalled reform efforts and led to some backtracking. Output by 1999 had fallen to less than 40% of the 1991 level. Loose monetary policies pushed inflation to hyperinflationary levels in late 1993.

GDP in 2000 showed strong export-based growth of 6% - the first growth since independence - and industrial production grew 12.9%. The economy continued to expand in 2002 as real GDP rose 9% and industrial output grew by over 14%. GDP of $43.6 billion in 2003 was more moderate, in part a reflection of faltering growth in the developed world. In general, growth has been under girded by strong domestic demand, low inflation, and solid consumer and investor confidence.

Transportation

Ukraine has a relatively well-developed system of major roads and the number of foreign nationals deciding to travel by car is on the increase. However, Ukrainian roads are not as well marked as in Western Europe and road signs might be difficult to read as most of them are in Cyrillic. The total motorway length is 169,491 km.

Ukraine generally has a good railway system. The fastest trains between Lviv and Kyiv run at night and the journey lasts about 8 hours. The country has a wider gauge compared to the rest of Europe and the total rail road length is about 22,473 km.

Russia and Ukraine are going to build a railway tunnel under the Kerch strait, linking the Black and Azov seas. Its annual throughput capacity will be 15 million passengers and 150 million tonnes of cargo. The 15 kilometer-long tunnel will connect two sea ports on the Russia and Ukrainian shores of the strait.

Summary and Conclusions

Particularly for *Alternatives scenarios of growth* , the socio-economic data have a very important role. The most important social and economic characteristics of each country in TEM and TER Region were presented above, and more analytically can be found bellow.

The data sets on socio-economic variables are enriched by some information concerning area, population, population growth, GDP growth and some characteristics of motorway and railway network in each country. So, based on the main information of this report, the external consultant will evaluate the present situation and produce projections of population, economy and trades of the countries in TEM/TER Region.

Further on in several tabels is given a comparative presentation of the countries'situation within the socio-economic framework described above.

SOCIO-ECONOMIC FRAMEWORK OF THE COUNTRIES IN TEM AND TER REGION

Table 1 Status of TEM Network (as of 01.01.1999)

	COMPARATIVE INDICATORS		
	% of total TEM length	Construction Progress %	Degree of Completion %
Austria	2,2	3,9	85,2
Belarus			
Bosnia &Herzegovina	3,6		
Bulgaria	4,2	2,2	30,2
Croatia	7	16,6	30,4
Czech Rep.	4,3	3	52,5
F.Y.R.O.M.			
Georgia	4,7		0,8
Greece			
Hungary	7,3	6	29,7
Italy	6,8		90,6
Lithuania	3,3		63,6
Rep. of Moldova			
Poland	14,8	4,6	9,7
Romania	11,3	5,3	4,2
Russian Federation			
Serbia & Montenegro			
Slovakia	4,1	8,9	31,7
Slovenia			
Turkey	26,4	10,4	19,9
Ukraine			
TOTAL	**100**	**6,3**	**26,4**

Table 2 Basic lengths of TER lines

	% of total TER length	Total length of TER lines	Total length of TER electrified lines	Total length of TER non-electrified lines	Total length of TER single track lines	Total length of TER double track lines
Austria	9	2651	2436	215	1210	1441
Belarus						
Bosnia & Herzegovina	1	405	405	0	310	95
Bulgaria	9	2509	2008	501	1667	842
Croatia	5	1502	856	646	1259	243
Czech Rep.	8	2349	2110	239	732	1617
F.Y.R.O.M.						
Georgia						
Greece						
Hungary	9	2574	2228	346	1412	1162
Italy			90,6			
Lithuania	3	847	103	744	565	282
Rep. of Moldova						
Poland	18	4813	4652	161	613	4200
Romania	12	3514	2357	1157	1456	2058
Russian Federation	6	1819	1819	0	32	1787
Serbia & Montenegro						
Slovakia	4	1005	985	20	179	826
Slovenia	2	604	483	121	274	330
Turkey	14	3985	1523	2462	3673	312
Ukraine						
TOTAL	**100**	**28577**	**21965**	**6612**	**13382**	**15195**

Table 3 Total area of each country (sq km)

COUNTRY	Total Area (sq km)
Austria	83.858
Greece	131.940
Italy	301.230
Bulgaria	110.910
Czech Rep.	78.866
Hungary	93.030
Lithuania	65.300
Poland	312.685
Romania	237.500
Slovakia	48.845
Slovenia	20.273
Turkey	780.580
Belarus	207.600
Bosnia & Herzegovina	51.129
Croatia	56.542
Georgia	69.700
Fed. Rep. of Yugoslavia	102.350
F.Y.R.O.M	25.333
Russia Federation	17.075.200
Ukraine	603.700
Rep. Of Moldova	33.843

Table 4 Population (in million) of each country (2000-2004)

	2000	***2001***	***2002***	***2003***	***2004***
Austria	8,1	8,1	8,1	8,2	8,2
Greece	10,6	10,6	10,6	10,7	10,7
Italy	57,8	57,9	57,9	58,0	58,1
Bulgaria	8,2	8,2	8,1	7,5	7,5
Czech Rep.	10,3	10,3	10,3	10,2	10,2
Hungary	10,0	10,0	10,0	10,0	10,1
Lithuania	3,5	3,5	3,5	3,6	3,6
Poland	38,6	38,7	38,8	38,0	37,8
Romania	22,4	22,4	22,4	22,3	22,2
Slovakia	5,4	5,4	5,4	5,4	5,4
Slovenia	2,0	2,0	2,0	1,9	1,9
Turkey	67,5	68,5	69,6	68,1	68,3
Belarus	10,0	10,0	9,9	9,9	9,8
Bosnia & Herzegovina	3,9	3,9	4,0	4,0	4,0
Croatia	4,5	4,5	4,5	4,5	4,5
Georgia	5,3	5,2	5,2	5,1	5,1
Fed. Rep. of Yugoslavia	10,6	10,6	10,6	10,6	10,6
F.Y.R.O.M	2,0	2,0	2,0	2,0	2,0
Russia Federation	145,6	144,8	144,1	143,4	142,8
Ukraine	49,5	49,1	48,7	48,3	47,9
Rep. Of Moldova	4,3	4,3	4,3	4,2	4,2

Table 5 Population (in million) growth in 2003

COUNTRY	Population 2003	Population growth (%)
Austria	8,2	1,22
Greece	10,7	0,19
Italy	58,0	0,17
Bulgaria	7,5	-8,00
Czech Rep.	10,2	-0,98
Hungary	10,0	0,00
Lithuania	3,6	2,78
Poland	38,0	-2,10
Romania	22,3	-0,45
Slovakia	5,4	0,00
Slovenia	1,9	-5,26
Turkey	68,1	-2,20
Belarus	9,9	0,00
Bosnia & Herzegovina	4,0	0,00
Croatia	4,5	0,00
Georgia	5,1	-1,96
Fed. Rep. of Yugoslavia	10,6	0,00
F.Y.R.O.M	2,0	0,00
Russia Federation	143,4	-0,49
Ukraine	48,3	-0,83
Rep. Of Moldova	4,2	-2,38

Table 6 Gross Domestic Product of each country in billion $ (2000-2004)

GDP (bil. $)	***2000***	***2001***	***2002***	***2003***	***2004***
Austria	190,7	189,6	204,1	209,5	215,1
Greece	112,1	117,2	132,8	136,5	140,3
Italy	1074,8	1091,8	1184,3	1214,0	1244,5
Bulgaria	12,6	13,6	15,5	16,0	16,4
Czech Rep.	51,4	57,2	69,5	72,3	75,2
Hungary	46,7	51,8	65,8	69,1	72,6
Lithuania	11,2	11,9	13,8	14,2	14,6
Poland	164,1	183,4	189,0	198,1	207,6
Romania	37,1	40,2	45,7	47,1	48,5
Slovakia	19,7	20,5	23,7	24,4	25,1
Slovenia	19,0	19,5	22,0	22,7	23,5
Turkey	199,3	145,2	183,7	192,3	201,3
Belarus	12,7	12,4	14,3	15,1	15,9
Bosnia & Herzegovina	4,5	5,0	5,6	5,9	6,1
Croatia	18,4	19,5	22,4	23,1	23,8
Georgia	3,0	3,2	3,4	3,5	3,5
Fed. Rep. of Yugoslavia	8,6	11,6	15,7	16,3	17,0
F.Y.R.O.M	3,6	3,4	3,8	4,0	4,1
Russia Federation	259,7	309,9	346,5	362,5	379,1
Ukraine	31,3	38,0	41,5	43,6	45,7
Rep. Of Moldova	1,3	1,5	1,6	1,7	1,7

Table 7 Gross Domestic Product annual growth (%) of each country

(Index 1998=100)

Countries	1998	1999	2000	2001	2002
Austria	100.00	69.83	90.11	17.08	26.50
Belarus	100.00	40.48	69.05	55.95	55.95
Bosnia and Herzegovina	100.00	61.54	35.90	28.85	25.00
Bulgaria	100.00	57.50	135.00	101.66	118.97
Croatia	100.00	-34.11	113.17	149.36	207.08
Czech Republic	100.00	-44.88	-12.01	-16.29	87.60
Georgia	100.00	103.45	62.07	162.07	193.10
Greece	100.00	107.17	124.02	121.89	117.51
Hungary	100.00	85.77	107.05	78.65	68.40
Italy	100.00	92.74	175.04	100.70	20.72
Lithuania	100.00	-24.93	54.40	89.13	91.77
Macedonia, FYR	100.00	127.01	133.80	-133.10	21.23
Moldova	100.00	51.49	32.20	92.84	110.06
Poland	100.00	85.42	83.33	20.83	29.17
Romania	100.00	25.06	-12.53	-110.67	-89.79
Russian Federation	100.00	-120.75	-188.68	-94.34	-81.13
Serbia and Montenegro	100.00	-725.41	204.52	220.66	159.95
Slovak Republic	100.00	33.28	55.52	83.29	110.92
Slovenia	100.00	130.30	116.05	73.07	75.40
Turkey	100.00	-152.30	238.01	-242.39	251.76
Ukraine	100.00	10.29	-98.36	-74.97	46.92

Source: World Development Indicators database

Table 8 Exports of each country (1998-2002), index: 1998=100

	1998	*1999*	*2000*	*2001*	*2002*
Austria	100	104,82	115,72	120,93	120,19
Greece	100	103,16	121,25	114,2	103,43
Italy	100	96,94	107,35	107,6	102,27
Bulgaria	100	94,68	118,35	118,07	112,87
Czech Rep.	100	103,09	118,8	120,4	110,88
Hungary	100	104,05	119,59	118,76	102,94
Lithuania	100	85,44	98,18	109,33	116,15
Poland	100	102,83	110,33	109,61	109,56
Romania	100	123,85	145,3	147,29	156,7
Slovakia	100	103,02	121,19	124,97	122,87
Slovenia	100	92,73	99,82	102,3	102,24
Turkey	100	95,37	98,78	138,5	122,14
Belarus	100	100,26	117,2	113,03	117,74
Bosnia & Herzegovina	100	107,26	109,34	108,59	109,39
Croatia	100	103,2	118,92	123,91	116,01
Georgia	100	116,27	140,92	149,97	167,19
Serbia & Montenegro	100	93,50	131,69	105,39	92,04
F.Y.R.O.M	100	102,34	117,25	102,84	92,18
Russia Federation	100	138,43	141,12	116,23	111,19
Ukraine	100	128,21	149,08	132,4	134,4

Rep. Of Moldova	100	112,47	107,1	107,04	114,73

Table 9 Imports of each country (1998-2002), index: 1998=100

	1998	***1999***	***2000***	***2001***	***2002***
Austria	100	105,36	115,54	119,36	115,85
Greece	100	118,91	132,64	123,86	115,22
Italy	100	102,38	119,01	117,23	112,62
Bulgaria	100	107,46	130,36	134,82	127,54
Czech Rep.	100	103,16	121,99	122,49	112,52
Hungary	100	105,83	122,84	118,37	104,03
Lithuania	100	85,94	89,53	96,74	102,52
Poland	100	117,31	124,45	115,14	114,08
Romania	100	107,18	125,61	134,01	134,54
Slovakia	100	93,54	106,22	118,05	114,37
Slovenia	100	97,9	103,34	100,63	97,12
Turkey	100	96,29	113	112,2	107,5
Belarus	100	96,44	113,29	110	115,63
Bosnia & Herzegovina	100	107,93	104,56	107,57	109,61
Croatia	100	100,28	106,2	111,11	111,46
Georgia	100	103,1	107,82	105,7	105,79
Serbia & Montenegro	100	109,97	147,74	141,5	138,98
F.Y.R.O.M	100	92,99	111,25	98,95	101,99
Russia Federation	100	126,61	117,89	115,83	117,59
Ukraine	100	109,25	131,22	121,9	117,34
Rep. Of Moldova	100	96,02	104,24	102,95	109,63

Table 10 Economic Development - Forecast

COUNTRY	**pop. 1994**	**pop. 2010**	**GDP (growth per year)%**
	*** 1000**	*** 1000**	**1994-2010**
Austria	8031	8160	2,2
Belarus	10175	10030	1
Bosnia &Herzegovina			
Bulgaria	7489	8521	4
Croatia			
Czech Rep.	10335	10451	4,7
F.Y.R.O.M.			
Georgia			
Greece	10416	10585	3,1
Hungary	10376	10376	2,8
Italy	57052	56303	2,2
Lithuania	3720	3756	4
Rep. of Moldova			
Poland	38822	41500	5
Romania	23562	25036	4
Russian Federation	146969	143251	3,6
Serbia & Montenegro			
Slovakia	5343	5704	5,7
Slovenia			
Turkey			
Ukraine	51328	50110	1,3

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Tables 11a, b, c Reference data for socioeconomic environment for the EU and Central European countries (2000 Projections, TINA)-Passenger Transport

		Traffic in 2020 (billion passenger-kilometers)					
		High GDP growth: +2.9%	Median GDP growth: +2.3%				Low GDP growth: +1.9%
		TRANSPORT REGULATION SCENARIO					
	1996	B3	A	B	C	D	B
Road	248.2	499.1	480.0	462.7	452.8	348.2	418.2
(National road network)							
Of which motorway Concessions	81.9	231.5	219.7	208.4	2.0.0	139.2	181.0
Rail (excl. Ile de France)	50.9	79.1	75.0	76.7	83.5	96.2	73.5
Air (internal)	13.1	32.6	34.9	29.1	28.1	26.4	24.8
TOTAL	312.2	610.8	590.0	568.5	564.3	470.7	516.6

		Annual growth 1996-2020					
		High GDP growth: +2.9%	Median GDP growth: +2.3%				Low GDP growth: +1.9%
		TRANSPORT REGULATION SCENARIO					
	1996	B	A	B	C	D	B
Road (National road network)	4.4%	3.0%	2.8%	2.6%	2.5%	1.4%	2.2%
of which motorway concessions	9.7%	4.4%	4.2%	4.0%	3.8%	2.2%	3.4%
Rail (excluding Ile de France)	1.6%	1.9%	1.6%	1.7%	2.1%	2.7%	1.5%
Air (internal)	9.3%	3.9%	4.2%	3.4%	3.2%	3.0%	2.7%
TOTAL	3.6%	2.8%	2.7%	2.5%	2.5%	1.7%	2.1%
Total road traffic (interurban + urban	21%						
Of which urban	1.7%						

		Modal share in 2020					
		High GDP growth: +2.9%	Median GDP growth: +2.3%				Low GDP growth: +1.9%
		TRANSPORT REGULATION SCENARIO					
	1996	B	A	B	C	D	B
Road	79.5%	81.7%	81.4%	81.4%	80.2%	74.0%	81.0%
(National road network)							
of which motorway concessions	26.2%	37.9%	37.2%	36.7%	35.8%	29.6%	35.0%
	16.3%	12.9%	12.7%	13.5%	14.8%	20.4%	14.2%
Rail (excluding Ile de France)							
	4.2%	5.3%	5.9%	5.1%	5.0%	5.6%	4.8%
Air (internal)							

Source: Traffic Forecast on the Ten Pan-European Transport Corridors of Helsinki.
Project management: NEA Transport Research and Training

Table 12 Total Highway and Railway Length (km), total length per 1000 people (km) in 2003

COUNTRY	Road Length	*per 1000 people*	Rail Length	*per 1000 people*
Austria	133.361	*16,29*	6.123	*0,75*
Greece	117.000	*10,97*	2.571	*0,24*
Italy	668.669	*11,53*	16.200	*0,28*
Bulgaria	37.288	*4,95*	4.294	*0,57*
Czech Rep.	55.432	*5,41*	9.462	*0,92*
Hungary	188.203	*18,74*	7.875	*0,78*
Lithuania	44.000	*12,25*	1.998	*0,56*
Poland	381.046	*10,03*	23.420	*0,62*
Romania	153.359	*6,89*	11.385	*0,51*
Slovakia	42.717	*7,87*	3.668	*0,68*
Slovenia	20.177	*10,42*	1.201	*0,62*
Turkey	382.059	*5,61*	8.607	*0,13*
Belarus	98.200	*9,51*	5.523	*0,54*
Bosnia & Herzegovina	21.846	*5,48*	1.021	*0,26*
Croatia	28.009	*6,33*	2.296	*0,52*
Georgia	33.900	*6,87*	1.612	*0,33*
Fed. Rep. of Yugoslavia	48.603	*4,56*	4.059	*0,38*
F.Y.R.O.M	8.684	*4,21*	699	*0,34*
Russia Federation	952.000	*6,59*	148.000	*1,02*
Ukraine	273.700	*5,70*	22.473	*0,47*
Rep. Of Moldova	16.657	*3,75*	1.300	*0,29*

Table 13 Total passenger traffic between the defined traffic zones economic reference scenario, infrastructure moderate scenario, 2015 (mill passenger trips)

	Million passenger trips			Change to base year 1995 (= 100)		
Country	**Domestic**	**International***	**Total**	**Domestic**	**International***	**Total**
Poland	906,419	209,087	1115,506	150	174	154
Czech Rep.	549,585	123,630	673,215	134	170	140
Slovak Republic	359,704	101,976	461,680	163	183	167
Hungary	353,289	196,733	550,022	131	194	148
Romania	353,164	36,817	389,981	134	199	139
Bulgaria	367,069	32,515	399,584	129	195	133
Albania	34,319	5,573	39,893	166	237	174
Estonia	31,360	15,084	46,444	126	167	137
Latvia	0,000	8,484	8,484	n. a.	184	n. a.
Lithuania	108,567	15,479	124,046	122	214	129
FYROM	31,333	21,433	52,766	126	193	146
Bosnia & Herzegovina	0,000	3,699	3,699	n. a.	209	n. a.
Slovenia	134,507	83,323	217,830	123	166	136
Grand Total	3229,316	734,159	3963,475	139	185	146

* = International passenger trips between CEEC-countries are stated at the CEEC-country of origin as well as at the CEEC-country of destination. So grand total of international passenger transport and total passenger transport is less than the sum of all international passenger trips and total passenger trips for all countries indicated.
Source: CEMT/CS/ TTI (2001)1

Table 14 Road transport of goods in the EU by type of carriage, in tonnes and tonne-kilometres

	1985[1]	1995[2]	Per cent variation 1985-1995					
	Million Tones	Billion t-km	Million Tones	Billion t-km	EUR 15 Tones	EUR 15 t-km	EUR3 Tones	EUR3 t-km
Domestic Transport	3.845	255	5.720	597	+48.5%	+134.1%	+17.0%	+40.0%
Hire or reward	3.982	170	4.413	223	+11.8%	+31.2%	+0.8%	+6.2%
Own account	7.827	425	10.139	820	+29.8%	+92.9%	+9.3%	+29.8%
Total								
International Transport								
Hire or reward	146 31	67.49.1	n.a. n.a.	161.9 9.4	--	--	n.a. n.a.	+140.2% +3.3%
Own account	177	76.5	n.a.	171.3	-	-	n.a.	+123.9%
Total								

(1) 1986 for Italy, Spain (1986 data) and Portugal (1987 data) included.
(2) 1993 for Austria, Germany and Ireland: estimates.
(3) Austria, Finland, Germany, Ireland and Sweden not included.

Source: Economic Research Centre, 1999

Table 15 Annual tonnage carried on own account compared to total road transport

	Fifteen countries	
	Abs.	**Per cent**
1–10%	55	7
11–20%	37	5
21–30%	26	3
31-40%	46	6
41-50%	54	7
51-60%	45	6
61-70%	61	8
71-80%	76	10
81-90%	74	10
91-100%	251	34
No data	24	3
Total no. of companies	749	100

Source: Economic Research Centre, 1999

Table 16 Eastern European railways: network and traffic

Country	Railway initials	Route length (km)	Tones freight (million/year)	Passenger journeys (million/year)
Albania	HSH	670	1	3
Bosnia-Herzegovina	ZBH	1 020	30	10
Bulgaria	BDZ	4 300	25	60
Croatia	HZ	1 900	10	18
Czech Republic	CD	9 344	100	220
Estonia	EVR	1 018	28	6
Hungary	MAV	7 400	45	250
Latvia	LDZ	2 700	28	44
Lithuania	LG	2 013	28	9
Macedonia	MZ	699	2	2
Poland	PKP	24 400	220	45
Romania	SNCFR	11 300	95	200
Slovakia	ZSR	3 650	10	12
Slovenia	SZ	1 201	9	8
Yugoslavia	JZ	3 987	6	25

Source: ECMT, 2001

Table 17 Passenger-Kilometre Index=100

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
CEE COUNTRIES:												
Bulgaria	100	93	96	60	66	72	62	58	62	72	58	47
Czech & Slovak	100	101	100	99	87	68	67	63	61	56	52	51
Hungary	100	103	99	86	79	74	74	73	75	75	77	59
Poland	100	107	97	78	63	63	53	51	51	49	49	50
Romania	100	102	88	73	70	56	53	54	53	46	39	36
Turkey	100	102	96	90	93	107	94	86	78	87	92	92
Yugoslavia	100	47	47	41	42	29	28	26	13	28	26	
Croatia	100	-	89	39	26	25	25	25	31	30	28	25
Macedonia	100	96	92	53	29	19	17	17	31	37	39	39
Slovenia	100	99	92	54	35	36	38	38	39	40	42	40
CIS AND BALTIC COUNTRIES:												
Russia	100	99	100	94	93	100	83	71	67	63	56	52
Ukraine	100	100	104	98	105	104	97	87	81	75	69	65
Kazakhstan		102	106	104	106	110	99	86	76	69	57	49
Belarus	100	103	105	99	113	122	100	78	74	81	83	106
Estonia	100		101	85	63	48	36	28	29	17	16	16
Latvia	100			100	93	60	46	35	31	28	28	25
Lithuania	100			110	93	92	53	38	30	26	24	25
Armenia	100	91	76	77	107	104	85	40	20	20	13	11
Georgia	100					59	69	22	22			
WESTERN COUNTRIES:												
Austria	100	109	110	118	123	120	118	124	124	105	102	101
Finland	100	100	104	101	96	94	95	99	102	105	105	107
France	100	102	101	98	99	92	93	88	94	98	102	105
Sweden	100	100	100	91	86	96	97	102	102	103	115	122
United Kingdom	100	97	97	93	92	88	84	84	93	98	102	108
Germany	100	100	106	111	113	116	150	148	148	146	144	177
USA: Amtrak	100	103	107	110	107	109	104	98	89	91	93	94

Source: ECMT, 2001

Table 18 Growth rates for road traffic in the moderate scenario

	2001-2006	2001-2015	2001-2020
Bosnia and Herzegovina-Passengers Cars	30%	108%	206%
Bosnia and Herzegovina-Trucks and Busses	29%	102%	232%
Croatia-Passengers Cars	25%	72%	114%
Croatia-Trucks and Busses	29%	96%	214%
FYROM-Passengers Cars	25%	99%	207%
FYROM-Trucks and Busses	25%	96%	222%
Serbia and Montenegro-Passengers Cars	30%	110%	226%
Serbia and Montenegro -Trucks and Busses	30%	119%	292%

Source: REBIS, 2003

Table 19 Growth rates for rail traffic in the moderate scenario

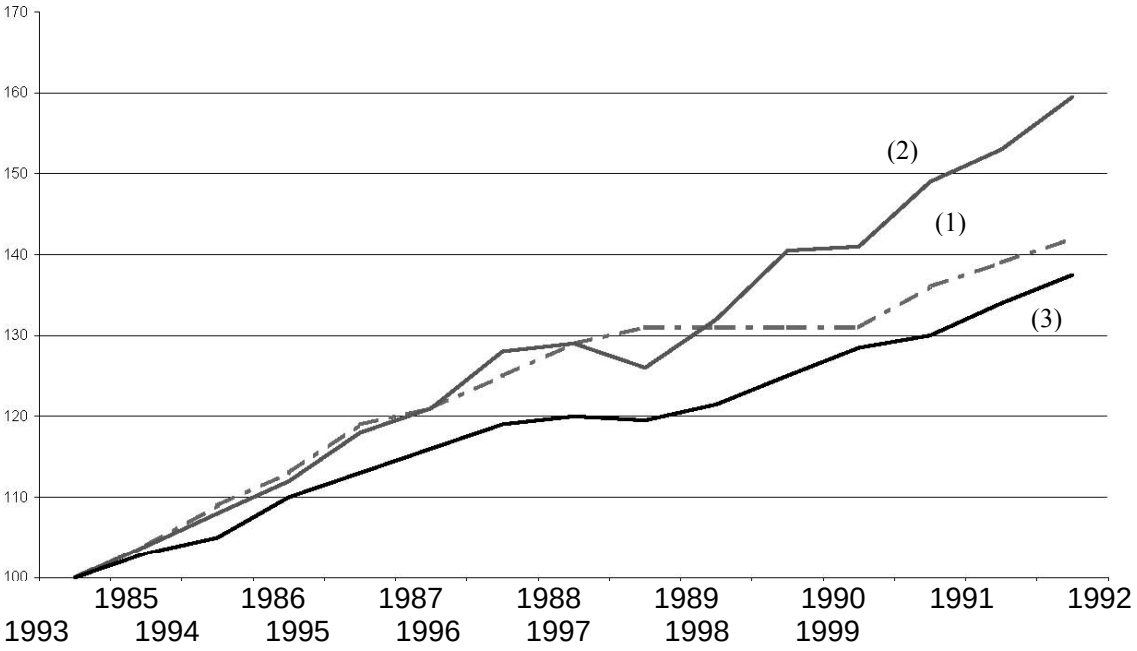
	2001-2006	2001-2015	2001-2020
Bosnia and Herzegovina-Tonnes of freight	11%	35%	66%
Bosnia and Herzegovina-Passengers	13%	39%	76%
Croatia- Tonnes of freight	11%	33%	62%
Croatia- Passengers	14%	39%	74%
FYROM- Tonnes of freight	10%	33%	64%
FYROM- Passengers	11%	37%	73%
Serbia and Montenegro- Tonnes of freight	12%	39%	78%
Serbia and Montenegro - Passengers	13%	44%	89%

Source: REBIS, 2003

Table 20 Arrivals at the borders: visitors and tourists

	Visitors in 1000s					Tourists in 1000s				
	1994	**1995**	**1996**	**1997**	**1998**	**1994**	**1995**	**1996**	**1997**	**1998**
Bulgaria		5284	4619	5207	3266		2721	2192	2336	1974
Czech Rep.	101140	98061	109405	107884	102844					
Estonia	1900	2110	2444	2619	2900	550	530	665	730	825
Hungary	39836	39240	39833	37315	33624	21425	20690	20374	17248	
Latvia	1944	1633	1750	1842	1788	622	523	560	625	567
Lithuania	2369	2055	3499	3702	4288			832	1012	1416
Poland	74253	82244	87439	87817	88592					
Romania	5898	5445	5205	5149	4831					
Slovakia	21868	27301	33113	31742	32735					
Slovenia	3339	3184	3594	3828	3297	748	732	832	974	976
Turkey	6671	7727	8537	9713	9431	6033	7083	7888	9063	8638
Albania	340	304	288	119	184					
Croatia	18441	16100	19085	23660	25499					
FYROM	3189	2628	2156	2078	1848	185	147	136	121	157

Source: TIRS



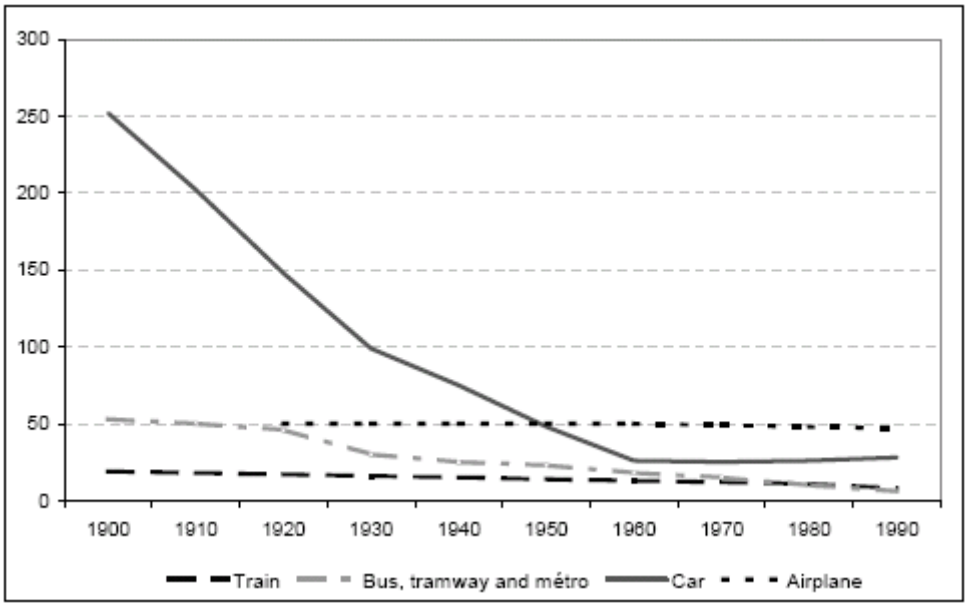
(1) Passengers (p-km), (2) Goods (t-km), (3) GDP (at constant prices)

Notes: (1) Passenger cars, buses and coaches, tram and metro, railways, air.

(2) Road, rail inland waterways, pipelines, sea (intra-EU).

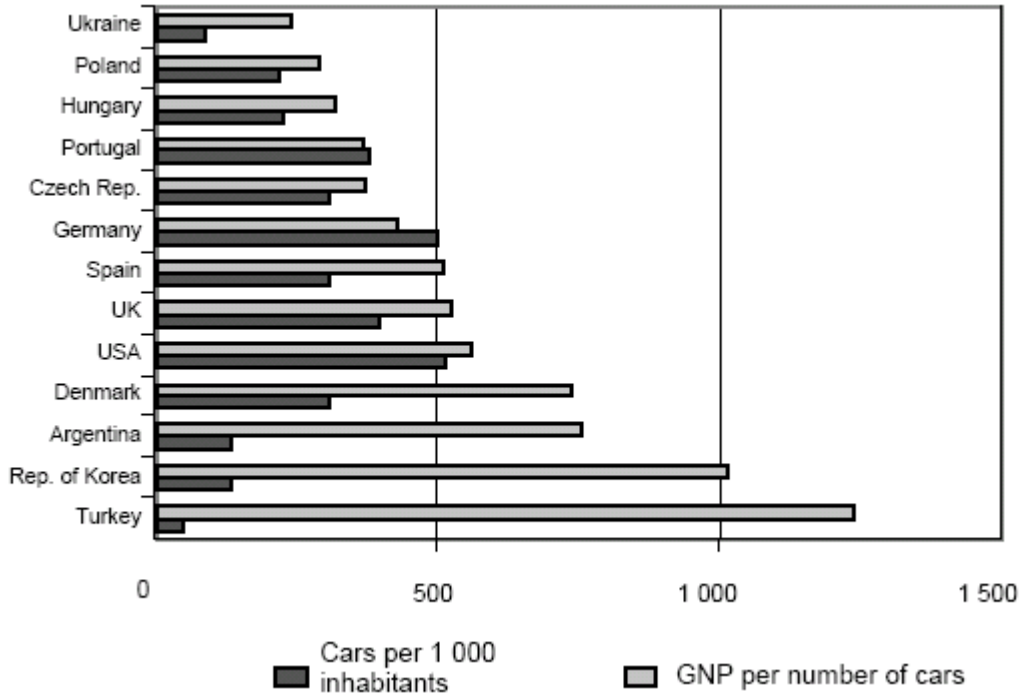
Source: European Union Energy and Transport in Figures, 2001**,** DG TREN.

Figure 1 Transport and GDP Growth, EU-15



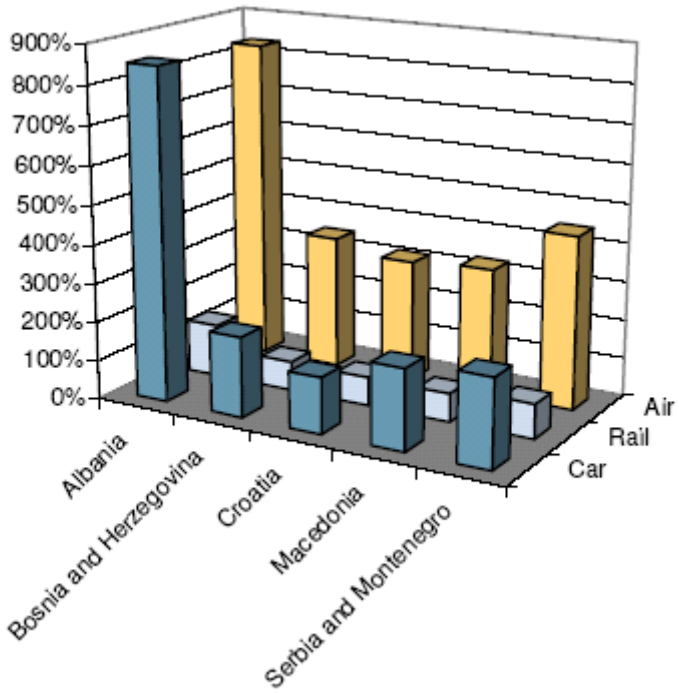
Source: ECMT, 2003

Figure 2 Average costs of passenger travel (in 1990 Euro per km)



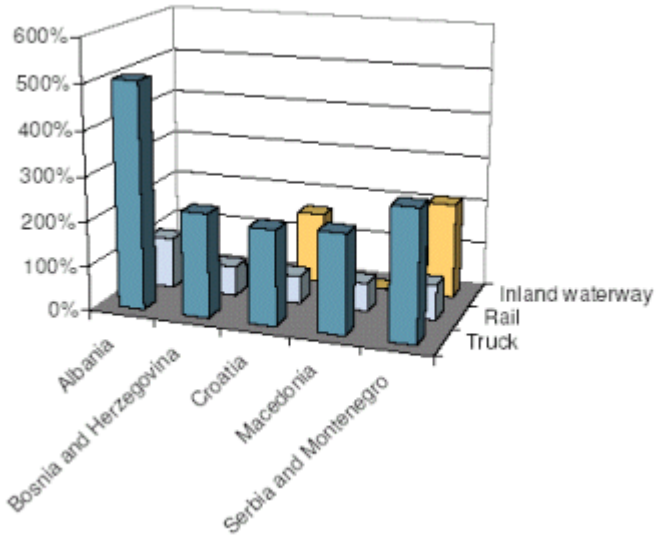
Source: ECMT, 2003

Figure 3 Car ownership in relation to GNP (ppp) per capita



Source: REBIS, 2003

Figure 4 Growth in passenger traffic: 2001- 2025, Moderate scenario



Source: REBIS, 2003

Figure 5 Growth in freight traffic: 2001- 2025, Moderate scenario

2.3 Alternative Scenarios of Growth

2.3.1 Population trends

– EU member countries before 1 May 2004

Today, demography is very much influenced by external migration: the contribution of migration to demographic growth in EU member countries before 01/05/2004 is close to 75%, which means an average growth of 0,3 % per year in a context of a low demographic growth rate in Europe, which is below 0,5 % per year. Specifically, for the EU member countries before 1 May 2004 the average annual change for population varies from 0,12% to 0,45%.

– EU member countries after 1 May 2004 and acceding countries

Like the EU member countries before 01/05/2004, diverging trends in population growth figures can also be found in the EU member countries after 01/05/2004 and acceding countries. For example, most countries population is predicted to decline over the 20-year period, with Slovenia presenting the highest decrease of –0,96% to –0,77% per year, whilst in Lithuania the population is expected to increase about 0,95% to 1,14% per year.

– Non-EU, non-acceding countries

For the non-EU, non-acceding countries, population is also predicted to decline over the 20-year period, like in the latter mentioned group of countries, with Ukraine presenting the

highest decrease of –0,74% to –0,59% per year, whilst in Bosnia & Herzegovina the population is expected to increase about 0,64% to 0,76% per year.

2.3.2 Economy trends

– EU member countries before 1 May 2004

It is possible to define trend hypotheses of GDP for the EU member countries before 1 May 2004, since the existence of series and a relatively stable economic context over the past period allows such trends to be determined. For these countries, concrete data exist up to 2002, from World Bank as well.

Trend forecasting projections, performed in this project, up to 2015 were compared with TINA forecast model. Finally, projections for the period 2015 – 2020 were checked against SCENARIOS and TEN-STAC results. In general, EU member countries before 1 May 2004, will keep a level of between 2 and 3% of GDP growth rates, until 2020.

– EU member countries after 01/05/2004 and acceding countries

Concerning EU member countries after 1 May 2004 and acceding countries, because of the transition process, it seems difficult to establish the same scheme of approach as in the EU member countries before 1 May 2004. The recent situation of the former mentioned with decreasing production and transport at the beginning of the nineties, followed by a recent increase, makes it difficult to define a clear trend.

There are now large uncertainties about their rate of growth for future years and a "trend" scenario does not really mean much: transition is a new situation, never experienced before. Furthermore consistent statistical data are not easy to obtain. For the past few years, the general economic evolution shows a confirmed recovery of growth in all of the countries in Central and Eastern Europe, including the Baltic States. This recovery had long been uncertain and it is now achieved in different ways depending on the country. Therefore, the economic situation of EU member countries after 1 May 2004 and acceding countries may develop in various directions.

In order to cover a majority of possible cases, two main hypotheses were studied: a moderate and an optimistic growth of GDP. According to TINA, a reasonable range for annual GDP growth can be taken between 2,5% and 7%.

Therefore, the moderate scenario, of TEM and TER Projects' Master Plan, assumes that average growth rates in the EU member countries after 1 May 2004 and acceding countries will reach levels up to 4 - 5% and maintain this level until 5 years after accession and will then slowly converge with EU levels, keeping a level of between 3 and 4% growth rates. The optimistic scenario, assumes that average growth rates will reach levels up to 6 - 7% and maintain this level until 5 years after accession and will then slowly converge with EU levels, keeping a level of between 3 and 4% growth rates.

Both scenarios are based on the assumption that, on the one hand, the accession process will follow the optimistic plan of the European Commission, and on the other hand, that the countries themselves will have a strict policy of structural reforming and direct foreign investments are increasing.

For this group of countries (EU member countries after 1 May 2004 and acceding countries), concrete data existed until 2002, from the World Bank. Trend forecasting projections up to 2015 were compared with TINA forecast model. Finally, projections for the period 2015 – 2020 were compared with SCENARIOS and TEN-STAC results.

– Non-EU, non-acceding countries

For non-EU, non-acceding countries, a moderate scenario to be used assumes that average growth rates will reach levels up to 2 -3% until 2020. An optimistic scenario assumes that average growth rates will reach levels up to 4 -5% until 2020. It can be argued that such scenarios are unrealistic for this group of countries, or that the differences between these countries will be much more significant than between the EU member countries before 1 May 2004 and the EU member countries after 1 May 2004 and acceding countries.

In any case, it is not unrealistic to assume that the existence of cohesion policies, which will help in EU member countries after 1 May /2004 and acceding countries, can also contribute for the countries in a stage of pre-accession to catch up and integrate more rapidly, therefore speeding up their development. It seems logical that non-EU, non-acceding countries could benefit from European integration facilitating the opening of markets in all of Europe, the free traffic of freight and travelers and the suppression of all border effects. Another positive effect could come from the desire of world companies to return to Europe where risks seem more controlled after the "Asian Crisis". In that way, an inflow of FDI (Foreign Direct Investments) towards the region of the non-EU, non-acceding countries will be observed as well.

In CODE-TEN project, it was possible to follow and plot the pace of reform for some of these countries (CIS and Baltic countries). The indexes obtained were compatible with the growth rates forecasted for EU member countries after 1 May 2004 and acceding countries. This means that there would be a fairly good correlation between implementation of reforms and economic development between the two country-groups.

In any case, it is also useful to keep in mind that the present estimation of the level of GDP in non-EU, non-acceding countries remains difficult and the "unofficial" economy represents a relatively more important role than in the other country-groups. Corresponding activities are either not taken into account, or are poorly assessed. GDP figures for the countries emerging from war have thus to be considered with some care, even more so if we keep in mind the fluctuations of the local currencies' exchange rates.

For these countries, data existed until 2002, from the World Bank. The projections up to year 2015 –for some of the countries- were compared with TIRS project results.

2.3.3 Foreign trade trends

In order to have a connection between economic growth and traffic growth for goods, details are needed concerning the trend of the national foreign trade.

Foreign trade is an important socio-economic variable for transport. International traffic flows are growing at a much faster rate than national traffic, in parallel with international trade, which is rising more quickly than national trade. On trunk networks international traffic is taking a growing share, which may often reach between one third and one half of the total traffic of many links within the next 20 years. The evolution of traffic in the hinterland of the large ports provides just one example of this phenomenon.

For international trade and the relative evolution of intra-European and extra-European relations, several analyses have been made (OECD 2020 for example), which are compatible with the GDP growth.

– EU member countries before 1 May 2004

The general trend in the EU member countries before 1 May 2004 is well known but can be clarified: a falling share of primary goods and bulk products, a decreasing share of intermediate goods, but on the contrary a rapidly increasing share of the high value goods. In this latter case the average value of one tone transported increases and the volume (measured in cubic meters) becomes a more relevant unit of transport than the tonnage. In parallel, we observe a decrease in the shipment size and the development of associated logistic services.

Trend forecasting for these countries was made, on observed trade trends between 1998 and 2003 (Database of World Bank). Growth hypotheses of the import and export growth chosen for these countries, are compatible with GDP growth with the underlying assumption that EU trade growth will increase at a similar rate as world trade.

The general trend for the EU member countries before 1 May 2004 is an increase of 12,5% to 100,3% for exports for the 20-year period of 2000-2020 and a lower increase of 57,66% to 81,04% for imports, for the same period.

– EU member countries after 1May 2004 and acceding countries

The economies of the EU member countries after 1 May 2004 and acceding countries are already very open economies although their GDP per capita is fairly low, showing again another characteristic of the transition situation. The same order of magnitude can be taken for the increase of the imports and exports as for EU member countries before 1 May 2004. However, more detailed geographic analysis will be necessary to investigate the potential growth of trade between neighboring countries in the Baltic areas, the Central Europe area (Visegrad countries), the Black sea area and the Balkans.

The general trend for the EU member countries after 01/05/2004 and acceding countries is an increase of 11,8% to 123,7% for exports for the 20-year period of 2000-2020 and a higher increase of 11,4% to 175,43% for imports, for the same period.

– Non-EU, non-acceding countries

The general trend in non-EU, non-acceding countries will follow the trend of EU member countries after 1 May 2004 and acceding countries, based on the same hypothesis as in the GDP growth. It can be argued that such scenarios are unrealistic for these countries, or that the differences between these countries will be much more significant than between the EU member countries after 1 May 2004 and acceding countries.

Nontheless, the general trend for the non-EU, non-acceding countries shows an increase of 11,2% to 146,1% for exports for the 20-year period of 2000-2020 and a higher increase of 11,05% to 197,85% for imports, for the same period.

2.3.4 Transport trends

Transport demand forecasting was performed: (a) by analyzing the current trends in transport industry in order to identify existing interrelations between transport demand and the transport-relevant socio-economic parameters (population, GDP and foreign trade); and (b) by using the forecasts of such parameters (population, GDP or any other relevant economic data, such as foreign trade) from the base year 2000 to the forecast year 2020.

It has to be noted here that, for some countries, offi cial forecasts do exist, and the apparently simplest option when dealing with forecasting of planning variables, such as

transport growth, is to use offi cial forecasts. Of course, offi cial forecasts are seldom at a suffi cient level of disaggregation to be directly usable in a modeling exercise; however, they do reduce the amount of work needed. To some extent, the problem with using offi cial forecasts is that they sometimes refl ect the expected effect of economic and regional policies whose success may actually depend on other uncontrollable factors like international trade and cooperation. Therefore, for this project, even if offi cial forecasts of transport growth existed for some countries, they were treated with reticence and as a reference/comparison point.

– EU member countries before 1 May 2004

For the EU member countries before 1 May 2004, an increase is expected in passenger and freight transport.

The two basic factors underlying the continuing growth of passenger transport in the EU member countries before 1 May 2004 are (a) growing incomes and (b) growing car ownership, both strongly correlated with GDP growth.

Freight transport growth, is closely linked to changes in the volume and structure of economic activity in EU member countries before 1 May 2004. The main underlying factors stimulating the growth are (a) globalization of the economy and liberalization of the internal market, (b) complex trading networks evolvement, (c) specialization of production processes and preferences of customers and (d) the still low load factors.

Regarding modal share, road is by far the fastest growing mode for both passenger and freight transport.

In summary, the following trends are expected in the EU member countries before 1 May 2004, for the 20-year period of 2000-2020:

- Annual growth in passenger transport by car: 1,32% to 1,81%
- Annual growth in passenger transport by bus/coaches: 0,03% to 0,19%
- Annual growth in passenger transport by rail: 1,31% to 2,55%
- Modal share between road and rail for passenger transport will remain almost the same, with a very slight decrease for road
- Annual growth in freight transport by road (trucks): 3,2% to 3,38%
- Annual growth in freight transport by rail: 3,43% to 3,67%
- Modal share between road and rail for freight transport will remain almost the same, with a very slight decrease for road

– EU member countries after 1 May 2004 and acceding countries

For the EU member countries after 1 May 2004 and acceding countries, an increase is expected in passenger and freight transport, though the magnitude of the increase is not completely known. There are important data gaps on passenger transport that hamper a complete assessment of passenger and freight transport demand. Nonetheless, some comments can be made for changes in modal share.

A negative trend is to be expected in public transport of the EU member countries after 1 May 2004 and acceding countries that can be explained by the higher competitiveness of

private cars, which are also seen as a symbol of the higher standard of living experienced in the EU. Additionally, decreasing accessibility, a consequence of both urban sprawl and degrading public transportation systems, can also be mentioned as an explaining factor behind decreasing passenger transport demand for rail and buses.

As it concerns freight transport, the share of road transport is expected to increase but rails' share is expected to remain almost the same -if not decrease -due to (a) an increase in rail transport prices, (b) liberalization and deregulation in road transport, which is close to completion; in the case of railways, this process is much slower; road transport is therefore more efficient than rail transport and (c) capacity expansion of most infrastructure is directed to roads.

In summarizing, the following trends are expected in the EU member countries after 1 May 2004 and acceding countries, for the 20-year period of 2000-2020:

- Annual growth in passenger transport by car: 2,07% to 3,10%
- Annual growth in passenger transport by bus/coaches: - 0,01% to - 0,28%
- Annual growth in passenger transport by rail: 0,75% to 1,18%
- Modal share between road and rail for passenger transport will remain almost the same, with a slight increase for road
- Annual growth in freight transport by road (trucks): 2,49% to 2,77%
- Annual growth in freight transport by rail: 2,57% to 2,59%
- Modal shares between road and rail for freight transport will dramatically change; freight transport by road is expected to increase by almost 43%, while for rail will decrease by 60%, until 2020.

– Non-EU, non-acceding countries

For the non-EU, non-acceding countries, limited or no data existed to support forecasting. Based on the limited data from 3 countries, Bosnia & Herzegovina, Serbia & Montenegro and The former Yugoslav Republic of Macedonia, accumulated traffic projections were made to the horizon year 2020.

In summary, the following trends are expected in the non-EU, non-acceding countries for the 20-year period of 2000-2020.

- Accumulated road traffic growth: *varies from* 187,2% to 255,6%
- Accumulated rail traffic growth: *varies from* 61,2% to 81,6%

The forecasted economic growth and traffic growth served as input for the Methodology for Evaluation/Prioritization of projects of TEM and TER Projects' Master Plan.

3. METHODOLOGY ON EVALUATION AND PRIORITIZATION OF INFRASTRUCTURE/INVESTMENT NEEDS

3.1 Objective

The ultimate goal of the methodology is to identify project's prioritization/ categorization, in order to support the elaboration of a medium-and long-term investment strategy in the region concerned and encourage the realization of projects that have good chances of implementation and fall within the TEM and TER Projects' Master Plan objectives.

The methodology can be divided in four phases. a) *Identification* -according to generic criteria- of the projects that are worth further analysis and evaluation; b) *forecasting* the future conditions of the identified network; c) *evaluation* of the selected projects, with respect to specific evaluation criteria; d) *prioritization* of the projects -based on the evaluation results- in order to classify them into four priority categories.

The latter mentioned phase is further divided in three prioritization levels, as shown in Figure 1.

3.2 Projects Identification Phase

This phase is designed in three screening levels, the first dealing with the projects' "**relevance**", the second with their "**readiness**" and the third with their "**viability**". All three levels are simple and easy to apply in this first stage of the project, in order to choose from the National Plans, the projects *(local, national and international)* that are worth further evaluation.

Thorough evaluation will be performed in order to mainly identify investment priorities and later establish a timetable for their realization and assess cost and financing arrangements within the time horizon of 2020.

Thorough evaluation will be applied **only** for the projects passing all the screening levels. The ones with insufficient information for the identification phase or the ones that will not pass all the screening levels will be automatically classified in the last priority category, which lists all projects to be implemented at a later stage.

3.2.1 1st Level: Relevance of Project

- The project is consistent with UNECE AGR, AGC, AGTC, TEM and TER technical standards and recommendations, respectively.
- The project advances one or more goals of the TEM and TER Projects' Master Plan
- The project is on a main trans-European axis pertinent to the internal market of the enlarged Europe, the Pan-European Transport Corridors, TINA, REBIS, TEN-T etc.
- The project is contributing to the connection of TEM and TER Networks to other regions (e.g. the 4 Euro-Asian corridors identified at the Second International Euro-Asian Conference on Transport, St. Petersburg, September 2000).

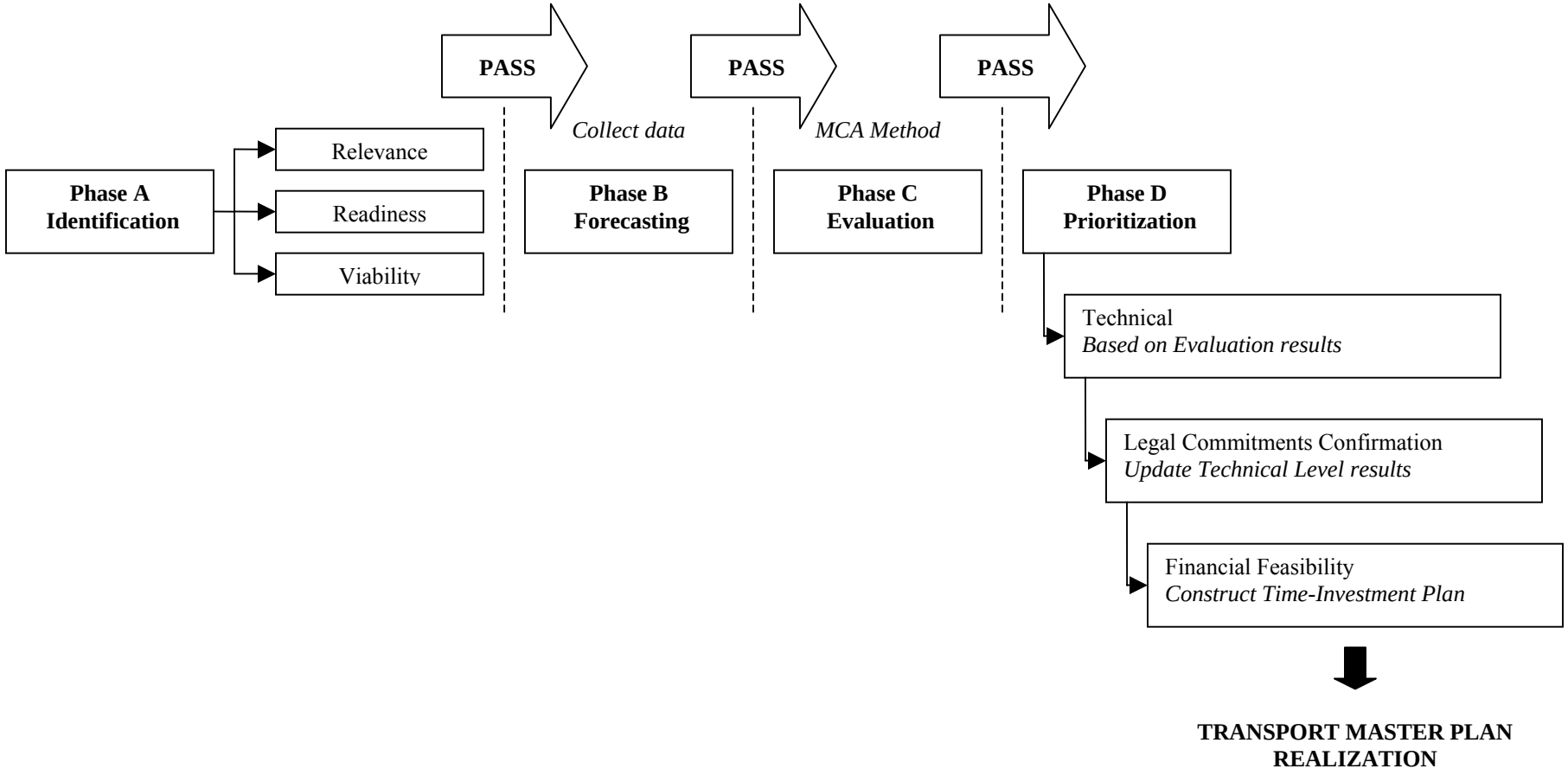


Figure 1 Methodology Outline

- The project is capable of reducing bottlenecks and eliminating missing links
- The project is consistent with the objectives of country's National Plans, or neighbour countries plans, or other sub-area plans, or the visions of country leadership.

3.2.2 2nd Level: Readiness of Project

- The project has been defined and development responsibility has been established and acknowledged (e.g. in terms of a) existing budget for the project in country's public investment budget, b) project's assignment to a specific agency, which will be responsible for its planning and/or execution, c) existence of studies).
- Additional considerations could be:
- Whether a management plan exists that can lead to a successful implementation of the project (in other words, the responsible agency has approved the time plan for the project implementation)

3.2.3 3rd Level: Viability of Project

- For the purpose of TEM and TER Projects' Master Plan projects with a minimum budget amounting to 10 million € per project were considered.
- The existence of evidence, out of the project's feasibility study, showing potential economic viability (e.g. acceptable IRR and other measures for socioeconomic benefits), and firm commitments from the concerned countries to carry out the required impact assessments with a view to completing the project within an agreed timeframe (This criterion assumes that a feasibility study is already implemented and accepted).
- Whether there are no major environmental constraints (major according to international treaties for protected areas) that would prevent the start of implementation
- Whether the expected/ forecasted demand associated with the project, can justify the need for the project.

3.3 Forecasting Phase

Forecasting for TEM and TER Projects' Master Plan project was performed on a macro level, using the alternative scenarios of growth –as presented earlier in this report- as well as

readily available data as collected from the TEM and TER countries, using specific data templates.

3.4 Evaluation of Projects Phase

The still very preliminary level of definition of most projects, the lack of precise information on the present situation, the imperfect knowledge of transport demand perspectives, the large array in types of projects, as well as the specific objectives of TEM, tend in favor of utilizing a Multi-Criteria Analysis, instead of any other method, to compare and evaluate the identified projects.

Such a method allowed available information to be taken into account on projects, even at their very preliminary level of definition, as well as background data. At the same time, some specific elements of particular interest for the decision-makers were introduced.

Criteria definition

The criteria for the evaluation were defined according to three basic concerns:

- the socio-economic return on investment;
- the functionality and the coherency of the network;
- the strategic/ political concerns of the network.

Under these three fundamental orientations of the evaluation process, the following criteria have been introduced.

CLUSTER A - Socio-economic return on investment (C_A):

- Degree of urgency (C_{A1}),
- Cost effectiveness (C_{A2}),
- Relative investment cost (C_{A3}),
- Level of transport demand (C_{A4}),
- Financing feasibility (C_{A5}).

CLUSTER B - Functionality and coherency of the network (C_B):

- Relative importance of international demand of traffic/ passengers (C_{B1}),
- Relative importance of international demand of traffic/ goods (C_{B2}),
- Alleviation of bottlenecks (C_{B3}),
- Interconnection of existing networks (international level) (C_{B4}),
- Interoperability of networks (C_{B5}).

CLUSTER C - Strategic/ Political concerns regarding the network (C_C):

- Border effects (C_{C1}),
- Political commitment (C_{C2}),

- Regional and international cooperation (C_{C3}),
- Historical/ heritage issues (C_{C4}),
- Economic impact (C_{C5}).

Following set criteria scores for each project, the evaluation and projects prioritization were proposed.

Criteria quantification

Criteria were quantified for each of the projects considered either by direct classification according to available data or measurable characteristics, or by "quality attributes", provided by expert judgment from the involved national authorities. To make the various criteria scores compatible it was necessary to transform them into one common measurement unit.

For the quantitative criteria, their quantification was not based on a specific utility function –like in all conventional MCA methods -, but on direct scoring at an artificial scale, which will be performed by connecting threshold values of the artificial scale with threshold values of the physical scale. Physical's scale threshold values were based mainly on project nature (i.e. road, rail, port/ maritime). The use of artificial scale was deemed necessary due to the different measurement units of the criteria under consideration.

The artificial scale chosen is: A = 5, B = 4, C = 3, D = 2, E = 1, with 5 the highest value.

Criteria weighting

At this stage, for establishing the criteria weights "Saaty's Analytical Hierarchy Process" (AHP) was used, because it is simple, transparent and widely accepted procedure. In addition, the existence of "Eigen vector method" in AHP provides fast and reliable weights: fast in expressing the short time necessary for its application; and reliable in minimizing the subjectivity of weights' values. It should be noted here that the resulted criteria weights should add up to unit.

Total score per project

The total score of each project in each country was calculated based on multi-attribute utility theory (MAUT). This was done by multiplying the value score on each criterion by the weight of that criterion, and then adding all those weighted scores together.

Total score per project is obtained by integrating the total score of each project for all countries involved in the project. This was done using Spatial Weights (SW), reflecting the impact of the project to each country if more than one is present. The underlying assumption was that the impacts were proportional to the length of the specific project in the country under consideration.

3.5 Prioritization Phase

The prioritization phase was performed in three levels:

- Technical (direct application of the evaluation methodology, which provides the scores for projects).
- Compliance with prior commitments that set priorities (e.g. TEN-T network for EU member states): then perform corrective actions if needed for the priorities.
- Financial capability of the country (comparison with 1,5% of GDP per year), to secure the good implementation of the prioritized projects: this level forced some projects to shift over time.

Technical prioritization

The ultimate goal of the technical prioritization level was to identify project's categorization -into four pre-defined priority categories- according to their scores, in order to further support the elaboration of a short, medium and long-term investment strategy in each country concerned and encourage the realization of projects that have good chances of implementation and fall within the TEM and TER Projects' Master Plan objectives. The four pre-defined priority categories are:

- *Priority I*: projects, which may be funded and implemented rapidly, including on-going projects up to 2010.
- *Priority II:* projects requiring some additional investigations for final definition before likely financing, or planned for implementation up to 2015.
- *Priority III:* projects requiring further investigations for final definition and scheduling before possible financing, or planned for implementation up to 2020.
- *Priority IV*: projects to be implemented in the long run, including the projects where insufficient data existed.
- And if the projects scores lie between:
- 4-5 then it belongs to priority category I.
- 3 -4 then it belongs to priority category II.
- 2 -3 then it belongs to priority category III.
- 1-2 then it belongs to priority category IV.

Compliance with prior commitments

The results of technical prioritization level were cross-checked with priorities assigned in similar procedures (EU Van Miert High Level Group, TINA etc.) that are already accepted and finalized.

The projects, the TEM and TER Projects' Master Plan technical prioritization of which was in compliance with other prior binding commitments, were left as they were. Those not in compliance were modified according to prior commitment.

It has to be noted here that very few cases existed, where changes were made.

Financial capability of countries

In short in this level the below-mentioned steps were followed:

- Estimation of budget for the implementation of the proposed TEM and TER Projects' Master Plan
- Investment budget on annual basis compared with 1,5% percentage of GDP (per country) to identify financial feasibility
- Construction of complete time-tables of investments
- Finalization of priorities
- Identification of possibilities of stage construction per projects
- Estimation of financial resources available

4. REALIZATION OF TEM AND TER PROJECTS' MASTER PLAN

The step-by-step implementation of the Methodology, led to the realization of TEM and TER Projects' Master Plan.

First, the results of the technical prioritization level of the Methodology, hence the direct application of the Methodology, were used, confirmed in prior binding commitments prioritization level and fed the financial capability prioritization level, which examined the financial capability of the countries to implement all the projects to finally present the short-term, mid-term and long-term investment plan.

The presentation of the results is done in two ways for a better "view" of the Master Plan. First they are presented on a country level and then aggregated figures are presented for all the prioritized projects.

4.1 TEM and TER Projects' Master Plan Results per Country

Austria

Austria proposed 7 projects (1 TEM and 6 TER projects) of the total implementation cost of 11,073.8 million Euros, of which, 173.8 million Euros for TEM and 10,900 million Euros for TER.

All Austrian projects belong to Priority Category I.

According to the implementation/investment timetable, 14% of the Austrian TEM and TER Network will be completed before 2010. The rest, 86%, will be completed before 2013.

Funding is secured for all projects.

Notes: The rail projects were not "submitted" in the proper format in the framework of the TEM and TER Projects' Master Plan, but in a general description in the Austrian Transport Master Plan of 2001 ("Generalverkehrsplan from 2001"). Therefore, the implementation of the methodology for the evaluation of these projects was not possible. However, based on the time and investment plan in the country's transport

master plan, it was made possible to define the priority category of each project and estimate its budget.

Belarus

For Belarus, 4 projects were considered (3 TEM and 1 TER projects) of total implementation cost 23.1 million Euros, of which, 22.44 million Euros for TEM and 0.57 million Euros for TER.

All Belarusian projects belong to Priority Category I.

According to the implementation/investment timetable, 100% of the Belarusian TEM and TER Network will be completed before 2010.

Funding is secured for all projects.

Notes: The projects were not "submitted" in the framework of the TEM and TER Projects' Master Plan, to support elaboration of prioritization Methodology, but suffi cient information existed in a document of UNECE of October 2004, entitled "Euro-Asian Linkages Information for Investment Activities".

Bosnia & Herzegovina

Bosnia and Herzegovina proposed 15 projects (8 TEM and 7 TER projects) of a total implementation cost of 4,519.6 million Euros, of which, 4,165.5 million Euros for TEM and 354.1 million Euros for TER.

Out of the 15 projects, 2 belong to Priority Category I and their implementation cost is 146.25 million Euros and the remaining 13 belong to Priority Category II and their implementation cost is 4,373.35 million Euros.

According to the implementation/investment timetable, 14% of the Bosnia and Herzegovina TEM and TER Network will be completed before 2010; 40% of the Bosnia and Herzegovina TEM and TER Network will be completed between 2010–2015; 6% of the Bosnia and Herzegovina TEM and TER Network will be completed between 2015–2020; 40% of the Bosnia and Herzegovina TEM and TER Network will be completed after 2020.

Funding is secured only for the 25% of the projects' total cost. For the unfunded projects, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Bulgaria

Bulgaria proposed 18 projects (10 TEM and 8 TER projects) of a total implementation cost of 6,012.76 million Euros, of which, 1,043.76 million Euros for TEM and 4,969 million Euros for TER.

Out of the 18 projects, 7 belong to Priority Category I and their implementation cost is 923.3 million Euros and the rest 11 belong to Priority Category II and their implementation cost is 5,089.47 million Euros.

According to the implementation/investment timetable 33% of the Bulgarian TEM and TER Network will be completed before 2010; 27% of the Bulgarian TEM and TER Network will be completed between 2010–2015; 22% of the Bulgarian TEM and TER Network will be completed between 2015–2020; 18% of the Bulgarian TEM and TER Network will be completed after 2020.

Funding is secured only for the 38% of the projects' total cost. For the unfunded projects, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Croatia

For Croatia, 43 projects were considered (27 TEM and 16 TER projects) of a total implementation cost 3,711.40 million Euros, of which, 3,115.8 million Euros for TEM and 595.6 million Euros for TER.

Out of the 43 projects, 24 belong to Priority Category I and their implementation cost is 1,396.6 million Euros and the remaining 19 belong to Priority Category II and their implementation cost is 1,780.80 million Euros.

According to the implementation/investment timetable, 56% of the Croatian TEM and TER Network will be completed before 2010; 30% of the Croatian TEM and TER Network will be completed between 2010–2015; 12% of the Croatian TEM and TER Network will be completed between 2015–2020; 2% of the Croatian TEM and TER Network will be completed after 2020.

Funding is secured for the 70% of the projects' total cost. For the remaining 30%, it is unknown -based on the readily available data -if funding is secured or not. In the latter case, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: The TER projects were not "submitted" in the framework of the TEM and TER Projects' Master Plan, to support elaboration of Prioritisation Methodology, but sufficient information existed in the REBIS study for the 16 rail projects.

Czech Republic

The Czech Republic proposed 13 projects (5 TEM and 8 TER projects) of a total implementation cost of 6,315.92 million Euros, of which, 3,273 million Euros for TEM and 3,042.92 million Euros for TER.

Out of the 13 projects, 10 belong to Priority Category I and their implementation cost is 4,344.3 million Euros and the remaining 3 belong to Priority Category II and their implementation cost is 1,971.62 million Euros.

According to the implementation/investment timetable, 69% of the Czech TEM and TER Network will be completed before 2010; 8% of the Czech TEM and TER Network will be completed between 2010–2015; 23% of the Czech TEM and TER Network will be completed between 2015–2020.

Funding is secured for all projects.

Georgia

For Georgia, 6 projects were considered (4 TEM and 2 TER projects) of a total implementation cost 1,914.98 million Euros, of which, 88.6 million Euros for TEM and 1,826.37 million Euros for TER.

Out of the 6 projects, 5 belong to Priority Category I and their implementation cost is 1,399.01 million Euros and 1 belongs to Priority Category II and its implementation cost is 515,97 million Euros.

According to the implementation/investment timetable, 66% of the Georgian TEM and TER Network will be completed before 2010; 33% of the Georgian TEM and TER Network will be completed after 2020.

Funding is secured for all of the projects apart from one road (TEM) project. In the latter case, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: The TEM projects were not "submitted" in the framework of the TEM and TER Projects' Master Plan, to support elaboration of Prioritization Methodology, but sufficient information existed in a document of UNECE of October 2004, entitled "Euro-Asian Linkages Information for Investment Activities" for the 4 road (TEM) projects.

The Ministry of Economic Development of Georgia, by its letter No. 26/747/9-6 of 7 April 2006, proposed some corrections to the data concerning the two railway projects of Georgia. As this request could not be met due to its late submission, this letter is annexed to the present report (Annex VIII).

Greece

Greece proposed 17 projects (5 TEM and 12 TER projects) of a total implementation cost of 6,420.43 million Euros, of which, 794 million Euros for TEM and 5,626.43 million Euros for TER.

Out of the 17 projects, 7 belong to Priority Category I and their implementation cost is 1,900.63 million Euros, 9 belong to Priority Category II and their implementation cost is 4,284.8 million Euros and 1 belongs to Priority Category III and its implementation cost is 235 million Euros.

According to the implementation/investment timetable, 29% of the Greek TEM and TER Network will be completed before 2010; 29% of the Greek TEM and TER Network will be completed between 2010–2015; 35% of the Greek TEM and TER Network will be completed between 2015–2020; and 7% of the Greek TEM and TER Network will be completed after 2020.

Funding is secured for 29% of the projects' total cost. For the rest, 71% identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Hungary

Hungary proposed 43 projects (20 TEM and 23 TER projects). TEM projects total implementation cost is unknown – based on the readily available data -. TER projects' total implementation cost is 4,453.89 million Euros.

Out of the 20 TEM projects, 11 belong to Priority Category I and 9 belong to Priority Category II, but for both categories the implementation cost is unknown as mentioned above.

Out of the 23 TER projects, 16 belong to Priority Category I and their implementation cost is 2,666,60 million Euros, 1 belongs to the intermediate Priority Category I-II and its implementation cost is 80.37 million Euros, 5 belong to Priority Category II and their implementation cost is 767.91 million Euros and 1 belongs to the intermediate Priority Category II-III and its implementation cost is 939 million Euros. The intermediate categories exist only because these projects were broken down to sub-projects.

For conformity reasons with the pre-selected Priority Categories, these "intermediate Priority Category" projects were treated as if they belong in the higher of the two Priorities, i.e. if intermediate Priority Category I-II, then the project belongs to Priority Category I.

According to the implementation/investment timetable 44%, of the Hungarian TEM and TER Network will be completed before 2010; 26% of the Hungarian TEM and TER Network will be completed between 2010–2015; 5% of the Hungarian TEM and TER Network will be completed between 2015–2020; 2% of the Hungarian TEM and TER Network will be completed after 2020; for the remaining 23% of the Hungarian TEM and TER Network, it is unknown - based on the readily available data - when it will be completed.

Funding is secured for 44% of the projects total cost. For the 9% of the projects' total cost funding is not secured and for the remaining 47% it is unknown - based on the readily available data - if funding is secured or not. In the case of unfunded projects, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: TEM projects as "submitted" in the framework of the TEM and TER Projects' Master Plan presented insufficient data to support elaboration of Prioritization Methodology. Their ranking in Priority Categories was provided directly by Hungary, regardless of the scores they received after the Evaluation Methodology. For TER projects some additional information, apart from that received from the country in the framework of the project, was collected from ISPA information sheets.

Italy

No data existed and none received from this country, to support elaboration of Prioritization Methodology. However, as Italy is among the TEM and TER countries in which the TEM and TER Networks are almost complete (99% of its TEM and TER Networks are already in place), the lack of project proposals was not considered to affect the efficiency of this work.

Lithuania

Lithuania proposed 32 projects (10 TEM and 22 TER projects). For 7 TEM projects there was absolutely no data. For the remaining 25 projects, the total implementation cost is 1,900.1 million Euros, of which, 97 million Euros for TEM and 1,803.1 million Euros for TER.

Out of the 32 projects, 19 belong to Priority Category I and their implementation cost is 1,437.5 million Euro, 6 belong to Priority Category II and their implementation cost is 462.6 million Euros and the 7 projects that presented no data categorized directly in Priority Category IV and their implementation cost is unknown.

According to the implementation/investment timetable, 47% of the Lithuanian TEM and TER Network will be completed before 2010; 28% of the Lithuanian TEM and TER Network will be completed between 2010–2015; 3% of the Lithuanian TEM and TER Network will be completed between 2015–2020; 22% of the Lithuanian TEM and TER Network will be completed after 2020.

Funding is secured for the 72% of the projects' total cost. For the remaining 28% it is unknown if funding is secured or not since there were no available data. In case the 28% is unfunded, then identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: 7 out of 10 TEM projects were "submitted", in the framework of the TEM and TER Projects' Master Plan, in an inappropriate format and presented insufficient data to support elaboration of Prioritization Methodology. These projects were treated as Priority IV and without details in financing.

Poland

For Poland, 97 projects were considered (91 TEM and 6 TER projects). For 65 (all TEM) projects there was absolutely no data. For the remaining 32 projects, the total implementation cost is 2,674.5 million Euros, of which, 2,080 million Euros for TEM and 594.5 million Euros for TER.

Out of the 97 projects, 32 belong to Priority Category I and their implementation cost is 2,674.5 million Euros and the 65 projects that presented no data were categorized directly in Priority Category IV and their implementation cost is unknown.

According to the implementation/investment timetable 33% of the Polish TEM and TER Network will be completed before 2010. For the remaining 66% of the Polish TEM and TER Network, it is unknown when it will be completed, it can only be estimated that it will start in the long-term.

With the exception of one rail project where funding is secured, funding seems to be a problem for all projects that are in Priorities I and II. This is due to the fact that for these projects the prioritization was done directly by the country without supporting data such as the funding sources and allocation per project. The few details of funding were found in ISPA information sheets. However, in the Schedule of Motorways and Expressways of the Polish General Directorate of National Roads and Motorways, it seems that funding is secured for projects in Priority I and II, but the allocation of funds in each project is unknown. For the projects in Priority IV, where no data existed either, it is unknown if funding sources are secured or not. In the case of unfunded projects, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: Most of the TEM projects as "submitted" in the framework of the TEM and TER Projects' Master Plan presented no data to support elaboration of Prioritization Methodology, so they were categorized directly in Priority Category IV. As for the rest, which are mostly in Priority I and some in Priority II, they presented the same quality of data as the ones in Priority IV but they were considered important and their priorities were given directly by the country. As for the information regarding the latter's timeplan and investment costs, these were taken from "Polish General Directorate of National Roads and Motorways: Schedule of Motorways and Expressways". As it concerns TER, no data was received from this country in the framework of the TEM and TER Projects' Master Plan, to support elaboration of Prioritization Methodology, but sufficient information existed in ISPA information sheets for 6 rail projects.

Republic of Moldova

The Republic of Moldova proposed 3 projects (1 TEM and 2 TER projects) of a total implementation cost of 500.5 million Euros, of which, 18.2 million Euros for TEM and 482.3 million Euros for TER.

All Republic of Moldova's projects belong to Priority Category I.

According to the implementation/investment timetable, 66% of the Moldavian TEM and TER Network will be completed before 2010. The remaining 33% will be completed after 2020.

Funding is secured for all projects.

Romania

Romania proposed 45 projects (41 TEM and 4 TER projects) of a total implementation cost of 20,601.19 million Euros, of which, 17,529.09 million Euros for TEM and 3,072.1 million Euros for TER.

Out of the 45 projects, 17 belong to Priority Category I and their implementation cost is 7,122.39 million Euros and 28 belong to Priority Category II and their implementation cost is 13,478.8 million.

According to the implementation/investment timetable, 18% of the Romanian TEM and TER Network will be completed before 2010; 16% of the Romanian TEM and TER Network will be completed between 2010–2015; 18% of the Romanian TEM and TER Network will be completed between 2015–2020; 48% of the Romanian TEM and TER Network will be completed after 2020.

Funding is secured for 56% of the projects' total cost. For the remaining 44%, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: In Romania the categorization of Priority Category II was not followed strictly as it concerns investment procedures, since the trial and error process in investment plan forced some projects in Priority Category II to be "moved" in the time horizon in Priority Category III or IV as it concerns their investment. These projects were the most expensive, and that was the reason for their movement. Therefore in Romania, unlike other countries, the time horizon of project construction might be different from investment horizon. Maybe the investment plan could be "narrowed" if Romania reconsiders the priorities given to some projects.

Russian Federation

For the Russian Federation, 31 projects were considered (12 TEM and 19 TER projects) at a total implementation cost of more than 11,340 million Euros, of which, 4,389.68 million Euros for TEM and 6,950.32 million Euros for TER.

All Russian projects belong to Priority Category I.

According to the implementation/investment timetable, 100% of the Russian TEM and TER Network will be completed before 2010.

For all the projects, it is unknown if funding sources are secured or not - according to the readily available data. In the latter case, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: The projects of this country were not "submitted" in the framework of the TEM and TER Projects' Master Plan, to support elaboration of Prioritization Methodology, but sufficient information existed in the country's National Report in the framework of the UNECEUNESCAP Project on developing Euro-Asian Transport Linkages.

According to the Russian Federation National Report, road and rail projects are mainly parts of two Euro-Asian corridors: the TRANSSIB and "North-South" corridors. Volumes of investments into the development of the TRANSSIB corridor up to the year 2010 will be more than 7.5 billion US dollars, and into the "North-South" corridors – 6.4 billion US dollars. Respectively, these amounts (in Euros) are 6.14 billion Euros and 5.2 billion Euros. The investment costs of road and rail projects belonging in each Euro-Asian corridor - in total -are presumably less than the investment volumes in the corridors, since both TRANSSIB and "North-South" corridors include other kinds of transport projects apart from road and rail, i.e. ports.

It has to be noted here that no sufficient data existed in the national report to support the calculation of investment cost per year for each project and, therefore, the country's expenses per year for TEM and TER construction, but the starting and ending year of construction for most of the projects was known. Furthermore, no funding information was available. Therefore, for the Russian Federation it was difficult to prepare a

cost/investment plan on a yearly basis in order to check the rule of **'total investment cost per year < 1.5% GDP'**, but since the total cost of the projects (being less that the investment volume of the two Euro-Asian Corridors) under consideration if broken down in years is significantly lower than the country's GDP, it can be assumed that there will be no problem for the Russian Federation to implement the projects between the selected/indicated years.

Finally, for the same reason, the estimation of TEM and TER individual implementation budgets are estimated under the hypothesis that each project's cost (TEM or TER) are almost equal.

Serbia & Montenegro

For Serbia and Montenegro, 41 projects were considered (28 TEM and 13 TER projects) of a total implementation cost of 1,398.9 million Euros, of which, 933.8 million Euros for TEM and 465.1 million Euros for TER.

Out of the 41 projects, 37 belong to Priority Category I and their implementation cost is 1,024.8 million Euros and 4 belong to Priority Category II and their implementation cost is 374.1 million Euros.

According to the implementation/investment timetable, 90.2 % of the Serbian and Montenegrian TEM and TER Network will be completed before 2010; 9.8 % of the Serbian and Montenegrian TEM and TER Network will be completed between 2010–2015.

Funding is secured for 12.1% of the projects' total cost. For the remaining 87.9%, it is unknown if funding is secured or not since there was no available data. In case the 87.9% is unfunded, then identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: The projects of this country were not "submitted" in the framework of the TEM and TER Projects' Master Plan, to support elaboration of the Prioritization Methodology, but sufficient information existed in the REBIS study.

Slovakia

Slovakia proposed 24 projects (19 TEM and 5 TER projects) of a total implementation cost 6,199.88 million Euros, of which, 4,379.35 million Euros for TEM and 1,820.53 million Euros for TER.

Out of the 24 projects, 11 belong to Priority Category I and their implementation cost is 3,685.49 million Euros and 13 belong to Priority Category II and their implementation cost is 2,514.39 million Euros.

According to the implementation/investment timetable, 4% of the Slovakian TEM and TER Network will be completed before 2010; 8% of the Slovakian TEM and TER Network will be completed between 2010–2015; 42% of the Slovakian TEM and TER Network will be completed between 2015–2020; 46% of the Slovakian TEM and TER Network will be completed after 2020.

Funding is secured for all projects.

Slovenia

Slovenia proposed 14 projects (7 TEM and 7 TER projects) of a total implementation cost of 3,686.68 million Euros, of which, 2,372.08 million Euros for TEM and 1,314.60 million Euros for TER.

Out of the 14 projects, 13 belong to Priority Category I and their implementation cost is 3,476.68 million Euros and 1 belongs to Priority Category II and its implementation cost is 210 million Euros.

According to the implementation/investment timetable, 36% of the Slovenian TEM and TER Network will be completed before 2010; 43% of the Slovenian TEM and TER Network will be completed between 2010–2015; 7% of the Slovenian TEM and TER Network will be completed between 2015-2020; 14% of the Slovenian TEM and TER Network will be completed after 2020.

Funding is secured for 50% of the projects' total cost. For the remaining 50%, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

The former Yugoslav Republic of Macedonia

The former Yugoslav Republic of Macedonia proposed 8 projects (3 TEM and 5 TER projects) of a total implementation cost of 1,425.27 million Euros, of which, 913.7 million Euros for TEM and 511.57 million Euros for 2 out of 5 TER, since for 3 TER projects the implementation cost is unknown.

Out of the 8 projects, 2 belong to Priority Category I and their implementation cost is 63.7 million Euros, 3 with an implementation cost of 1,361.57 million Euros, it is unknown in which Priority Category they belong due to lack of data and for the last 3 it is unknown how much they cost and in which Priority Category they belong due to lack of data.

For conformity reasons with the pre-selected Priority Categories, these "unknown Priority Category" projects were treated as if they belong in Priority Category IV, since this Priority Category contains projects with no sufficient data to support proper evaluation/prioritization.

Thus, out of the 8 projects, 2 belong to Priority Category I and their implementation cost is 63.7 million Euros, 6 belong to Priority Category IV, of which 3 have a total implementation cost of 1,361.57 million Euros, and for the remaining 3, is unknown how much they cost due to lack of data.

According to the implementation/investment timetable, 25% of the FYROM TEM and TER Network will be completed before 2010; for the remaining 75% it is unknown for the same reason mentioned above.

Funding is secured for 25% of projects' total cost. For the remaining 75%, it is unknown based on the readily available data - if funding is secured or not. In the latter case, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Notes: The projects were not "submitted" in proper format in the framework of the TEM and TER Projects' Master Plan, to support elaboration of Prioritization Methodology, but sufficient information existed in a brief description of the country's priorities and therefore 8 projects were identified.

Turkey

Turkey proposed 24 projects (20 TEM and 4 TER projects) of a total implementation cost of 6,658.27 million Euros, of which, 3,123.47 million Euros for TEM and 3,534.8 million Euros for TER.

Out of the 24 projects, 18 belong to Priority Category I and their implementation cost is 2,998.58 million Euros and 6 belong to Priority Category II and their implementation cost is 3,659.68 million Euros.

According to the implementation/investment timetable 50% of the Turkish TEM and TER Network will be completed before 2010; 29% of the Turkish TEM and TER Network will be completed between 2010–2015; 21% of the Turkish TEM and TER Network will be completed between 2015–2020.

Funding is secured for 54% of the projects' total cost. For the remaining 46%, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Ukraine

For Ukraine, 6 projects were considered (4 TEM and 2 TER projects) of a total implementation cost of 1,283 million Euros, of which, 1,043 million Euros for TEM and 240 million Euros for TER.

Out of the 6 projects, 3 belong to Priority Category I and their implementation cost is 483.61 million Euros and 3 belong to Priority Category II and their implementation cost is 799.2 million Euros.

According to the implementation/investment timetable, 50% of the Ukrainian TEM and TER Network will be completed before 2010; 50% of the Ukrainian TEM and TER Network will be completed between 2010–2015.

Funding is secured for all projects.

Notes: The TER projects were not "submitted" in the framework of the TEM and TER Projects' Master Plan, to support elaboration of Prioritization Methodology, but sufficient information existed in a document of UNECE of October 2004, entitled "Euro-Asian Linkages Information for Investment Activities".

4.2 TEM and TER Projects' Master Plan Results per Country Group

It is interesting to view the results from the country-group perspective, following the country groups presented in Chapter 2, EU member countries before 1 May 2004, EU member countries after 1 May 2004 and acceding countries, Non-EU, non-acceding countries.

EU member countries before 1 May 2004

The EU member countries before 1 May 2004 (Austria, Italy and Greece) proposed 24 projects (6 TEM and 18 TER projects) of a total implementation cost of 17,494.23 million Euros, of which, 967.8 million Euros for TEM and 16,526.43 million Euros for TER

Out of the 24 projects, 14 belong to Priority Category I and their implementation cost is 12,974.43 million Euros, 9 belong to Priority Category II and their implementation cost is 4,284.8 million Euros and 1 belongs to Priority Category III and its implementation cost is 235 million Euros.

According to the implementation/investment timetable of this country group: 25% of the TEM and TER Network will be completed before 2010; 46% of the TEM and TER Network will be completed between 2010–2015; 25% of the TEM and TER Network will be completed between 2015–2020; 4% of the TEM and TER Network will be completed after 2020.

Funding is secured for 50% of the projects' total cost. For the remaining 50%, identification of the possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

EU member countries after 1 May 2004 and acceding countries

The EU member countries after 1 May 2004 and the acceding countries (Bulgaria, Croatia, Czech Republic, Hungary, Lithuania, Poland, Romania, Slovakia, Slovenia and Turkey) proposed 353 projects (250 TEM and 103 TER projects). For the 261 projects, out of these 353, the total implementation cost is 61,197.53 million Euros, of which, 37,013.54 million Euros for TEM and 24,183.99 million Euros for TER. For the remaining 92 (all TEM), the implementation cost is unknown.

Out of the 353 projects, 168 belong to Priority Category I and their implementation cost is 30,130.63 million Euros, 11 belong to Priority Category I and their implementation cost is unknown, 91 belong to Priority Category II and their implementation cost is 31,066.9 million Euros, 9 belong to Priority Category II and their implementation cost is unknown and 72 belong to Priority Category IV and their implementation cost is unknown.

According to the implementation/investment timetable of this country group: 35% of the TEM and TER Network will be completed before 2010; 16% of the TEM and TER Network will be completed between 2010 – 2015; 11% of the TEM and TER Network will be completed between 2015 – 2020; 14% of the TEM and TER Network will be completed after 2020.

Funding is secured for 47% of the projects' total cost. Funding is not secured for 15% of the projects' total cost and for the remaining 38%, it is unknown if funding is secured or not. In the latter two cases, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

Non-EU, non-acceding countries

The non-EU, non-acceding countries (Belarus, Bosnia and Herzegovina, FYROM, Georgia, Republic of Moldova, Russian Federation, Serbia and Montenegro and Ukraine) proposed 114 projects (63 TEM and 51 TER projects). For the 111 projects, out of these 114, the total implementation cost is 22,405.13 million Euros, of which, 11,575.14 million Euros for TEM and 10,829.99 million Euros for TER. For the rest 3 (all TER), the implementation cost is unknown

Out of the 114 projects, 87 belong to Priority Category I and their implementation cost is 14,980.91 million Euros, 21 belong to Priority Category II and their implementation cost is 6,062.62 million Euros, 3 belong to Priority Category IV and their implementation cost is 1,361.6 million Euros and 3 belong to Priority Category IV and their implementation cost is unknown.

According to the implementation/investment timetable of this country group: 74% of the TEM and TER Network will be completed before 2010; 11% of the TEM and TER Network will be completed between 2010–2015; 4% of the TEM and TER Network will be completed between 2015–2020; 6% of the TEM and TER Network will be completed after 2020 and 5% of the TEM and TER Network is unknown when it will be completed.

Funding is secured for 25% of the projects' total cost. Funding is not secured for 11% of the projects total cost and for the remaining 64% it is unknown if funding is secured or not. In the latter two cases, identifi cation of possible sources of funding, eligibility

criteria for receiving funding and the required procedures are outlined in the framework of the TEM and TER Projects' Master Plans.

4.3 TEM and TER Projects Master Plan Total Results

In total, 491 projects were proposed from the TEM and TER countries and included in the TEM and TER Projects' Master Plan **(319 TEM projects and 172 TER projects)**. The implementation of TEM and TER Network as a whole will need **102,114 billion Euros**, of which, **49,556 billion Euros for TEM** and **52,558 billion Euros for TER**.

Out of these 491 TEM and TER Projects:

- 269 projects categorized in Priority Category I and their implementation cost is 58,085 billion €, (141 TEM projects of a total value of 25,255 billion € and 128 TER projects of a total value of 32,83 billion Euros).
- 11 (all TEM) projects categorized in Priority Category I but their implementation cost is unknown.
- 123 projects categorized in Priority Category II and their implementation cost is 41,41 billion Euros, (84 TEM projects of a total value of 23,22 billion Euros and 39 TER projects of a total value of 18,19 billion Euros).
- 9 (all TEM) projects categorized in Priority Category II but their implementation cost is unknown.
- 1 (TEM) project categorized in Priority Category III and its implementation cost is 0,235 billion Euros.
- 3 projects categorized in Priority Category IV and their implementation cost is 1,36 billion Euros, (1 TEM project of a total value of 0,085 billion Euros and 2 TER projects of a total value of 0,511 billion Euros).
- 75 (72 TEM and 3 TER) projects categorized in Priority Category IV but their implementation cost is unknown.

According to the implementation/investment timetable:

- 44% of the TEM and TER Network will be completed before 2010;
- 16% of the TEM and TER Network will be completed between 2010 – 2015;
- 10% of the TEM and TER Network will be completed between 2015 – 2020;
- 11% of the TEM and TER Network will be completed after 2020 and
- 19% of the TEM and TER Network is unknown when it will be completed.

Separately for TEM Network:

- 36% of the TEM Network will be completed before 2010;
- 13% of the TEM Network will be completed between 2010 – 2015;
- 10% of the TEM Network will be completed between 2015 – 2020;
- 13% of the TEM Network will be completed after 2020 and
- 27% of the TEM Network is unknown when it will be completed.

Separately for TER Network:

- 58% of the TER Network will be completed before 2010;
- 22% of the TER Network will be completed between 2010 – 2015;
- 9% of the TER Network will be completed between 2015 – 2020;
- 7% of the TER Network will be completed after 2020 and
- 3% of the TER Network is unknown when it will be completed.

46 billion Euros of funding is secured covering 45% of the TEM and TER Projects' total implementation cost or about 60% of the projects. Funding is not secured for 16% of the TEM and TER Projects' total implementation cost. For the remaining 39%, it is unknown if funding is secured or not since there was no available data. In any case, for the unfunded projects, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined later in this report.

Separately for TEM: 15.3 billion Euros of funding is secured covering 31% of the TEM Projects total implementation cost. Funding is not secured for 21% of the TEM Projects total cost. For the remaining 48%, it is unknown if funding is secured or not since there was no available data. In any case, for the unfunded projects, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined later in this report.

Separately for TER: 30.5 billion Euros of funding is secured covering 58% of the TER Projects' total implementation cost. Funding is not secured for 10% of the TER Projects' total cost. For the remaining 32%, it is unknown if funding is secured or not since there was no available data. In any case, for the unfunded projects, identification of possible sources of funding, eligibility criteria for receiving funding and the required procedures are outlined later in this report.

Notes: Most of these projects were submitted by countries with sufficient information in order to be evaluated and some found in relevant studies such as TIRS, REBIS, Euro-Asian Transport Linkages, ISPA information sheets, EU Van Miert High Level Group, etc. This large number of road and rail projects was evaluated and the prioritization of the projects was undertaken.

4.4 Identification of TEM and TER Bottlenecks

4.4.1 Identification of TEM Bottlenecks

The methodological approach to identifying the capacity bottlenecks with a special respect to the effects of the truck and bus transport was based on the Methodological Basis for the Definition of Common Criteria Regarding Bottlenecks, Missing Links and Quality of Service of Infrastructure Networks, elaborated by the UNECE Inland Transport Committee Working Party on Transport Trends and Economics. For the purpose of identification of the individual bottlenecks, the level of service concept of the US Highway Capacity Manual (HCM), in the framework of which the level of service C was chosen as still acceptable, and the relation between the capacity of the infrastructure and quality of transport service represented important indicators.

Moreover, in accordance with the findings of the above-mentioned UNECE Inland Transport Committee document, a quantifiable and practical bottleneck criterion to be

found in all European countries was that of road capacity, which permitted to compare internationally the bottlenecks in various countries.

For individual road categories, the following maximum capacities in terms of number of vehicles as the average daily traffic were recommended:

4-lane motorway	60,000 PCU/24 hrs
road of 2 lanes	12,000 PCU/24 hrs

These capacity limits were used to identify the bottlenecks in the TEM Master Plan. When stating the capacity, it was also necessary to evaluate differently the vehicle types according to their infl uence on the traffic flow. The most important role here was played by the trucks and buses, the influence of which was the highest. To take it into account properly, their weights (passenger car equivalents) had to be chosen, depending on the type of terrain, through which the road (motorway) passed.

For two-lane highways , these HCM-based values of trucks´ and buses´ passenger car equivalents were used:

Vehicle type	Type of terrain		
	flat	hilly	mountainous
trucks and buses	2,1	4,5	9,0

Similarly, in order to identify the capacity bottlenecks on four lane TEM motorway (to be removed by adding two or more lanes), the following HCM passenger car equivalents were taken as a basis:

Vehicle type	Type of terrain		
	flat	hilly	mountainous
trucks and buses	1,5	3,0	6,0

On this basis it was possible to identify the expected bottlenecks in the respective five-year periods until 2020 using these equations:

a) for two-lane highways

x + 1,1y □12000 PCU in flat terrain
x + 3,5y □12000 PCU in hilly terrain
x + 8,0y □12000 PCU in mountainous terrain

b) for four-lane motorways (motorways having 6 lanes and more were not taken into account when identifying bottlenecks, their capacity being considered sufficient)

x + 0,5y □60000 PCU in flat terrain
x + 2,0y □60000 PCU in hilly terrain
x + 5,0y □60000 PCU in mountainous terrain

where:

PCU – were passenger car units (equivalents)

x – number of all vehicles

y – number of trucks and coaches.

The potential bottlenecks thus identified were positioned on the interurban (rural) TEM network sections only (i.e. urban areas were excluded). The TEM sections with bottlenecks expected to appear until 2020 were listed in the Master Plan final report and shown also on the respective maps reflecting the bottlenecks´ status in 2005, 2010, 2015 and 2020.

4.4.2 Identification of TER Bottlenecks

In terms of bottlenecks in the railway sector there are a lot of elements, which may constitute a bottleneck. These include:

- Single or double track;
- Electrified or non electrified line;
- Narrow gauge or normal European standard gauge or broad gauge;
- Tunnels;
- Bridges;
- Level crossings or overpasses requiring in most cases a speed reduction;
- Platform length in stations;
- Gradient or radius of curve;
- Actual or designated speed or maximum speed allowed by the track;
- Signaling system in use;
- Processing time required for passenger or freight traffic at border crossings;
- Modernized or old infrastructure existing in border crossings;
- Traction system in border stations;
- Max. capacity per line section;
- Frequency of services offered;
- Max. axle load;
- Main overhaul done or in course or not done etc.

The TER member countries have always regarded the collection, processing and presentation of such data as a very important task for TER. The TER PCO, in cooperation with the national data experts of its member countries, is collecting and processing a great number of relevant data along the TER Network as part of its permanent work. This information is shared among the TER members. However, this work is not yet complete. This refers in particular to the non-TER member countries involved in the Master Plan, for which such data do not exist in the TER PCO, as well as to some TER member countries whose data is far from being complete or need further updating.

Bearing in mind the above, as well as complexity of the work, which if considered on individual basis would generate a great volume of information impossible to be processed within the existing time frame and resources available for the completion of this work, it was considered more appropriate that the current study is not going into such details.

On the contrary the TER PCO identified a number of missing links along the TER network, which were considered much more relevant for the purpose of this study. These missing links are presented bellow:

Braniewo (Pol) – Kaliningrad (Rus) – Nesterov (Rus) – Kybartai (Ltu)
Lvov (Ukr) – Przemysl (Pol)
Lvov (Ukr) – Uzhgorod (Ukr)
Lvov (Ukr) – Chop (Ukr)

Lukow(Pol) – Lublin(Pol) – Dorohusk(Pol) – Chelm (Pol)
Lyubolm'il (Ukr) – Kowel (Ukr) – Vladimir (Ukr) – Volunskiy (Ukr) – Lvov (Ukr)
Halmeu (Rou) – Vinigradov (Ukr) – Munkacevo (Ukr)
Brest (Blr) – Kowel (Ukr)
Kovel (Ukr) – Sarmy (Ukr) – Kiev (Ukr)
Kiev (Kiev) – Nizhin (Ukr) – Chernihiv (Ukr) – Repki (Ukr) – Dobryanka (Ukr) – Homyel (Blr) – Osipoviki (Blr) – Minsk (Blr) – Kena B.S. (Ltu)
Zhmerinka (Ukr) – Odessa (Ukr)
Odessa (Ukr) – Kukurhan (Mda) – Tiraspol (Mda) – Tighina (Mda)
Kiev (Ukr) – Donetsk (Ukr) – Luhansk (Ukr) – Likhaya (Rus)
Pascani (Rou) – Suceava (Rou) – Vicsani (Rou) – Vadu Siretu (Ukr) – Chernovtvy (Ukr) – Byala (Ukr) – Berezowika-Ostrow (Ukr)
Donetsk (Ukr) – Rostov Na Donu (Rus)
Belgrade (Scg) – Ripanj (Scg) – Valjevo (Scg) – Zvornik (Scg)
Valjevo (Scg) – Titovo-Uzice (Scg) – Bijelo Polje (Scg) – Podgorica (Scg) – Bar (Scg)
Caplijina (Bih) – Hum (Hrv)
Gostivar (FYROM) – Kicevo (FYROM)
Struga (FYROM) – Durres (Alb)
Gdansk – Warsaw – Lublin – Yogodin – Lvov – Halmeu – Cluj – Brasov – Bucuresti – Constanta
Pascani – Vicsani – Vadu Siret – Cernauti – Kiev

5. TEM AND TER PROJECTS' MASTER PLAN BACKBONE NETWORK AND ADDITIONAL LINKS

The definition of the TEM and TER Networks, as outlined in this project, was based on a certain number of assumptions:

- the technical standards of the future infrastructure should ensure consistency between the capacity of network components and their expected traffic. To achieve this, it was accepted that these standards should be in line with the recommendations of the UNECE Working Party on Transport Trends and Economics (WP.5) on the definition of transport infrastructure capacities (Trans/WP5/R.60);
- the time horizon for achievement of the network should be 2020, although differentiation should be indicated among the three time horizons of 2010, 2015 and 2020;
- the cost of the network should be consistent with realistic forecasts of financial resources, so that average costs should not exceed 1.5% of each country's annual GDP over the period up to 2020.
- to the extend deemed appropriate the network in the EU Member Countries (old and new) as well as in the assecion countries, should be in line with the criteria laid down in the EU guidelines for the development of the TENs (Council decision 1692/96/EC);

The fisrt draft Backbone Network was the starting point of the TEM and TER Projects' Master Plan for a differential network design. This network was defined by TEM and TER PCOs and their consultants, separately for TEM and TER, as to include:

- Major parts of the TEM and TER Networks for their member countries;
- TEN corridors (EU Van Miert High Level Group projects), Pan-European Corridors; MEDA TEN-T corridors and Euro-Asian Routes for the non-member countries of TEM and TER
- the intermodal terminals/freight villages and ports
- the TIRS and REBIS projects wherever relevant, and of course
- the projects proposed by the involved countries as their priority needs

Further to the first draft Backbone Network, during the TEM and TER Projects' Master Plan process, additional network components were proposed to be included in the final TEM and TER Projects' Master Plan networks. Special consideration was given to the interconnection and continuity of the additional links with parts of the Backbone Networks. More specifically, the additional network components should:

- together with the Backbone Network, be able to form a network which will be in line or extending the EU TEN-T.
- give priority, where possible, to the better use of existing infrastructure;
- be able to comply with the set time-period for the development of the network (2020);
- be in line with the given financial framework;

Finally, the missing links were identified, broadly following the recommendations of UNECE Working Party on Transport Trends and Economics (WP.5) for the identification of missing links and bottlenecks.

5.1 TEM Master Plan Backbone Network: Backbone Links, Additional and Missing Links and TEM Extensions

To identify the TEM Master Plan Backbone Network and its additional links, TEM PCO suggested as the most logical and generally acceptable approach, to be based on the Pan-European Transport Corridors approved in 1994, and 1997 at Crete and Helsinki respectively, on the Trans-European Road Network of the European Union and on the Euro-Asian transport links.

So, the basic criterion for selection of the TEM Master Plan Backbone links was their international importance, i.e. their affiliation to the Pan-European Transport Corridors, Trans-European Network of the EU and to the Euro-Asian transport links.

Following the above-mentioned approach, these links were identified as parts of the TEM Master Plan Backbone Network (per country):

AUSTRIA

Nickelsdorf (H/A) – Wien
Berg (SK/A) – Fischamend
Wien – Graz – Arnoldstein (A/I)

BOSNIA AND HERZEGOVINA

Bos. Samac (HR/BIH) – Sarajevo – Visici (BIH/HR)

BULGARIA

Kalotina (SIM/BG) – Sofia – Kapitan Andreevo (BG/TR)
Ruse (RO/BG) – Bjala – Haskovo

CROATIA

Bregana (SLO/HR) – Zagreb – Lipovac (HR/SIM)
Gorican (H/HR) – Zagreb – Karlovac – Rijeka
Knezevo (H/HR) – Osijek – Slav. Samac (HR/BIH)
Metkovic (BIH/HR) – Ploce

CZECH REPUBLIC

Cinovec (D/CZ) – Praha – Brno – Lanzhot (CZ/SK)
Rozvadov (D/CZ) – Praha
Brno – Ostrava – C. Tesin (CZ/PL)

GEORGIA

Leselidze (RUS/GA) – Senaki – Tbilisi – Tsiteli Khidi (GA/AZ)
Sarpi (TR/GA) – Poti – Senaki
Larsi (RUS/GA) – Tbilisi – Sadakhlo (GA/AR)

HUNGARY

Hegyeshalom (A/H) – Budapest – Szeged – Röszke (H/SIM)
Rajka (SK/H) – Levél
Szeged – Nagylak (H/RO)

Letenye (HR/H) – Budapest – Záhony (H/UA)
Budapest – Udvar (H/HR)

ITALY

Genova – Padova – Palmanova – Trieste (I/SLO)
Coccau (A/I) – Palmanova
Padova – Bologna – Bari – Brindisi

LITHUANIA

Klajpeda – Kaunas – Vilnius – Medininkai (LT/BY)
Kaunas – Sangruda (LT/PL)
Salociai (LV/LT) – Sitkunai

POLAND

Swiecko (D/PL) – Poznan – Warszaw – Terespol (PL/BY)
Gdansk – Lodz – Piotrkow Tr. – Katowice – Zwardon (PL/SK)
Katowice – Cieszyn (PL/CZ)
Olszyna (D/PL) – Wroclaw – Katowice – Krakow – Medyka (PL/UA)
Jedrzychowice (D/PL) – Krzywa
Budzisko (LT/PL) – Warszawa – Piotrkow Tr.

ROMANIA

Nadlac (H/RO) – Timisoara – Sebes – Bucuresti – Constanta
Timisoara – Craiova
Albita (RO/MO) – Marasesti – Bucuresti – Giurgiu (RO/BG)

SLOVAKIA

Kuty (CZ/SK) – Bratislava – Rusovce (SK/H)
Petrzalka (A/SK) – Bratislava – Zilina – Kosice – V. Nemecke (SK/UA)
Skalite (PL/SK) – Zilina

TURKEY

Kapikule (BG/TR) – Istanbul – Gerede – Ankara – Askale – Gurbulak (TR/IRN)
Gerede – Samsun – Trabzon – Sarp (TR/GA)
Trabzon – Askale
Izmir – Afyon – Ankara
Ankara – Adana – Toprakkale – Gaziantep – Habur (TR/IRQ)
Toprakkale – Iskenderun – Yayladagi (TR/SYR)
Tarsus – Mersin.

Remaining outside thus defined Backbone Network, these are the additional TEM network links:

BOSNIA AND HERZEGOVINA

Neum West (HR/BIH) – Neum East (BIH/HR)
Izacic (HR/BIH) – Bihac – Sarajevo – Bolanic (BIH/SIM)

BULGARIA

Sofia – Bjala

Svilengrad – Novo Selo (BG/GR)

CROATIA

Rijeka – Split – Dubrovnik – Debeli Brijeg (HR/SIM)
Karlovac – Grabovac – Knin – Split
Grabovac – Vaganac (HR/BIH)

CZECH REPUBLIC

Praha – Turnov – Harrachov (CZ/PL)
Praha – Hradec Kr. – Beloves (CZ/PL)
Holubice – St. Hrozenkov (CZ/SK)

GEORGIA

Ureki – Samtredia
Khashuri – Naohrebi (GA/TR)
Marneuli – Guguti (GA/AR)

HUNGARY

Budapest – Parassapuszta (H/SK)
Mosonmagyaróvár – Nagykanizsa
Tornyosnémeti (SK/H) – Miskolc – Debrecen – Biharkeresztes (H/RO)

LITHUANIA

Panevezys – Vilnius

POLAND

Szczecin – Z.Gora – Legnica – Jakuszyce (PL/CZ)
Kudowa Zdr. (CZ/PL) – Wrocław – Piotrkow Tr.
Rzeszów – Barwinek (PL/SK)

ROMANIA

Craiova – Bucuresti
Timisoara – Moravita (RO/SIM)
Bors (H/RO) – Oradea – Cluj Napoca – Sebes
Halmeu (RO/UA) – Satu Mare – Cluj Napoca
Siret (UA/RO) – Suceava – Sabaoani – Marasesti
Sculeni (RO/MO) – Iasi – Sabaoani
Cluj Napoca – Brasov – Bucuresti

SLOVAKIA

Drietoma (CZ/SK) – Chocholna
Ruzomberok – B.Bystrica – Zvolen – Sahy (SK/H)
Kosice – Milhost (SK/H)
Presov – Vys. Komarnik (SK/PL)
Trnava – Zvolen

TURKEY

Horasan – Kars – Turkozu (TR/GA)
Afyon – Konya – Ulukisla
Izmir – Aydin – Antalya

Izmir – Cesme
Izmir – Balikesir – Bursa – Gebze

BULGARIA

Southern part of the Sofia ring
Sofia – Greek border (Kulata)
Orizovo – Burgas – Varna
Varna – Sumen – Bjala

CROATIA

Zagreb – Slovenian border (Macelj)
Bosiljevo – Otocac – Maslenica
Rijeka – Matulji – Slovenian border (Rupa)
Matulji – Kanfanar – Pula
Kanfanar – Slovenian border (Plovanija)

CZECH REPUBLIC

Praha – Austrian border (D. Dvoriste)
Brno – Austrian border (Mikulov)

GEORGIA

Akhaitsikhe – Zdanov (Armenian border).

HUNGARY

Szeged – Yugoslav border (Roszke)
Letenye – Slovenian border (Tornyiszentmiklos)

POLAND

Warszawa – Lublin – Ukrainian border (Hrebenne)
Szczecin – German border (Kolbaskowo)

ROMANIA

Northern part of the Bucuresti ring

TURKEY

Dogubayazit – Diyarbakir – Sanliurfa
Suluova – Amasya – Refahiye

BELARUS

Brest (PL/BY) – Minsk – Krasnoje (BY/RUS)
Kamenny Loh (LT/BY) – Minsk - Gomel
Jezjarysca (RUS/BY) – Orsa – Gomel – Novaja Guta (BY/UA)

BULGARIA

Sofia – Kjustendil – Gjusevo (BG/FY)

THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

Tabanovce (SIM/FY) – Kumanovo – Titov Veles – Gevgelia (FY/ GR)
Titov Veles – Bitola – border (FY/GR)
Kriva Palanka (BG/FY) – Kumanovo – Skopje – Debar (FY/AL)

GREECE

Igoumenitsa – Kipi (GR/TR)
Alexandroupoli – Ormenio (GR/BG)
Thessaloniki – Promachonas (GR/BG)
Kozani – Niki (GR/FY)
Siatista – Ieropigi (GR/AL)
Patra – Athens – Thessaloniki – Evzoni (GR/FY)
Rio – Kakavia (GR/AL)
Corinthos – Tripoli – Sparti
Corinthos – Tripoli – Kalamata
North Creta Road Axis

REPUBLIC OF MOLDOVA

Leuseni (RO/MO) – Chisinau – Dubasari – border (MO/UA)
Chisinau – Tiraspol – border (MO/UA)

POLAND

Warszawa – Lublin – Dorohusk (PL/UA)

RUSSIAN FEDERATION

St. Peterburg – Pskov – Nevel – border (RUS/BY)
Krasnoje (BY/RUS) – Smolensk – Moskva – Nižnij Novgorod
St. Peterburg – Moskva – Borisoglebsk – Volgograd
Jaroslavl – Moskva – Brjansk – Kalinovka (RUS/UA)
Krupec (UA/RUS) – Kursk – Voronez – Borisoglebsk – Saratov – Dergachi (RUS/KAZ)
Border (UA/RUS) – Kamensk Sachtinskij – Volgograd – Astrakhan
Novosachtinsk (UA/RUS) – Rostov na Donu – Pavlovskaja – Novorossijsk – Adler (RUS/GA)
Pavlovskaja – Armavir – Vladikavkaz – Makhackala
Mayaral (KAZ/RUS) – Astrakhan – Makhackala – Orudzhaba (RUS/AZ)

SERBIA AND MONTENEGRO

Kelebia (H/SIM) – Novi Sad – Beograd – Nis – Strezovce (SIM/FY)
Batrovci (HR/SIM) – Beograd
Nis – Dimitrovgrad (SIM/BG)

SLOVENIA

Fernetici (I/SLO) – Ljubljana – Obrezje (SLO/HR)

UKRAINE

Starovojtovo (PL/UA) – Kovel – Korosten –Kiev – Charkiv – Debalceve – Antracit – border (UA/RUS)
Seginie (PL/UA) – Lvov – Zitomir – Kiev
Kipti – Hluchov (UA/RUS) – Cervone (UA/RUS)
Border (RUS/UA) – Ripki – Kipti – Kiev – Uman – Ljubasivka – Odessa
Krasni Okni (MO/UA) – Ljubasivka
Limanske (MO/UA) – Odessa
Cop (H/UA) – Uzhorod (SK/UA) – Mukaceve – Stryj – Lvov
Djakove (RO/UA) – Mukaceve

Stryj – Tarnopol – Vinnicja – Uman - Dnipropetrovsk – Doneck – Debalceve – Krasnodon (UA/RUS)
Tarnopol – Cernivci – Porubne (UA/RO)

5.2 TER Network: Backbone Links and Missing Links

TER Master Plan Backbone Network includes the following links, as identified per country:

AUSTRIA

Salzburg – Bischofshofen – Schwarzach – Spittal-M. – Villach – Rosenbach
Passau (D) – Neumarkt – Wels – Linz – St. Valentin – St. Polten – Wien
Linz – Salzburg – Innsbruck – Bregenz
Wien – Parndorf – Hegyeshalom (HU)/Bratislava Petrzalka (SK)
Wien – Bruck an der Mur – Villach – Tarvisio (IT)
Wien – Hohenau – Breclav (CZ)
Summerau – Linz – Selzthal – St. Michael – Leoben – Bruck an der Mur – Graz – Spielfeld
Innsbruck – Brenner (IT)

BOSNIA & HERZEGOVINA

Bosanski – Samac – Doboj – Zenica – Sarajevo – Konjic – Mostar – Capljina

BULGARIA

Vidin – Mezdra – Sofia – Pernik – Radomir – Dupniza – Kulata
Russe – G. Oriahovitza – Dubpvo – Stara Zagora – Dimitrovgrad – Svilengrad
Dragoman – Sofia – Mesdra – Pleven – G. Oriahovitza – Kaspichan – Sindel – Varna
Sofia – Plondiv – Dimitrovgrad
Stara Zagora – Karnobat – Burgas

CROATIA

Tovarnik – Zagreb – Gornje Dubrave – Rijeka
Gornje Dubrave – Gorpi – Stara Straza – Split
Beli Manastir – Osijek – BCP with BIH
Zagreb – Ljubljana (SL)

CZECH REPUBLIC

(Germany) – Decín – Ústí nad Labem – Lovosice – Kralupy – Praha – Kolín – Pardubice – Ceská Trebová – Brno – Breclav – (Austria/Slovakia)
(Poland) – Petrovice u Karviné – Ostrava – Prerov – Breclav – (Austria/Slovakia)
(Germany) – Cheb – Plzen – Beroun – Praha – Kolín – Pardubice – Olomouc – Prerov – Ostrava – Mosty u Jablunkova – (Slovakia)
(Poland) – Lichkov – Usti nad Orlicí – Pardubice – Kolín – Praha Benesov – Tábor – Vaselí nad Luznicí – Ceské Budejovice – Horní Dvoriste – (Austria)
Prerov – Brno (Priority project No. 23 – Decision 884/2004/EC Gdansk – Warsaw – Brno – Vienna)
Hranice na Morave – Horní Lidec (Slovakia)

GEORGIA

Gantiadi – Achadara – Gali – Abasha – Batumni

Abasha – Poti
Abasha – Agara – Gori – Kaspi – Tbilisi – Sadakhlo
Tbilisi – Gardabani

GREECE

Svilengrad – Alexandroupoli – Thessaloniki
Promachonas – Thessaloniki – Athina
Thessaloniki – Skopje (Ma)

HUNGARY

Sopron – Győr – Budapest
Budapest – Hatvan – Miskolc – Nyíregyháza – Záhony (BCP with UKR)
Felsőzsolca – Hidasnémeti
Zalalövő – Zalaegerszeg – Ukk – Boba – Székesfehérvár – Budapest
Budapest – Cegléd – Szolnok – Püspökladány – Biharkeresztes (BCP with RO)
Szajol – Békéscsaba – Lökösháza (BCP with RO)
Szob – Budapest
Budapest – Pusztaszabolcs – Dombovár – Pécs – Magyarboly
Budapest – Kelebia

ITALY

Trieste – Venice – Bologna – Ankona – Rome
Verona – Bologna – Venice

LITHUANIA

Kena – Kaisiadorys – Klaipeda
Kaisiadorys – Kybartai BCP
Radviliskis – Pagegiai BCP
Mockava BCP – Kazlu Ruda – Palemonas – Gaiziunai – Siauliai – Joniskis BCP

POLAND

Gdynia – Gdansk – Tczew – Malbork – Warsaw
Trakiszki – Suwalki – Sokolka – Bialystok – Warsaw
Warsaw – Korytow – Idzikowice – Zawiercie – Katowice – Chalupky
Warsaw – Lukow – BCP with BLR
Warsaw – BCP with UKR
Rzepin – Poznan – Konin – Warsaw
Poznan - Miedzylesie
Wroclow – Wegliniec – Gliwice – Krakow
Glivice – Bohumin (CZ)

ROMANIA

Oradea – Poieni – Cluj – Apahida – Alba Iulia – Copsa M. – Brasov – Ploiesti
Suceava – Pascani – Adjud – Marasesti – Buzau – Ploiesti
Ploiesti – Bucuresti – Giurgiu
Bucuresti – Fetesti – Constanta
Bucuresti – Videle – Craiova – D.T. Severin – Timisoara – Arad – BCP with HU

RUSSIAN FEDERATION

Moscow – N. Novgorod
Moscow – St. Petersburg

Moscow – Krasnoye
Moscow – Suzemka

SLOVAKIA

BCP with CZE – Malacky – Dev. N. Ves- B. Petrzalka – Rusove
Zilina – Puchov – N.M.Vahom – Leopoldov – Bratislava/Galanta
Bratislava – Galanta – N. Zamky – Sturovo
Cadca – Zilina – Vrutky – Ruzomberok – Kralova Lehota – Poprad – S.N.Ves
Margecany – Kysak – Kosice – Cierna nad Tisou
Plavec – Presov – Kysak – Kosice – Cana
Cadca – Skalite

SLOVENIA

Koper – Divaca – Pivka – Ljubljana – Zidani Most – Pragersko – Ormoz – Murska Sobota – Puconci – Hodos
Divaca – Sezana
Pivka – I. Bistrica
Ljubljana – Jesenice
Pragersko – Maribor – Sentilj
Ormoz – Sredisce
Ljubljana – Zagreb (CR)

TURKEY

Kapikoy (BCP with Iran) – Van – Tatvan – Yolcati – Malatya – Cetinkaya
Cetinkaya – Divrigi – Erzurum – Kars – Dogukapi (BCP with Armenia)
Kars – Aktas (BCP with Georgia)
Cetinkaya – Sivas – Kalin – Ankara – Istanbul – Halkali – Mandra – Pehlivonkoy – Kapikule (BCP with Bulgaria)
Sivas – Amasya – Samsun
Malatya – Narli – Toprakkale – Iskenderun
Toprakkale – Adana – Mersin

BELARUS

Krasnoe – Minsk – Brest
BCP with LI (Sumskas) – Homyel – BCP with UKR

THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

BCP with SGC – Tabanovce – Kumarovo – Skopje – Titov Veles
Titov Veles – Kremence
Titov Veles – Gevgelija
Skopje – Thessaloniki (GR)

REPUBLIC OF MOLDOVA

BPC with RO – Ungheni – Chisinau – Tighina – Bender

SERBIA AND MONTENEGRO

BCP with HUN (Kelebia) – Subotica – Stara Pazova – Belgrad – Veliko – Orasje – Nis – Pirot – BCP with BGR (Dragoman)
Stara Pazova – Ruma – Sid – BCP with CR
Nis – Leskovac – Presevo – BCP with FYROM

UKRAINE

BCP with BLR – Chernihiv – Kiev – Vinnytsya – Khmel'nyts'kyy – Ternopil' – L'viv – BCP with POL
BCP with RUS (Suzemka) – Kiev

Concerning the backbone network, TER missing links are:

Katowice – Krakow – Przemysl – Mostiska – Lvov
Jasi – Pascani
Craiova – Calafat
Muzsina – Krakow – Katowice
Innsbruck – Brenner – Verona (Brenner base tunnel project)
St. Petersburg – Pskov – Latvia
Concerning the whole TER network, missing links are considered the following:
Braniewo (Pol) – Kaliningrad (Rus) – Nesterov (Rus) – Kybartai (Ltu)
Lvov (Ukr) – Przemysl (Pol)
Lvov (Ukr) – Uzhgorod (Ukr)
Lvov (Ukr) – Chop (Ukr)
Lukow(Pol) – Lublin(Pol) – Dorohusk(Pol) – Chelm (Pol)
Lyubolm'il (Ukr) – Kowel (Ukr) – Vladimir (Ukr) – Volunskiy (Ukr) – Lvov (Ukr)
Halmeu (Rou) – Diakovo (Ukr) – Vinigradov (Ukr) – Munkacevo (Ukr)
Brest (Blr) – Kowel (Ukr)
Kovel (Ukr) – Sarmy (Ukr) – Kiev (Ukr)
Kiev (Kiev) – Nizhin (Ukr) – Chernihiv (Ukr) – Repki (Ukr) –Dobryanka (Ukr) – Homyel (Blr) – Osipoviki (Blr) – Minsk (Blr) – Kena B.S. (Ltu)
Zhmerinka (Ukr) – Odessa (Ukr)
Odessa (Ukr) – Kukurhan (Mda) – Tiraspol (Mda) – Tighina (Mda)
Kiev (Ukr) – Donetsk (Ukr) – Luhansk (Ukr) – Likhaya (Rus)
Vicsani (Rou) – Vadu Siret (Ukr) – Chernovtvy (Ukr) – Byala (Ukr) – Berezowika-Ostrow (Ukr)
Donetsk (Ukr) – Rostov Na Donu (Rus)
Belgrade (Scg) – Ripanj (Scg) – Valjevo (Scg) – Zvornik (Scg)
Valjevo (Scg) – Titovo-Uzice (Scg) – Bijelo Polje (Scg) – Podgorica (Scg) – Bar (Scg)
Caplijina (Bih) – Hum (Hrv)
Gostivar (FYROM) – Kicevo (FYROM)
Struga (FYROM) – Durres (Alb)
Gdansk – Warsaw – Lublin – Yogodin – Lvov – Halmeu (Rou) – Dej (Rou) – Cluj (Rou) – Brasov – Bucuresti – Constanta
Vicsani (Rou) – Vadu Siret (Ukr) – Cernauti – Kiev
Ankara – Yozgat – Yildizeli

6. FUNDING CONSIDERATIONS, FINANCING ARRANGEMENTS, TECHNICAL AND INSTITUTIONAL ASPECTS FOR TEM AND TER PROJECTS' MASTER PLAN IMPLEMENTATION

6.1 Estimation of Financial Resources Available for TEM and TER Network Implementation

The implementation of TEM and TER network as a whole will need approximately 89.662,86 million EUR and will follow the time plan presented in FINAL TEMPLATE next. In this TEMPLATE the available/secured percentage of funding is shown as well.

As it can be seen in the TEMPLATE the financial resources available differ from country to country from the 25% to 100%. Of course we should bear in mind that some of these percentages can change if more information were available from the countries, since for most of them it is unknown if funding is secured or not.

So, as it concerns the financial resource available for TEM and TER Network Implementation, in brief and based on the TEMPLATE below:

36.134,13 million EUR are readily available/secured
53.528,17 million EUR are not readily available/secured,

out of which:

(b_1) the 14.973,69 million EUR are for sure not available/secured
(b_2) the 38.554,48 million EUR is unknown (no information given/existent) if they are available/secured or not.

FINAL TEMPLATE – TEM & TER NETWORK

Country	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
AT	1	100%	-	-	-	-	-	100%	-
BL	4	100%	-	-	-	-	100%	-	-
BH	15	14%	40%	6%	40%	-	25%	75%	-
BG	18	33%	27%	22%	18%	-	38%	62%	-
CR	43	56%	30%	12%	2%	-	70%	-	30%
CZ	13	69%	8%	23%	-	-	100%	-	-
Ma	8	25%	-	-	-	*75%*	25%	-	*75%*
GE	6	66%	-	-	33%	-	83,4%	16,6%	-
GR	17	29%	29%	35%	7%	-	29%	71%	-
HU	43	44%	26%	5%	2%	*23%*	44%	9%	*47%*
IT	0	-	-	-	-	-	-	-	-
LT	32	47%	28%	3%	22%	-	78%	-	*22%*
MD	3	66%	-	-	33%	-	-	100%	-
PL	97	33%	-	-	-	*67%*	1%	-	*99%*
RO	45	18%	16%	18%	52%	-	56%	44%	-
RU	31	100%	-	-	-	-	-	-	*100%*
SM	41	90,2%	9,8%	-	-	-	12,1%	-	*87,9%*
SK	24	4%	8%	42%	46%	-	100%	-	-
SL	14	36%	43%	7%	14%	-	50%	50%	-

TU	24	50%	29%	21%	-	-	54%	46%	-
UKR	6	50%	-	50%	-	-	100%	-	-
Whole Network	***Projects***	***TEM and TER Network Implementation Progress***					***TEM and TER Network Funding***		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
	486	45,7%	15,6%	10,1%	12,0%	*16,5%*	40,3%	16,7%	*43,0%*

6.2 Remarks on the perspectives to construct the TEM and TER Region Backbone Networks

Concerning this task the following issues were examined:

- Identified gaps in the process and future work to address/overcome them
- Completion for the networks and associated time (for all 21 countries) – Possibility of Success and Risks

Identified gaps

Gaps in the process, and especially in evaluation/prioritisation method as well as in financial planning, occurred due to lack of data.

The evaluation/prioritisation methodologies as well as the financial planning process, even in the simple forms they were developed, were heavily based on the data collected from the countries. Unfortunately most of the countries didn't send any data, or they have send data in inconvenient format. Nonetheless, the consultants through their own-research they have managed to complete most of the "gaps".

Therefore, in the future will be better if these "gaps" were properly completed, especially for projects that are supposed to start in the near future but have not started yet.

Another "gap", but on a more policy/theoretical level, is the lack of regional approach in the TEM & TER Master Plans. For several important issues, such as designing investments - through prioritization of transport links, ensuring compatibility of regulation and facilitating border crossing – a regional approach to Backbone Network management instead of several national ones is expected to bring about substantial benefits.

Experience also shows that if regional co-operation is to prosper, the involved countries are much assisted and the process accelerated when a leading international organisation is devoting; i) funds for technical back up, and also; ii) expert/policy resources in support of the process. In general, on a worldwide basis, organisations such as the EU Commission and IFIs, e.g. EBRD, EIB, the World Bank and ADB, are often dedicating funds and expert/policy resources in support of regional co-operation processes with clear positive catalytic results.

Completion of Networks – Possibility of Success and Involved Risks

An important task for the completion of the networks will be to secure funding for all the projects, that so far have not secured funding. Another task will be to monitor traffic and physical conditions of the Backbone Network, and to oversee how projects are

planned and implemented. This latter task requires the regular reporting of data from relevant transport authorities in the region, and an appropriate tool to process and store data and to produce the required reports.

Regarding the involved risks, they can be divided under broad categories:

(a) Unsecured funding
(b) Over-investment problems

The first is self-explainable.

As it concerns the second: TEM and TER Member Countries, according to the timeplan and costs they have submitted for projects implementation, in order to complete their TEM and TER projects until 2020 are currently -and will be- investing nearly 1,5% of their gross domestic product in building road & rail transport infrastructure only (without considering investments in other kind of infrastructure -transport or not). This can be considered as an over-investment, which may in the near future prevent a fair number of the network projects, notably some priority projects, to be completed within the desired time frames, despite their positive repercussions on the economy.

According to the results of TEM and TER Methodology implementation, as outlined in the previous chapter, a considerable amount of the total implementation cost for the realization of TEM and TER Projects' Master Plan is not "secured". Due to this, and in order to advance further and support the process of the implementation of TEM and TER Projects' Master Plan, the identification of possible sources of funding for country projects -that have not yet secured funding-, the eligibility criteria for the respective countries to receive funds as well as the required procedures, have been outlined and analyzed.

The main identified sources of funding are European Investment Bank (EIB), European Bank for Reconstruction and Development (EBRD), World Bank, European Union, including Cohesion Fund, Structural Funds, TEN-T funds, ISPA and INTERREG frameworks.

For the majority of these sources the following main elements were analyzed:

(a) Initial approach to the funding/financing institution
(b) Information provided by the institution
(c) Legal framework
(d) Projects' eligibility criteria to receive loan/funding
(e) Projects' appraisal procedures
(f) Projects' examination procedures
(g) Projects' monitoring procedures
(h) Decision making procedures
(i) Contracts signature procedure
(j) Loans/Funds activity breakdown by region in EU

Finally, the possibility of private participation, via Public-Private Partnership (PPP), in the implementation of TEM and TER infrastructure projects was also investigated, starting from the Green Paper on Public-Private Partnerships and Community law on public contracts and concessions.

Although the principal concern addressed has been that of funding and ways in which approaches such as staged construction may offer opportunities both to ameliorate budgetary difficulties and to give some further element of robustness to future uncertainties within the plans proposed, it is important not to over look other ways in which the realisation of those plans may be supported.

An important feature of the thinking embedded in the proposals developed for the elaboration of the TEM and TER Projects' Master Plan has been the careful and simultaneous consideration of both national and international perspectives. By seeking to bear in mind both perspectives, the aim has been to move towards plans that acknowledge shared international needs and goals while at the same time recognising the reality that national needs were themselves also important and that much, though not necessarily all, of the funding for implementation would probably have to be secured from national sources, or at least would need the inclusion of the relevant projects in lists of identified national priorities.

Furthermore, in supporting the type of collaboration and degree of mutual interdependence that is implicit in this approach, thought needs to be given to related issues that directly influence the likely ease with which such collaboration may be secured. In particular, there are a range of concerns where failure properly to secure co-ordination could significantly interfere with the approach that the current work seeks to encourage.

Another particular concern for both road and rail is where there are proposals for shared cross-border infrastructure.

The demands put on transport infrastructure planning from the perspective of environmental planning have grown out of all recognition since the original thinking that underpinned the development of the TEM and TER organisations. It is important that these changes are understood and embedded in not only the proposals that are brought forward, but also in the detail of individual proposals.

Another area of activity that the increasingly international nature of funding and building of major networks such as the TEM and TER elaboration proposals highlights is the need to ensure that state laws with respect to tendering and construction are appropriately harmonised with emerging European good practice.

One issue that needs careful attention in both the motorway and rail sectors is the extent of convergence in thinking regarding technical standards is secured. Ensuring the interoperability among the identified road, rail and combined transport priority projects, as well as between them and the other parts of the respective networks is a major element for the successful implementation of the TEM and TER Projects' Master Plan. The development of the TEM and TER Master Plans should follow commonly accepted standards and practices recommended for use by all the countries involved.

The UNECE International Agreements AGR, AGC, AGTC, as well as the TEM and TER Standards and recommended practices provide the technical and institutional framework for it. Assisting the implementation of these standards by all concerned countries, as well as monitoring of the progress in bringing the TEM and TER Backbone

networks up to the required standards could be among the permanent tasks of the TEM and TER Projects in future.

In concluding, more than just a transport planning action is needed to support the successful implementation of the nature and scale of planning implicit in the proposals that this report is seeking to instigate. There are also important enabling actions required that take time to set in place, that sometimes require changes in ways of thinking and attitudes, and that themselves need to be planned with the same degree of rigour and care that underpin the network planning itself.

6.3 Projects' Technical Priorities, Financing Priorities and Feasibility and Funding Considerations

SCOPE

This report refers to most of the part of WP7/Task 1 (of the Consultant's TOR) and more specifically to the following sub-tasks:

- Identification of specific projects for the implementation based on the proposed TEM and TER Region Master Plans
- Estimate of budget for the implementation of the proposed TEM and TER Region Master Plans
- Estimate of financial resources available
- Identify possible sources of funding (e.g. EUROPAID, World Bank, EIB, EBRD, Japanese Development funds, other countries development funds) and the required procedures

This report is developed in three parts. The first part presents the results of the "technical" prioritisation phase of the methodology, else the direct application of the methodology, which provides the scores for projects. The second part presents the results of the "financial" prioritisation phase, which examines the financial capability of the country to implement all the projects -and, which might force some projects to shift implementation over time-, and finally provides the short-term, mid-term and long-term investment plan. The third part identifies possible sources of funding for country projects that have not yet secured funding, the eligibility criteria for the respective countries to receive funds as well as the required procedures.

PART I – TECHNICAL PRIORITISATION PHASE

The ultimate goal of the technical prioritisation phase was to identify project's categorization -into the four pre-defined priority categories- according to their scores, in order to further support the elaboration of a short, medium and long-term investment strategy in each country concerned and encourage the realization of projects that have good chances of implementation and fall within the TEM Master Plan objectives.

In total 492 projects were included in this phase (320 TEM projects and 172 TER projects). Most of these projects were submitted by countries with sufficient information in order to be evaluated and some found in relevant studies such as REBIS, TIRS, Euro-Asian Linkages, Van Miert etc. This large number of road and rail projects was evaluated and a first prioritisation of the projects was undertaken.

The evaluation was based on a multi-criteria method. In close co-operation with national representatives of the TEM and TER countries, a comprehensive assessment was undertaken of each TEM and TER project. The assessment included a total of 15 criteria, and for each criterion a score was given. The evaluation assigned weights to these scores and a total score for each project under study was arrived at. The 15 criteria used in the multi-criteria analysis are presented in previous report of WP4. Projects for which the evaluation did not apply were assessed on an individual basis, in close co-operation with the responsible countries.

The results of the screening are shown on Table 1 and Table 2, and the following provides information on the contents of the tables.

Each project is identified with a unique **Project ID** specifying the country, the transport mode and a specific number. So the following abbreviations can be introduced in Project ID column: Austria (AT), Belarus (BL), Bosnia and Herzegovina (BH), Bulgaria (BG), Czech Republic (CZ), Croatia (CR), F.Y.R.O.M (Ma), Georgia (GE), Greece (GR), Hungary (HU), Italy (IT), Lithuania (LT), Moldova (MD), Poland (PL), Romania (RO), Russian Federation (RU), Serbia and Montenegro (SM), Slovakia (SK), Slovenia (SL), Turkey (TU), Ukraine (UKR) and Motorway (M), Highway (H), Rail (R).

The project AT-M-1 is thus TEM (road) project number 1 in Austria.

Each project presents a **description** column, in which the title of the project is presented as given by the relevant countries.

The **score** column is a scale between 1 and 5 where 5 represents the highest possible score and 1 the least possible score.

The **category** column is the project's priority, which results from the score. If the project scores between 4-5 then it belongs to priority category **I** (projects, which may be funded and implemented rapidly, including on-going projects up to 2010). If the project scores 3-4 then it belongs to priority category **II** (projects requiring some additional investigations for final definition before likely financing, or planned for implementation up to 2015). If the project scores 2 then it belongs to priority category **III** (projects requiring further investigations for final definition and scheduling before possible financing, or planned for implementation up to 2020). If the project scores 1 then it belongs to priority category **IV** (projects to be implemented in the long run, including the projects where insufficient data existed).

The **comments** column indicates if there is any difference in each project regarding the evaluation/ prioritisation phase, in comparison with the rest.

Table 1 **Results of Projects Evaluation/ Technical Prioritization – TEM (Road)**

Project ID	***Project Description***	***Score***	***Category***	***Comments***
AT-M-1	New motorway link from A 4 Motorway to border crossing at Kittsee to link up with Slovak motorway D 4 to Bratislava	4,16	I	
BG-M-1	Reconstruction of road E85	3,8	II	
BG-M-2	Maritza Motorway, Section 1	3,94	II	
BG-M-3	Maritza Motorway, Section 2	3,86	II	
BG-M-4	Maritza Motorway, Section 3	3,86	II	
BG-M-5	Kalotina-Sofia Motorway, section: Dragoman – Slivnitza – Sofia	3,48	II	
BG-M-6	Kalotina-Sofia Motorway, section: Kalotina-Dragoman	3,4	II	
BG-M-7	Kalotina-Sofia Motorway, Section: Hemus Connector	4,4	I	
BG-M-8	Kalotina-Sofia Motorway, Section: Sofia Ring Road – North Arc	3,6	II	
BG-M-9	Hemus Motorway, Section 1	3,8	II	
BG-M-10	Hemus Motorway, Section 2	3,8	II	
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II	
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II	
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II	
BH-M-4	Improvement of Foca-Hum Road	3,22	II	
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II	
BH-M-6	Improvement of Lasva-Travnik Road (M5/E-761)	3,70	II	
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II	
BH-M-8	Construction of Corridor V Motorway	3,36	II	

BL-M-1	Upgrading of the M1/E30 road, section from km 1.7 to km 9.8			Belarus TEM projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from Euro-Asian Corridors Info Sheet on Investments.
BL-M-2	Upgrading of the M1/E30 road, section from Telmy to Kozlovichi (21 km lengs)			
BL-M-3	Upgrading of the M1/E30 road, section from (n.a.)			
CR-M-1	A3-01 Zupanja - Lipovac	3,50	II	
CR-M-2	A4-01 Gorican	3,29	II	
CR-M-3	A6-01 Bosiljevo - Kupjak	3,51	II	
CR-M-4	A6-01Kupjak - Kikovica	3,51	II	
CR-M-5	A7-01 Rijeka - Krizisce	3,88	II	
CR-M-6	A7-02 Krizisce - Senj	3,31	II	
CR-M-7	A7-03 Senj - Zuta Lokva	3,34	II	
CR-M-8	A1-01 Sveti Rok Tunel	3,91	II	
CR-M-9	A1-02 Pirovac - Sibenic	3,88	II	
CR-M-10	A1-03 Sibenic - Vrpolje	3,83	II	
CR-M-11	A1-04 Dugopolje - Zagvozd (Makarska)	3,55	II	
CR-M-12	A1-05 Zagvozd (Makarska) - Ploce	3,35	II	
CR-M-13	A1-06 Ploce - Neum	3,43	II	
CR-M-14	A1-07 Neum - Dubrovnik	3,18	II	
CR-M-15	A2-01 Macelj - Krapina	3,72	II	
CR-M-16	A2-02 Zapresic - Zagreb	4,13	I	

CR-M-17	A1-08 Mala Kapela	4,29	I	
CR-M-18	A1-09 Dugopolje - Klis	3,67	II	
CR-M-19	A1-10 Klis - Split	3,67	II	
CR-M-20	A5-01 Knezevo - Ceminac	3,42	II	
CR-M-21	A5-02 Ceminac - Osijek	3,42	II	
CR-M-22	A5-03 Osijek - Sredanci	3,55	II	
CR-M-23	A5-04 Sredanci - Svilaj	3,29	II	
CR-M-24	A10-01 Metkovic - Ploce	3,42	II	
CR-M-25	A5-05 Ceminac - Batina	3,29	II	
CR-M-26	A9-01 Vodnjan - Pula	3,73	II	
CR-M-27	A9-02 Umag - Kanfanar	3,77	II	
CZ-M-1	Motorway D8: Trmice-German border	4,18	I	
CZ-M-2	Motorway D8: Lovosice-Rehlovice	4,26	I	
CZ-M-3	Motorway D11: Podebrady-Hradec Kralove	4,32	I	
CZ-M-4	Motorway D1: Vyskov-Kromeriz	3,3	II	
CZ-M-5	Motorway D47: Lipnik-Polish border	4,06	I	
GE-M-1	World Bank Credit No3357GE			Georgia TEM projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from Euro-Asian Corridors Info Sheet on Investments.
GE-M-2	Kuwaiti Fund Credit No589			
GE-M-3	KfW - Road Component			
GE-M-4	World Bank Credit			

GR-M-1	"Strymonas – Nea Peramos" of the Egnatia Motorway**:** Construction of 41,5 Km dual carriageway	3,24	II	
GR-M-2	"Profitis – Macedonia Airport" (code: 59.1)**:** Construction of 40 Km dual carriageway (Kavala bypass)	3,44	II	
GR-M-3	"Derveni – Serres – Promahonas" (code: 60) – Section: Derveni – Lefkonas**:** Construction of 64km motorway	3,34	II	
GR-M-4	"Siatista – Kristallopigi" (code: 45) – Section: Siatista – Kostarazi**:** Construction of 30 Km motorway (Siatista – Argos Orestiko)	3,38	II	
GR-M-5	"Ardanio - Ormenio" (code: 80) – Section: Ardanio – Soufli**:** Construction of 30 Km expressway	3,54	II	
HU-M-1	M0: M1 to M5	high	I	These projects (all HU-M) were not evaluated using the MCA method since no sufficient data existed. Hungary provided the qualitative scores and therefore the priorities.
HU-M-2	M0: M5 to M2	high	I	
HU-M-3	M2: Bp.-Vác	high	I	
HU-M-4	M2: Vác-H/SK border	medium	II-III	
HU-M-5	M3: Polgár-Nyíregyh.	high	I	
HU-M-6	M3: Nyíregyh.-H/UA b.	medium	II-III	
HU-M-7	M5: Kiskunf.-H/YU b.	high	I	
HU-M-8	M6: Bp.-Dunaújv.	high	I	
HU-M-9	M6: Dunaújv.-Boly	medium	II-III	
HU-M-10	M6: Boly-H/Cr b.	medium	II-III	
HU-M-11	M7: Zamárdi-H/CR .b	high	I	
HU-M-12	M15: Mmóvár-H/SK b.	high	I	
HU-M-13	M43: Szeged-Makó	medium	II-III	
HU-M-14	M43: Makó-H/R b.	medium	II-III	
HU-M-15	Sopron-N.kanizsa	medium	II-III	
HU-M-16	M30: SK/H b.-Miskolc	medium	II-III	
HU-M-17	M30: Miskolc-Emőd	high	I	
HU-M-18	M35: Emőd-Debrecen	high	I	
HU-M-19	M35: Debrecen bypass	high	I	
HU-M-20	47/42:Debrecen-H/R b.	medium	II-III	
LT-M-1	Development of I Transport Corridor (Via Baltica) in the Years 2004-2005	3,82	II	
LT-M-2	Development of Transport Corridor IXB in the Years 2004-2006	3,48	II	
LT-M-3	Development of Roads (E85 Lyda – Vilnius, E272 Vilnius – Panevėžys, E272 Panevėžys – Šiauliai and E272 Šiauliai – Palanga) of Transeuropean Road Network in the Years 2004-2006	3,44	II	

LT-M-4	Widening of bridge on road A1 across Neris river in Kaunas city.	1	IV	No data provided.
LT-M-5	Widening of road A1 (6 traffic lanes)	1	IV	
LT-M-6	Widening of road A1 (6 traffic lanes)	1	IV	
LT-M-7	Road A5 Kaunas-Marijampolė-Suvalkai (construction of second driving direction)	1	IV	
LT-M-8	Road A5 Kaunas-Marijampolė-Suvalkai (construction of second driving direction)	1	IV	
LT-M-9	Road A8 Panevėžys-Aristava-Sitkūnai (construction of second driving direction)	1	IV	
LT-M-10	Road A8 Panevėžys-Aristava-Sitkūnai (construction of second driving direction)	1	IV	
Ma-H-1	Construction of Demir Kapija - Udovo - Smokvica section: Phase I (33 km)		I	FYROM provided data insufficient to support the elaboration of the MCA method. Priorities resulted after fax-communication with national representative. The scores therefore are missing.
Ma-H-2	Construction of Tavanovce - Kumanovo section (7,3km)		I	
Ma-H-3	Finalise construction of works along Corridor VIII		II	
MD-M-1	Improvement of Traffic Conditions along the Road Leuseni – Chisinau – Dubasari – the Border with Ukraine on the Section of Chisinau Bypass.	3,42	II	
PL-M-1	A18-I		I	Poland provided data insufficient to support the elaboration of the MCA methodology. Priorities resulted for some projects after communication with the TEM representative. The scores therefore are missing for those projects that belong in priority I or II.

PL-M-2	A1-I	1,46	IV	For projects belonging in priority IV, Poland representative made no comments.
PL-M-3	A1-II	1,54	IV	
PL-M-4	A1-III	1,62	IV	
PL-M-5	A1-IV	1,38	IV	
PL-M-6	AI-V	1,54	IV	
PL-M-7	A1-VI	1,54	IV	
PL-M-8	A1-VII	1,54	IV	
PL-M-9	A1-VIII	1,54	IV	
PL-M-10	A1-IX	1,62	IV	
PL-M-11	A1-X		II	
PL-M-12	A2-I	1,38	IV	
PL-M-13	A2-II		I	
PL-M-14	A2-III		I	
PL-M-15	A2-IV		I	
PL-M-16	A2-V		I	
PL-M-17	A2-VI		I	
PL-M-18	A2-VII		I	
PL-M-19	A2-VIII	1,46	IV	
PL-M-20	A2-IX	1,54	IV	
PL-M-21	A4-I		I	
PL-M-22	A4-II		I	
PL-M-23	A4-III		I	

PL-M-24	A4-IV		I	
PL-M-25	A4-V		I	
PL-M-26	A4-VI	1,46	IV	
PL-M-27	A4-VII	1,46	IV	
PL-M-28	A4-VIII	1,54	IV	
PL-M-29	A4-IX	1,54	IV	
PL-M-30	A6-I		I	
PL-H-1	S1-I	1,62	IV	
PL-H-2	S1-II		I	
PL-H-3	S1-III		I	
PL-H-4	S1-IV		I	
PL-H-5	SI-V		I	
PL-H-6	S1-VI	1,62	IV	
PL-H-7	S3-I	1,62	IV	
PL-H-8	S3-II	1,62	IV	
PL-H-9	S3-III	1,62	IV	
PL-H-10	S3-IV	1,62	IV	
PL-H-11	S3-V	1,62	IV	
PL-H-12	S3-VI	1,62	IV	
PL-H-13	S3-VII	1,62	IV	
PL-H-14	S3-VIII	1,62	IV	
PL-H-15	S3-IX	1,62	IV	
PL-H-16	S3-X	1,62	IV	

PL-H-17	S3-XI	1,3	IV	
PL-H-18	S3-XII	1,62	IV	
PL-H-19	S3-XIII	1,62	IV	
PL-H-20	S3-XIV	1,62	IV	
PL-H-21	S3-XV	1,62	IV	
PL-H-22	S3-XVI	1,62	IV	
PL-H-23	S5-I	1,62	IV	
PL-H-24	S5-II	1,62	IV	
PL-H-25	S5-III	1,62	IV	
PL-H-26	S5-IV	1,62	IV	
PL-H-27	SI-V		I	
PL-H-28	S5-VI	1,62	IV	
PL-H-29	S5-VII	1,62	IV	
PL-H-30	S69-I	1,62	IV	
PL-H-31	S69-II	1,62	IV	
PL-H-32	S69-III	1,62	IV	
PL-H-33	S69-IV	1,62	IV	
PL-H-34	S69-V	1,62	IV	
PL-H-35	S69-VI		II	
PL-H-36	S69-VII		II	
PL-H-37	S69-VIII		I	
PL-H-38	S69-IX		I	
PL-H-39	S69-X	1,62	IV	

PL-H-40	S6-I	1,62	IV	
PL-H-41	S6-II	1,62	IV	
PL-H-42	S6-III	1,62	IV	
PL-H-43	S8-I	1,62	IV	
PL-H-44	S8-II		I	
PL-H-45	S8-III	1,62	IV	
PL-H-46	S8-IV	1,3	IV	
PL-H-47	S8-V	1,62	IV	
PL-H-48	S8-VI	1,62	IV	
PL-H-49	S8-VII	1,38	IV	
PL-H-50	S8-VIII	1,62	IV	
PL-H-51	S8-IX	1,62	IV	
PL-H-52	S8-X	1,54	IV	
PL-H-53	S8-XI	1,3	IV	
PL-H-54	S8-XII		II	
PL-H-55	S8-XIII		II	
PL-H-56	S8-XIV	1,62	IV	
PL-H-57	S8-XV	1,62	IV	
PL-H-58	S8-XVI	1,62	IV	
PL-H-59	S8-XVII	1,62	IV	
PL-H-60	S8-XVIII	1,62	IV	
PL-H-61	S8-XIX	1,62	IV	
RO-M-1	Nădlac - Timişoara	4,04	I	

RO-M-2	Timişoara - Lugoj	3,82	II	
RO-M-3	Lugoj - Deva	3,65	II	
RO-M-4	Deva - Sebeş	4,21	I	
RO-M-5	Sebeş - Sibiu	3,91	II	
RO-M-6	Sibiu - Piteşti	3,55	II	
RO-M-7	Bucharest South By-pass	3,65	II	
RO-M-8	Bucharest North By-pass	3,73	II	
RO-M-9	Bucharest - lehliu	4,2	I	
RO-M-10	Lehliu - Feteşti	4,14	I	
RO-M-11	Feteşti - Cernavodă	4,24	I	
RO-M-12	Cernavodă - Constanța	3,72	II	
RO-M-13	Bucharest - Giurgiu	4,27	I	
RO-M-14	Lugoj - Drobeta Turnu Severin	3,61	II	
RO-M-15	Drobeta Turnu Severin - Craiova	3,43	II	
RO-M-16	Craiova - Bucharest	3,38	II	
RO-M-17	Timişoara - Stamora Moravița	3,74	II	
RO-M-18	Oradea - Zalău	4,3	I	
RO-M-19	Halmeu - Satu Mare	3,3	II	
RO-M-20	Satu Mare - Zalău	3,33	II	
RO-M-21	Zalău - Cluj Napoca	4,16	I	
RO-M-22	Cluj - Turda	4,46	I	
RO-M-23	Turda - Sebeş	3,29	II	
RO-M-24	Turda - Ogra	4,34	I	

RO-M-25	Ogra - Sighişoara	4,18	I	
RO-M-26	Sighişoara - Braşov	4,1	I	
RO-M-27	Braşov - Predeal	3,8	II	
RO-M-28	Predeal - Comarnic	3,96	II	
RO-M-29	Comarnic - Ploieşti	3,58	II	
RO-M-30	Ploieşti - Bucureşti	4,24	I	
RO-M-31	Albița - Crasna	3,57	II	
RO-M-32	Crasna - Tecuci	3,44	II	
RO-M-33	Tecuci - Mărăşeşti	3,6	II	
RO-M-34	Mărăşeşti - Râmnicu Sărat - Buzău	3,76	II	
RO-M-35	Buzîu - Bucharest N/E	3,64	II	
RO-M-36	Siret - Suceava	3,61	II	
RO-M-37	Suceava - Săbăoani	3,34	II	
RO-M-38	Săbăoani - Bacău	3,29	II	
RO-M-39	Bacău - Mărăşeşti	3,43	II	
RO-M-40	Sculeni - Iaşi	3,19	II	
RO-M-41	Iaşi - Târgu Frumos	2,54	III	
RO-M-42	Târgu Frumos - Săbăoani	2,69	III	
RU-H-1	Development of the direction: BelaruS border - Moscow - Nizhni Novgorod			Russian federation TEM projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from
RU-H-2	Development of the direction: Ukraine border - Kursk - Saratov			
RU-H-3	Development of the direction: Syzran - Saratov - Volgograd			
RU-H-4	Development of the direction: Finland border - St. Petersburg - Vologda - Kirov - Perm - Ekarinburg			
RU-H-5	Development of the direction: Ekarinburg - Tyumen			
RU-H-6	Construction of Chita - Khabarovsk (Part of world national highway: Krasnoe - Moscow - Vladivostok)			

RU-M-1	Reconstruction of sections on the route: Ukraine border - Kursk - Voronezh - Saratov			country's National report for Euro-Asian Corridors.
RU-M-2	Construction and reconstruction of Motorway "Don" on the section Moscow - Voronezh			
RU-M-3	Motorway «Don» on the section Voronezh – Rostov on Don – Novorossiisk/Sochi: Length of the section with necessity of construction and reconstruction - 302 km			
RU-M-4	Motorway "Kaspiy" Moscow – Tambov – Volgograd – Astrakhan and road Astrakhan - Makhachkala: Length of the section with necessity of construction, modernization and reconstruction - 515 km			
RU-M-5	Motorway "Caucasus" on the section Pavlovskaya – Mineralnie Vodi – Kochubey / Makhachkala: Length of the section with necessity of reconstruction - 359 km			
RU-M-6	Auxiliary and service infrastructure			
SK-M-1	Motorway D1 Bidovce - Dargov	3,87	II	
SK-M-2	Motorway D1 Dargov - Pozdisovce	3,94	II	
SK-M-3	Motorway D1 Pozdisovce - State border SR/UA	4,1	I	
SK-M-4	Motorway D3 Hricovske Podhradie - Zilina, Strazov	4,16	I	
SK-M-5	Motorway D3 Cadca, Bukov - Svrcinovec	3,88	II	
SK-M-6	Motorway D3 Svrcinovec - Skalite	3,99	II	
SK-H-1	Expressway R3 Horna Stubna, bypass	3,97	II	
SK-H-2	Expressway R4 Kosice - Milhost	4,28	I	
SK-H-3	Expressway R4 Svicnik, relocation	3,91	II	
SK-M-7	Motorway D1 Sverepec - Vrtizer	4,18	I	
SK-M-8	Motorway D1 Hricovske Podhradie - Dubna Skala	4,08	I	
SK-M-9	Motorway D1 Dubna Skala - Turany	4,14	I	
SK-M-10	Motorway D1 Turany - Hubova	3,79	II	
SK-M-11	Motorway D1 Hubova - Ivachnova	4,04	I	

SK-M-12	Motorway D1 Janovce - Jablonov	3,9	II	
SK-M-13	Motorway D1 Jablonov - Beharovce	3,94	II	
SK-M-14	Motorway D1 Fricovce - Svinia	3,86	II	
SK-M-15	Motorway D1 Presov West - Presov South	3,76	II	
SK-M-16	Motorway D1 Budimir - Bidovce	3,88	II	
SL-M-1	Maribor-Pince	4,06	I	
SL-M-2	Bič-Obrežje	4,2	I	
SL-M-3	Vrba-Peračica	3,96	II	
SL-M-4	Šentvid-Koseze	3,96	II	
SL-M-5	Koper-Dragonja	3,6	II	
SL-M-6	Slivnica-Draženci	4,1	I	
SL-M-7	Draženci-Gruškovje	3,52	II	
SM-H-1	Upgrading border-crossing at Kotroman			Serbia & Montenegro TEM projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from REBIS.
SM-H-2	Upgrading border-crossing at Presevo			
SM-H-3	Upgrading border-crossing at Gradina			
SM-H-4	Upgrading border-crossing at Debeli Brijek			
SM-H-5	Upgrading border-crossing at Bozaj			
SM-H-6	Rehabilitation of Bujanovac - Presevo road			
SM-H-7	Rehabilitation of Leskovac - Bujanovac			
SM-H-8	Rehabilitation of Liberty bridge in Novi Sad			
SM-H-9	Rehabilitation of Belgrade-Nis road			
SM-H-10	Improvement Rzav Nova Varos road			
SM-M-1	Completion of Motorway Novi Sad - Horgos			
SM-M-2	Completion of Motorway Belgrade - Novi Sad			
SM-H-11	Upgrading Nis-Pirot-Gradina road			
SM-H-12	Completion of belgrade bypass			
SM-H-13	Rehabilitation of Pancevo-Romanian border road			
SM-H-14	Removal of bottlenecks on roads in Ovcar Banja			
SM-H-15	Sozina Tunnel, access roads			

SM-H-16	Eastern mini bypass of Podgorica			
SM-H-17	Rehabilitation of road Podgorica - Bjelo Polje: Improve capacity and safety			
SM-H-18	Rehabilitation of road Podgorica - Bjelo Polje: Improving speed, capacity and safety			
SM-H-19	Rehabilitation of Cacak-Pozega road			
SM-H-20	Cacak bypass, Phase 1			
SM-H-21	Bypass Niksic			
SM-H-22	Rehabilitation of Petrovac-Budva road			
SM-H-23	Leskovac Bujanovac			
SM-H-24	Verige bridge at Kotor			
SM-H-25	Bypass Bijelo Polje			
SM-H-26	Podgorica - Niksic Bosnian border			
TU-M-1	Ankara – Pozanti Motorway, Section 1:Ankara – Acikuyu	3,85	II	
TU-M-2	Ankara – Pozanti Motorway, Section 2: Acikuyu – Ortakoy	3,85	II	
TU-M-3	Ankara – Pozanti Motorway, Section 3: Ortakoy - Golcuk	4,1	I	
TU-M-4	Ankara – Pozanti Motorway, Section 4: Golcuk - Pozanti	3,6	II	
TU-M-5	Bursa – Izmir Motorway, Section 1: Orhangazi – Bursa	3,8	II	
TU-M-6	Bursa – Izmir Motorway, Section 2: (Bursa-Karacabey)Jun.-Susurluk	4,05	I	
TU-M-7	Bursa – Izmir Motorway, Section 3: Susurluk-(Balikesir-Edremit)Junc.	4,05	I	
TU-M-8	Bursa – Izmir Motorway, Section 4: (Balikesir-Edremit)Junc.- Kirkagac	4,1	I	
TU-M-9	Bursa – Izmir Motorway, Section 5: Kirkagac-Manisa	4	I	
TU-M-10	Bursa – Izmir Motorway, Section 5: Manisa-Izmir	4,1	I	
TU-M-11	Tekirdag – İpsala border Road, Section 1: Kinali Junc. – Tekirdag	3,91	II	
TU-M-12	Tekirdag – İpsala border Road, Section 2: Tekirdag Bypass	4,05	I	
TU-M-13	Tekirdag – İpsala border Road, Section 3: Tekirdag – Malkara Junction	4,25	I	
TU-M-14	Tekirdag – İpsala border Road, Section 4: Malkara junc.-İpsala Border	4,35	I	
TU-M-15	Sanliurfa – Habur Border, Section 1: Sanliurfa – Viransehir	4,01	I	
TU-M-16	Sanliurfa – Habur Border, Section 2: Viransehir-Kiziltepe	3,91	II	

TU-M-17	Sanliurfa – Habur Border, Section 3: Kiziltepe-Nusaybin Junc.	4,01	I	
TU-M-18	Sanliurfa – Habur Border, Section 4: Nusaybin Junc.- Oyali	4,01	I	
TU-M-19	Sanliurfa – Habur Border, Section 5: Oyali – Cizre	4,01	I	
TU-M-20	Sanliurfa – Habur Border, Section 6: Cizre - Silopi	4	I	
UKR-M-1	Building and maintenance of motorway Western Border of Ukraine (Kosyny) – Kyiv on the road' part Vinnytza-Kyiv on the term of concession.	3,26	II	
UKR-M-2	Building and maintenance of new motorway Lviv-Krakovets on the term of concession.	3,22	II	
UKR-M-3	Building and maintenance of new motorway Lviv-Brody on the term of concession.	3,24	II	
UKR-M-4	Building and maintenance of motorway from Russia border (Scherbakivka) to the motorway of state value Kyiv – Kharkiv – Dovzhansky.	3,3	II	

*** The only TEM country that provided no data and no data found elsewhere by consultant and therefore is not included is Italy**

Table 2 **Results of Projects Evaluation/ Technical Prioritization – TER (Rail)**

Project ID	***Project Description***	***Score***	***Category***	***Comments***
AT-R-1	New lines, upgrading and modernisation of network	n.a.	I - II	These projects (all AT-R) were not evaluated using the MCA method since no sufficient data existed. Priorities resulted from the investment plan provided by the country concering transport infrastructure, in which it was mentioned that all these projects will be finalized and funded until 2013.
AT-R-2	Nodes, stations, terminals, short-distance traffic	n.a.	I - II	
AT-R-3	Various other projects	n.a.	I - II	
AT-R-4	Safety (tunnels, railway crossings)	n.a.	I - II	
AT-R-5	Re-investment, quality improvements, streamling	n.a.	I - II	
AT-R-6	Planning for long-term investments	n.a.	I - II	
BG-R-1	Plovdiv-Svilengrad: Modernization and electrification of Plovdiv-Svilengrad railway line	3,94	II	
BG-R-2	Vidin-Calafat: Construction of Danube bridge Vidin-Calafat	3,52	II	
BG-R-3	Dragoman-Kalotina: Electrification of Dragoman-Kalotina railway line	4,34	I	
BG-R-4	Vidin-Sofia-Kulata: Modernisation of Vidin-Sofia-Kulata railway line	3,72	II	
BG-R-5	Sofia-Plovdiv-Burgas/Varna: Modernisation of Sofia-Plovdiv-Burgas/Varna railway line	3,88	II	
BG-R-6	Radomir-Gueshevo: Modernisation and electrification of Radomir-Gueshevo railway line	3,18	II	
BG-R-7	Sofia-Zimnitsa: Modernisation of Sofia-Karlovo-Zimnitsa railway line	3,3	II	
BG-R-8	Sofia-Dragoman: Modernisation of Sofia-Dragoman railway line	4,26	I	
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II	
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II	
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II	

BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II	
BH-R-5	Doboj-Dobrljin:Track overhaul and reconstruction of 78 km of the line to meet TER standards	3,82	II	
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik:Modernization of signaling system	3,5	II	
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik:Modernization of telecommunication system	3,66	II	
BL-R-1	Organisation of speed traffic of passenger trains (section Krasnoje-Minsk-Brest)			Belarus TEM projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from Euro-Asian Corridors Info Sheet on Investments.
CR-R-1	Reconstruction of Railway section of Corridor Vc	n.a.	n.a.	Croatia TER projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from REBIS.
CR-R-2	Electrification of north section (78,9) Beli Manastir - Strizivojna/Vrpolje	n.a.	n.a.	
CR-R-3	Track overhaul of railway section of Corridor Vb	n.a.	n.a.	
CR-R-4	Construction of 2nd rail track on 36km Dugo Selo - Krizevci section	n.a.	n.a.	
CR-R-5	Modification of the electical traction system on rail line Moravice-Rijeka-Sapjane (Skriljevo-Bakar)	n.a.	n.a.	
CR-R-6	Remote control system on rail line Botovo-Zagreb-Rijeka (329km) section	n.a.	n.a.	
CR-R-7	Reconstruction of Zagreb Main Railway Station	n.a.	n.a.	
CR-R-8	Ostarije-Knin-Split: Track reconstruction on Kosovo (Knin) -Split section	n.a.	n.a.	
CR-R-9	Reconstruction of stations on rail line Ostarije-Knin-Split	n.a.	n.a.	
CR-R-10	Construction of 2nd rail track on 53km Zagreb-Kalrovac section	n.a.	n.a.	
CR-R-11	Rail track overhaul Ostarije-Ogulin (6,2km), Skrad - Drivenik (32,2km) & Skriljevo - Rijeka (11,4km) sections. Total 54,8km of single track line	n.a.	n.a.	
CR-R-12	Construction of 2nd track on section Zagreb-V. Gorica	n.a.	n.a.	
CR-R-13	Remote rail control traffic system Savski marof - Zagreb-Tovarnik (319km)	n.a.	n.a.	
CR-R-14	Rail track overhaul Savski Marof-Zagreb & Ivankovo-Tovarnik sections, total 92,8km	n.a.	n.a.	
CR-R-15	Project of optical telecommunication rail network (whole HZ network)	n.a.	n.a.	

CR-R-16	Electrification of Ostarije-Knin-Spli/Sibenic	n.a.	n.a.	
CZ-R-1	Benesov-Ceske Budejovice	3,86	II	
CZ-R-2	Ceske Budejovice-Horni Dvoriste	4,42	I	
CZ-R-3	State border - Cheb-Plzen	4,1	I	
CZ-R-4	Detmarovice-Mosty u Jablunkova	4,1	I	
CZ-R-5	Electrification of the railway line kadan-Karlovy Vary	3,62	II	
CZ-R-6	Electrification of the railway line Letohrad-Lichkov	4,26	I	
CZ-R-7	Plzen-Praha	3,9	II	
CZ-R-8	Praha-Benesov	3,98	II	
GE-R-1	Reconstruction of Zestaponi-Khashuri Section	3,68	II	
GE-R-2	Georgia -Turkey New Railway Link Construction	4	I	
GR-R-1	Aharnes (Athens) - Tithoraia - Domokos - Thessaloniki: Completion of the construction of double line, substructure works, signalling and electrification	3,8	II	
GR-R-2	Tithoraia - Lianokladi:Completion of the construction of double line, substructure works, signalling and electrification, stations	3,68	II	
GR-R-3	Lianokladi - Domokos:Completion of the construction of double line, substructure works, signalling and electrification, stations	3,5	II	
GR-R-4	Aharnes-Kiato:Completion of the construction of double line, substructure works, signalling, electrification, stations and group of Thriasio Field	4,18	I	
GR-R-5	Kiato-Patras:Completion of the construction of double line, substructure works, signalling and electrification, stations	3,88	II	
GR-R-6	Aharnes-Spata Airport:Completion of the construction of double line, substructure works, signalling, electrification, traffic group of Aharnes Center	4,26	I	
GR-R-7	Thessaloniki-Alexandroupoli: Construction of new single line to detected sections	4,01	I	
GR-R-8	Aharnes-Patra:Electrification	3,88	II	
GR-R-9	Inoi-Chalkis:Electrification	3,88	II	

GR-R-10	West Axis/Section 1:Igoumenitsa-Kalambaka-Kozani	2,86	III	
GR-R-11	West Axis/Section 2:Rion-Ioannina	2,94	III	
GR-R-12	West Axis/Section 3:Rio-Patra-Kalamata	3,04	II	
HU-R-1	Track reconstruction on the line Győr–Celldömölk	3,48	II	
HU-R-2	Reconstruction of Budapest – Hegyeshalom main lines phase II.	3,76	II	
HU-R-3	Rehabilitation of Hatvan – Somoskőújfalu railway line	3,54	II	
HU-R-4	Rehabilitation of Mezőzombor – Sátoraljaújhely railway line	3,54	II	
HU-R-5	Reconstruction of Budapest – Hatvan – Miskolc railway line	3,18	II	
HU-R-6	Reconstruction of Budapest – Szob railway line	3,44	II	
HU-R-7	Reconstruction of Dombóvár – Gyékényes railway line	3,16	II	
HU-R-8	Reconstruction of Budapest – Pusztaszabolcs – Dombóvár railway line	3,38	II	
HU-R-9	Reconstruction of Budapest – Székesfehérvár railway line	3,28	II	
HU-R-10	Electrification of railway line Budapest-Esztergom	3,44	II	
HU-R-11	Rehabilitation of Szabadbattyán – Tapolca railway line	3,28	II	
HU-R-12	Reconstruction of Zalalövő – Ukk – Boba railway line	3,52	II	
HU-R-13	Reconstruction of Székesfehérvár – Szombathely railway line	3,52	II	
HU-R-14	Electrification of Szombathely – Nagykanizsa railway line	3,18	II	
HU-R-15	Electrification of Hegyeshalom – Szombathely railway line	3,4	II	
HU-R-16	Rehabilitation of Budapest – Kelebia railway line	3,16	II	
HU-R-17	Rehabilitation of Budapest – Lajosmizse – Kecskemét railway line	3,3	II	
HU-R-18	Rehabilitation of Cegléd – Szeged railway line	3,4	II	
HU-R-19	Rehabilitation of railway line Budapest-Újszász-Szolnok-Lökösháza -Phase I.	3,3	II	
HU-R-20	Reconstruction of railway line Püspökladány–Biharkeresztes	3,1	II	

HU-R-21	Reconstruction of railway line Szolnok-Debrecen-Nyíregyháza-Záhony	3,12	II	
HU-R-22	Reconstruction of railway line Mezőzombor – Nyíregyháza	3,04	II	
HU-R-23	Railway line Budapest–Cegléd–Szolnok	3,36	II	
LT-R-1	Modernisation of Telecommunicatios on the Rail Corridor IXB	4,18	I	
LT-R-2	Modernisation of Telecommunicatios equipments on the Rail Corridor IXD	4,06	I	
LT-R-3	Modernisation of Signalling and Power supply on Crete corridor sectin Šiauliai – Klaipėda	4,16	I	
LT-R-4	Modernisation of power supply on Crete Corridor IX B section Kaisiadorys-Radvilislis	4,16	I	
LT-R-5	Reconstruction of Kaunas tunnel	4,02	I	
LT-R-6	Elimination of crossings (road overpasses building) on corridor IXD	4,02	I	
LT-R-7	Elimination of crossings (road overpasses building) on corridor IXB	4,02	I	
LT-R-8	Infrastructures renovation of main tracks links	3,78	II	
LT-R-9	Tracks modernization for speed up to 160 km/h	4,02	I	
LT-R-10	Tracks modernization for speed up to 160 km/h	4,02	I	
LT-R-11	Modernization of Signalling and Power supply on lines Kena-Kybartai, Radviliskis-Siauliai	3,98	II	
LT-R-12	Modernization of radio system	4,1	I	
LT-R-13	Development of Klaipeda railway node	4,1	I	
LT-R-14	Extension of tracks length up to 1050 m on the corridor IXD, IXB stations	4,14	I	
LT-R-15	Development of Vilnius node	4,1	I	
LT-R-16	Construction of new standart gauge section State border with Poland – Kaunas	"Rail Baltica"	I	These project s were not evaluated using the MCA, after request of Lithuania, since belong to Rail Baltica. They were prioritized directly by country.
LT-R-17	Construction of new standard gauge section Kaunas- State border with Latvia	"Rail Baltica"	I	

LT-R-18	Electrification of Kena-Kybartai line	3,86	II	
LT-R-19	Electrification of Kaišiadorys-Radviliskis,Palemonas-Gaižiūnai line	3,86	II	
LT-R-20	Electrification of Radviliskis-Klaipeda line	3,86	II	
LT-R-21	Reconstruction of Kena border station	4,06	I	
LT-R-22	Hot boxes axles detectors modernization	4,18	I	
Ma-R-1	Complete construction of railway towards Albania and Bulgaria			FYROM provided data insufficient to support the elaboration of the MCA method, so priorities and scores are missing.
Ma-R-2	Electrification/ Modernisation of Skopje - Gostivar			
Ma-R-3	Increase speed on certain section along Corridor X			
Ma-R-4	Multi-modal terminal at Struga			
Ma-R-5	Free Economic Zone in Durres			
MD-R-1	Rehabilitation and Electrification of the Railway Line Ukrainian border – Bender – Chişinău – Ungheni – Romanian Border	4,04	I	
MD-R-2	Construction (Restoration) of the Revaca – Cainari Railway Line	3,44	II	
PL-R-1	Rzepin-Kunowice (E20): Rail upgrading	n.a.	n.a.	Poland'sTER projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from ISPA info sheets.
PL-R-2	Siedlce-Terspol: Modernisation of rail section (Phase 1)	n.a.	n.a.	
PL-R-3	Wegliniec-Legnica Modernisationof E30 rail section	n.a.	n.a.	
PL-R-4	Poznan modernisation rail node E20	n.a.	n.a.	
PL-R-5	Improvement of railway infrastructure and liquidation of operational bottlenecks	n.a.	n.a.	
PL-R-6	Modernisation of E30 railway line section	n.a.	n.a.	
RO-R-1	Rehabilitation and Modernisation of the Railway line Craiova – Calafat, component of the Pan-European Corridor IV (the southern branch)	3,34	II	
RO-R-2	Rehabilitation the Railway Line Bucharest – Videle - Giurgiu, component of the Pan-European Corridor IX for the traffic of the trains with a maximum speed of 160 km/hour	3,86	II	
RO-R-3	Rehabilitation of the Railway Line Bucharest – Constanta, component of the Pan-European Corridor IV for the traffic of the trains with a maximum speed of 160 km/hour	4,1	I	
RO-R-4	Rehabilitation of the Railway Line Brasov – Sighisoara - Curtici, component of the Pan-European Corridor IV for the traffic of the trains	3,74	II	

	with a maximum speed of 160 km/hour			
RU-R-1	Development of the railway direction: Belarus border - Moscow - Nizhni Novgorod - Perm			Russian federation TER projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from country's National report for Euro-Asian Corridors.
RU-R-2	Development of the railway direction:Moscow - Kazan - Ekaterinburg			
RU-R-3	Development of the railway direction:Finland border - St.Petersburg - Ekaterinburg			
RU-R-4	Development of the railway direction:Ekaterinburg - Omsk			
RU-R-5	Development of the railway direction:Ukraine border - Liski - Syzran - Samara - Chelyabinsk - Kurgan			
RU-R-6	Development of the railway direction: Novorossisk-Vologograd-Syzran			
RU-R-7	Development of dock station at St. Petersburg			
RU-R-8	Development of dock station at Vyborg			
RU-R-9	Development of dock station at Vysotsk			
RU-R-10	Development of dock station at Novorossisk			
RU-R-11	Development of dock station at Tuapse			
RU-R-12	Development of border station at Gorbunovo (border with Kazakhstan)			

RU-R-13	Development of border station at Solovey (border with Ukraine)			
RU-R-14	Moscow - Ryasah - Rostov: Modernisation and reconstruction of two way electrified rairoad (1228 kms)			
RU-R-15	Modernisation and reconstruction of railway line: Volgograd - Astrakham - Samur			
RU-R-16	Railway line Kochetovca - Saratov - Urbakh - Verkhniy Raskunchak: Modernisation and reconstruction for line and electrification for branch Kochetovka - Rtischevo			
RU-R-17	Construction of railway approach to port Olja: 50km length and port station			
RU-R-18	Construction of check points at the border stations: Aksarayskaya, Ozinki, Verkhniy, Baskunchak, Pallasovka, Elton			
RU-R-19	Modernisation of technical means to increase safety in railway lines which are part of the ITC "North-South"			
SK-R-1	ZSR Kuty - Bratislava Modernisation	3,84	II	
SK-R-2	ZSR Bratislava-Trnava Modernisation	3,24	II	
SK-R-3	ZSR Trnava-Nove Mesto nad Vahom Modernisation	3,36	II	
SK-R-4	ZSR Nove Mesto nad Vahom - Puchov Modernisation	3,48	II	
SK-R-5	ZSR Zilina-krasno nad Kysucou	3,96	II	
SL-R-1	Modernisation of railway line Pragersko – Ormož – Project A	4,3	I	
SL-R-2	Electrification of railway line Pragersko - Hodoš	4,1	I	
SL-R-3	Construction of 2nd track on railway line Maribor – Šentilj – border with the Republic of Austria	4,12	I	
SL-R-4	Introduction of the ERTMS/ETCS, GSM-R system with the implementation of remote control of fixed installations of the electric traction system on the Slovenian rail network	4,58	I	

SL-R-5	Modernisation of the existing railway line Koper - Divača	4,14	I	
SL-R-6	Upgrading the Ljubljana – Zidani most – Maribor railway line	4,02	I	
SL-R-7	Construction of 2nd track on railway line Divača - Koper	3,68	II	
SM-R-1	Priority rehabilitation works Belgrade-S. Pazova Tovarnik rail line			Serbia & Montenegro TER projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from REBIS.
SM-R-2	Priority rehabilitation on Belgrade-Nis-Presevo rail line			
SM-R-3	Widening of rail tunnels Ripanj and Ralja			
SM-R-4	Priority rehabilitation works on S. Pazova Kelebia - section Petrovaradin Cortanovci rail line			
SM-R-5	Priority rehabilitation of Stara pazova - kelebia rail line			
SM-R-6	Priority rehabilitation on Nis-Pirot-Dimitrovgrad			
SM-R-7	Upgrading of Valjevo-Pozega rail line			
SM-R-8	Rehabilitation of Vrbnica-Podgorica-Bar rail line			
SM-R-9	Rehabilitation of Vrbnica-Podgorica-Bar			
SM-R-10	Repair of danube and Ostruznica rail bridges at Belgrade			
SM-R-11	Reconstruction of Zezelj rail bridge at Novi sad			
SM-R-12	Completion of belgrade railway junction			
SM-R-13	Electrification of rail lines			
TU-R-1	Ankara-İstanbul rehabilitation Project(Existing Railway Line)	3,38	II	
TU-R-2	Ankara-Yozgat-Yıldızeli New Railway Project	3,4	II	
TU-R-3	Project of Bosphorus Rail Tube Tunnel and Gebze-Halkalı Surface Metro system	3,82	II	
TU-R-4	Turkey (Kars)-Georgia (Tbilisi) New Railway Project	4	I	
UKR-R-1	Purchase of modern track technique for modernization and maintanance of track at section Lvov - Schmerinka-Kiev	n.a.	n.a.	Ukraine's TER projects were not given in details by country so they were not technically evaluated. They were examined directly in

UKR-R-2	Building of Beskidskiy tunnel (Pan-European transport corridor №5); passenger's coachs purchase; track technique purchase.	n.a.	n.a.	the "financial feasibility prioritization phase" based on information taken from country's National report for Euro-Asian Corridors.

*** The only TER country that provided no data and no data found elsewhere by consultant and therefore is not included is Italy**

PART II – FINANCING FEASIBILITY PRIORITISATION PHASE

Description of the Phase

The first problem that needs to be solved when selecting investment projects is the size of the budget that can be afforded. Therefore, based on the technical prioritisation phase results, an examination shall be made as to whether each country can theoretically afford financing the projects selected in each priority category, within its boundaries.

In recent years, International Funding Institutions have considered that the acceptable proportion that internationally-relevant transport investment costs represent, compared with GDP for a country, should not be higher than 1.5 per cent per year in the long term, in order to limit the risk of over-indebtedness. This level was recommended by the ECMT Resolution n° 97/1 on Transport and Infrastructure Development adopted in Berlin on 21-22 April 1997. It was also used by the TINA project and it will be used here as well.

Therefore, the Consultant has accordingly tailored –following certain steps- and classified all projects into the four pre-defined priority categories by a process of trial and error, to arrive at the respective budgetary limits determined for each year.

The certain steps that were followed are:

1. Rank all projects in each country first by priority and then in each priority category by score, following a top-down approach. The projects in Priority I are identified from the beginning as CLASS 1. The projects in Priority II are identified from the beginning as CLASS 2. The projects in Priority III are identified from the beginning as CLASS 3. The projects in Priority IV are identified from the beginning as CLASS 4.

2. Projects that are UNDER CONSTRUCTION or CROSS-BORDERS ones are moved in CLASS 1 regardless their initial Priority Category. The rest remain in same CLASSES.

3. Check projects in CLASSES 2, 3 and 4, according to Van Miert, REBIS and TIRS. So if a project results i.e. to be in priority category II according to TEM and TER Methodology but according to i.e. Van Miert prioritization belongs in another Priority Category (i.e. A, B or C) then Van Miert's prioritization will be followed. SO IF: (a) the projects present higher priorities in Van Miert, REBIS or TIRS are placed in CLASSES according to the priorities identified in these studies (b) the projects present lower priorities in Van Miert, REBIS or TIRS are placed in CLASSES according to the priorities identified in TEM and TER study and (c) the projects present same priorities in Van Miert, REBIS or TIRS they remain in their initial respective CLASSES.

4. Projects of CLASS 1 are then checked for threshold in IRR. If IRR < 4,5% or no IRR is available then their CLASS is lowered from CLASS 1 to CLASS 2.

5. The results of the first 4 steps are used as follows: CLASS 1 is the first investment/implementation class in the time horizon and projects belonging in

CLASS 1 will start before 2010. Respectively, projects of CLASS 2 will start before 2015, projects of CLASS 3 will start before 2020 and projects of CLASS 4 will start after 2020.

6. Put all the projects in the timetable, splitting their investment costs among the implementation years and in the first trial put the first payemtn of each project of each CLASS in the first year of the time horizon of the respective CLASS.
7. Then - following a process of trial and error - for EACH YEAR in the time horizon up to 2030 check if the sum of all investments per year is less or equal to 1,5% of country's GDP. If it is more, then start moving projects at a later year and possibly stage. Both TER and TEM projects are added.

Following the 7 steps above we obtain a time-investement plan in each country for TEM and TER Master Plan.

The **investment costs** comprise the construction costs estimated at 2004 prices, net of taxes and net of land acquisition. Countries GDP are 2004 values and are taken from WP3.

Next we will present an example for a better understanding of the Financing Feasibility Prioritisation Phase, and then the final results for each country will be presented.

1. Application Example

Bosnia and Herzegovina submitted in total 15 projects (7 TER and 8 TEM projects), as shown in Table 3a below.

Table 3a **Bosnia-Herzegovina Projects – Initial Scores and Priority Category**

Project ID	***Project Description***	***Score***	***Category***
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II
BH-M-4	Improvement of Foca-Hum Road	3,22	II
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II
BH-M-6	Improvement of Lasva-Travnik Road (M5/E-761)	3,70	II
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II
BH-M-8	Construction of Corridor V Motorway	3,36	II
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II
BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II
BH-R-5	Doboj-Dobrljin:Track overhaul and reconstruction of 78 km of	3,82	II

	the line to meet TER standards		
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik:Modernization of signaling system	3,5	II
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik:Modernization of telecommunication system	3,66	II

Apply Step 1: Rank all projects in the country first by priority and then in each priority by score, following a top-down approach. The projects in Priority I are identified from the beginning as CLASS 1. The projects in Priority II are identified from the beginning as CLASS 2. The projects in Priority III are identified from the beginning as CLASS 3. The projects in Priority IV are identified from the beginning as CLASS 4.

Table 3b Bosnia-Herzegovina Projects Initial Ranking and CLASSES

Project ID	***Description***	***Score***	***Category***	***CLASS***
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II	2
BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II	2
BH-R-5	Doboj-Dobrljin: Track overhaul and reconstruction of 78 km of the line to meet TER standards	3,82	II	2
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II	2
BH-M-6	Improvement of Lasva-Travnik Road (M5/E-761)	3,70	II	2
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of telecommunication system	3,66	II	2
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II	2
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of signaling system	3,5	II	2
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II	2
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II	2
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II	2
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II	2
BH-M-8	Construction of Corridor V Motorway	3,36	II	2
BH-M-4	Improvement of Foca-Hum Road	3,22	II	2
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II	2

Apply Step 2: Projects that are UNDER CONSTRUCTION or CROSS-BORDERS ones are moved in CLASS 1 regardless their initial Priority Category. The rest remain in same CLASSES.

None of the above projects is under construction.

- Cross – border projects are BH-M-1, BH-M-2 and BH-M-8, therefore they become CLASS 1.

Table 3c **Bosnia-Herzegovina Projects First Re-prioritisation**

Project ID	*Description*	*Score*	*Category*	*CLASS*
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II	2
BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II	2
BH-R-5	Doboj-Dobrljin: Track overhaul and reconstruction of 78 km of the line to meet TER standards	3,82	II	2
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II	2
BH-M-6	Improvement of Lasva-Travnik Road (M5/E-761)	3,70	II	2
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of telecommunication system	3,66	II	2
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II	2
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of signaling system	3,5	II	2
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II	1
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II	1
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II	2
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II	2
BH-M-8	Construction of Corridor V Motorway	3,36	II	1
BH-M-4	Improvement of Foca-Hum Road	3,22	II	2
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II	2

Apply Step 3: Check projects in CLASSES 2, 3 and 4, according to Van Miert, REBIS and TIRS. So if a project results i.e. to be in priority category II according to TEM and TER Methodology but according to i.e. Van Miert prioritization belongs in another Priority Category (i.e. A, B or C) then Van Miert's prioritization will be followed. SO IF: (a) the projects present higher priorities in Van Miert, REBIS or TIRS are placed in CLASSES according to the priorities identified in these studies (b) the projects present lower priorities in Van Miert, REBIS or TIRS are placed in CLASSES according to the priorities identified in TEM and TER study and (c) the projects present same priorities in Van Miert, REBIS or TIRS they remain in their initial respective CLASSES.

Van Miert, REBIS and TIRS studies were reviewed and the following projects found:

- Projects BH-R-1, BH-R-3 and BH-R-5 were evaluated in both REBIS and TIRS studies and their respective priorities were: 3B and I.
- Project BH-R-4 was evaluated were evaluated in both REBIS and TIRS studies and its respective priority was: 3B and IIa.
- Project BH-M-6 was evaluated in TIRS and characterized as a priority IIa.
- Project BH-R-7 was evaluated were evaluated in both REBIS and TIRS studies and its respective priority was: 3B and III.
- Project BH-R-6 was evaluated in REBIS and characterized as a priority 3B.

- Project BH-M-2 was evaluated in TIRS and characterized as a priority III.
- Project BH-M-1 was evaluated were evaluated in both REBIS and TIRS studies and its respective priority was: 1A and IIa.
- Project BH-M-3 was evaluated in TIRS and characterized as a priority I.
- Project BH-M-8 was evaluated in TIRS and characterized as a priority IIa.
- Project BH-M-4 was evaluated in TIRS and characterized as a priority III.

We will take into considerations only the projects that were evaluated in REBIS or in TIRS as Priority I, since they are all already Priority II in TEM and TER. These projects are:
BH-R-1, BH-R-3, BH-R-5, BH-M-1 and BH-M-3.

Table 3d **Bosnia-Herzegovina Projects Second Re-prioritisation**

Project ID	***Description***	***Score***	***Category***	***CLASS***
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II	1
BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II	2
BH-R-5	Doboj-Dobrljin: Track overhaul and reconstruction of 78 km of the line to meet TER standards	3,82	II	1
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II	2
BH-M-6	Improvement of Lasva-Travnik Road (M5/E-761)	3,70	II	2
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of telecommunication system	3,66	II	2
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II	1
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of signaling system	3,5	II	2
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II	1
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II	1
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II	1
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II	2
BH-M-8	Construction of Corridor V Motorway	3,36	II	1
BH-M-4	Improvement of Foca-Hum Road	3,22	II	2
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II	2

Apply Step 4: Projects of CLASS 1 are then checked for threshold in IRR. If IRR < 4,5% or no IRR is available then their CLASS is lowered from CLASS 1 to CLASS 2.

Projects in CLASS 1 with IRR < 4,5% (or IRR –Score < 1) are: ALL apart BH-R-1, BH-R-3

Table 3e **Bosnia-Herzegovina Projects Final Re-prioritisation**

Project ID	***Description***	***Score***	***Category***	***CLASS***
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II	1
BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II	2
BH-R-5	Doboj-Dobrljin: Track overhaul and reconstruction of 78 km of the line to meet TER standards	3,82	II	2
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II	2
BH-M-6	Improvement of Lasva-Travnik Road (M5/E-761)	3,70	II	2
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of telecommunication system	3,66	II	2
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II	1
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of signaling system	3,5	II	2
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II	2
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II	2
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II	2
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II	2
BH-M-8	Construction of Corridor V Motorway	3,36	II	2
BH-M-4	Improvement of Foca-Hum Road	3,22	II	2
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II	2

Apply Step 5:The results of the first 4 steps are used as follows: CLASS 1 is the first investment/implementation class in the time horizon and projects belonging in CLASS 1 will start before 2010. Respectively, projects of CLASS 2 will start before 2015, projects of CLASS 3 will start before 2020 and projects of CLASS 4 will start after 2020.

Table 3f **Bosnia-Herzegovina Projects Final Ranking**

Project ID	*Description*	*Score*	*Category*	*CLASS*
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II	1
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II	1
BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II	2
BH-R-5	Doboj-Dobrljin:Track overhaul and reconstruction of 78 km of the line to meet TER standards	3,82	II	2
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II	2
BH-M-6	Improvement of Lasva-Travnik Road (M5/E-761)	3,70	II	2
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of telecommunication system	3,66	II	2
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik: Modernization of signaling system	3,5	II	2
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II	2
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II	2
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II	2
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II	2
BH-M-8	Construction of Corridor V Motorway	3,36	II	2
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II	2
BH-M-4	Improvement of Foca-Hum Road	3,22	II	2

Apply Step 6 & 7: Put all the projects in the timetable, splitting their investment costs among the implementation years and in the first trial put the first payment of each project of each CLASS in the first year of the time horizon of the respective CLASS. Then - following a process of trial and error - for EACH YEAR in the time horizon up to 2025 check if the sum of all investments per year is less or equal to 1,5% of country's GDP. If it is more, then start moving projects at a later year and possibly stage. Both TER and TEM projects are added.

Table 4 shows the results of Steps 6 & 7, along with all the information researched in previous Steps. Finally, it also includes the Funding Sources as given by country or found in other studies or financial institutions information sheets (i.e. ISPA).

Projects that do not present funding sources will probably have to secure them in the near future. For this purpose the eligibility criteria for receiving funds as well as the required procedures per funding institution/ souce are presented in PART III of this report.

Project ID	*Description*	*Score*	*Category*	*CLASS*	*Status*	*Cross-border*	*IRR - Score*	*Time Plan*	*Total Cost*
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II	1	Planning	N	5	3	83,00
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II	1	Planning	N	4	7	63,25
BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II	2	Planning	N	4	5	13,75
BH-R-5	Doboj-Dobrljin:Track overhaul and reconstruction of 78 km of the line to meet TER standards	3,82	II	2	Planning	N	1	3	60,00
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II	2	Planning	N	4	3	72,00
BH-M-6	Improvement of Lasva-Travnik Road (M5/E-761)	3,70	II	2	Design	N	1	5	51,00
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik:Modernization of telecommunication system	3,66	II	2	Planning	N	1	4	11,10
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik:Modernization of signaling system	3,5	II	2	Planning	N	1	4	51,00
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II	2	Design	Y	1	10	350,00
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II	2	Design	Y	1	7	83,50
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II	2	Planning	N	1	5	9,00
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II	2	Identification	N	1	5,5	72,00
BH-M-8	Construction of Corridor V Motorway	3,36	II	2	Study	Y	1	9	3500
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II	2	Identification	N	1	5	12,00
BH-M-4	Improvement of Foca-Hum Road	3,22	II	2	Identification	N	1	5,5	88,00

Table 4 **Bosnia-Herzegovina Investment Time Plan for TEM and TER Networks**

Project	***Class 1 – up to 2010***							***Class 2 – up to 2015***				
ID	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*
BH-R-1	27,6666	27,6666	27,6666									
BH-R-3	9,03571	9,03571	9,03571	9,03571	9,03571	9,03571	9,03571					
BH-R-4								2,75	2,75	2,75	5,5	
BH-R-5								20	20	20		
BH-R-2								24	24	24		
BH-M-6								10,2	10,2	10,2	10,2	10,2
BH-R-7								2,775	2,775	2,775	2,775	
BH-R-6								12,75	12,75	12,75	12,75	
BH-M-2											35	35
BH-M-1												11,92857
BH-M-3								1,8	1,8	1,8	1,8	1,8
BH-M-5												13,09091
BH-M-8												
BH-M-7											2,4	2,4
BH-M-4												
SUM/YEAR	**36,7023**	**36,7023**	**36,7023**	**9,03571**	**9,03571**	**9,03571**	**9,03571**	**74,275**	**74,275**	**74,275**	**70,425**	**74,41948**
	V	**V**	**V**	**V**	**V**	**V**	**V**	**V**	**V**	**V**	**V**	**V**
	74,93	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**

* 1,5% * country GDP = 74,93

Table 4 **Bosnia-Herzegovina Investment Time Plan for TEM and TER Networks (cont.)**

Project ID	***Class 3 – up to 2020***					***Class 4 –after 2020***					Funding Sources			
	2016	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*2025*	*National*	*Bank*	*Grant*	*Private*
BH-R-1											0%	100%	0%	0%
BH-R-3											0%	100%	0%	0%
BH-R-4											0%	100%	0%	0%
BH-R-5											0%	100%	0%	0%
BH-R-2											0%	100%	0%	0%
BH-M-6											0%	0%	0%	0%
BH-R-7											0%	100%	0%	0%
BH-R-6											0%	100%	0%	0%
BH-M-2	35	35	35	35	35	35	35				0%	0%	0%	0%
BH-M-1	11,9285	11,9285	11,9285	11,9285	11,9285	11,9285					0%	0%	0%	0%
BH-M-3											0%	0%	0%	0%
BH-M-5	13,0909	13,0909	13,0909	13,0909	6,54545						0%	0%	0%	0%
BH-M-8						After 2020 but split the amount in 46 doses not to pass 1,5%GDP					0%	0%	0%	0%
BH-M-7	2,4	2,4	2,4								0%	0%	0%	0%
BH-M-4				8	16	16	16	16	16		0%	0%	0%	0%

SUM/YEAR	**62,4194**	**62,4194**	**62,4194**	**68,0194**	**69,4740**	**62,9285**	**51**	**16**	**16**	**0**
	V	**V**	**V**	**V**	**V**	**V**	**V**	**V**	**V**	**V**
	74,93	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**	**74,93**

Table 4 **Bosnia-Herzegovina Investment Time Plan for TEM and TER Networks (cont.)**

Therefore the final TEMPLATE and CONCLUSIONS for Bosnia-Herzegovina are as follows:

FINAL TEMPLATE – BOSNIA&HERZEGOVINA

Network	***Project ID***	***Category***	***Class***	***Starting year***	***End year***	***% Funding Secured/ Source***			
						National	*Bank*	*Grant*	*Private*
TER	BH-R-1	I	1	2004	2006	0%	100%	0%	0%
TER	BH-R-3	I	1	2004	2010	0%	100%	0%	0%
TER	BH-R-4	II	2	2011	2014	0%	100%	0%	0%
TER	BH-R-5	II	2	2011	2013	0%	100%	0%	0%
TER	BH-R-2	II	2	2011	2013	0%	100%	0%	0%
TEM	BH-M-6	II	2	2011	2015	0%	0%	0%	0%
TER	BH-R-7	II	2	2011	2014	0%	100%	0%	0%
TER	BH-R-6	II	2	2011	2014	0%	100%	0%	0%
TEM	BH-M-2	II	2	2014	2022	0%	0%	0%	0%
TEM	BH-M-1	II	2	2015	2021	0%	0%	0%	0%
TEM	BH-M-3	II	2	2011	2015	0%	0%	0%	0%
TEM	BH-M-5	II	2	2015	2020	0%	0%	0%	0%
TEM	BH-M-8	II	2	After 2020	n.a.	0%	0%	0%	0%
TEM	BH-M-7	II	2	2014	2018	0%	0%	0%	0%
TEM	BH-M-4	II	2	2020	2024	0%	0%	0%	0%

Explanations on TEMPLATE:

(a) Category is the priority category of the Project as resulted from Technical Prioritisation Methodology

(b) CLASS is the "priority category" that results after the implementation of Financial Feasibility Prioritization Methodology.

(c) Start and End year refer to the payments not necessarily to the construction. Although only in few cases they differ.

CONCLUSIONS – BOSNIA & HERZEGOVINA

A. Network progress

14% of the TEM and TER Network will be completed before 2010

40% of the TEM and TER Network will be completed between 2010 - 2015

6% of the TEM and TER Network will be completed between 2015 – 2020

40% of the TEM and TER Network will be completed after 2020.

B. Funding of the network

Funding is secured only for 25% of the projects.

For the rest, the country can consult PART III of this report.

2. Results per Country

The same procedure is followed for all countries. Here the presentation of the final TEMPLATES and CONCLUSIONS per country will be presented.

2.1 Austria

Austria submitted in total 7 projects (1 TEM and 6 TER projects). The rail projects were not submitted in the proper format, but in a general description in the Austrian Transport Master Plan of 2001 ("Generalverkehrsplan from 2001"). Therefore proper evaluation was not possible but based on the time and investment plan in the country's transport master plan it was possible to define the priority category and the class.

FINAL TEMPLATE – AUSTRIA

Network	***Project ID***	***Category***	***Class***	***Starting year***	***End year***	***% Funding Secured/ Source***			
						National	*Bank*	*Grant*	*Private*
TEM	AT-M-1	I	1	2003	2008	0%	0%	0%	0%
TER	AT-R-1	I - II	1	2002	2013	100%	0%	0%	0%
TER	AT-R-2	I - II	1	2002	2013	100%	0%	0%	0%
TER	AT-R-3	I - II	1	2002	2013	100%	0%	0%	0%
TER	AT-R-4	I - II	1	2002	2013	100%	0%	0%	0%
TER	AT-R-5	I - II	1	2002	2013	100%	0%	0%	0%
TER	AT-R-6	I - II	1	2002	2013	100%	0%	0%	0%

CONCLUSIONS – AUSTRIA

A. Network progress

14% of the TEM and TER Network will be completed before 2010. The rest 86% will be completed before 2013.

B. Funding of the network

Funding is secured for all TER projects but not for the TEM project. For the latter Austria can consult PART III of this report.

2.2 Belarus

No received from this country, to support elaboration of Prioritisation Methodology, but sufficient information existed in a document of UNECE "Euro-Asian Linkages Information for Investment Activities"

Belarus submitted for Euro-Asian Linkages in total 4 projects (3 Road/TEM and 1 Rail/TER project).

FINAL TEMPLATE – BELARUS

Network	***Project ID***	***Category****	***Class *****	***Starting year***	***End year***	***% Funding Secured/ Source***			
						National	*Bank*	*Grant*	*Private*
TER	BL-R-1	n.a.	1	2003	2005	100%	0%	0%	0%
TEM	BL-M-1	n.a.	1	2003	2004	100%	0%	0%	0%
TEM	BL-M-2	n.a.	1	2000	2004	100%	0%	0%	0%
TEM	BL-M-3	n.a.	1	2005	2005	100%	0%	0%	0%

* Since no technical prioritization phase was applied, the category is missing.

** CLASS is based on the investment timeplan as indicated in the Euro-Asian Investment Info Sheet

CONCLUSIONS – BELARUS

A. Network progress

100% of the TEM and TER Network will be completed before 2010

B. Funding of the network

Funding is secured for all project.

2.3 Bosnia & Herzegovina

Already presented as the example.

2.4 Bulgaria

Bulgaria submitted in total 18 projects (10 TEM and 8 TER projects).

FINAL TEMPLATE – BULGARIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TEM	BG-M-7	I	1	2004	2008	0%	0%	0%	0%
TER	BG-R-3	I	1	2004	2005	100%	0%	0%	0%
TER	BG-R-8	I	1	2005	2010	27%	0%	55%	0%
TER	BG-R-1	II	1	2001	2006	11%	44%	45%	0%
TEM	BG-M-10	II	1	2004	2012	0%	0%	0%	0%
TER	BG-R-2	II	1	2005	2009	9%	50%	41%	0%
TEM	BG-M-5	II	1	2004	2008	0%	0%	0%	0%
TEM	BG-M-2	II	2	2011	2014	0%	0%	0%	0%
TER	BG-R-5	II	2	2015	2026	25%	0%	75%	0%
TEM	BG-M-3	II	2	2011	2014	0%	0%	0%	0%
TEM	BG-M-4	II	2	2011	2014	0%	0%	0%	0%
TEM	BG-M-1	II	2	2011	2016	0%	0%	0%	0%
TEM	BG-M-9	II	2	2011	2018	0%	0%	0%	0%
TER	BG-R-4	II	2	2011	2037	25%	0%	75%	0%
TEM	BG-M-8	II	2	2011	2015	0%	0%	0%	0%
TER	BG-R-7	II	2	2017	2026	0%	0%	0%	0%
TER	BG-R-6	II	3	2011	2016	20%	0%	80%	0%
TEM	BG-M-6	II	3	2016	2019	0%	0%	0%	0%

CONCLUSIONS – BULGARIA

A. Network progress

33% of the TEM and TER Network will be completed before 2010

27% of the TEM and TER Network will be completed between 2010 - 2015

22% of the TEM and TER Network will be completed between 2015 – 2020

18% of the TEM and TER Network will be completed after 2020

B. Funding of the network

Funding is secured only for 38% of the projects.

For the rest, the country can consult PART III of this report.

2.5 Croatia

Croatia submitted in total 27 projects (all TEM projects). As it concerns TER no data received from this country, to support elaboration of Prioritisation Methodology, but sufficient information existed REBIS study for 16 rail projects.

FINAL TEMPLATE – CROATIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TEM	CR-M-17	I	1	2004	2004	0%	100%	0%	0%
TEM	CR-M-16	I	1	2004	2005	0%	0%	0%	100%
TEM	CR-M-8	I	1	2004	2005	0%	100%	0%	0%
TEM	CR-M-5	II	1	2004	2005	0%	100%	0%	0%
TEM	CR-M-9	II	1	2004	2004	0%	100%	0%	0%
TEM	CR-M-10	II	1	2005	2005	0%	100%	0%	0%
TEM	CR-M-27	II	1	2007	2007	0%	0%	0%	100%
TEM	CR-M-15	II	1	2004	2008	0%	0%	0%	100%
TEM	CR-M-1	II	1	2005	2006	0%	100%	0%	0%
TER	CR-R-1	n.a.	1	2004	2005	0%	100%	0%	0%
TER	CR-R-2	n.a.	1	2008	2009	n.a.	n.a.	n.a.	n.a.
TER	CR-R-3	n.a.	1	2004	2006	100%	0%	0%	0%
TER	CR-R-4	n.a.	1	2004	2007	n.a.	n.a.	n.a.	n.a.
TER	CR-R-5	n.a.	1	2004	2007	n.a.	n.a.	n.a.	n.a.
TER	CR-R-6	n.a.	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TER	CR-R-7	n.a.	1	2005	2008	n.a.	n.a.	n.a.	n.a.
TER	CR-R-8	n.a.	1	2004	2004	0%	100%	0%	0%

TER	CR-R-9	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TER	CR-R-10	n.a.	1	2005	2007	n.a.	n.a.	n.a.	n.a.
TER	CR-R-11	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TER	CR-R-12	n.a.	1	2005	2006	n.a.	n.a.	n.a.	n.a.
TER	CR-R-13	n.a.	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TER	CR-R-14	n.a.	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TER	CR-R-15	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	CR-M-26	II	2	2011	2013	0%	0%	0%	100%
TEM	CR-M-18	II	2	2011	2013	0%	100%	0%	0%
TEM	CR-M-19	II	2	2011	2013	0%	100%	0%	0%
TEM	CR-M-11	II	2	2014	2015	0%	100%	0%	0%
TEM	CR-M-22	II	2	2011	2013	0%	100%	0%	0%
TEM	CR-M-3	II	2	2011	2013	0%	100%	0%	0%
TEM	CR-M-4	II	2	2011	2014	0%	100%	0%	0%
TEM	CR-M-13	II	2	2013	2016	0%	100%	0%	0%
TEM	CR-M-20	II	2	2011	2012	0%	100%	0%	0%
TEM	CR-M-21	II	2	2011	2013	0%	100%	0%	0%
TEM	CR-M-24	II	2	2011	2013	0%	100%	0%	0%
TEM	CR-M-12	II	2	2016	2017	0%	100%	0%	0%
TEM	CR-M-7	II	2	2013	2016	0%	100%	0%	0%
TEM	CR-M-6	II	2	2015	2017	0%	100%	0%	0%
TEM	CR-M-2	II	2	2011	2012	0%	100%	0%	0%
TEM	CR-M-23	II	2	2011	2013	0%	100%	0%	0%
TEM	CR-M-25	II	2	2018	2019	0%	100%	0%	0%
TEM	CR-M-14	II	2	2018	2022	0%	100%	0%	0%
TER	CR-R-16	n.a.	2	2011	2013	n.a.	n.a.	n.a.	n.a.

CONCLUSIONS – CROATIA

A. Network progress

56% of the TEM Network will be completed before 2010

30% of the TEM Network will be completed between 2010 - 2015

12% of the TEM Network will be completed between 2015 – 2020

2 % of the TEM Network will be completed after 2020

B. Funding of the network

Funding is secured for 70% of the projects. For the rest 30% funding situation is unknown. In any case for funding issues country can consult PART III of this report.

2.6 Czech Republic

Czech Rep. submitted in total 13 projects (5 TEM and 8 TER projects).

FINAL TEMPLATE – CZECH REPUBLIC

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TER	CZ-R-2	I	1	2005	2007	43%	25%	32%	0%
TEM	CZ-M-3	I	1	2004	2007	83%	17%	0%	0%
TEM	CZ-M-2	I	1	2004	2007	100%	0%	0%	0%
TER	CZ-R-6	I	1	2005	2008	100%	0%	0%	0%
TEM	CZ-M-1	I	1	2004	2006	88%	0%	12%	0%
TER	CZ-R-3	I	1	2005	2010	33%	35%	32%	0%
TER	CZ-R-4	I	1	2007	2013	33%	35%	32%	0%
TEM	CZ-M-5	I	1	2004	2008	77%	23%	0%	0%
TER	CZ-R-5	II	1	2004	2007	100%	0%	0%	0%
TEM	CZ-M-4	II	1	2004	2009	100%	0%	0%	0%
TER	CZ-R-8	II	2	2011	2016	43%	25%	32%	0%
TER	CZ-R-7	II	2	2011	2016	33%	35%	32%	0%
TER	CZ-R-1	II	2	2013	2020	43%	25%	32%	0%

CONCLUSIONS – CZECH REPUBLIC

A. Network progress

69% of the TEM and TER Network will be completed before 2010

8% of the TEM and TER Network will be completed between 2010 - 2015

23% of the TEM and TER Network will be completed between 2015 – 2020

B. Funding of the network

Funding is secured for all projects.

2.7 F.Y.R.O.M.

F.Y.R.O.M. submitted a brief description of counry's priorites and 8 projects were identified (3 TEM and 5 TER projects).

For these projects limited data existed to support elaboration of the prioritization methodology, so as it can be seen in the TEMPLATE below, little information exist to support the derivation of the investment plan of the country.

FINAL TEMPLATE – F.Y.R.O.M.

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TEM	Ma-H-1	I	1	2004	2007	0%	100%	0%	0%
TEM	Ma-H-2	I	1	2004	2006	0%	100%	0%	0%
TEM	Ma-H-3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

CONCLUSIONS – F.Y.R.O.M.

A. Network progress

25% of the TEM and TER Network will be completed before 2010

The rest 75% is unknown when it will be completed.

B. Funding of the network

Funding is secured for 25% of projects.

For the rest 75% of projects funding is unknown.

2.8 Georgia

Georgia presented in total 6 projects (4 road projects –therefore considered as TEM projects- as indicated in Euro-Asian Linkages Info Sheet and 2 TER projects submitted by them in the framework of this project).

FINAL TEMPLATE – GEORGIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TER	GE-R-2	I	1	2004	2034	10%	90%	0%	0%
TEM	GE-M-1	n.a.*	1**	2000	2004	17%	73%	0%	0%
TEM	GE-M-2	n.a.*	1**	2000	2004	32%	0%	68%	0%
TEM	GE-M-3	n.a.*	1**	2004	2005	17%	0%	83%	0%
TEM	GE-M-4	n.a.*	1**	2005	2009	23%	7%	0%	0%
TER	GE-R-1	II	2	2035	2046	20%	20%	50%	10%

* Since no technical prioritization phase was applied the category is missing.

** CLASS is based on the investment timeplan as indicated in the Euro-Asian Investment Info Sheet

CONCLUSIONS – GEORGIA

A. Network progress

66% of the TEM and TER network will be completed before 2010

33% of the TEM and TER Network will be completed after 2020.

B. Funding of the network

Funding is secured for all projects, apart from one road project. For this latter, the country can consult PART III of this report.

2.9 Greece

Greece submitted in total 17 projects (5 TEM and 12 TER projects).

FINAL TEMPLATE – GREECE

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured /Source*			
						National	*Bank*	*Grant*	*Private*
TER	GR-R-6	I	1	2004	2006	**50%**	**0%**	**50%**	**0%**
TER	GR-R-4	I	1	2004	2006	**50%**	**0%**	**50%**	**0%**

TER	GR-R-7	I	1	2004	2011	**15%**	**0%**	**85%**	**0%**
TER	GR-R-5	I	1	2004	2011	**32%**	**0%**	**32%**	**0%**
TER	GR-R-1	II	1	2004	2008	**50%**	**0%**	**50%**	**0%**
TEM	GR-M-5	II	1	2004	2006	**0%**	**0%**	**0%**	**0%**
TEM	GR-M-3	II	1	2004	2008	**0%**	**0%**	**0%**	**0%**
TER	GR-R-8	II	2	2011	2019	**0%**	**0%**	**0%**	**0%**
TER	GR-R-9	II	2	2011	2013	**50%**	**0%**	**50%**	**0%**
TER	GR-R-2	II	2	2011	2017	**42%**	**0%**	**42%**	**0%**
TER	GR-R-3	II	2	2011	2019	**24%**	**0%**	**24%**	**0%**
TEM	GR-M-4	II	2	2011	2015	**0%**	**0%**	**0%**	**0%**
TEM	GR-M-1	II	2	2011	2015	**0%**	**0%**	**0%**	**0%**
TER	GR-R-12	II	2	2011	2020	**0%**	**0%**	**0%**	**0%**
TER	GR-R-11	III	2	2011	2020	**0%**	**0%**	**0%**	**0%**
TER	GR-R-10	III	2	2011	2019	**0%**	**0%**	**0%**	**0%**
TEM	GR-M-2	II	3	2016	2021	**0%**	**0%**	**0%**	**0%**

CONCLUSIONS – GREECE

A. Network progress

29% of the TEM and TER Network will be completed before 2010

29% of the TEM and TER Network will be completed between 2010 - 2015

35% of the TEM and TER Network will be completed between 2015 – 2020

7% of the TEM and TER Network will be completed after 2020

B. Funding of the network

Funding is secured for 29% of the projects.

For the rest, the country can consult PART III of this report.

2.10 Hungary

Hungary submitted in total 43 projects (20 TEM and 23 TER projects).

It has to be noted that the ranking of the projects as presented in TEMPLATE below is done separately for TEM and TER projects, because TEM projects presented insufficient data to support full elaboration of the Evaluation and Technical Prioritisation Methodology and TER projects were prioritized directly by Hungary regardless the scores they received after the Evaluation Methodology.

Information in TEMPLATE below reflects the data received from the country and from ISPA information sheets.

FINAL TEMPLATE – HUNGARY

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured /Source*			
						National	*Bank*	*Grant*	*Private*
TEM	HU-M-1	I	1	These projects will be implemented between 2004 – 2010 but it is unknown when they will be completed.		**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-2	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-3	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-5	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-7	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-8	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-11	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-12	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-17	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-18	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-19	I	1			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-4	II-III	2	These projects will be implemented between 2010 – 2015 but it is unknown when they will be completed.		**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-6	II-III	2			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-9	II-III	2			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-10	II-III	2			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-13	II-III	2			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-14	II-III	2			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-15	II-III	2			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-16	II-III	2			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TEM	HU-M-20	II-III	2			**n.a.**	**n.a.**	**n.a.**	**n.a.**
TER	HU-R-2a	II	1	2004	2006	15%	35%	50%	0%
	HU-R-2b			2004	2008	40%	0%	0%	10%
	HU-R-2c			2006	2007	0%	0%	0%	100%
	HU-R-2d			2007	2009	100%	0%	0%	0%
	HU-R-2e			2012	2014	100%	0%	0%	0%
TER	HU-R-23a	II	1	2003	2006	0%	0%	100%	0%
	HU-R-23b			2007	2010	0%	0%	100%	0%
TER	HU-R-19	II	1	2001	2008	0%	22%	78%	0%
TER	HU-R-18	II	1	2003	2007	0%	0%	0%	0%
TER	HU-R-9	II	1	2005	2008	0%	79%	21%	0%
TER	HU-R-21	II	1	2007	2012	0%	0%	100%	0%
TER	HU-R-7	II	1	2007	2009	0%	0%	100%	0%
TER	HU-R-8a	II	1	2005	2007	0%	100%	0%	0%
	HU-R-8b			2008	2014	0%	0%	100%	0%
TER	HU-R-12	II	1	2004	2007	0%	0%	100%	0%
TER	HU-R-1	II	1	2005	2007	n.a.	n.a.	n.a.	n.a.
TER	HU-R-15	II	1	2006	2007	0%	100%	0%	0%
TER	HU-R-10	II	1	2005	2012	0%	63%	0%	0%
TER	HU-R-13	II	1	2008	2012	0%	0%	100%	0%
TER	HU-R-5	II	2	2012	2016	0%	0%	100%	0%
TER	HU-R-22	II	2	2011	2015	0%	0%	100%	0%
TER	HU-R-20	II	2	2016	2018	0%	0%	100%	0%
TER	HU-R-17	II	1	2007	2010	0%	0%	0%	0%
TER	HU-R-14	II	1	2011	2014	0%	0%	0%	0%

TER	HU-R-4	II	2	2009	2010	100%	0%	0%	0%
TER	HU-R-3a	II	2	2006	2009	100%	0%	0%	0%
	HU-R-3b			2011	2012	100%	0%	0%	0%
TER	HU-R-11	II	1	2009	2011	0%	0%	0%	0%
TER	HU-R-6a	II	1-2	2005	2007	0%	100%	0%	0%
	HU-R-6b			2008	2010	0%	100%	0%	0%
	HU-R-6c			2012	2014	0%	100%	0%	0%
TER	HU-R-16a	II	2-3	2012	2015	0%	0%	100%	0%
	HU-R-16b			2018	2022	0%	0%	100%	0%

CONCLUSIONS – HUNGARY

A. Network progress

44% of the TEM and TER Network will be completed before 2010

26% of the TEM and TER Network will be completed between 2010 - 2015

5% of the TEM and TER Network will be completed between 2015 – 2020

2% of the TEM and TER Network will be completed after 2020

23% of the TEM and TER Network is unknown when it will be completed

B. Funding of the network

Funding is secured for 44% of the projects.

Funding is not secured for 9% of the projects, and for these, the country can consult PART III of this report.

For the rest 47% of projects funding is unknown.

2.11 Italy

No data existed and none received from this country, to support elaboration of Prioritisation Methodology.

2.12 Lithuania

Lithuania submitted in total 32 projects (10 TEM and 22 TER projects). As it can be seen though in Table 1 in the beginning of this report and TEMPLATE below, most of the TEM projects provided insufficient or no information so they were treated as Priority IV, therefore CLASS 4, but without details in financing.

FINAL TEMPLATE – LITHUANIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TER	LT-R-16	I	1	2004	2010	20%	0%	80%	0%
TER	LT-R-17	I	1	2004	2010	20%	0%	80%	0%
TER	LT-R-1	I	1	2003	2004	0%	0%	100%	0%
TER	LT-R-22	I	1	2004	2007	37%	0%	63%	0%
TER	LT-R-3	I	1	2003	2005	0%	64%	36%	0%
TER	LT-R-4	I	1	2003	2004	0%	44%	56%	0%
TER	LT-R-14	I	1	2007	2015	15%	0%	85%	0%
TER	LT-R-12	I	1	2005	2007	15%	0%	85%	0%
TER	LT-R-13	I	1	2003	2015	16%	0%	84%	0%
TER	LT-R-15	I	1	2004	2006	36%	0%	64%	0%
TER	LT-R-2	I	1	2003	2005	0%	0%	100%	0%
TER	LT-R-21	I	1	1999	2006	100%	0%	0%	0%
TER	LT-R-5	I	1	2006	2008	15%	0%	85%	0%
TER	LT-R-6	I	1	2005	2010	19%	0%	81%	0%
TER	LT-R-7	I	1	2009	2015	25%	0%	75%	0%
TER	LT-R-9	I	1	2005	2010	15%	0%	85%	0%
TER	LT-R-10	I	1	2009	2015	25%	0%	75%	0%
TEM	LT-M-1	II	1	2006	2008	15%	0%	85%	0%
TEM	LT-M-2	II	1	2004	2007	15%	0%	85%	0%
TER	LT-R-11	II	2	2011	2016	15%	0%	85%	0%
TER	LT-R-18	II	2	2011	2014	25%	0%	75%	0%
TER	LT-R-19	II	2	2011	2013	24%	0%	76%	0%
TER	LT-R-20	II	2	2011	2015	25%	0%	75%	0%
TER	LT-R-8	II	2	2011	2014	37%	0%	63%	0%
TEM	LT-M-3	II	2	2011	2013	15%	0%	85%	0%
TEM	LT-M-4	IV	4	After 2020. More details if and when Lithuania provides more detailes on these projects.		n.a.	n.a.	n.a.	n.a.
TEM	LT-M-5	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	LT-M-6	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	LT-M-7	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	LT-M-8	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	LT-M-9	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	LT-M-10	IV	4			n.a.	n.a.	n.a.	n.a.

CONCLUSIONS – LITHUANIA

A. Network progress

47% of the TEM and TER Network will be completed before 2010

28% of the TEM and TER Network will be completed between 2010 - 2015

3% of the TEM and TER Network will be completed between 2015 – 2020

22% of the TEM and TER Network will be completed after 2020 (the ones with no data are categorized directly as CLASS 4 – after 2020)

B. Funding of the network

Funding is secured for all projects that presented sufficient data for prioritisation. For the projects that no data existed it is uknown if funding sources are secured or not.

In case, for the latter mentioned, funding is not secured the country can consult PART III of this report.

2.13 Moldova

Moldova submitted in total 3 projects (1 TEM and 2 TER projects).

FINAL TEMPLATE – MOLDOVA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured /Source*			
						National	*Bank*	*Grant*	*Private*
TER	MD-R-1	I	1	2004	2026	0%	0%	0%	0%
TER	MD-R-2	II	1	2004	2005	0%	0%	0%	0%
TEM	MD-M-1	II	1	2004	2006	0%	0%	0%	0%

CONCLUSIONS – MOLDOVA

A. Network progress

66% of the TEM and TER Network will be completed before 2010

33% of the TEM and TER Network will be completed after 2020

B. Funding of the network

Funding is not secured for all projects.

The country can consult PART III of this report.

2.14 Poland

Poland submitted in total 91 projects (91 TEM projects). As it can be seen in Table 1 in the beginning of this report and TEMPLATE below, most of the TEM projects provided insufficient or no information so they were treated as Priority IV, therefore CLASS 4, but without details in financing.

As for the rest, which are most in Priority I and some in Priority II, they presented the same quality of data as the ones in Priority IV but they were considered important and their priorities were given directly by the country. As for the information regarding the latter's timeplan and investment costs these were taken from "Polish General Directorate of National Roads and Motorways: Schedule of Motorways & Expressways".

As it concerns TER no data received from this country, to support elaboration of Prioritisation Methodology, but sufficient information existed in ISPA information sheets for 6 rail projects.

FINAL TEMPLATE – POLAND

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TEM	PL-M-1	I	1	2004	2006	0%	0%	75%	0%
TEM	PL-M-13	I	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-14	I	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-15	I	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-16	I	1	2004	2005	0%	0%	75%	0%
TEM	PL-M-17	I	1	2004	2005	0%	0%	75%	0%
TEM	PL-M-18	I	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-21	I	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-22	I	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-23	I	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-24	I	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-25	I	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-30	I	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-2	I	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-3	I	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-4	I	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-5	I	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-27	I	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-37	I	1	2004	2006	n.a.	n.a.	n.a.	n.a.

TEM	PL-H-38	I	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-44	I	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-11	II	1	2005	2007	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-35	II	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-36	II	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-54	II	1	2005	2007	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-55	II	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TER	PL-R-1	n.a.	1	2000	2004	25%	0%	75%	0%
TER	PL-R-2	n.a.	1	2002	2004	n.a.	n.a.	75%	n.a.
TER	PL-R-3	n.a.	1	2001	2004	n.a.	n.a.	75%	n.a.
TER	PL-R-4	n.a.	1	2001	2004	n.a.	n.a.	75%	n.a.
TER	PL-R-5	n.a.	1	2001	2004	n.a.	n.a.	75%	n.a.
TER	PL-R-6	n.a.	1	2002	2004	n.a.	n.a.	75%	n.a.
TEM	PL-M-4	IV	4	These projects will be implemented after 2020.		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-10	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-1	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-6	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-7	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-8	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-9	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-10	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-11	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-12	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-13	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-14	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-15	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-16	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-18	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-19	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-20	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-21	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-22	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-23	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-24	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-25	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-26	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-28	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-29	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-30	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-31	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-32	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-33	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-34	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-39	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-40	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-41	IV	4			n.a.	n.a.	n.a.	n.a.
TEM	PL-H-42	IV	4			n.a.	n.a.	n.a.	n.a.

TEM	PL-H-43	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-45	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-47	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-48	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-50	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-51	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-56	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-57	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-58	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-59	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-60	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-61	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-3	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-6	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-7	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-8	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-9	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-20	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-28	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-29	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-52	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-2	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-19	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-26	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-27	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-5	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-M-12	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-49	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-17	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-46	IV	4		n.a.	n.a.	n.a.	n.a.
TEM	PL-H-53	IV	4		n.a.	n.a.	n.a.	n.a.

CONCLUSIONS – POLAND

A. Network progress

33% of the TEM Network will be completed before 2010

For the rest projects it is unknown when will be completed, the only thing we can support is that they will start in the long – term.

B. Funding of the network

With the exception of one rail project where funding is secured, funding seems to be a problem for all projects that are in Priorities I and II. But this is due to the fact that for these projects the prioritization was done directly by the country without supporting data such as the funding sources and allocation per project. The few percentages of funding shown in the TEMPLATE were found in ISPA information sheets. On the other hand in the Schedule of Motorways & Expressways of the Polish General Directorate of National

Roads and Motorways, it seems that funding is secured for projects in Priority I and II, but the allocation of funds in each projects is unknown.

For the projects in Priority IV, that no data existedas well, it is uknown if funding sources are secured or not.

In anycase for projects that funding is not secured the country can consult PART III of this report.

2.15 Romania

Romania submitted in total 45 projects (41 TEM and 4 TER projects).

FINAL TEMPLATE – ROMANIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TEM	RO-M-22	I	1	2004	2007	35%	65%	0%	0%
TEM	RO-M-24	I	1	2008	2017	35%	65%	0%	0%
TEM	RO-M-18	I	1	2004	2008	35%	65%	0%	0%
TEM	RO-M-13	I	1	2005	2010	0%	0%	100%	0%
TEM	RO-M-11	I	1	2006	2008	0%	100%	0%	0%
TEM	RO-M-30	I	1	2004	2008	40%	0%	0%	60%
TEM	RO-M-4	I	1	2010	2017	0%	0%	100%	0%
TEM	RO-M-25	I	1	2008	2010	35%	65%	0%	0%
TEM	RO-M-21	I	1	2004	2012	35%	65%	0%	0%
TEM	RO-M-10	I	1	2004	2006	0%	100%	0%	0%
TEM	RO-M-26	I	1	2006	2015	35%	65%	0%	0%
TER	RO-R-3	I	1	2004	2007	26%	39%	35%	0%
TEM	RO-M-1	I	1	2010	2015	0%	100%	0%	0%
TEM	RO-M-5	II	1	2010	2015	0%	0%	25%	0%
TEM	RO-M-17	II	1	2010	2017	0%	0%	0%	0%
TEM	RO-M-31	II	1	2010	2015	0%	0%	0%	0%
TEM	RO-M-19	II	1	2010	2015	0%	0%	0%	100%
TEM	RO-M-42	III	2	2011	2016	0%	0%	0%	0%
TEM	RO-M-41	III	2	2010	2016	0%	0%	0%	0%
TEM	RO-M-28	II	2	2011	2015	40%	0%	0%	60%
TER	RO-R-2	II	2	2017	2020	20%	80%	0%	0%
TEM	RO-M-2	II	2	2016	2021	0%	100%	0%	0%

TEM	RO-M-27	II	2	2020	2021	40%	0%	0%	60%
TEM	RO-M-34	II	2	2019	2025	0%	0%	0%	0%
TER	RO-R-4	II	2	2019	2037	20%	0%	80%	0%
TEM	RO-M-8	II	2	2016	2022	0%	0%	0%	0%
TEM	RO-M-12	II	2	2018	2023	0%	0%	0%	0%
TEM	RO-M-3	II	2	2027	2031	0%	100%	0%	0%
TEM	RO-M-7	II	2	2018	2023	0%	0%	0%	0%
TEM	RO-M-35	II	2	2018	2021	0%	0%	0%	0%
TEM	RO-M-14	II	2	2023	2028	0%	0%	0%	0%
TEM	RO-M-36	II	2	2015	2019	0%	0%	0%	0%
TEM	RO-M-33	II	2	2015	2019	0%	0%	0%	0%
TEM	RO-M-29	II	2	2022	2024	40%	0%	0%	60%
TEM	RO-M-6	II	2	2030	2037	0%	0%	8%	0%
TEM	RO-M-32	II	2	2031	2034	0%	0%	0%	0%
TEM	RO-M-15	II	2	2030	2035	0%	0%	0%	0%
TEM	RO-M-39	II	2	2033	2038	0%	0%	0%	0%
TEM	RO-M-16	II	2	2016	2025	0%	0%	0%	0%
TEM	RO-M-37	II	2	2022	2027	0%	0%	0%	0%
TER	RO-R-1	II	2	2025	2030	70%	0%	0%	30%
TEM	RO-M-20	II	2	2025	2032	0%	0%	0%	100%
TEM	RO-M-23	II	2	2027	2033	0%	0%	0%	0%
TEM	RO-M-38	II	2	2027	2033	0%	0%	0%	0%
TEM	RO-M-40	II	2	2027	2033	0%	0%	0%	0%

In Romania “CLASS 2” was not followed strictly as it concerns investment procedures, since the trial and error process in investment plan forced some projects in CLASS 2 to be “moved” in the time horizon in CLASS 3 or 4 as it concerns their investment. These projects were the most expensive, and that was the reasons for their movement.

Therefore in Romania, unlike other countries, the time horizon of project construction might be different from investment horizon. Maybe the investment plan could be “narrowed” if Romania reconsiders the priorities given to some projects.

CONCLUSIONS – ROMANIA

Network progress

18% of the TEM and TER Network will be completed before 2010
16% of the TEM and TER Network will be completed between 2010 - 2015
18% of the TEM and TER Network will be completed between 2015 – 2020
52% of the TEM and TER Network will be completed after 2020

A. Funding of the network

Funding is secured for 56% of the projects.
For the rest 44%, the country can consult PART III of this report.

2.16 Russian Federation

No data received from this country, to support elaboration of Prioritisation Methodology, but sufficient information existed in country's National Report in the framework of Euro-Asian Linkages.

According to Russian Federation National Report, road and rail projects are mainly parts of two Euro-Asian corridors: the TRANSSIB and "North-South" corridors.

Volumes of investments into the development of the TRANSSIB corridor will be till 2010 more than 7,5 billion US dollars, and into the NORTH-SOUTH corridor – 6,4 billion US dollars. Respectively these amounts (in EUR) are 6,14 billion EUR and 5,2 billion EUR.

The investment costs of road and rail projects belonging in each Euro-Asian corridor –in total- are presumably less than the investment volumes in the corridors, since both TRBNSSIB and "North-South" corridors include other kind of transport projects apart from road and rail i.e. ports.

It has to be noted here that no sufficient data existed in the national report to support the calculation of investment cost per yer for each project and therefore the country's expenses per year for TEM and TER elaboration, but the starting and ending year of construction for most of the projects was known. Furthemore, no funding information was available.

Therefore for Russia it was difficult to prepare cost/investment plan on a yearly basis in order to check the rule of **'total investement cost per year < 1,5% GDP'**, but since the total cost of projects (being less that the investment volume of the two Euro-Asian Corridors) under consideration if splited in years is significantly lower than country's GDP, we assume that there will be no problem for Russian Federation to implement the projects between the selected/indicated years.

So, according to Russian Federation National Report, the projects of that can be included in TEM and TER are in total 31 projects (12 Road/ TEM and 19 Rail/TER projects).

FINAL TEMPLATE – RUSSIAN FEDERATION

Network	*Project ID*	*Category**	*Class **	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TER	RU-R-1	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-2	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-3	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-4	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-5	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-6	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-7	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-8	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-9	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-10	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-11	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-12	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-13	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-H-1	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-H-2	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-H-3	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-H-4	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-H-5	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-H-6	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-M-1	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-14	n.a.	1	2002	2005	n.a.	n.a.	n.a.	n.a.
TER	RU-R-15	n.a.	1	2002	2003	n.a.	n.a.	n.a.	n.a.
TER	RU-R-16	n.a.	1	2004	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-17	n.a.	1	2002	2004	n.a.	n.a.	n.a.	n.a.
TER	RU-R-18	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TER	RU-R-19	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-M-2	n.a.	1	2002	2005	n.a.	n.a.	n.a.	n.a.
TEM	RU-M-3	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-M-4	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-M-5	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.
TEM	RU-M-6	n.a.	1	2002	2010	n.a.	n.a.	n.a.	n.a.

* Since no technical prioritization phase was applied, the category is missing.

** CLASS is based on the implementation timeplan as indicated in National Report

CONCLUSIONS – RUSSIAN FEDERATION

A. Network progress

100% of the TEM and TER Network will be completed before 2010

B. Funding of the network

For all the projects, it is uknown if funding sources are secured or not.
In anycase for projects that funding is not secured the country can consult PART III of this report.

2.17 Serbia & Montenegro

No data received from this country, to support elaboration of Prioritisation Methodology, but sufficient information existed in REBIS study.
According to REBIS study, the projects of Serbia & Montenegro REBIS that are included in the Short-Term and Long-Term Investment Plans are in total 41 projects (28 Road/ TEM and 13 Rail/TER projects).

FINAL TEMPLATE – SERBIA & MONTENEGRO

Network	*Project ID*	*Category**	*Class **	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TEM	SM-H-1	n.a.	1	2005	2005	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-2	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-3	n.a.	1	2005	2007	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-4	n.a.	1	2006	2007	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-5	n.a.	1	2006	2007	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-6	n.a.	1	2004	2004	0%	100%	0%	0%
TEM	SM-H-7	n.a.	1	2004	2004	0%	100%	0%	0%
TEM	SM-H-8	n.a.	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-9	n.a.	1	2004	2004	0%	100%	0%	0%
TEM	SM-H-10	n.a.	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	SM-M-1	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	SM-M-2	n.a.	1	2004	2004	100%	0%	0%	0%

TEM	SM-H-11	n.a.	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-12	n.a.	1	2005	2007	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-13	n.a.	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-14	n.a.	1	2005	2006	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-15	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-16	n.a.	1	2004	2006	40%	0%	0%	0%
TEM	SM-H-17	n.a.	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-18	n.a.	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-19	n.a.	1	2005	2006	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-20	n.a.	1	2005	2007	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-21	n.a.	1	2007	2008	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-22	n.a.	1	2004	2004	n.a.	n.a.	n.a.	n.a.
TER	SM-R-1	n.a.	1	2005	2007	n.a.	n.a.	n.a.	n.a.
TER	SM-R-2	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TER	SM-R-3	n.a.	1	2005	2005	n.a.	n.a.	n.a.	n.a.
TER	SM-R-4	n.a.	1	2004	2004	0%	100%	0%	0%
TER	SM-R-5	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TER	SM-R-6	n.a.	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TER	SM-R-7	n.a.	1	2005	2006	n.a.	n.a.	n.a.	n.a.
TER	SM-R-8	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TER	SM-R-9	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TER	SM-R-10	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TER	SM-R-11	n.a.	1	2004	2005	n.a.	n.a.	n.a.	n.a.
TER	SM-R-12	n.a.	1	2006	2009	n.a.	n.a.	n.a.	n.a.
TER	SM-R-13	n.a.	1	2004	2006	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-23	n.a.	2	2011	2012	n.a	n.a	n.a	n.a
TEM	SM-H-24	n.a.	2	2011	2012	n.a	n.a	n.a	n.a
TEM	SM-H-25	n.a.	2	2011	2012	n.a	n.a	n.a	n.a
TEM	SM-H-26	n.a.	2	2011	2012	n.a	n.a	n.a	n.a

* Since no technical prioritization phase was applied the category is missing.

** CLASS is based on the investment timeplan as indicated in REBIS study

CONCLUSIONS – SERBIA & MONTENEGRO

A. Network progress

90,2% of the TEM and TER Network will be completed before 2010

9,8% of the TEM and TER Network will be completed between 2010 - 2015

B. Funding of the network

Funding is secured for 12,1% of projects.
For the projects, it is uknown if funding sources are secured or not.
In anycase for projects that funding is not secured the country can consult PART III of this report.

2.18 Slovakia

Slovakia submitted in total 24 projects (19 TEM and 5 TER projects).

FINAL TEMPLATE – SLOVAKIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TEM	SK-H-2	I	1	2004	2018	100%	0%	0%	0%
TEM	SK-M-7	I	1	2004	2018	30%	28%	42%	0%
TEM	SK-M-4	I	1	2004	2020	45%	55%	0%	0%
TEM	SK-M-9	I	1	2004	2022	35%	0%	0%	65%
TEM	SK-M-3	I	1	2004	2019	100%	0%	0%	0%
TEM	SK-M-8	I	1	2004	2018	35%	0%	0%	65%
TEM	SK-M-11	I	1	2004	2023	35%	0%	0%	65%
TEM	SK-M-6	II	1	2004	2023	100%	0%	0%	0%
TER	SK-R-5	II	1	2004	2009	1,0%	2,2%	10%	0,01%
TER	SK-R-4	II	1	2004	2013	2,2%	6,7%	38%	0,5%
TER	SK-R-3	II	1	2004	2013	14,8%	1,5%	17%	1,8%
TEM	SK-H-1	II	2	2011	2019	100%	0%	0%	0%
TEM	SK-M-13	II	2	2011	2020	35%	0%	0%	65%
TEM	SK-M-2	II	2	2011	2020	100%	0%	0%	0%
TEM	SK-H-3	II	2	2011	2019	100%	0%	0%	0%
TEM	SK-M-12	II	2	2011	2022	35%	0%	0%	65%
TEM	SK-M-16	II	2	2011	2022	100%	0%	0%	0%
TEM	SK-M-5	II	2	2011	2022	100%	0%	0%	0%
TEM	SK-M-1	II	2	2011	2024	100%	0%	0%	0%

TEM	SK-M-14	II	2	2011	2024	100%	0%	0%	0%
TER	SK-R-1	II	2	2011	2020	1,7%	15%	0%	17%
TEM	SK-M-10	II	2	2011	2024	35%	0%	0%	65%
TEM	SK-M-15	II	2	2011	2024	100%	0%	0%	0%
TER	SK-R-2	II	2	2011	2022	59,7%	0,0%	45%	9,0%

CONCLUSIONS – SLOVAKIA

A. Network progress

4% of the TEM and TER Network will be completed before 2010

8% of the TEM and TER Network will be completed between 2010 - 2015

42% of the TEM and TER Network will be completed between 2015 – 2020

46% of the TEM and TER Network will be completed after 2020

B. Funding of the network

Funding is secured for all projects.

2.19 Slovenia

Slovenia submitted in total 14 projects (7 TEM and 7 TER projects).

FINAL TEMPLATE – SLOVENIA

Network	***Project ID***	***Category***	***Class***	***Starting year***	***End year***	***% Funding Secured/ Source***			
						National	*Bank*	*Grant*	*Private*
TER	SL-R-4	I	1	2004	2012	25%	25%	50%	0%
TER	SL-R-1	I	1	2004	2012	19%	32%	49%	0%
TEM	SL-M-2	I	1	2002	2006	0%	0%	0%	0%
TER	SL-R-2	I	1	2004	2011	25%	25%	50%	0%
TER	SL-R-5	I	1	2006	2016	26%	31%	44%	0%
TER	SL-R-3	I	1	2006	2021	25%	25%	50%	0%
TEM	SL-M-6	I	1	2007	2012	0%	0%	0%	0%
TEM	SL-M-1	I	1	2003	2013	0%	0%	0%	0%
TER	SL-R-6	I	1	2004	2010	0%	64%	36%	0%

TEM	SL-M-3	II	1	2004	2008	0%	0%	0%	0%
TEM	SL-M-4	II	1	2003	2006	0%	0%	0%	0%
TER	SL-R-7	II	1	2006	2021	5%	25%	50%	20%
TEM	SL-M-5	II	1	2005	2006	0%	0%	0%	0%
TEM	SL-M-7	II	2	2014	2014	0%	0%	0%	0%

CONCLUSIONS – SLOVENIA

A. Network progress

36% of the TEM and TER Network will be completed before 2010

43% of the TEM and TER Network will be completed between 2010 - 2015

7% of the TEM and TER Network will be completed between 2015 – 2020

14% of the TEM and TER Network will be completed after 2020

B. Funding of the network

Funding is secured for 50% of the projects.

For the rest, the country can consult PART III of this report.

2.20 Turkey

Turkey submitted in total 24 projects (20 TEM and 4 TER projects).

FINAL TEMPLATE – TURKEY

Network	***Project ID***	***Category***	***Class***	***Starting year***	***End year***	***% Funding Secured/ Source***			
						National	*Bank*	*Grant*	*Private*
TEM	TU-M-14	I	1	2004	2006	100%	0%	0%	0%
TEM	TU-M-13	I	1	2004	2006	100%	0%	0%	0%
TEM	TU-M-3	I	1	2010	2014	0%	0%	0%	0%
TEM	TU-M-8	I	1	2010	2014	0%	0%	0%	0%
TEM	TU-M-10	I	1	2010	2014	0%	0%	0%	0%
TEM	TU-M-6	I	1	2010	2014	0%	0%	0%	0%
TEM	TU-M-7	I	1	2010	2014	0%	0%	0%	0%
TEM	TU-M-12	I	1	2004	2006	100%	0%	0%	0%

TEM	TU-M-15	I	1	2004	2008	100%	0%	0%	0%
TEM	TU-M-17	I	1	2004	2008	100%	0%	0%	0%
TEM	TU-M-18	I	1	2004	2008	100%	0%	0%	0%
TEM	TU-M-19	I	1	2004	2009	100%	0%	0%	0%
TEM	TU-M-9	I	1	2010	2014	0%	0%	0%	0%
TEM	TU-M-20	I	1	2004	2008	100%	0%	0%	0%
TER	TU-R-4	I	1	2006	2010	0%	0%	0%	0%
TEM	TU-M-11	II	1	2004	2007	100%	0%	0%	0%
TEM	TU-M-16	II	1	2004	2008	100%	0%	0%	0%
TER	TU-R-1	II	1	2005	2006	0%	100%	0%	0%
TEM	TU-M-1	II	2	2015	2019	0%	0%	0%	0%
TEM	TU-M-2	II	2	2015	2019	0%	0%	0%	0%
TER	TU-R-3	II	2	2011	2017	0%	100%	0%	0%
TEM	TU-M-5	II	2	2015	2019	0%	0%	0%	0%
TEM	TU-M-4	II	2	2015	2019	0%	0%	0%	0%
TER	TU-R-2	II	2	2011	2013	0%	100%	0%	0%

CONCLUSIONS – TURKEY

A. Network progress

50% of the TEM and TER Network will be completed before 2010

29% of the TEM and TER Network will be completed between 2010 - 2015

21% of the TEM and TER Network will be completed between 2015 – 2020

B. Funding of the network

Funding is secured for 54% of the projects.

For the rest, the country can consult PART III of this report.

2.21 Ukraine

Ukraine submitted in total 4 projects (4 TEM projects). As it concerns TER network, no data received from this country, to support elaboration of Prioritisation Methodology, but sufficient information existed in Euro-Asian Linkages information sheets for 2 rail projects.

FINAL TEMPLATE – UKRAINE

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*% Funding Secured/ Source*			
						National	*Bank*	*Grant*	*Private*
TEM	UKR-M-2	II	1	2004	2009	40%	0%	0%	60%
TER	UKR-R-1	n.a.	1	2004	2004	42%	56%	2%	0%
TER	UKR-R-2	n.a.	1	2004	2008	40%	60%	0%	0%
TEM	UKR-M-1	II	2	2011	2018	20%	0%	0%	80%
TEM	UKR-M-4	II	2	2011	2018	20%	0%	0%	80%
TEM	UKR-M-3	II	2	2011	2018	79%	0%	0%	21%

CONCLUSIONS – UKRAINE

A. Network progress

50% of the TEM Network will be completed before 2010

50% of the TEM Network will be completed between 2015 - 2020

B. Funding of the network

Funding is secured for all projects.

3. TEM and TER Network Implementation Plan

Summarizing all the results presented in sub-section 2, the implementation of TEM and TER network as a whole will need **100.562,86 million EUR** and will follow the time plan in FINAL TEMPLATE next. In this TEMPLATE the available/secured percentage of funding is shown as well.

FINAL TEMPLATE – TEM & TER NETWORK

Country	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
AT	7	14%	86%	-	-	-	86%	14%	-
BL	4	100%	-	-	-	-	100%	-	-
BH	15	14%	40%	6%	40%	-	25%	75%	-
BG	18	33%	27%	22%	18%	-	38%	62%	-
CR	43	56%	30%	12%	2%	-	70%	-	30%
CZ	13	69%	8%	23%	-	-	100%	-	-
Ma	8	25%	-	-	-	*75%*	25%	-	*75%*
GE	6	66%	-	-	33%	-	83,4%	16,6%	-
GR	17	29%	29%	35%	7%	-	29%	71%	-
HU	43	44%	26%	5%	2%	*23%*	44%	9%	*47%*
IT	0	-	-	-	-	-	-	-	-
LT	32	47%	28%	3%	22%	-	78%	-	*22%*
MD	3	66%	-	-	33%	-	-	100%	-
PL	97	33%	-	-	-	*67%*	1%	-	*99%*
RO	45	18%	16%	18%	52%	-	56%	44%	-
RU	31	100%	-	-	-	-	-	-	*100%*
SM	41	90,2%	9,8%	-	-	-	12,1%	-	*87,9%*
SK	24	4%	8%	42%	46%	-	100%	-	-
SL	14	36%	43%	7%	14%	-	50%	50%	-

TU	24	50%	29%	21%	-	-	54%	46%	-
UKR	6	50%	-	50%	-	-	100%	-	-
Whole Network	***Projects***	***TEM and TER Network Implementation Progress***					***TEM and TER Network Funding***		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
	492	45,1%	16,7%	10,0%	11,9%	*16,3%*	40,8%	16,5%	*42,7%*

PART III – FUNDING CONSIDERATION/ ELIGIBILITY CRITERIA AND REQUIRED PROCEDURES.

This part identifies possible sources of funding for country projects that have not yet secured funding, the eligibility criteria for the respective countries to receive funds as well as the required procedures. It is not concentrated on each country separately, but on the funding sources.

European Investment Bank (EIB)

Projects Eligible For Bank Financing

Within *the European Union*, projects considered for EIB financing must contribute to one or more of the following objectives:

- Balanced economic development of the Union and its less favored regions;
- Enrichment of human capital: health and education;
- Information technology and communications networks
- Research and development;
- Diffusion of innovation;
- Transport, telecommunications and Trans-European Networks (TENs);
- Environment: protection and improvement of the natural and urban environment,
- Projects with a positive impact on the regional or global environment (sustainable development and prevention of climate change);
- Increasing the competitiveness and integration of European industry;
- Development of small and medium-scale enterprises (venture capital funding aimed at stimulating innovation by SMEs and entrepreneurship is undertaken by the European Investment Fund).
- Securing the energy supply base and conserving energy.

In the *Accession Countries*, the EIB underpins development of basic infrastructure, the creation of new activities, protection of the environment and transfer of the existing body of Community legislation.

Outside The Union, the Bank participates in implementing the Union's development aid and cooperation policies through long-term loans from own resources or subordinated loans and risk capital from EU or Member States' budgetary funds. It operates in:

- The **non-member Mediterranean countries** by helping to attain the objectives of the Euro-Mediterranean Partnership with sights set on the establishment of a Customs Union by 2010;
- The **African, Caribbean and Pacific States (ACP), South Africa and the OCT**;
- **Asia and Latin America**, where it supports certain types of project of mutual interest to the Union and the countries concerned;

- The **Balkans**, where it contributes to the goals of the Stability Pact by directing its lending specifically towards reconstruction of basic infrastructure and projects with a regional dimension.

Loans Activity Breakdown by region

Region	***Current year (in EUR)***	***Past 5 years (in EUR)***
European Union	26,174,501,924	169,033,777,103
Article 18	188,834,298	991,223,790
Accession Countries	103,000,000	2,739,700,000
Mediterranean countries	821,498,958	7,096,205,558
Africa, Caribbean, Pacific countries + OCT	219,872,073	2,038,240,185
South Africa	100,000,000	751,800,000
Balkans countries	311,000,000	1,330,000,000
Asia and Latin & Central America	207,943,995	1,898,548,436
Commonwealth of Independent States	0	25,000,000
Total Amount	28,126,651,248	185,904,495,072

Project appraisal

As a borrower on the markets whose remit is to support viable projects helping to achieve the objectives of the European Union, the EIB attaches special importance to appraisal of projects put to it. Projects are examined by the EIB's teams of engineers, economists and financial analysts cooperating closely with the promoter. This examination focuses on the eligibility of the project, i.e. whether it conforms to those EU objectives, which the EIB is responsible for promoting.

Eligibility

Within the European Union, projects considered for EIB financing must contribute to one or more of the following objectives:

- Strengthening economic and social cohesion: promoting business activity to foster the economic advancement of the less favoured regions;
- Improving infrastructure and services in the health and education sectors, key contributors to human capital formation;
- Developing transport, telecommunications and energy transfer infrastructure networks with a Community dimension;
- Preserving the natural and urban environment, notably by drawing on renewable energy;
- Securing the energy supply base by more rational use, harnessing of indigenous resources and import diversification;

- Assisting the development of SMEs by enhancing the financial environment in which they operate:
- Through medium and long-term loans;
- Through venture capital support.

Outside the Union, the Bank participates in implementing the Union's development aid and cooperation policies through long-term loans from own resources or subordinated loans and risk capital from EU or Member States' budgetary funds.

The EIB is mandated to conduct operations in:

- The Central and Eastern European Countries and certain Mediterranean Countries which have applied for membership of the EU;
- The Euro-Mediterranean Partnership Countries;
- The African, Caribbean and Pacific States (ACP), South Africa and the OCT;
- Asia and Latin America;
- The Western Balkans.

This examination evaluates the project's economic, technical and financial characteristics. This confidential appraisal enables the promoter to benefit from the experience and know-how acquired by the EIB in dealing with a wide range of projects in all Member States of the Union.

Evaluation

Working closely with the promoter, the EIB's departments make a documentary and on-site evaluation of the practical viability, economic benefits and scheduled implementation of the proposed project. Careful account is also taken of protection of the environment and compliance with procurement procedures.

The evaluation also looks at the cost of a project, its finance plan and the standing of its financial and technical partners. The financial situation of the promoter, the projected cash flow and the security offered are also examined. After completion of the appraisal the decision to grant a loan is taken by the EIB's Board of Directors.

Decision-making

The EIB, bearing in mind wider considerations of common benefit, seeks the opinion of the Member State concerned and of the European Commission.

The project is then submitted for examination and approval firstly to the Management Committee of the EIB and then to its Board of Directors.

Once the finance contract has been signed with the promoter the loan is disbursed in one or more installments in keeping with requirements and progress on the works. Once finance has been provided for the project its progress is monitored regularly. The Bank can thus assist with any of the project’s or promoter's additional requirements, while ensuring compliance with the aims of its financing decision.

Project monitoring

The EIB monitors the project until completion as well as during the loan repayment period.

In particular, it verifies regular servicing of the loan, checks that the funds are used in line with corresponding objectives and forecasts and keeps abreast of developments concerning the promoter and his partners. Finally, the Bank ensures that the project is implemented in accordance with the contract and evaluates its results.

Project Cycle

Introduction

The mission of the European Investment Bank is to further the European Union's objectives by granting long-term loans in support of viable capital investment. The Bank's lending:

- has grown to an annual volume of nearly EUR 36 billion,
- committed in support of almost 300 operations;
- is accomplished with a workforce remaining stable at around 1 000;
- is set against a background of increasing complexity and diversity of operations, both within and outside the Union.

Geared towards the long-term financing of productive projects, of both a tangible and intangible nature, the Bank performs its remit:

- in direct contact with the market, including a growing number of private enterprises;
- after careful analysis of projects, borrowers and guarantees.

As a bank, the EIB:

- Assesses the viability of projects from four points of view: economic, technical, **environmental and financial**;
- Evaluates each capital project and follows it through to completion;
- Subjects each project, both within and outside the Union, to a process of appraisal and monitoring designed to ensure that its operations are in line with its role as the Union's financing institution and contribute value added in conjunction with other lenders; for projects outside the Union, fosters the transfer of the existing body of Community legislation and regulations.

The standard procedures described are, of course, tailored to each individual project.

Initial Approach to the EIB

Projects can be submitted to the Bank, officially or informally, by:

- Potential promoters (private or public companies);

- Commercial banks wishing to involve the EIB in their finance plan;
- Public authorities, international or national development finance institutions.

It is desirable for projects to be presented to the Bank at the earliest possible stage, especially in the case of infrastructure schemes and projects mounted under public-private partnerships.

In all cases, the EIB gives promoters a rapid response based on its knowledge of each country's economic and financial context. At this stage the Bank checks whether the project envisaged meets its fundamental criteria, notably regarding eligibility, scale, sources of additional finance (the EIB acts as a complementary source of finance) and economic sector. This initial examination may already lead the Bank to:

- Suggest improvements to the technical, economic or environmental specifications of the capital projects submitted for financing;
- Draw the promoter's attention to certain procedures to be followed (award of contracts, compliance with environmental requirements, etc.)
- Request modifications to the loan application.

Examination Of Projects

If a project appears to meet the Bank's criteria and the EIB's financial involvement seems likely to generate value added:

- The appraisal procedure is launched by the Directorate General for Lending Operations, on the basis of a file compiled by the promoter
- The Management Committee is informed of the main features of the planned project and the principal aspects on which the appraisal will focus;
- An appraisal team composed of representatives of all Directorates concerned is set up to prepare the appraisal. A timetable is established;
- A site visit to the promoter is organized by the Directorate General for Lending Operations.

Depending on the project, an engineer and/or economist may join the loan officer in discussing in detail with the promoter the project's parameters and the Bank's potential support.

Information Provided By The Promoter

The form and content of documents in the project file submitted to the EIB are the responsibilities of the borrower, who may, if necessary, seek internal or external technical assistance with their preparation. The diversity of projects makes it difficult in practice to standardize the documents needed for the appraisal. For this reason, the Bank does not require potential borrowers to complete set forms or questionnaires. The following list is therefore intended as a guide since during the appraisal the EIB will liaise closely with the enterprise or administrative body concerned in order to identify jointly the main problems likely to arise before and after commissioning of the project.

The documentation submitted to the Bank (which must of course be tailored to the nature of each individual project**)** should cover the following points:

- General and legal information about the borrower.
- Financial data.
- Technical data: general design and technical description of the project; study and implementation; detailed estimate of investments; operation.
- Environmental data: environmental design of the project; measures taken to comply with or exceed applicable national, European and international standards; where necessary, environmental impact assessment as well as measures taken to ensure public consultation; where appropriate, planned provisions of an "Environmental Management Plan" for the project.
- Economic data: for calculating the project's economic rate of return, in particular: market, sales policy and organization, impact on employment, etc.

Project Appraisal

After returning from the site visit, if its findings are positive, the Bank's team conducts a detailed project appraisal, following which the Management Committee examines the financing proposal and passes it on to the Board of Directors for decision.

Each project is also referred by the EIB to the Member State concerned and the Commission for their opinions. These opinions are a precondition for the signing of the finance contract.

The Commission has a period of two months to make its opinion known to the EIB.

The following criteria form the basis of a standard EIB appraisal but are tailored to each individual project. These points are all covered by the report submitted to the Board of Directors for a financing decision

Rationale for Bank financing: eligibility, value added of the operation.

The project's contribution to European Union objectives supported by the EIB2 is ascertained. The analysis also reveals how the Bank's input brings **"value added"** to the project: this may be apparent in the financial terms offered, in the EIB's active and "catalytic" role in structuring the finance plan, or in the improvement of the project's technical specifications

Market and sector

This analysis is based on the information gathered during project appraisal and on the sectoral studies regularly carried out by the Projects Directorate. It looks at the sector in question, establishes worst and best-case scenarios based on reasonable projections and assesses the promoter's qualities in relation to the project and the project's ability to meet existing demand.

Technical description, capacity

The Bank's analysis looks at the project's technical soundness and the promoter's ability to implement the technical solutions adopted. It also examines the technical risks and measures taken to attenuate these.

Investment cost

The EIB examines the total investment cost, the main project costs compared with those of similar schemes financed by the Bank, the margins for contingencies and price inflation adopted and the impact of taxes on the project and promoter

Implementation

The Bank's analyses cover the following points:

- Technical: establishment of a "technical description" of the project, to be appended to the contract and serve as a basis for future monitoring.
- Procurement: compliance with current procedures; percentage of project cost subject to international competitive bidding; acceptability to the Bank of procedures envisaged.

Operation

Management; measures taken to meet particular risks; evaluation of operating costs; employment.

Environmental impact

Environmental situation with and without the project; where appropriate, review of studies of alternative solutions; project's impact on the natural and human environments; definition of the measures adopted to prevent, reduce or mitigate any adverse effects; compatibility with current or proposed environmental legislation; existence of an environmental management plan and promoter's ability to implement and manage it; examination of environmental aspects over the life of the project; project's compatibility with sustainable development objectives - including prevention of climate change - to which the European Union is committed.

In performing the environmental part of its appraisal, the Bank makes use of the variety of studies carried out by the promoter or by independent consultants on its behalf EIAs, SEAs, SISs, etc,. The Bank examines the mitigating measures proposed, reserving the right to ask for further studies to be undertaken by competent external consultants. In any event, the EIB ensures compliance with adequate project related conditionality.

Prices, tariffs and financial return from the project

- Calculation of the expected cash flow in real terms.
- Where appropriate, the forecasts and analyses of certain financial ratios may serve as a basis for formulating appropriate tariff policies.
- Sensitivity and/or risk analysis

Economic benefits

Economic justification of the project; economic appraisal of value added of the project and the Bank's input; calculation of the project's economic rate of return; estimation of external costs/benefits, such as environmental protection, regional development, etc; sensitivity analysis

Financial and credit risk analysis

The Directorate General for Lending Operations performs a detailed financial analysis of the borrower - as well as of the guarantor if the operation is backed by a commercial guarantee. This can of course be simplified for the EIB's repeat borrowers.

Where public borrowers promoting infrastructure projects are concerned (e.g. regions or municipalities), a different type of financial analysis is performed, based on documents of a budgetary nature. The Credit Risk Department casts an objective eye on the financial viability of the borrower and gu**arantor**, with whom it has no business relationship

Appraisal of global loans

Global loans are credit lines, which the EIB makes available to financial intermediaries for financing small and medium-scale projects; either ventures mounted by SMEs or small-scale infrastructure schemes. This type of loan enables the Bank to contribute indirectly to the long-term financing of projects, which, because of their size, are not eligible for direct EIB funding. The volume of such lending varies from country to country. In total, both within and outside the European Union, the Bank has dealings with nearly 400 banks and financial institutions, which are or have been its partners in deploying this type of instrument.

The appraisal of global loans essentially entails an examination of the intermediary bank from two main angles:

- Financial robustness and ability to enter into a lasting relationship with the EIB;
- Ability of the financial intermediary to channel EIB funds swiftly to customers targeted by the global loan (SMEs or promoters of small-scale infrastructure): specialization, size of portfolio, appraisal methods for this type of project, procedures for monitoring borrowers and projects, etc

The appraisal team seeks to define precise criteria in discussions with the intermediary, so as to optimize the impact of the long-term resources made available by the EIB.

Project Approval

The overall results of the appraisal are summarized in a report to the Board of Directors. The Management Committee conducts a prior examination of this report and its various annexes covering technical, environmental, economic, financial, legal and credit risk aspects. Once the draft report is approved, it is passed on to the Board of Directors for decision. The Board decision may be taken while there are still a number of points to be finalized (e.g. in the case of a public-private partnership project). Approval by Directors conditional upon the resolution of any outstanding issues, thus plays a decisive catalytic role and speeds up the project's launch. The Board's decision to approve the loan does not take effect until the finance contract is signed.

The financing decision is subject to:

- The opinions of both the EU Member State on whose territory the project will be located and the European Commission;
- Receipt of a formal loan application from the promoter;
- Contractual finalization of any points still unresolved when the financing decision was taken by the Board.

Finance Contract Signature

Responsibility for this process lies with the Legal Affairs Directorate, working in conjunction with all other Directorates concerned. The finance contract incorporates all the key elements forming the basis for the Bank's decision and studied during appraisal. It includes an appended technical description and any necessary technical, economic or environmental conditions. Where appropriate, it is supplemented by one or more guarantee contracts.

Draft contracts are also submitted to the Credit Risk Department, which has to endorse the main financial clauses.

The approval is valid for one year. Where duly warranted, however, this period may be extended.

Following contract signature, the project is usually announced in a press release. Information on all projects financed by the Bank is published on the EIB's website (www.eib.org) as well as in the statistical supplement accompanying the Bank's Annual Report.

European Bank for Reconstruction and Development (EBRD)

Introduction

The European Bank for Reconstruction and Development was established in 1991 when communism was crumbling in central and Eastern Europe and ex-soviet countries needed support to nurture a new private sector in a democratic environment. Today the EBRD uses the tools of investment to help build market economies and democracies in 27 countries from central Europe to central Asia.

The EBRD is the largest single investor in the region and mobilizes significant foreign direct investment beyond its own financing. It is owned by 60 countries and two intergovernmental institutions. But despite its public sector shareholders, it invests mainly in private enterprises, usually together with commercial partners.

It provides project financing for banks, industries and businesses, both new ventures and investments in existing companies. It also works with publicly owned companies, to support privatization, restructuring state-owned firms and improvement of municipal services. The Bank uses its close relationship with governments in the region to promote policies that will bolster the business environment.

The mandate of the EBRD stipulates that it must only work in countries that are committed to democratic principles. Respect for the environment is part of the strong corporate governance attached to all EBRD investments.

Every EBRD investment must

- Help move a country closer to a full market economy: the transition impact
- Take risk that supports private investors and does not crowd them out
- Apply sound banking principles

Through its investments, the EBRD promotes

- Structural and sectoral reforms
- Competition, privatisation and entrepreneurship
- Stronger financial institutions and legal systems
- Infrastructure development needed to support the private sector
- Adoption of strong corporate governance, including environmental sensitivity

Functioning as a catalyst of change, the EBRD

- Promotes co-financing and foreign direct investment
- Mobilizes domestic capital
- Provides technical assistance

Apply for financing

The EBRD is the largest single investor in central and Eastern Europe and the CIS. The Bank has committed more than €20 billion to over 800 large projects. Small projects are almost always financed through financial intermediaries. By supporting local commercial banks, micro-business banks, equity funds and leasing facilities, the EBRD has helped finance around 200,000 smaller projects.

The EBRD provides loan and equity finance, guarantees, leasing facilities and trade finance. The Bank also finances professional development through support programmes.

Finance for large projects

EBRD investments in private sector projects range from EUR 5 million – EUR 250 million; the average amount is EUR 25 million. The Bank takes a flexible approach and tailors solutions to the needs of private investors. The Bank finances privatisations and restructures. It also supports municipal services and the infrastructure that underpins the private sector.

These guidelines are for the private sector. Public sector projects are initiated directly through dialogue with governments.

Criteria and structure - large projects

EBRD funding criteria for projects from EUR 5 million – EUR 250 million

- The project must be located in an EBRD country of operation

Table 5 **Countries of operations**

Albania	Georgia	Romania
Armenia	Hungary	Russia
Azerbaijan	Kazakhstan	Serbia and Montenegro
Belarus	Kyrgyz Republic	Slovak Republic
Bosnia and Herzegovina	Latvia	Slovenia
Bulgaria	Lithuania	Tajikistan
Croatia	FYR Macedonia	Turkmenistan
Czech Republic	Moldova	Ukraine
Estonia	Poland	Uzbekistan

- It must have good prospects of being profitable.
- Significant equity contributions in cash or in kind are required from the project sponsor.
- The project must benefit the local economy.
- It must satisfy EBRD's environmental standards as well as those of the host country.

Smaller projects are almost always financed through financial intermediaries. In exceptional circumstances, the EBRD can consider financing smaller projects.

Project structure

The Bank tailors solutions to client and project needs and to the specific situation of the country, region and sector. It assigns a dedicated team of specialists with expertise in project finance, the region and sector, law and environment.

- The EBRD funds up to 35% of the total project cost for a greenfield project or 35% of the long-term capitalisation of an established company.
- Additional funding by sponsors and other co-financiers is required. The EBRD may identify additional resources through its syndications programme
- Typical private sector projects are based on at least one-third equity investment.
- Significant equity contributions are required from the sponsors. Sponsors should have a majority shareholding or adequate operational control. In-kind equity contributions are accepted.

Excluded sectors the EBRD does not finance

- Defence-related activities
- Tobacco industry
- Substances banned by international law
- Stand-alone gambling facilities.

In addition, the Bank may not finance certain products or processes due to their environmentally harmful nature or if adverse impact cannot be adequately mitigated.

Loans for large projects

The EBRD's loans are structured with a high degree of flexibility to provide loan profiles that match client and project needs. This approach determines each loan currency and interest rate formula.

The basis for a loan is the expected cash flow of the project and the ability of the client to repay the loan over the agreed period. The credit risk can be taken entirely by the Bank or may be partly syndicated to the market. A loan may be secured by a borrower's assets and/or it may be converted into shares or be equity-linked. Full details are negotiated with the client on a case-by-case basis.

Loan features

- Minimum EUR5 - 15 million, although this can be smaller in some cases.
- Fixed or floating rate.
- Senior, subordinated, mezzanine or convertible debt.
- Denominated in major foreign or local currencies.
- Short to long-term maturities, from 5 to 15 years.

- Project-specific grace periods may be incorporated.

Interest rates

EBRD loans are based on current market rates and are priced competitively. Financial terms can be discussed in detail with banking staff once a project has been presented to the Bank. The EBRD does not subsidise projects, nor does it offer soft loans.

The Bank offers both fixed and floating interest rates:

- Fixed rate basis, linked to a floating rate such as LIBOR.
- Floating rate basis with a cap or a collar.

As the type rate directly affects profitability, a project's financial structure should preferably include both floating and fixed rate loans. The mix is evaluated with respect to client and project sensitivities to interest rate movements.

Fees and charges

A margin is added on to the base rate. The margin is a combination of country risk and project-specific risk. This information is confidential to the client and the Bank.

In addition to the margin, the Bank may charge some of the following fees and commissions:

- Front-end commission, paid up-front.
- Commitment fee, payable on the committed but undisbursed loan amount.
- Loan conversion fee, paid at the time of interest rate or currency conversion on the amount which is to be converted.
- Prepayment, cancellation and late payment fees are also charged if necessary.

In line with commercial practice, sponsors will be obliged to reimburse the Bank for out-of-pocket expenses, such as fees for technical consultants, outside legal counsel and travel expenses.

Other lending terms

Full lending terms are negotiated with the client for each project.

Recourse

Performance and Recourse to a sponsor is not required. However, the EBRD may seek specific completion guarantees plus other forms of support from sponsors of the kind that are normal practice in limited-recourse financing.

Insurance

The Bank requires project companies to obtain insurance against normally insurable risks. Examples include theft of assets, outbreak of fire, specific

construction risks. The EBRD does not require insurance against political risk or non-convertibility of the local currency.

Security

The EBRD usually requires the companies it finances to secure the loan with project assets. These can include:

- Mortgage on fixed assets, such as land, plant and other buildings.
- Mortgage on movable assets, such as equipment, other business assets.
- Assignment of the company's hard currency and domestic currency earnings.
- Pledge of the sponsor's shares in the company.
- Assignment of the company's insurance policy and other contractual benefits.

Convenants

Typical project finance convenants are required as part of the loan package. Such covenants, limiting indebtedness and specifying certain financial ratios and various other issues, will be negotiated.

Loan repayment

Repayment is normally in equal, semi-annual installments. Longer maturities may be considered on an exceptional basis, for example, up to 15 years for large infrastructure operations.

Hedging possibilities

The Bank can help manage financial risks associated with a project's assets and liabilities. This covers foreign exchange risk, interest rate risk and commodity price risk. Risk hedging instruments include currency swaps, interest rate swaps, caps, collars and options and commodity swaps.

Large project guarantees

The EBRD provides various types of guarantees. These range from all-risk guarantees whereby the Bank covers lenders against default regardless of the cause, to partial risk-specific contingent guarantees covering default arising from specified events.

In all cases the maximum exposure must be known and measurable and the credit risk must be acceptable. Precise legal definitions of the events guaranteed and pricing are handled on a case-by-case basis.

Illustration of generic products

- Debt guarantees
- Equity guarantees

- Local currency loan guarantees
- Guarantees for capital market products
- Guarantees for trade facilitationContact.

Project stages

When the EBRD has all the necessary information, a deal typically takes three to six months from initial contact to signing. In some cases, however, this can be shorter. The total project cycle, from initiation to repayment, can range from one year for working capital or trade financing projects to 15 years for long-term sovereign infrastructure projects.

The EBRD project cycle consists of the following stages:

Concept Review – The EBRD's Operations Committee (OpsCom) approves the project concept and overall structure, including proposed financing structure and supporting obligations. At this stage, the EBRD and the client sign a mandate letter, which outlines the project plan, development expenses and responsibilities.

Final Review – Once the basic business deal (including a signed term sheet) has been negotiated and all investigations have been substantially completed, the project receives a Final Review by OpsCom.

Board Review – The EBRD President and operation team present the project to the Board of Directors for approval.

Signing – The EBRD and the client sign the deal and it becomes legally binding.

Disbursements – Once repayment conditions are agreed and the Bank's conditions met, the funds are transferred from the Bank's account to the client's account.

Repayments – The client repays the loan amount to the EBRD under an agreed schedule.

Sale of equity – The Bank sells its equity investments on a non-recourse basis.

Final maturity – The final loan amount is due for repayment to the Bank.

Completion – The loan has been fully repaid and/or the EBRD's equity investment divested.

Small and medium finance

Many projects are too small to be funded directly by the EBRD. To give entrepreneurs and small firms greater access to finance, the EBRD supports financial intermediaries, such as local commercial banks, micro-business banks, equity funds and leasing facilities.

Investment criteria are consistent with EBRD policy, but financial intermediaries make independent decisions about which small and medium exterprises (SMEs) they fund

Small and medium loan funding requirements

The EBRD's financial intermediaries consider sound and sensible projects that support private sector development. Each bank or programme has its own requirements and investment limits. For detailed financing information, contact the intermediary directly.

SME requirements for obtaining loans through local banks

Sound business plans for establishing or expanding a company's business.
Solid management with a proven track record.
Products that are competitive in the marketplace.
Information on owners/partners.
Financial history.
Security in the form of pledges, mortgages, etc.

- Funds provided must be used in strict accordance with the aims stated in the original business plan.
- In line with the EBRD's mandate, banks ensure that all proposals pay due regard to environmental issues.
- Funding cannot be provided to majority state-owned companies or for government-guaranteed projects.
- In addition, equity contributions, either in existing or new business, of around 35% are often required.

Municipality requirements for obtaining loans through local banks

Funding for infrastructure projects is available to small and medium-sized municipalities and their utility companies in the EU Accession countries. Requirements:

- Population served by the municipality of under 100,000 people. For Bulgaria and Romania, under 150,000 people.
- Able to repay the loan through the municipality's cash flow and to meet specified financial ratios in loan agreements.
- Competent financial management and budgetary control procedures.
- Willing to apply EBRD procurement and environmental requirements.
- Willing to provide visibility for the EU's contribution.

- Commitment to publicize any EU technical cooperation support received through events or press releases.

Transport Sector

The EBRD has invested EUR 3.16 million in the transport sector as of 31 December 2003. These investments are spread across a total of 97 projects. At the following paragraphs some case studies are presented.

Improving the road system in Kazakhstan

In a country bigger than Western Europe but with a population of little more than the Netherlands, roads provide a vital link for Kazakhstan's dispersed communities. But for Kazakh drivers, tight state budgets in the 1990s have meant that some 65 per cent of the country's 23,000 km of highways are in poor repair.

In the west of the country near the Caspian coast, road quality will improve dramatically following an EBRD loan of €95 million to the Kazakh Government. The financing, expected to be bolstered by a loan of around EUR 40 million from the Asian Development Bank, will fund the upgrading of a 900km road, improving links between Kazakhstan's main port of Aktau and the regional centre of Atyrau.

Work on the route started in the 1960s but was never completed and much of the road is currently in poor condition. The new road will improve access to Kazakhstan's oil-rich western region and the Caspian Sea. With oilfield development vital to the country's economic growth, the road provides an important route for the transport of equipment and personnel.

"With EBRD support, this project will play an important part in the upgrading of an important international transport corridor linking Turkmenbashi, Atyrau and Astrakhan, which is vital for the countries of Central Asia and Russia," said Erik Khamsinovich Sultanov, Chairman of the Kazakh Government's Roads Committee.

The project will also lead to greater recovery of road costs from drivers, with fees for road use linked to the type of vehicle. This will result in more sustainable financing for the road sector in the future. A grant from the EU's Tacis programme funded part of the project's preparation costs

Russia: Take-off for Russian aircraft makers

Russia has a proud heritage in aerospace technology. During the soviet era, Russian companies were world leaders in the manufacture of both civil and military aircraft. But following the collapse of the Soviet Union, investment in this hi-tech sector fell sharply, leading to a dramatic decline in Russia's ability to compete in the international aerospace market.

In the EBRD's first venture in the aircraft manufacturing business, we are helping to revive this sector by providing Sirocco Aerospace Russia with a EUR 36 million loan to finance construction of a new export-oriented version of the Tupolev cargo

aircraft, which is currently undergoing European certification. The Rolls-Royce powered aircraft will be built at Aviastar's advanced assembly facility in the Volga region, which employs some 7,000 people.

The company's first export contract is to supply five aircraft to two airlines in China, the world's fastest growing aviation market. The loan will also help to re-establish Russia as an effective, low-cost competitor in the aircraft markets in Africa, the Middle East and the Pacific Rim.

"The Tupolev is a proven aircraft, well-positioned to compete internationally. With EBRD support, we can move more quickly into these new markets," said Dr Kamel, Chairman of Sirocco Aerospace.

The project is also expected to develop skill levels as Tupolev will benefit from the expertise of Western aircraft companies involved in the supply of parts and the certification process.

New road link to Russia's far east and less traffic for St Petersburg

During the long winter months, people living in remote settlements in Russia's Far East are completely cut off and can be reached only by air. At the other extremity of this huge country, trucks thundering through the centre of St Petersburg create congestion and pollution. With the EBRD's help and a 15-year loan of €218 million, two new road projects will transform the quality of life for these distinctly different communities.

Our first loan to the Russian road sector will help build a section of the first-ever East-West road link to the Russian Far East. When completed in 2005, a new two-lane road, covering 2,165 kilometres (between Chita and Khabarovsk) will run parallel to the Trans-Siberian railway and provide the first road connection between Moscow and Vladivostok. As well as opening up this remote region, the road will speed the movement of goods and provide an alternative to rail freight, resulting in increased availability of essential commodities and lower transport costs.

Environmental damage arising from such an enormous construction project is minimised because of strict construction regulations. The project has passed all environmental requirements and was met with overwhelming approval during the public consultation period. Igor Slyunyaev, the head of the Russian Road Administration, Rosavtodor, comments: "The financing of the EBRD is an absolute necessity for us in order to be able to construct the Chita-Khabarovsk road and the St Petersburg bypass. Both roads are a priority for my country and I am very pleased that the EBRD is bringing its expertise to assist us with the construction and the reform of the road sector."

Construction starts in 2003 on the EBRD-financed section of the St Petersburg eastern bypass, which will take heavy trucks away from the historic city centre. This will reduce noise and pollution, and improve road safety and air quality for St Petersburg residents. Reform of how the road sector is financed is an integral part of the project. The EBRD is providing technical assistance to Rosavtodor to develop a road management system, to improve road safety and to upgrade quality control. This follows on from proposals (developed by consultants and now implemented) to recover some of the costs of road use by charging road users via dedicated taxes.

This project depends on close cooperation between the EBRD and the Russian Ministry of Transport, which will act as a model for future collaboration.

Railways recovery project, Bosnia and Herzegovina

The main railway network in Bosnia and Herzegovina is to be made safer and more reliable with the help of an EBRD investment of EUR 21 million.

The loan will be used to repair an important 395 km stretch of rail track that provides a link to Hungary and Croatia through largely inaccessible terrain. Damage sustained during the war, political divisions and economic disruption have led to a rapid deterioration in Bosnia and Herzegovina's transport infrastructure. In the railway sector, this has resulted in low operating speeds, bottlenecks and concerns about safety.

To tackle this challenge, the railway companies approached the EBRD to finance investments identified in a priority investment plan. EBRD financing will help to support the economic recovery of the rail system and to improve the infrastructure on a key stretch of rail track for international business. It will assist with labour restructuring and strengthening management in the railway sector. In particular, it will help to meet the requirements of a new railway law, introduced in compliance with EU directives.

The EBRD's sovereign loan will finance the purchase of track maintenance machines, the restoration of the signalling system and a programme of labour severance. Parallel financing is being provided by the European Investment Bank. The EBRD has also mobilised grant funding from Canada, Japan and the United States to finance infrastructure work and other improvements.

World Bank

Transport Sector Overview

Why is the Transport Sector Important ?

- Value added by transport is estimated to account for 3 to 5 percent of GDP.
- Public investment in transport typically accounts for between 2.0 and 2.5 percent of GDP and may rise as high as 3.5 percent in countries modernizing outdated transport infrastructure or building new transport infrastructure.
- Transport likewise commonly accounts for 5 to 8 percent of total paid employment.
- Demand for freight and passenger transport in most developing and transition countries is growing 1.5 to 2.0 times faster than GDP the bulk of this increase is for road transport.
- Although demand for freight transport in industrialized countries grows less rapidly than GDP, in developing and transition countries the growth rate is closer to that for passenger transport.

- In 1994 foreign aid accounted for 12 percent of total infrastructure financing in developing countries (including transport), while private financing of infrastructure accounted for 7 percent and was rising. In 1996 private sector lending to emerging markets peaked at $196 billion. Since then it has fallen sharply and estimates for 1999 are just over $17 billion.

Sector Issues at a Glance

- Globalization of trade. Advances in international logistics (for example, multi-modal transport technology, electronic documentation, streamlined customs procedures, etc.) have greatly expanded the scope for international trade in goods and services
- Congestion and pollution: Growing road congestion, particularly in cities, generates pollution and increases road accidents (about 500,000 persons per annum are killed in road accidents in the Bank's developing member countries and about 70 percent of these fatalities are pedestrians)
- Transport sector deficits: Poorly managed public transport services impose a heavy burden on public finance (for example, until recently, the transport sector deficit in Zambia absorbed 12 percent of the government's total current revenues)
- Expenditure needs: Large sums of money are required to maintain and modernize existing transport infrastructure (for example, road spending alone often accounts for 10 percent to 20 percent of the government's development budget)
- Private capital flows: In 1996, lending to emerging markets by private sector creditors totaled $196 billion (about 15 percent of this went to the transport sector). The current global financial crisis has sharply reduced these private capital flows which are estimated to have fallen to $17 billion in 1998.

Transport Sector Policies

World Bank Sector Mission

- Access: Improve access to markets, employment and services to promote social and economic development of our developing member countries
- Public and private sectors: Assist clients to make best use of the public and private sectors in the provision of transport services
- Institutional and financial development: Promote institutions which can manage and finance the transport sector on a sustainable long-term basis

World Bank Sector Strategy

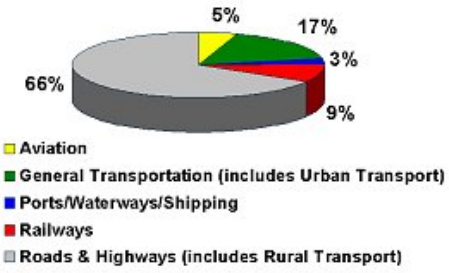
- Re-inventing government: Focus is on restructuring publicly-owned transport enterprises, privatizing where feasible, and commercializing/concessioning elsewhere to subject provision of transport services to the discipline of the market place
- Cutting public sector deficits: Railway concessioning has produced spectacular results: it has turned Brazil's $500 million rail deficit into an annual $160 million payment to the Treasury (Brazil Railways restructuring Project); likewise it has reduced Argentina's annual net deficit by $700 million (Argentina Public Enterprise Reform Adjustment Loan).
- Managing roads like a business: The vast majority of the Bank's road projects deal with maintenance and rehabilitation, and commercialization of road management and finance. Commercialization is moving ahead in all the Bank's regions with an increasing number of countries deciding to finance their roads on a fee-for-service basis (e.g., Jordan Third Transport Project, Zambia Road Sector Investment Program, Pakistan Highways Rehabilitation Project).
- Rural accessibility: There are several innovative projects in this area which are attempting to establish sustainable institutional arrangements for managing and financing rural roads (e.g., Guatemala Rural and Main Roads Project, Zambia Road Sector Investment Program).

World Bank Lending for Transport

Annual Average Bank Lending by Sector, FY02-04

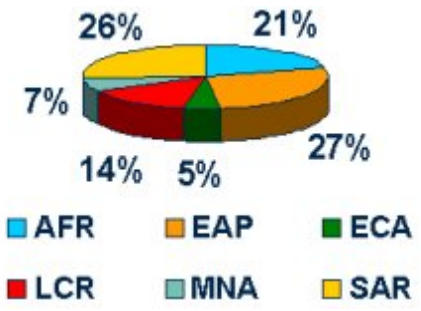
Bank Annual Average FY02-04=$US19 billion

Annual Average Transport Lending by Mode, FY02-04

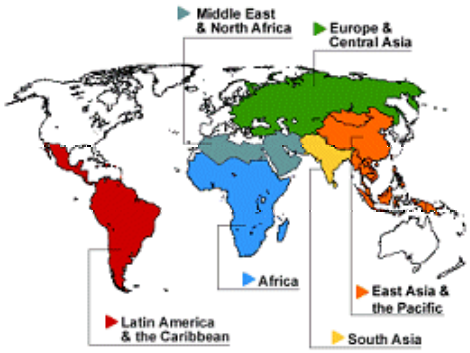


Transport Annual Average FY02-04=$US 3 billion

Annual Average Transport Lending by Region, FY02-04



The World Bank Group Countries & Regions



The World Bank finances two types of projects to eligible member countries: long-term investment (5 to 10 years) and short-term adjustment (1 to 3 years) projects. Currently, the Bank's lending portfolio consists of some 1,900 active projects, representing annual disbursements of approximately $21 billion. The Bank's on-line projects database provides data and information on the current portfolio of pipeline, active, dropped, and closed projects.

Roads and Highways

The Bank's Highway Design and Maintenance (HDM-III) model is recommended forbasic analysis, including economic evaluation, in assessing optimum works program, phasing, choice of technological options, etc. Even where HDM is not being used as the evaluation tool, it can be used as a basis for assembling operating cost estimates for a range of vehicle types using local input at different operating speeds, for which HDM-VOC software is available. In cases where HDM is not being used the assessment of the benefits to "base load" or "normal" traffic should be complemented by a consideration of the benefits to "generated" traffic, including traffic diverted from other routes, modes or destinations, as well as any forecast increase in the total number of trips or movements being made. The analysis should allow for the savings of cost on other routes, modes or O/D pairs in order to avoid overestimation of total benefit. Generated traffic (or associated degenerated traffic where diversions are involved) should normally be assigned a value half that of the base load traffic effects ("the rule of half"). However, generated freight traffic may in some circumstances require more careful analysis. For discussion of the evaluation of benefits to generated freight traffic, click here. Benefits for normal or base load traffic should be calculated at the resource cost of inputs, that is net of any taxes or subsidies. Special care should be taken to assess the impact on project returns of any distortion of input prices. For generated traffic the gross value should be calculated as the area under the demand curve as perceived by the user, less the total resource cost of the extra traffic. This will involve valuing traffic at the cost to users including fuel taxation, but also adjusted appropriately for any other well founded misperception of the user costs of transport.

The Roads and Highways section of the bank's knowledge base will be expanded in the near future to address the following additional issues:

- secondary benefits
- modal interactions
- pricing effects - tolls and shadow tolls
- phasing / stage construction
- low volume roads and social benefit evaluation
- road safety

Railways

The Bank has invested heavily in the rail sector in the past, and continues to do so in some countries (for example, China). Experience with rail investment has never been fully satisfactory. One reason for this failure has been over-optimistic traffic forecasting, naively based on "trend-breaking" assumptions. It is therefore important that rail traffic forecasts should realistically model qualitative, as well as simple price, comparisons between modes, and should be based on a careful assessment of future changes in industrial structure and a realistic view of trends in competing modes. A further source of failure of rail lending has been the continued inefficiency of parastatal rail corporations. For this reason the question of whether a rail project should be in the private or public sector is particularly important. Concessioning of rail undertakings to the private sector has been successful. Concessioning of operations to the private sector can be effectively combined with continued public contribution to investment finance. The possibilities of "unbundling" rail operations, to secure private participation should always be considered. A critical requirement of successful concession is the treatment of labor redundancy. Severance payments may now be financed through Bank loans, and should be subject to an economic evaluation

Economic Analyses in Transport Project and Program Appraisal

Purposes and Uses

The purpose of economic appraisal of investment projects is to ensure that selected projects are worthwhile (yield benefits with a value in excess of their costs); are well designed (are better value than alternative projects directed to the same end); and are practicable (the responsible agency has the capability and incentive to realize those benefits). The basic form of economic evaluation recommended for public sector investment project appraisal within the Bank is social cost benefit analysis. A social cost benefit analysis attempts to add together the effects on all affected parties, and brings together results of fiscal, financial, user benefit and third party impact analyses. It also attempts to value all costs and benefits to society, irrespective of to

whom they accrue, in the calculation of a single indicator, the net present value (NPV) or the economic rate of return (ERR).

Wherever possible a project should be divided into separable components which can each be subject to economic testing. It is also important to ensure that alternative solutions are subject to comparable and consistent analyses. In particular, the comparability of the requirements made of road and public transport investments should be carefully established. While the calculation of a single indicator such as the ERR is a useful barometer in making "go/no-go" decisions, it is much more important for economic analysis to have been used in project design to inform such decisions on program composition, choice of technology, project timing and program phasing, infrastructure management, pricing and policy reforms. A quite common fear about the emphasis on the project ERR is that funds are essentially fungible, at least within sector budgets, so that what the Bank ought to be testing is not a specific project presented for finance, but the marginal project within the sector. This is rarely possible, and is best addressed by being satisfied that financing a specific project is not making space for a clearly unacceptable project. The issue of whether a project should be in the public or private sector should also be addressed as an economic issue.

Basic Appraisal Format

The economic evaluation of a transport project attempts to compare the benefits resulting from the investment with the costs of the investment. Ideally this would measure the total benefits in increased output across all final product sectors in a spatially and sectorally identified input output model. Such a model would also ideally pick up all external effects, including environmental impacts. In practice such models do not work at the necessary degree of refinement for project evaluation. More partial equilibrium approaches have been adopted in some rural transport project cases by estimating the increase in agricultural and other outputs associated with a project. Even this is not generally tractable with the result that appraisals generally concentrate on the "first round" impacts on transport users and producers.

The comparison made in the analysis is between the situation "with project" and "without project", which must not be confused with a simplistic "before and after" comparison. In practice, however, the "do-nothing" alternative may be difficult to define. The costs and benefits considered should include all elements which contribute to individual welfare. On the cost side these include purchased inputs (for example, fuel), non-purchased inputs (time) and quality of service characteristics (such as comfort, convenience, reliability, flexibility, etc.) Thiw is referred to as the “generalized cost” of transport. The total benefit measurement includes benefits both to existing users and producers of transport services, and to those who are new users generated by an improvement, picked up in the "rule of half" measure. Effects on non-users (for example, noise or air pollution impacts on residents adjacent to a road or airport) should also be included. All values should be stated in constant price terms (i.e., 1998 dollars), except where changes in relative real prices can be confidently forecast. To allow costs and benefits accruing at differing points in time to be aggregated a discounting process is used, for which the specification of an appropriate discount rate is necessary. The relative merits and uses of the alternatives indicators used to represent the merit of the project (either a net present value (NPV) or the internal economic rate of return (ERR)) are discussed in detail in the OPR evaluation

handbook.. As many of the elements of the rate of return or net present value estimation are subject to error, calculations of the sensitivity of the calculated net benefit indicator to ranges in individual parameters (capital cost, traffic growth rate, etc.) and calculation of "switching values" of individual parameters at which the project NPV or ERR becomes sub-marginal are a minimum requirement. Monte Carlo simulations can be used to explore more complex risk distributions.

Generic Valuation Conventions

The calculated economic value of a project depends critically on a small number of parameters, which have to be assumed or estimated. National economic growth rates are the main basis for most future demand forecasting. These should always be consistent with the rates adopted in the CAS, and advice on these should be sought from the country economist. The impact of growth on transport demand will then depend on the income elasticity of demand (the rate of change of quantity of transport services demanded with respect to rate of changes in income). This varies between passenger and freight, by mode, and by country type. Where possible local experience should be analyzed. For freight, the elasticity of ton kms with respect to GDP appears to lie between 1.05 and 1.25, with the higher values more appropriate for developing countries. Values around 1.25 appear to be appropriate conservative default values for road freight, while those for rail appear to be somewhat lower. For passenger transport, the elasticities of passenger kilometers demanded with respect to income are usually substantially below 1 for bus transport, between 1 and 2 for rail and auto transport, and may be above 2 for air transport. Price elasticities show even greater variability. For land freight transport estimated price elasticities mostly fall in the range fall in the range from 0.4 - 1.2, suggesting a default value of about 0.8. For passenger transport elasticities are typically higher: for leisure than for business trips, for off-peak than for peak, and for air and rail than for bus or urban transit

Operating cost savings estimation are dealt with under the modal sections of this knowledge base. Shadow prices of resource inputs, of labor and of foreign exchange should always conform to country team norms and advice on these should be sought from the country economist. Values of time should usually distinguish at least between working time and non-working time, and wherever possible should be based on local data.

Valuing savings in accident costs should also be based on local estimates of accident incidence rates in different conditions as well as local values for both the resource impacts (loss of net output, repair and medical costs) and the human costs

Project Cycle

Overview

Each year the World Bank lends between US$15-$20 billion for projects in the more than 100 countries it works with. Projects range across the economic and social spectrum in these countries from infrastructure, to education, to health, to government financial management. The projects the Bank finances are conceived and supervised

according to a well-documented project cycle. Documents produced as part of the project cycle can be valuable sources of information for interested stakeholders wanting to keep abreast of the work the Bank is financing and for businesses wishing to participate in Bank-financed projects. Below is a step-by-step guide to the project cycle, the documents that are produced as part of the process, and how to access them.

How the Process Begins: Poverty Reduction and Country Assistance Strategies

The Bank recognizes that many past assistance efforts, including some of its own, failed because the agenda was driven by donors rather than by the governments it was trying to assist. Under its current development policy, the Bank helps governments take the lead in preparing and implementing development strategies in the belief that programs that are owned by the country, with widespread stakeholder support, have a greater chance of success.

In low-income countries, the Bank uses the Poverty Reduction Strategy (PRS) approach which involves widespread consultation and consensus building on how to boost development. Under this process, a national poverty reduction strategy is prepared by the country, creating a framework for donors to better co-ordinate and align their programs behind national priorities. The government consults a wide cross-section of local groups and combines this with an extensive analysis of poverty in the country's society and its economic situation. The government determines its own priorities from this process and produces targets for reducing poverty over a three to five year period. These are outlined in a Poverty Reduction Strategy Paper (PRSP). The Bank and other aid agencies then align their assistance efforts with the country's own strategy - a proven way of improving development effectiveness.

The Bank's blueprint for its work with a country is based on a Country Assistance Strategy (CAS) which, in the case of low income countries, is derived from the priorities contained in the country's Poverty Reduction Strategy Paper. The CAS is produced in co-operation with the government and interested stakeholders. The preparation of the CAS may draw on analytical work conducted by the Bank or other parties on a wide range of economic and social sectors, such as health, education,

agriculture, public expenditure and budgeting, fiscal management, or procurement, among others.

The Identification Phase

The Bank's Country Assistance Strategy (CAS) forms the blueprint for its assistance to a country. In low-income countries, the CAS is based on the priorities identified in the country's Poverty Reduction Strategy Paper (as outlined above). The goals outlined in the CAS guide the priorities of the Bank's lending program and are a useful source of information for interested stakeholders and businesses wishing to identify potential future areas of Bank lending. During the identification phase, Bank teams work with the government to identify projects which can be funded as part of the agreed development objectives. Once a project has been identified, the Bank team creates a Project Concept Note (PCN) which is an internal document of four to five pages that outlines the basic elements of the project, its proposed objective, likely risks, alternative scenarios to conducting the project, and a likely timetable for the project approval process.

Useful public documents

- The Project Information Document (PID) is prepared after an internal review of the PCN and is released publicly through the Bank's InfoShop It is usually four to five pages long and contains the information mentioned above - the objective, a brief description, etc. It also contains the name of the World Bank Task Manager or Team Lead who is supervising the project, a useful contact for companies interested in bidding for work on the project. The PID is an essential resource for tailoring bidding documents to the project concerned.
- The Integrated Safeguards Data Sheet (ISDS) is also prepared for the first time after the project's first formal review and made available publicly. It identifies key issues under the World Bank's safeguard policies for environmental and social issues, and provides information about how they will be addressed during project preparation.

Preparation Phase

This part of the process is driven by the country that the Bank is working with and can take anything from a few months to three years, depending on the complexity of the project being proposed. The Bank plays a supporting role, offering analysis and advice where requested. During this period, the technical, institutional, economic, environmental and financial issues facing the project will be studied and addressed - including whether there are alternative methods for achieving the same objectives. An assessment is required of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable (Environmental Assessment). The scope of the Environmental Assessment depends on the scope, scale and potential impact of the project.

Useful public documents

- An Environmental Assessment Report (EA) analyzes the likely environmental impact of a planned project and steps to mitigate possible harm.
- An Indigenous Peoples Development Plan identifies potentially adverse effects on the health, productive resources, economies, and cultures of indigenous peoples.
- The Environmental Action Plan describes the major environmental concerns of a country, identifies the main causes of problems, and formulates policies and concrete actions to deal with the problems.

Appraisal Phase

The Bank is responsible for this part of the process. Bank staff review the work done during identification and preparation, often spending three to four weeks in the client country. They prepare for bank management either Project Appraisal Documents (investment projects) or Program Documents (for adjustment operations) and the Financial Management team assesses the financial aspects of the project. The PID is updated during this phase. These documents are released to the public after the project is approved (see below).

Negotiation and Approval Phase

After Bank staff members have appraised the proposed project, the Bank and the country that is seeking to borrow the funds, negotiate on its final shape. Both sides come to an agreement on the terms and conditions of the loan. Then the Project Appraisal Document (PAD) or the Program Document (PGD), along with the Memorandum of the President and legal documents are submitted to the Bank's Board of Executive Directors for approval. The appropriate documents are also submitted for final clearance by the borrowing government which may involve ratification by a council of ministers or a country's legislature. Following approval by both parties, the loan agreement is formally signed by their representatives. Once this has occurred, the loan or credit is declared effective, or ready for disbursement, after the relevant conditions are met, and the agreement is made available to the public.

Useful public documents

- The Project Appraisal Document (PAD) presents all the information the Board needs to approve Bank financing of the proposal. Before 1999, this document was called the Staff Appraisal Report. The Program Document (PGD) describes adjustment-lending operations, and sets out the Bank's appraisal and assessment of the feasibility and justification for the program.
- The Technical Annex supplements a Memorandum and Recommendation of the President for freestanding technical assistance loans, which do not require Project Appraisal Documents.

Implementation and Supervision Phase

The implementation of the project is the responsibility of the borrowing country, while the Bank is responsible for supervision. Once the loan is approved, the borrowing government, with technical assistance from the Bank, prepares the specifications and evaluates bids for the procurement of goods and services for the project. The Bank reviews this activity to ensure that its procurement guidelines have been followed. If they have, the funds will be disbursed. The Bank's Financial Management Team maintains an oversight of the financial management of the project including periodically requiring audited financial statements.

Useful public document

Report on the Status of Projects in Execution provides a very brief summary of all projects that were active during the previous fiscal year. Previously an internal communication to the Board of Executive Directors, the SOPE Report now is available to the public. Projects that closed during the fiscal year are no longer included in the SOPE, since their Implementation Completion Reports are also publicly disclosed.

The Implementation Completion Report

At the end of the loan disbursement period (anywhere from 1-10 years), a completion report identifying accomplishments, problems, and lessons learned is submitted to the Bank Board of Executive Directors for information purposes.

Useful public document

Implementation Completion Reports review the results and assess an operation on completion of each loan financed by the Bank. Operational staff prepares these self-evaluations for every completed project.

Evaluation Phase

Following the completion of a project, the Bank's Operations Evaluation Department conducts an audit to measure its outcome against the original objectives. The audit entails a review of the project completion report and preparation of a separate report. Both reports are then submitted to the executive directors and the borrower. They are not released to the public.

Useful public documents

- Project Performance Assessment Reports rate project outcomes (taking into account relevance, efficacy, and efficiency), sustainability of results, and the

institutional development impact. One in four completed projects (or about 70 a year) is chosen for a Project Performance Assessment Report, which takes Operations and Evaluation Department staff about six weeks to produce and normally includes a visit to the project in the borrowing country.

- Impact Evaluation Reports assess the economic worth of projects and the long-term effects on people and the environment. These "second looks" at projects are performed five to eight years after the close of loan disbursements.
- Inspection Panel Reports review claims by affected parties that the Bank failed to follow its operational policies and procedures with respect to the design, appraisal and/or implementation of a Bank-financed operation.

Projects may be dropped at any point in the project cycle from preparation to approval. For these projects, which never achieve active status, Project Information Documents, described above, are effectively the final documents.

European Union

Introduction to EU funding

Most EU funding is not paid directly by the European Commission but via the national and regional authorities of the Member States. This is the case for payments under the Common Agricultural Policy and most payments under the structural policy financial instruments (European Regional Development Fund, European Social Fund, European Agricultural Guidance and Guarantee Fund and Financial Instrument for Fisheries Guidance), which make up, in money terms, the great bulk of EU funding.

The Commission pays direct grants to beneficiaries (public or private legally constituted bodies - universities, businesses, interest groups, NGOs - and, in some exceptional cases, individuals) in pursuance of other common policies in such fields as research and development, education, training, the environment, consumer protection, and information. It also pays direct grants in pursuance of EU external policies.

All EU funding is channeled towards precise objectives and priorities under the various common policies, which, in turn, are based on provisions of the Treaties. Grants are awarded on the basis of specific EU legislation, except those for pilot schemes, preparatory actions and certain tasks carried out by the Commission as an institution. The award and payment principles and procedures of EU grants (of all types) are governed by the Financial Regulation and its implementing Rules in particular Title VI of Part 1.

The Financial Regulation also requires all grants awarded to beneficiaries in the course of a financial year to be published each year, including the names and addresses of the beneficiaries and the relevant amounts awarded. http://europa.eu.int/grants/info/ - top

Financial and legal information

Nature of Community contribution

Grant on the basis of new Financial regulation (1605/2002), its rules for the implementation (2342/2002) and the Vade-mecum on grant management.

Level of Community contribution

Grant limited from 10% up to 50% of the total amount of eligible costs.

Successor to other programs

Call for proposals with a view to obtaining grants in the field of transport (OJ C 202 of 18 July 2001, p. 20).

Budget Line

B2-702; B2-704; A-7041.

Total available budget

The total amount of grants to be awarded in 2002-2003 is estimated at EUR 7 400 000 for transport, and at EUR 200.000 for organising conferences in the fields of energy and transport.

Legal Basis for the funding

Articles 70 to 80, 154 to 156, 157 and 174 to 176 of the Treaty establishing the European Community and regarding legislation.

Evaluation of EU Activities

Commission Evaluation System & Regulatory Requirements

The European Commission has a policy of regularly evaluating its programmes and activities. In this context, evaluation functions have been established within the individual Directorates General in order to coordinate and carry out evaluations. The central services of the Commission provide support and coordination.

The basic regulatory requirements on evaluation are set out in the Financial Regulation and Communications of the Commission.

The Financial Regulation and its Implementing Rules

The Financial Regulation provides basic rules on evaluation in its articles 27, 28 and 33 and these are further detailed in articles 21 and 22 of the Implementing Rules.

The Financial Regulation

Article 27(4): "in order to improve the decision-making, institutions shall undertake both ex ante and ex post evaluations in line with guidance provided by the Commission. Such evaluations shall be applied to all programmes and activities which entail significant spending and evaluation results disseminated to spending, legislative and budgetary authorities".

Article 28(1): "any proposal submitted to the legislative authority which may have an impact on the budget, including changes in the number of posts, must be accompanied by a financial statement and the evaluation provided for in the article 27(4)".

Article 33 (2d): "the Commission shall attach to the preliminary draft budget…information on the achievement of all previously set objectives for the various activities as well as new objectives measured by indicators. Evaluation results shall be consulted and referred to as evidence of the likely merits of a proposed budget amendment".

The Implementing Rules to the Financial Regulation

Article 21 (1): "all proposals for programmes or activities occasioning expenditure or a reduction in revenue for the budget shall be subject of an ex ante evaluation, which shall identify:

a) the need to be met in the short or long term;

b) the objectives to be achieved;

c) the results expected and the indicators needed to measure them;

d) the added value of Community involvement;

e) the risks, including fraud, linked with the proposals and the alternative options available;

f) the lessons learned from similar experiences in the past;

g) the volume of appropriations, human resources and other administrative expenditure to be allocated with due regard for the cost-effectiveness principle;

h) the monitoring system to be set up".

Article 21(2): "all programmes or activities shall then be the subject of an interim and/or ex post evaluation in terms of the human and financial resources allocated and the results obtained in order to verify that they were consistent with the objectives set, as follows:

a) The results obtained in carrying out a multiannual programme shall be periodically evaluated in accordance with a timetable which enables the findings of that evaluation to be taken into account for any decision on the renewal, modification or suspension of the programme;

b) Activities financed on an annual basis shall have their results evaluated at least every six years".

Communications on evaluation

The Commissioner for Budget together with the President of the Commission have issued several Commission Communications which set out the Commission's evaluation policy and provide rules for the services on how to implement it.

The basic elements and the development of the Commission evaluation system are described in:

- Focus on Results: Strengthening Evaluation of Commission Activities, Communication to the Commission from Mrs Schreyer, July 2000

The Commission has subsequently established a set of standards and good practices in evaluation to be applied within its services.

- Evaluation Standards and Good Practice. Communication for the Commission from the President and Mrs Schreyer, December 2002

The Commission also carries out a number of cross cutting evaluations examining strategic issues, which embrace activities within several policy areas:

- Putting Strategic Evaluation into Practice within the Commission Communication of the President with the agreement of Mrs Schreyer, November 2001

ISPA
Introduction

ISPA is one of the three financial instruments (with Phare and Sapard) to assist the candidate countries in the preparation for accession. Over the period from 2000 to 2006, a total of EUR 1 040 million a year (at 1999 prices) will be made available for infrastructure projects in the field of environment and transport.

Its main priorities in preparing the applicant countries for accession will be:

- Familiarizing them with the policies and procedures of the Union
- Helping them catch up with EU environmental standards
- Expanding and linking with the trans-European transport networks

Who can apply for Ispa grants - how are Ispa grants decided

The candidate countries can propose, via the National Ispa Co-ordinator, projects in the sectors eligible to Ispa. The projects must be part of an Ispa sector investment plan adopted by the candidate countries and endorsed by the Commission.

Applications must be sent to the Ispa directorate of DG Regio. The application will be examined by Commission services and (when necessary) discussed with the applicant country.

When the Commission considers the project acceptable, she will submit the project for opinion to the Management Committee, composed of representatives of the Member States.

After having received the positive opinion of the Management Committee the Commission will adopt the project and submit a Financing Memorandum for signature to the applicant country.

Sectors receiving assistance

- The environment bringing the applicants up to EU standards
- Transport expanding the trans-European transport networks
- Technical assistance directly related to the projects being funded

Transport: expanding the trans-European transport networks

Agenda 2000 stresses the urgent need to build and repair transport infrastructure in the applicant countries and to link it to the Union's transport networks. For the countries concerned, improving their transport infrastructure is a crucial part of their economic development strategies. Developing efficient transport systems is thus an essential component in the pre-accession strategy.

Assistance should go to transport infrastructure projects which encourage sustainable forms of moving people and goods, in particular projects which are of Community interest, identified at the Helsinki and Crete conferences, and also projects which enable the countries concerned to meet the objectives of the Accession Partnerships. This will include expanding the TENs to provide good connections between the Union and the applicant countries and interconnections between national networks and links from them to the TENs.

Bringing transport infrastructure in the applicant countries up to the standards of the Union to meet the expected growth of traffic will call for major investments. ISPA will be contributing therefore to funding the development of railways, roads, ports and airports, taking into account requirements for sustainable transport and modal change.

Eligibility of measures

Following the pattern of the Cohesion Fund for which funding is granted on a project-by-project basis; ISPA will fund the following type of measures:
Project: a project is an economically indivisible series of works for a precise technical function and with identified objectives.
Stage of project: a technically and financially independent stage shall be a stage, which can be identified as operational in its own right.
Group of projects: projects meeting the following three conditions may be grouped:
They must be located in the same area or situated along the same transport corridor;
They must be objective oriented under an overall plan for the area or corridor;
They must be supervised by a single body responsible for coordinating and monitoring.

Such projects must be of a high quality and on a sufficient scale to have a significant impact in the field of environmental protection or improving transport networks. In light of the experience with the Cohesion Fund, and in particular to avoid disproportionate administrative burdens, projects will need to have a minimum size of EUR 5 million. For the start up period of ISPA, the Commission will, however, restrict itself to supporting large projects only.

Projects are to be selected and approved on the basis of national programmes for transport or the environment, which form part of the central elements of the Accession Partnerships, the national programmes for adopting the 'acquis communautaire'. These programmes must contain strategies specifically aimed at transport and the environment, and take the transnational dimension into account when developing future trans-European networks.

Financial provisions per country

Over the period from 2000 to 2006, a total of EUR 1 040 million a year (at 1999 prices) is to be divided evenly between environmental and transport infrastructure projects.

The allocation of ISPA resources among the recipient countries has been decided by the Commission using criteria based on population, per capita GDP (in purchasing power parity terms) and land surface area. In order to encourage the beneficiary countries to propose high quality projects and to have some flexibility in the management of ISPA funding, the allocation is given as a range:

8.0% - 12.0%	Bulgaria
5.5% - 8.0%	Czech Republic
2.0% - 3.5%	Estonia
7.0% - 10.0%	Hungary
4.0% - 6.0%	Lithuania
3.5% - 5.5%	Latvia
30.0% - 37.0%	Poland
20.0% - 26.0%	Romania
1.0% - 2.0%	Slovenia
3.5% - 5.5%	Slovakia

The rate of assistance will be up to 75% of eligible public expenditure, but in exceptional cases up to 85%. The actual rate will depend on the following criteria: the matching funds available, any potential revenue generated from projects and application of the 'polluter-pays' principle.

How to apply for ISPA co-financing of projects

The recipients of ISPA assistance will be the central governments of the candidate countries. Only applications received via the National Ispa Co-ordinator will be examined by the Commission services. Applications must be introduced following standard application forms

Implementation of projects receiving ISPA grants

The beneficiary countries are responsible for the implementation of projects receiving Ispa grants. This means that they, while respecting the rules of the Commission, have to launch call for tenders, to attribute contracts and to follow up the implementation. Commission's services are at all stages consulted on the proceedings.

Procurement rules

Contracts for technical assistance, services, supplies and works are awarded following the usual procedures (i.e. after publication in the Official Journal and on the internet). The detailed procedures for tendering and contracts are laid down in the Practical Guide to Phare, Ispa & Sapard contract procedures of the Commission.
However, the following exceptions will apply:

In the case of works, tenders can be invited on the basis of open tendering procedures or restricted tender after pre-qualification, depending on which procedure is most suitable to the case in question. The procedures of the manual should be applied in conjunction with the contract provisions, except for Annex D to be replaced by contract arrangements of the International Federation of Consulting Engineers (FIDIC);

For all types of contracts:

- Pre-qualification option can be used extensively
- Pricing can be specified in national currency.
- Tendering and contracting will be subject to ex-ante approval (endorsement) by the Commission as laid down in the manual for each type of procurement and procedure followed (e.g. tender dossier, evaluation procedure, evaluation report, contract etc.).

How can companies take part in projects with ISPA grants

Companies can react to tender publications launched by the candidate countries. The information on tenders can be found on the EuropeAid cooperation office website Replies to the invitation for tenders have to be sent to the countries concerned.

Public Private Partnerships

Recent years have seen a marked increase in co-operation between the public and private sectors for the development and operation of infrastructure for a wide range of economic activities. Such Public-Private Partnerships (PPP) arrangements were driven by limitations in public funds to cover investments needs but also by efforts to increase the quality and efficiency of public services.

The efforts of the Accession Countries and the new Member States to reform and upgrade infrastructure and services could potentially benefit from the PPP approach. However, PPPs should only be considered (1) if it can be demonstrated that they will achieve additional value compared with other approaches, (2) if there is an effective implementation structure and (3) if the objectives of all parties can be met within the partnership.

DG Regional Policy has undertaken a wide consultation process within the Commission, involving the EIB, EBRD, PPP units and task forces of the Member States and Candidate Countries. The result can be found in "Guidelines for Successful Public-Private Partnerships", published in March 2003.

As a natural follow up and in the effort to address the knowledge gap in a practical way, DG REGIO has produced (June 2004), with the same effective collaboration from partners, a repertory of PPP case studies across countries and across sectors, called "Resource book". The Resource book was presented at a Workshop "Building a valuable approach to PPPs" which took place on 5 July 2004.

How are ISPA grants disbursed

On the signature by the Commission the beneficiary country receives 10% of the total grant. Another 10% is paid on the signature by the beneficiary country of the first contract for the project. The rest of the grant is reimbursed on evidence of payment of invoices, of which 20% after the acceptance of the final report. Exceptions on the above-described procedure are possible for technical assistance projects for the Extended Decentralisation (EDIS).

INTEREG
How to apply for INTERREG IIIC funding

The fourth call for project proposals is still open in East zone. The deadline for submission of East zone applications is 19 November 2004. In North and West zone the fourth call closed on 8 October 2004. The North zone received 27 applications, the West zone 57. The extended third call for Regional Framework Operations in the South zone, which closed on 8 October 2004 also, resulted in 25 applications.

All documents important for the development of an application can be found in the Application Pack.

Application Pack

The Application Pack - consists of the following documents:

- Application Form
- Programme Manual :The Programme Manual provides an overall view of the planning, managing and follow-up to the INTERREG IIIC operation, from the preparation of the application to the implementation, reporting and finalisation
- Co-financing Statements
- Programme documents (Community Initiative Programmes and Programme Complements)
- Relevant EU regulations
- Model authorisation letter for Regional Framework Operations : The model authorisation letter is relevant for Regional Framework Operations only. In cases where regional authorities at a geographically lower level or bodies other than the governing authority of the respective region shall represent the territorial unit listed in the Community Initiative Programme, a written authorisation of the governing authority of the respective region is required
- Map :A map showing the location of all partners involved in the operations has to be attached to the application form

Total available budget for INTERREG IIIC

For the EU Member States the total ERDF budget available for co-financing operations for all four INTERREG IIIC programme zones amounts to EUR 315.4 million. This total has to be matched with national co-financing from project partners of the EU Member States. Most national co-financing will be made up of public funds. For partners from Norway, the Norwegian government has provided a separate budget of EUR 2.7 million for co-financing interregional co-operation throughout Europe. These Norwegian national funds have to be matched with regional co-financing from Norwegian project partners. The co-financing rate is up to 30% of the total eligible budget.

Contributions from third countries, including EU funds for Non-Member States, will also play an essential role in financing operations.

General rate of INTERREG III C co-financing

The ERDF co-financing rate for the operations is 75% of the eligible costs for partners in Objective 1 areas and 50% of the eligible costs for partners in other areas. For partners from outermost regions (French Oversea Departments, Canary Islands, Azores and Madeira) and being involved in operations financed by the South Programme the ERDF co-financing rate is 85% of the eligible costs.

Regions having dual Objective status (partly Objective 1) that are involved in RFOs must calculate an average co-financing rate varying between 50% and 75% taking into account an estimated involvement of each region's institutions in the RFO sub-projects.

Financial models that can be applied in INTERREG III C operations

Each operation is free to apply the financial model that fits best to the operation, partnership or objectives. Note that the financial model has to be in line with Commission Regulation 438/2001 (available for download on our website in the download section). Examples can be found in the Programme Manual

Advance payments avalable in INTERREG III C

No advance payments are provided in the INTERREG IIIC Programme. All payments from the Paying Authority to the Lead Partner must be based on expenditure actually paid out and recorded. Payments are linked to reports - as soon as report is accepted, the payment is authorised

The Green Paper on Public-Private Partnerships and Community law on public contracts and concessions

Presentation of the Green Paper

Public private partnerships (PPPs) are forms of cooperation between public authorities and the world of business, which aim to ensure that infrastructure projects can be carried out or that services of use to the public can be provided. These forms of partnership have been developed in several areas of the public sector, such as transport, public health, education, public safety, waste management and water distribution.

Various factors explain the increased recourse to PPPs. In view of the budget constraints confronting Member States, it meets a need for private funding for the public sector. Another explanation is the desire to benefit more in public life from the know-how and working methods of the private sector. The development of PPPs is also part of the more general change in the role of the state in the economy, which is moving from a role of direct operator to one of organizer, regulator and controller

On the basis of a Green Paper, the European Commission has launched a debate on the desirability of adapting the Community rules on public procurement and concessions to accommodate the development of public-private partnerships (PPPs). The main objective is to see whether it is necessary to improve the current rules in order to ensure that economic operators have access to PPPs under conditions of legal clarity and real competition. Over the last ten years PPPs have been developing in several member states. They are now used in many areas of the public sector. The choice of a private partner by a public authority must be made in accordance with Community rules on the awarding of public contracts. However, there is no specific system under Community law for PPPs and the Community rules on awarding public contracts are applied to PPPs with differing degrees of intensity. The Green Paper sets out the scope of Community rules, with a view to identifying any uncertainties and assessing to what extent Community intervention might be necessary.

This Green Paper analyses the phenomenon of PPPs with regard to Community law on public procurement and concessions.

Under Community law, there is no specific system governing PPPs.

PPPs created for contracts that qualify as "public contracts" under the Directives coordinating procedures for the award of public contracts must comply with the detailed provisions of those Directives. However, "works concessions" are covered only by a few scattered provisions of secondary legislation and "service concessions" are not covered by the "public contracts" Directives at all.

Nevertheless, all contracts in which a public body awards work involving an economic activity to a third party, whether covered by secondary legislation or not, must be examined in the light of the rules and principles of the EC Treaty, and particularly those on the freedom of establishment and the freedom to supply services (Articles 43 to 49 of the EC Treaty). These principles include in particular the principles of transparency, equal treatment, proportionality and mutual recognition.

The EU rules governing the choice of a private partner have therefore been coordinated in the Community at various levels and to various extents, so that a wide variety of approaches are still possible at national level.

The aim of this Green Paper is to launch a wide ranging debate to find out whether the Community needs to intervene to ensure that the economic operators in the Member States have better access to the various forms of public private partnership in a situation of legal certainty and effective competition.

It therefore describes the ways in which the rules and the principles deriving from Community law on public contracts and concessions are applied when a private partner is being selected, and for the subsequent duration of the contract, in the context of different types of PPP. The Green Paper also asks a set of questions intended to find out more about how these rules and principles work in practice, so that the Commission can determine whether they are sufficiently clear and suitable for the requirements and characteristics of PPPs.

The Green Paper thus addresses various topics: the framework for the procedures for selecting a private partner (competitive dialogue procedure for certain PPP operations qualifying as public contracts, minimal framework for secondary legislation, no framework for works and service concessions), privately initiated PPPs, the contractual framework and contract amendments during the life of a PPP, and subcontracting. The Green Paper addresses both PPPs created on the basis of purely contractual links ("contractual PPPs"), and PPPs involving joint participation of a public partner and a private partner in a mixed capital legal entity ("institutional PPPs").

This Green Paper is one of the priorities identified by the Commission in its internal market strategy for 2003 2006, and contributes to the measures planned as part of the initiative on growth in Europe

Source: http://europa.eu.int/comm/internal_market/publicprocurement/ppp_en.htm

7. BORDER CROSSING ISSUES FOR TEM AND TER NETWORK

Special attention was paid to recognition and addressing of the border crossing problems that could possibly appear in such a project. Quality assessment of the border crossing procedures, the institutional differences, etc., was performed in order to prioritize the causes of border crossing problems. Assistance from the International Road Transport Union (IRU), International Union for Railways (UIC), International Union of Combined Road Rail Transport (UIRR), UNECE and other related organizations, was provided.

In this connection, it is necessary to acknowledge the valuable inputs, to this part of the TEM and TER Projects' Master Plan and especially to addressing road border crossing issues, provided by the European Conference on Ministers of Transport (ECMT) documents on this topic.

As a first step, the inventory of border crossing points was made, listing data on countries involved, names of border points on both sides of the border and their present and future, whenever defined, status. These border crossing points were also presented in GIS maps along with multimodal transfer points in the TEM and TER region.

Then, the identification of border crossing problems, the separation of problems' origins

and in each origin the main inadequacies as well as recommendations for the alleviation of

problems, were provided.

It has to be noted that the border crossing issues, were examined separately for TEM and TER Networks.

7.1 TEM Border Crossing Issues

Border issues constitute major barriers to trade, tourism and transport. Long waiting times at borders cause huge disruption to logistic activities and massively increase costs. Whilst transport operators' employees waste time at borders, it is shippers and, ultimately, consumers, who pay the bill for these barriers, which reduce the efficiency of the global economy and delay much-needed economic development in less-favored regions of the world.

7.1.1 Inventory of border crossing problems (Road)

The main obstacles at border crossings of TEM network have their origins in: (a) infrastructure, (b) procedures and (c) staff. The main inadequacies per origin are presented below.

Infrastructure

- Unsuitability and insufficient capacity of border posts
- Obsolete and poor quality facilities
- Inadequate equipment
- Absence of separate lanes for transit traffic and empty vehicles

Under-sized access roads to border posts and insufficient parking space at borders

Procedures

- Insufficient of often over-complex control procedures

- Insufficient computerization of control procedures
- Systematic control of all vehicles instead of controls based on risk management techniques
- Complex and often contentious procedures for weighing commercial vehicles
- Absence of non-stop veterinary and phytosanitary controls
- Introduction of additional controls of doubtful necessity, such as radioactivity controls at some borders (Serbia and Montenegro)
- Lack of coordination between the customs administrations of the various countries, and in particular insufficient exchange of information
- Insufficient cooperation between the authorities responsible for controls
- Non-compliance with TIR procedures
- Failure to provide information to the professionals, private sector, etc
- Changes without notice of the procedures used
- Compulsory convoys of vehicles with customs or police escorts
- Imposition of compulsory pay services using "commercial" structures established at border crossing points
- Proliferation of taxes, duties and fees

Staff

- Shortage of control personnel
- Low productivity
- Non-continuous working hours
- Lack of skills and training
- Lack of continuity in the management of controls due to a high level of staff rotation at all levels
- Inappropriate behaviour of some officials responsible for controls

7.1.2 Recommendations for improvement

To solve the main problem of delays and all the consequences on transport and economy, the recommendation is to tackle border procedures, through simplification and harmonization. Authorities should anticipate future growth in trade flows by investing – in advance -in improved infrastructure, procedures and training, to prevent borders from remaining or becoming places where scarce resources are wasted. Facilitation of trade, tourism and road transport is an area where it is vital for Governments to work together to reduce barriers to economic and social development.

UNECE has developed a number of international Agreements and Conventions on border crossing facilitation, which provide a common legal and technical platform for both EU and non-EU countries for achieving a harmonized and effi cient performance of border crossing controls. Therefore, accession to and implemenation of these

Agreements and Conventions should be in the focus of all Governments of the countries concerned.

Per category of problems, the recommended solutions are presented below.

Infrastructure

- Improving facilities at borders
- Providing a sufficient number of queues and windows
- Improving access to border crossings by widening roads and creating additional lanes

Procedures

- Introducing common customs posts and controls carried out jointly
- Transferring of control procedures to sites inside the country (especially for transit) or at the place of destination
- Introducing new, simplified control procedures
- Complying strictly with the provisions of the TIR Convention
- Simplification and harmonization of procedures for weighing vehicles
- Improving coordination between the customs authorities of neighboring countries
- Creating cooperation between national administrations
- Simplifying and, if possible, reducing of taxes, fees and duties charged at border crossings
- Facilitating the issuance of visas to professional drivers
- Improving communication with the private sector
- Harmonizing and, if possible, reducing of the bans

Staff

- Increasing the number of personnel
- Failing 24/24 opening, alignment of border post opening times
- Training of control personnel
- Motivating of control officials
- Fighting against corruption

Transport services are the lifeline between economic and social players. At the present time, this is particularly true of road transport, since it carries the majority of traded goods moved on land routes (70% by volume, 90% by value). In addition, road transport by bus and coach is highly important in the passenger transport market.

All the problems, mentioned previously, result in excessive waiting times at borders and in turn in serious hampering of international movements of goods and people. It is not unusual that due to all these problems cars, trucks, buses and coaches have to wait for hours at borders before they can proceed.

7.2 TER Border Crossing Issues

Border crossing regulations and standards for facilitating border crossing in international rail transport have been developed by UNECE, ECMT, EU, the Schengen Agreement, UIC etc.

7.2.1 Inventory of border crossing problems (Rail)

In the course of the last four years the TER Project has developed a permanent monitoring system to follow the developments and progress achieved in facilitation of rail border control in Central and Eastern Europe. This process is based on country inputs and is promoted in close cooperation with UIC and the European Commission – Justice and Internal Affaires.

Experts from TER member countries, as well as Central European Initiative (CEI) member countries in the last two years attended specialized regular TER meetings to discuss railway border crossing problems and measures taken, as well as on future facilitation measures and actions needed to bring border control in line with Schengen regulations or EU Directives.

From the examination of the situation in most of the railway border crossings in Central and Eastern Europe, the following problems were identified:

- Lack of adequate technology for the handling of arrival and departure of trains at the border (delayed disposition of locomotives – late arrival of staff – insufficient coordination and management etc.);
- Lack or insufficient legal basis for establishing rules and relations between railway administrations and all other interested institutions in the harmonization of border procedures;
- Slow implementation of measures in line with the need for more adequate information on flows, transmission of data inside and outside a country;
- Inaccuracy in completing the documents, thus causing major delays;
- Inadequate cooperation due to lack of initiative at all levels.

7.2.2 Recommendations for improvement

From the examination of the situation in most of the railway border crossings in Central and Eastern Europe, the following recommendations were drawn:

- There is a need for the establishment of Railway Working Groups on a bilateral and/or multilateral basis;
- Communication among those involved in the border crossing operations should be further improved;
- All parties involved in border crossing operations should adopt and implement the best practices developed in the field;
- Border control procedures should be organized during the running train;

- Performance of non-railway procedures (such as customs formalities) should be transferred to origin and destination stations;
- For combined transport transportation, all customs and border control operations, including veterinary or phytosanitary should be carried out at the points of loading and unloading;
- Technical facilities on border crossing points should be improved;
- Performance indicators to monitor future progress on border crossing should be introduced.

In the future, a special attention should be given to the impact, which the enlarged EU or Schengen area regulations will have on border crossing control at the external border stations of the EU in order to prevent bottlenecks and ensure the necessary fluidity of the traffic of passenger and freight. These regulations are listed below:

- Towards an integrated European railway area – Communication from the Commission to the Council and the European Parliament (COM(2002)18 final)
- Towards integrated management of the external borders of the member states of the EU – Communication from the Commission to the Council and the European Parliament (COM(2002)233 final)
- Proposal for a Council Regulation on the establishment of a regime of local border traffic at the external land borders of the Member States and
- Proposal for a Council Regulation on the establishment of a regime of local border traffic at the temporary external land borders between the Member States (COM(2002)502 final).

7.2.3 Future actions needed to bring border control in line with Schengen regulations or EU Directives as identified by TER Ad-hoc working group on facilitation of border crossings procedures

Border crossing procedures and implementation of measures for facilitation of border control became one of the major issues with a strong impact on increasing to a higher or lower degree the traffic of passenger and goods in international railway transport. Of course, with higher or lower profits or advantages to some countries, increase of their economic ties and development of trade, expansion of tourist industry etc.

Border crossing regulations and standards for facilitating border crossing in international rail transport have been developed by UNECE, ECMT, EU, Schengen Agreement, UIC etc.

A source of information for removal of obstacles at border crossings are the reports and surveys of the above mentioned organisations or various studies done to identify the real situation and the measures which could facilitate the procedures and increase co-operation among relevant bodies in the border crossing control.

According to surveys made by ECMT, UNECE and UIC the problems encountered as well as the main obstacles identified at border crossings have their origin in relation to shortcomings connected with:
- infrastructure and equipment,
- procedures,
- staff.

Infrastructure and equipment

a) Border facilities, both rail and administrative, generally pose few problems and offer sufficient capacity for facilitating the traffic. Serious infrastructure problems which have been reported include: borders inside former Yugoslavia, especially those of Serbia and Montenegro with Croatia and FYROM; Greece's borders with the other Balkan stated and the border between Turkey and Bulgaria; Serbia and Montenegro's border with Bulgaria etc.

If border posts and railway facilities exist there are some shortcomings like:

- some track equipment ought to be modernised because, although in perfect working state, it is outdated (hand-operated points) or no longer compliant with current standards (e.g. at the borders between Poland and the Czech Republic, Austria and Hungary, Hungary and Serbia & Montenegro),
- reports often mention shortcomings with container handling equipment and the lack of covered facilities for convoy inspections,
- police and customs posts are relitively ill-equipped when passenger controls are not carried out on board the train (fortunately only in a minority of cases).

b) As far as rolling stock is concerned, a shortage of traction units in Bulgaria was reported. Otherwise the main problem, especially for border crossings between the

countries of former Yugoslavia and between those countries and Hungary, Bulgaria and Greece, is the obsolescence of the rolling stock used for goods transport.

This can be a source of considerable delay, because if a network refuses to accept a wagon, convoys often have to be reformed.

c) The lack of interoperability is by far one of the major difficulties encountered on the railways at border crossings. It is a widespread problem which affects EU countries, Central and Eastern European countries. The fact that the lack of harmonisation of infrastructure and equipment is now almost the only obstacle to border crossings within the EU explains the European Commission's efforts to promote interoperability on the railways, for both high-speed trains (Directive 96/48/EC and Decisions of 29/7/99, 21/03/01, 30/5/02) and other trains (Directive 2001/16/EC).

The lack of interoperability mainly concerns:

- different gauges, a factor which mostly explains sometimes very lengthy waiting times at the borders, mainly between Poland and Belarus but also at the borders with Ukraine and Moldova;
- electrical systems and hence traction unites. Outside the EU (where there is little interpenetration of traction units and, in any event, chiefly concerns high-speed passenger trains and certain EC trains), changes of locomotives are the exception in Central and Eastern Europe (EC trains between Austria and Hungary, a plan for trains between Slovakia and Austria). Given that the minimum time for changing a locomotive is around 40 minutes, it is clear what a handicap this problem is for the railways. Technically, although multi-current unites are a possible solution, they often run up against political or financial considerations. Furthermore, traction units are changed almost systematically in Central and Eastern Europe even when electrical systems are similar, because of a lack of bilateral agreements between the countries and railways concerned and because of unresolved issues relating to the insurance of equipment and staff. That is a case, for example, at the borders between the Czech Republic and Slovakia, Hungary and Romania, Greece and FYROM, and at Serbia and Montenegro's borders with Croatia, FYROM and Hungary.

  This touches on the "political" dimension of interoperability and the desire of recently created stated to assert their existence;
- signalling and control-command systems.

d) Another factor is at the absence of cross-border communication systems between rail networks due to incompatible information and data transmission systems. Together with interoperability (the two issues are closely linked), this is one of the major difficulties put forward to explain lengthy waiting times at rail border crossings. The problem is widespread in Central and Eastern Europe. Incompatibility between information systems may be total (as between Bulgaria and Greece, Romania, Serbia and Montenegro, or between Greece and FYROM, Hungary and Romania, between Poland and Belarus, between Austria and Slovakia) or partial (as between Austria and Slovenia, Hungary and the Czech Republic, between Slovenia and Croatia, Hungary and Italy, or between Hungary and Slovakia).

Very often there is not even a cross-border pre-warning system (as between Greece and Bulgaria, between Poland and the Czech Republic, between Serbia & Montenegro and Croatia, FYROM and Hungary) or exchange of information about delays (as between Bulgaria and Turkey).

The absence of cross-border systems for exchanging information leads to a lack of continuity in data transmission which means that data for freight trains has to be entered twice. This is another source of delay, since customs and police officials cannot be given prior information and cannot therefore start processing documents before the arrival of trains. Processing is often lasting long, involving photocopying documents that are often handwritten, increasing the risk of mistaken or lost data, especially as inspection authorities are highly suspicious of handwritten corrections. The lack of harmonised information exchange systems affects not only the rail networks themselves but also communication between rail networks and inspection authorities and between different countries' inspection authorities.

According to UNECE, the absence of data exchange between customs authorities in different countries is one of the main sources of delays at rail border crossings. Another factor is the complete lack of any interface between the existing communication systems of Eastern European railways and those of rail customers.

Procedures

It is clear that, whenever the interoperability problems mentioned above exist, waiting times for trains at border crossings are mainly due to the many formalities to be completed (technical inspections, customs, police, veterinary and phytosanitary controls, data entry, etc) and the conditions under which both technical inspections and administrative controls are carried out.

a) The technical inspections carried out by the networks themselves to enable the exchange of rolling stock, especially wagons, are largely responsible for the delays encountered at border crossings.

Within the EU, most of the waiting time at border crossings is due to purely technical factors (changing traction units, technical and safety checks), since there are no longer any customs or police controls within the Schengen area. The same applies in Central and Southeastern Europe, though customs and police checks still exist there. Between Hungary and Romania, for example, technical inspections take three to four times longer than all other administrative controls put together. At the border between Bulgaria and Greece, technical inspections account for about half of the necessary waiting time, while police and customs cheks each account for about a quarter. Such problems are due to:

- extremely limited use of the mutual trust handover system. In Central and Eastern Europe the system is used only for a few goods trains between Austria and the Czech Republic and between Italy and Slovenia. It may even not be used for passenger trains, as between Bulgaria and Turkey,
- because of the lack of a mutual trust handover system, there is no harmonisation of rail documents between neighbouring countries and, above all, inspections are carried out on both sides of the border instead of jointly in a single place. That is athe case at Poland's borders with Belarus and the Czech Republic, Serbia and Montenegro's borders with Bulgaria, Croatia, FYROM and Hungary, Greece's borders with Bulgaria and FYROM, Italy's border with Slovenia and Bulgaria's border with Turkey,
- the very poor management of refusals, meaning that trains have to be reformed, loads transferred or repairs made, causing delays. The problem is due partly to the condition of the equipment and partly to errors in the loading of certain types of goods.

b) Administrative controls (mainly customs and police) seem to raise fewer problems than technical inspections. This is especially true for passenger trains, whenever the controls are carried out on board.

Reported exceptions concern the borders between Bulgaria and Greece, Bulgaria and Turkey (with two stops), Hungary and Romania.

The only problem to be mentioned extensively in this regard concerns controls on night trains in Central and Eastern Europe, which are carried out in compartments and mean waking up the passengers. However, this is mainly a quality-of-service problem rather than a real cause of delays at border crossings.

For freight trains, the principal causes of delay due to administrative controls are as follows:

- Complex customs control procedures aggravated by the fact that they are carried out independently of technical inspections. The slowness of customs controls at Russia's borders (especially with Azerbaijan) and between the Caucasus countries seems to be a particular problem. Similar difficulties are also reported at the border between Romania and Hungary. Certain specific factors may lengthen customs controls, such as:

  - Specific controls for certain types of goods, because of the risks of fraud involving goods like alcohol and tobacco;
  - Systematic controls of goods in transit;
  - Controls of certain trains consisting of single wagons carried hub to hub, which involved sealing the wagons, the seal number then being entered on the consignment note, which requires more detailed customs controls.

- Police controls generally take the least time. However, the situation has deteriorated recently as a result of tighter controls in the fight against illegal immigration and terrorism. Measures against illegal migration also explain why specific controls are carried out on trains on the rolling road and on carsleeper trains as between Austria and Slovenia. As far as police controls are concerned, the Schengen agreement and its extension following EU enlargement create certain specific problems, since they entail stricter controls at external borders of the EU;
- Veterinary and phytosanitary inspections are sometimes considered to be extremely abnormal and the source of delays;
- Co-operation between inspection services in different countries is insufficient or non-existent because of the absence of cross-border information systems. This lack of cooperation may also be found in inter-service relations within the same country, leading to successive controls which could be carried out in parallel or simultaneously. This situation, reflected in the lack of any joint organisation of work between the various players involved at border crossings, explains why inspections are systematically carried out at borders rather than at loading or unloading points.
- There is a lack of automatic processing of documents, especially of consignment notes and accompanying documents, photocopies still being widely used.
- Different sets of legal rules apply to transport, with interface problems between CIM and SMGS, this difficulty, which is particularly acute at the border between Poland and Belarus, means that consignment notes are not harmonised and that several sets of documents are required.
- Co-operation is lacking between inspection services and shippers, reflected in the absence of an interface between their various information systems. This situation linked to the number and complexity of the required documents, explains why the documents

too often, turn out to be incomplete or erroneous, thus causing delays at border crossings.

Staff

There are relatively few problems relating to staff, the main ones being:

- Insufficient numbers of staff,
- Opening hours and absence of round-the-clock service,
- Lack of qualification of control personnel and their insufficient knowledge of the regulations plus communications difficulties due to different languages,
- Lack of interoperability of rail crew, especially drivers, who, because they have not been suitably trained, are lacking of the necessary skills to cross borders and operate on foreign networks,
- Labour union hostility to the grouping of inspection tasks in a single location and the development of joint operations, because of the fear of job cuts on either side of the same border.

Solutions have to be founed to all the above mentioned issues for reducing the waiting time at border crossings and rationalisation of all kind of procedures in order to improve the railways' competitiveness in international transport. This is the objective of the activity of TER working group meetings on facilitation of border crossings.
Permanent monitoring of the developments and particularly the progress achieved in facilitation of border control is a task which has been assumed in the last 4-5 years also by the UNECE-TER. Other organisations are interested in this field and exchange of information would be profitable first of all to the Central and Eastern European Countries.

Karlovy Vary, Venice, Warsaw and Portoroz are landmarks in the role assumed by TER for monitoring the progress in Central and Eastern Europe. For the last 2 years this process was ensured jointly by TER and CEI.
UIC was side by side with TER involved in examining the progress in the implementation of ABC Action Plan.

As a result of this assessment it is expected to be obtained a current database of existing practices as well as to be worked out together with the member countries suitable recommendations for improving this situation at border crossings.

8. CONCLUSIONS / RECOMMENDATIONS

The TEM and TER Projects' Master Plan elaboration has so far achieved its intended goal, which is to present a consistent and realistic short-, medium-, and long-term investment strategy on the road, rail and combined transport Backbone Networks in the wider TEM and TER region.

With the elaboration of their Master Plan, TEM and TER Projects offered a substantial contribution to the extension of TEN-T; the practical implementation of Pan-European Transport Corridors; the promotion of intermodal operation and transport modes complementarity; and assisted towards the provision of maximum effectiveness of transport infrastructure.

The implementation of such an investment plan, if ensured, would contribute to the economic growth of the countries concerned and to the well-being of their populations, as well as assisting the integration and harmonization of transport within Europe and beyond.

For this to happen close monitoring of its implementation and regular adaptations of the network outline would be required. This, in particular would require intensive follow-up work, in close co-ordination between TEM and TER member countries, the TEM PCO, the TER PCO and the UNECE, as well as with the European Commission competent Directorates and other international organizations and bodies concerned.

It is evident to state that TEM and TER process has been successful, but the work is ongoing. Further work in some aspects is necessary and technical assistance is needed in order to monitor progress.

First of all, there is still considerable diffi culty in presenting the complete shape of the TEM and TER Backbone Networks in the different time horizons of 2010, 2015 and 2020, due to lack of adequate information of the current status and the planned progress in some parts of the respective networks. The existence of this currently missing information could provide valuable information for the decisions makers, concerning the future development of a complete Backbone Network.

Therefore, in the future, certain action in some main fields might be necessary:

- Any missing or insufficient data should be completed with direct inputs of countries that did not provide data in order to support the decision-making process and complete the design of the TEM and TER Backbone Networks
- In addition to the above task, Backbone Networks and priority projects's monitoring and implementation should be followed from time to time. This would enable to keep the investment plan, elaborated under the TEM and TER Projects' Master Plans, updated. To facilitate this process, countries not yet members to the TEM and TER Projects, should seriously consider their full membership
- On the basis of the network outline endorsed in TEM and TER, establishment of transport sector priorities amongst possible investment measures using the criterion of sustainable mobility and an investment project pipeline for external financing
- Promotion of institutional building, and of organizational and regulatory measures favoring the competitiveness of rail
- Promotion of PPP schemes

- Monitoring of the development of TEM and TER Network and its usage, with the publication of regular information on progress
- Maintenance of a Geographical Information System (GIS) and an Expert Network in the field of monitoring TEM and TER Network development and use.

The TEM and TER Projects' Master Plan current work, their methodological tools or the specific results, can be considered as a valuable input to the EC High Level Group No.2 work, as well as of the Euro Asian Transport Linkages development process.

Moreover, the TEM and TER Projects' Master Plan results as well as the recommended follow-up actions will assist the countries involved when planning their medium and long-term national and regional transport infrastructure and investment strategies.

Last but not least, the existence of a complete TEM and TER Projects' Master Plan, in terms of time plan and financial plan, could be of benefit for both countries and funding and lending institutions, in terms of financial contracts signature procedures.

9. THE WAY AHEAD

The implementation of this work is a long-term process that requires first and foremost political will and commitment from the countries concerned.

To see it to fruition will also require continued close cooperation between the TEM and TER member countries, between them and their immediate neighbours, the respective TEM and TER PCOs and the UNECE. This particularly relates to missing information on individual country plans, priorities and to missing data in general.

Regular monitoring of the progress of implementation of the identified TEM and TER region Backbone Networks, as well as monitoring of the progress in bringing the TEM and TER Backbone Networks up to the required international standards could be among the permanent tasks of the TEM and TER Projects in the future.

A review of the identified investment strategy for developing of the transport infrastructure in the countries concerned, by 2008, and the presentation of the shape of the TEM and TER Backbone Networks in 2010, 2015, and 2020 and beyond should be among the major targets of the TEM and TER Projects in the following years.

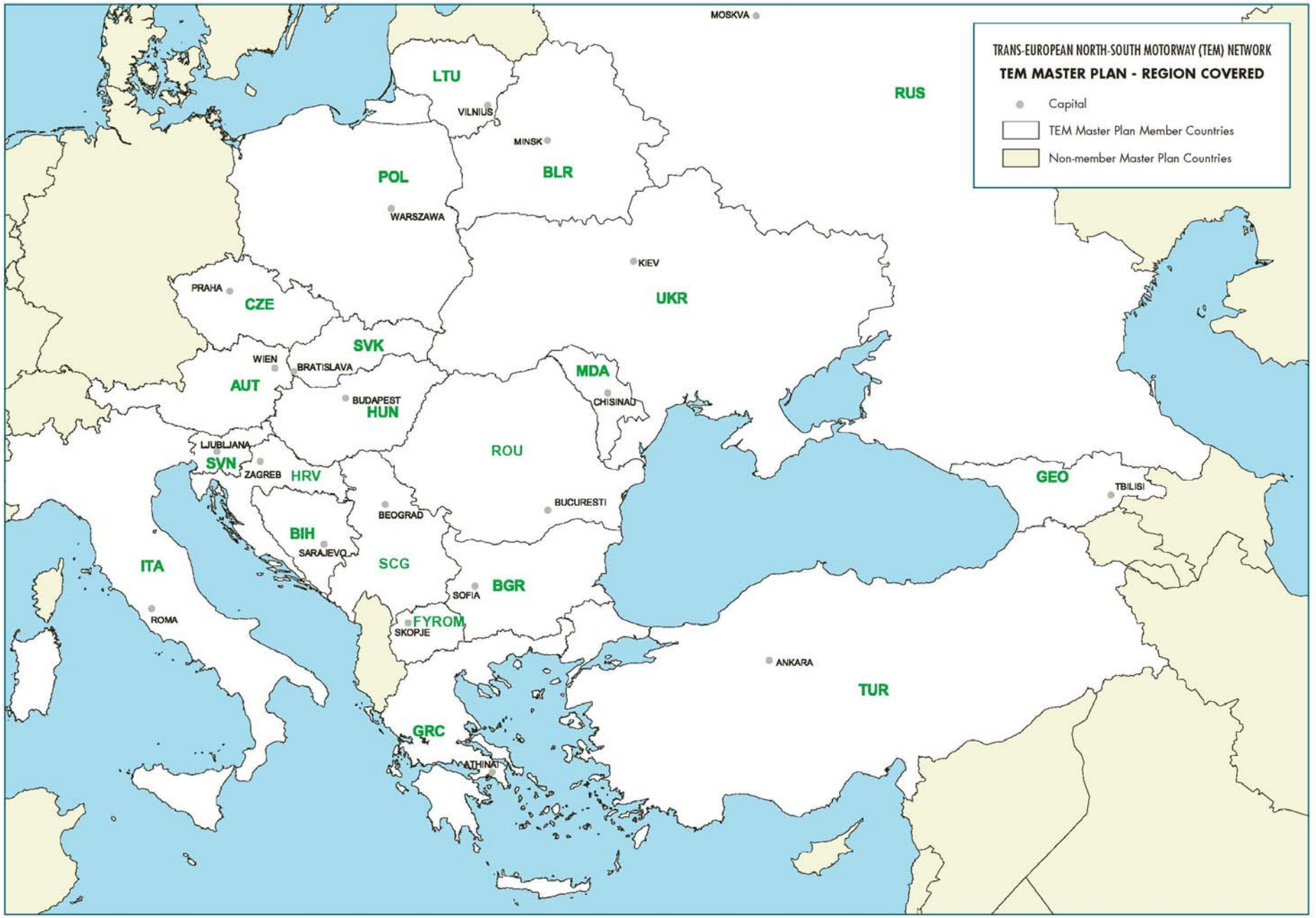
The TEM and TER Projects' long-lasting, flexible, effective and self sustainable structures, in combination with the strong desire and commitment with the projects of their country members, provide an ideal framework for the development and monitoring the progress of implementation of the TEM and TER Projects' Master Plan Backbone Networks as an outstanding example of an intercountry cooperation in the field of transport.

ANNEXES

ANNEX I – TEM MASTER PLAN MAPS

1. TEM Master Plan – Region Covered
2. TEM Master Plan Backbone Network
3. TEM Master Plan Backbone Network, Extensions, Additional and Missing Links
4. TEM Master Plan, Results of the Projects Assessement I
5. TEM Master Plan, Results of the Projects Assessement II
6. TEM Master Plan Border Crossings, Interconnections and Multimodal Transfer Points

ECONOMIC COMMISSION FOR EUROPE



ECONOMIC COMMISSION FOR EUROPE

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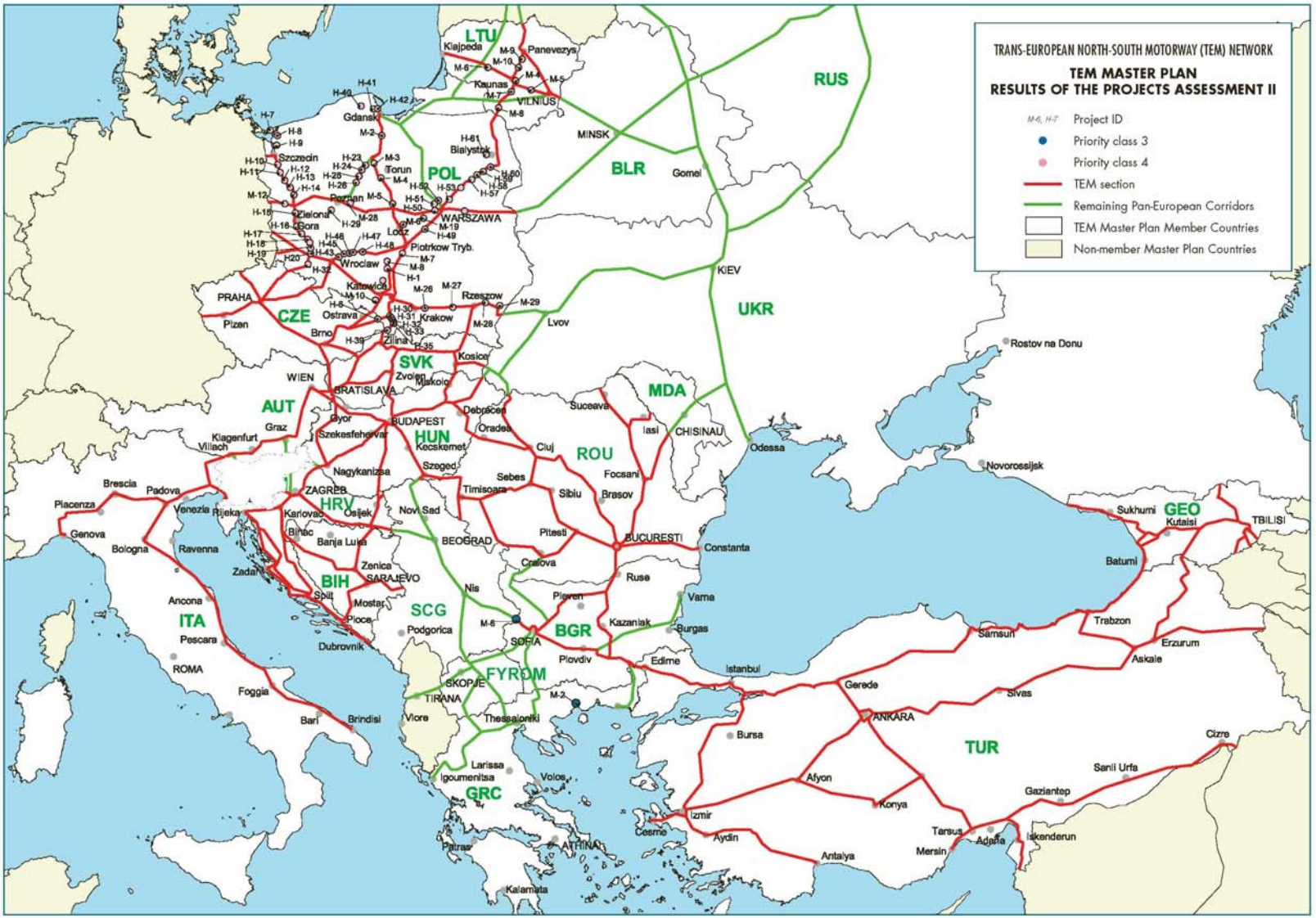
ECONOMIC COMMISSION FOR EUROPE

ECONOMIC COMMISSION FOR EUROPE



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ANNEX II – TER MASTER PLAN MAPS

1. TER Master Plan Project Area (Region covered)
2. TER Master Plan, All Projects over TER Network
3. TER Master Plan, All projects over TER Network by Priority Category
4. TER Master Plan Backbone Network, GIS map
5. TER Master Plan Backbone Network, Schematic Map
6. TER Master Plan All Projects, by priority Category over Backbone Network
7. TER Master Plan Missing Links
8. TER Master Plan Border Crossings and Interconnections, Along the pan-European Corridors
9. TER Master Plan Country Maps with All Projects, by Category

ECONOMIC COMMISSION FOR EUROPE


TER MASTER PLAN
PROJECTS OVER TER NETWORK
RUS
Moscow
LTU
Vilnius
Minsk
BLR
POL
Warsaw
Volga
Kiev
UKR
Donne
Dnieper
Praha
CZE
SVK
Bratislava
Wien
AUT
Budapest
HUN
MDA
Chisinau
Ljubljana
SVN
Zagreb
HRV
ITA
ROU
Bucuresti
Danube
BIH
Sarajevo
SCG
Belgrade
BGR
Sofia
Rome
FYROM
Skopje
GRC
Athens
Ankara
TUR
GEO
Tbilisi
Legend
TER Network
Train Ferry Links
Modernisation / Development Railway Station
Bridge Repair
Node / City
Capital
Development of Dock Station
Project Line
River


TER MASTER PLAN
PROJECTS OVER TER NETWORK BY CATEGORY
Legend
Area Projects I (2010)
Area Projects IV (2020)
TER Network
Train Ferry Links
I (2010) (34)
II (2015) (64)
IV (beyond 2020) (57)
River
RUS
Moscow
St. Petersburg
Volga
Donne
Dnieper
UKR
Kiev
BLR
Minsk
LTU
Vilnius
POL
Warsaw
CZE
Praha
SVK
Bratislava
AUT
Wien
HUN
Budapest
SVN
Ljubljana
HRV
Zagreb
BIH
Sarajevo
SCG
Belgrade
ROU
Bucuresti
MDA
Chisinau
BGR
Sofia
Danube
FYROM
Skopje
GRC
Athens
TUR
Ankara
Istinbul
GEO
Tbilisi
ITA
Rome

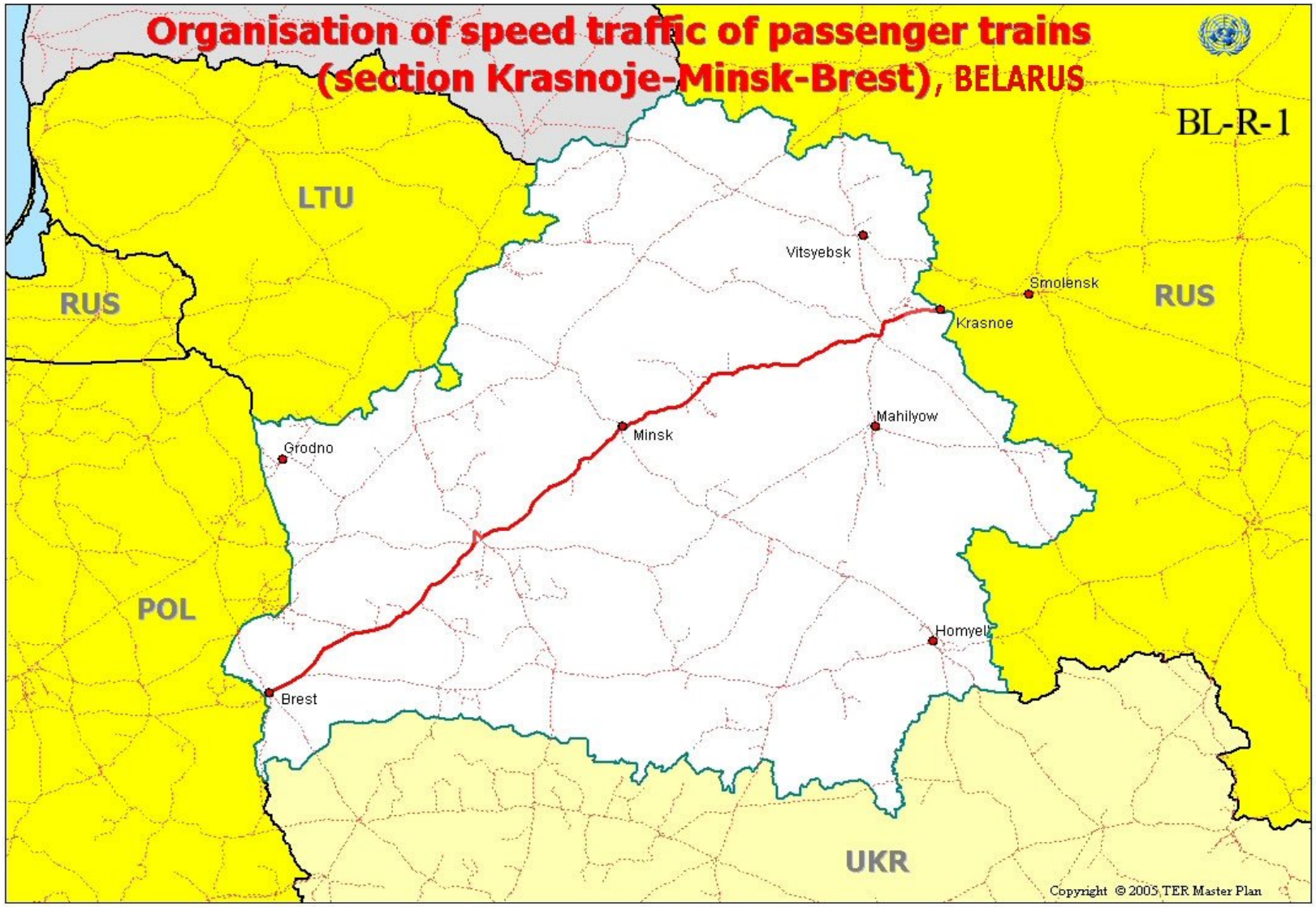

TER MASTER PLAN
BACKBOBE NETWORK
(GIS MAP)
Legend
Capital
Node (BCP, Station, City, etc.)
TER Network (Sections not included in backbone)
Rail Ferry Links
TER Backbone
TER MP Backbone Extensions
Main Maritime Port
Main Inland Port
Pan-European corridor
River
Moscow
Minsk
Warsaw
Kiev
Vilnius
Praha
Wien
Bratislava
Budapest
Chisinau
Ljubljana
Zagreb
Belgrade
Sarajevo
Bucuresti
Danube
Sofia
Skopje
Athens
Rome
Ankara
Tbilisi
Volga
Donne
Dnieper
RUS
BLR
UKR
POL
LTU
CZE
SVK
HUN
MDA
ROU
BGR
SCG
BIH
HRV
SVN
AUT
ITA
GRC
TUR
GEO


TER MASTER PLAN
BACKBOBE NETWORK
(SCHEMATIC MAP)
Legend
Capital
Node (BCP, Station, City, etc.)
Rail Ferry Links
TER Backbone (Scheme)
TER MP Backbone Extensions
Main Maritime Port
Main Inland Port
River
Moscow
Minsk
Warsaw
Kiev
Vilnius
Praha
Bratislava
Budapest
Chisinau
Bucuresti
Belgrade
Zagreb
Ljubljana
Sarajevo
Sofia
Skopje
Athens
Ankara
Tbilisi
Rome
Volga
Donne
Dnieper
Danube
RUS
BLR
UKR
POL
LTU
CZE
SVK
HUN
MDA
ROU
BGR
SCG
BIH
HRV
SVN
AUT
ITA
GEO
TUR
GRC
FYROM


TER MASTER PLAN
PROJECTS BY PRIORITY
CATEGORY OVER BACKBONE
NETWORK
Legend
Capital
Node (BCP, Station, City, etc.)
TER Network (Sections not included in backbone)
Rail Ferry Links
TER Backbone
TER MP Backbone Extensions
Main Maritime Port
Main Inland Port
Pan-European corridor
River
Area Projects I (2010)
Area Projects IV (2020)
I (2010)
II (2015)
IV (beyond 2020)


TER MASTER PLAN
MISSING LINKS TO TER NETWORK
RUS
LTU
BLR
POL
UKR
CZE
SVK
AUT
HUN
MDA
ROU
SVN
HRV
BIH
SCG
BGR
FYROM
GRC
TUR
GEO
ITR
Moscow
Minsk
Warsaw
Kiev
Vilnius
Praha
Wien
Bratislava
Budapest
Chisinau
Ljubljana
Zagreb
Belgrade
Bucuresti
Sarajevo
Sofia
Skopje
Rome
Athens
Ankara
Tbilisi
Legend
Capital
Node (BCP, Station, City, etc.)
TER Network
Rail Ferry Links
TER Missing Links to Network
Main Maritime Port
Main Inland Port


TER NETWORK BORDER CROSSINGS
INTERCONNECTIONS
MULTIMODALTRANSFERPOINTS
Buslovskaya
St. Petersburg
RUS
Moskow
Šarkiai
Klaipeda
LTU
Kaunas
Vilnius
Kena
Kaliningrad
Mockava
Krasnoye
Gdansk
Brannievo
Trakiszki
Minsk
BLR
Szczecin
POL
Rzepin
Warsawa
Homyel
Suzemka
Terespol
Brest
Gomostaivka
Wegliniec
Decin - vychod
Kiev
Lichkov
Cheb
Praha
Bohumin
Zebrzydowice
Przemysl
Mostiska
CZE
Horni Lidec
Cadca
Plavec
SVK
Retz
Kuty
Uzhorod
UKR
Passau
Gmund NO
Bratislava
Kenartovce
Canal
Luhans'k
Simbach
Salzburg
Wien
Szob
Vicsani
MDA
AUT
Budapest
Halmeu
Ungheni
Jennersdorf
St. Gotthard
Episcopia Bihor
HUN
Chistesti
Amolstein
Brennero
Hodos
Jijia
Chisinau
Odessa
ROU
Ljubljana
Kelebia
Curtici
Gyekenyes
Ilichivs'k
SVN
Zagreb
HRV
Galati
Reni
ITA
Venice
Dobrljin
Rijeka
Tovarnik
Stamora Moravita
Novorossiysk
Bosanski
Samac
Beograd
Calafat
Bucharest
Constanta
Bologna
BIH
Sarajevo
SCG
Giurgiu
Russe
Gantiadi
Split
Dragoman
Sofia
BGR
Kaspichan
Varna
Sukhumi
Burgas
Poti
GEO
Rome
Gueshevo
Tbilisi
Skopje
Kulata
Svilengrad
Samsun
Batumi
FYROM
Istambul
Aktas
Alexandroupolis
Thessaloniki
Doqukapi
GRC
Ankara
TUR
Izmir
Kapikoy
Athens
Mersin
Iskenderun
Legend
Border crossing
Main airport
Main maritime port
Main inland port
TER Line Section
Railway Link
Maritime Link
Pan-European corrido



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Bosnia and Herzegovina - Projects Proposed
Dobrljin
Bosanski Samac
BCP - Bosanski Samac
B&H-R-5
B&H-R-1
Doboj
HRV
Tuzla
Zvornik Novi
B&H-R-6
B&H-R-7
Zenica
SCG
B&H-R-4
B&H-R-3
Sarajevo
Konjic
B&H-R-2
Mostar
Capljina
BCP - Capljina
Projects Proposed
B&H-R-1
B&H-R-2
B&H-R-3
B&H-R-4
B&H-R-5
B&H-R-6
B&H-R-7
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Bulgaria - Priority Projects Proposed
Vidin
BG-R-2
ROU
Russe
Kardam
BG-R-4
Pleven
Kaspichan
Varna
S
C
G
Mezdra
G.Oriahovitza
Sindel
Kalotina
BG-R-3
BG-R-8
Dragoman
BG-R-7
BG-R-5
Karlovo
Dubovo
BG-R-7
Pernik
Zimnitsa
Burgas
SOFIA
Karnobat
Radomir
Stara Zagora
BG-R-5
BG-R-6
Dupnitza
BG-R-5
Gueshevo
F
Y
R
O
M
BG-R-4
Plovdiv
Dimitrovgrad
BG-R-1
Svilengrad
TUR
Kulata
Podkova
GRC
Priority of the Projects
I (2010) - No. (2)
II (2015) - No. (6)
Pan Eur. corridor
TER Line Sections
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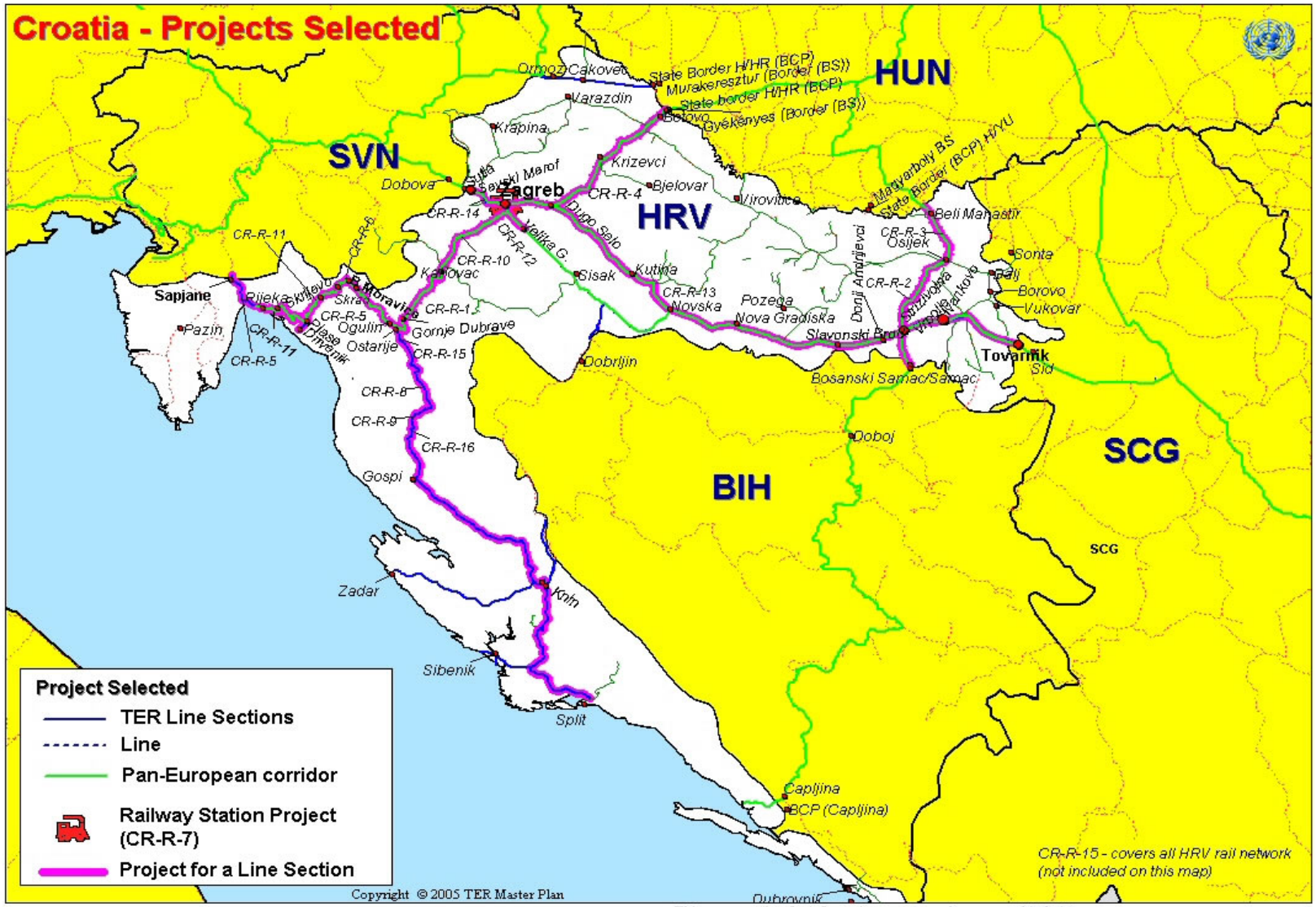
Croatia - Projects Selected
HUN
SVN
HRV
BIH
SCG
SCG
Ormoz
Cakovec
Varazdin
Krapina
Dobova
Zagreb
Krizevci
Bjelovar
Virovitica
Beli Manastir
Osijek
Sonte
Bali
Borovo
Vukovar
Tovarnik
Sid
Slavonski Brod
Bosanski Samac/Samac
Pozega
Nova Gradiska
Novska
Kutina
Sisak
Dugo Selo
Velika G.
Kamovac
Dobrljin
Doboj
Sapjane
Pazin
Rijeka
Skrad
Ogulin
Gornje Dubrave
Ostarije
Gospi
Zadar
Knin
Sibenik
Split
Capljina
BCP (Capljina)
Dubrovnik
Project Selected
TER Line Sections
Line
Pan-European corridor
Railway Station Project (CR-R-7)
Project for a Line Section
CR-R-15 - covers all HRV rail network (not included on this map)
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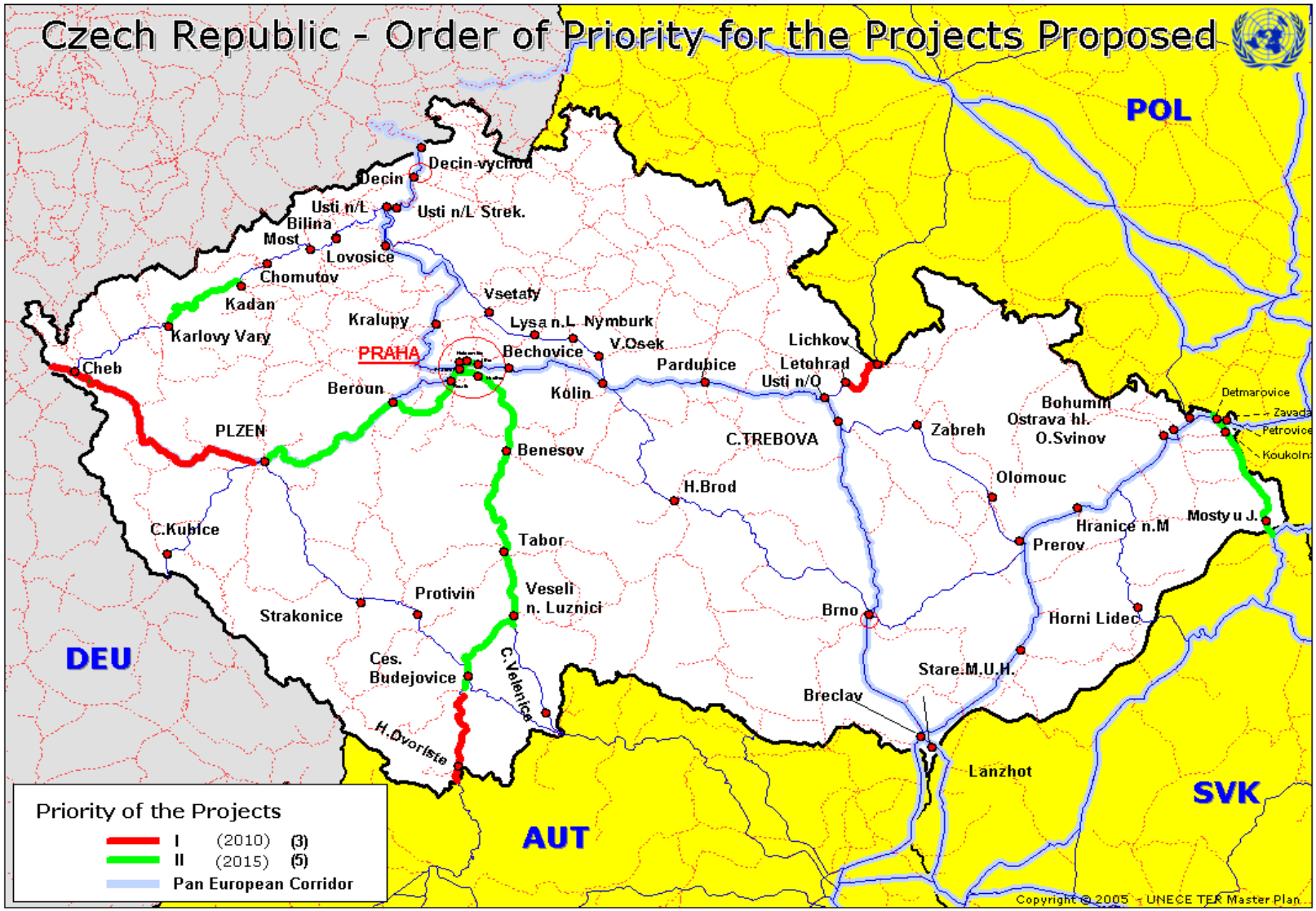
Czech Republic - Order of Priority for the Projects Proposed
POL
DEU
AUT
SVK
Decin-vychod
Decin
Usti n/L
Usti n/L Strek.
Bilina
Most
Lovosice
Chomutov
Kadan
Karlovy Vary
Cheb
Kralupy
Vsetaty
Lysa n.L.
Nymburk
V.Osek
PRAHA
Bechovice
Pardubice
Lichkov
Letohrad
Usti n/O
Beroun
Kolin
PLZEN
Benesov
C.TREBOVA
Zabreh
Bohumin
Ostrava hl.
O.Svinov
Detmarovice
Zavada
Petrovice
Koukolna
Olomouc
H.Brod
Mosty u J.
Hranice n.M
Prerov
C.Kubice
Tabor
Protivin
Veseli
n. Luznici
Strakonice
Brno
Horni Lidec
Ces.
Budejovice
C.Velenice
Stare.M.U.H.
Breclav
H.Dvoriste
Lanzhot
Priority of the Projects
I (2010) (3)
II (2015) (5)
Pan European Corridor
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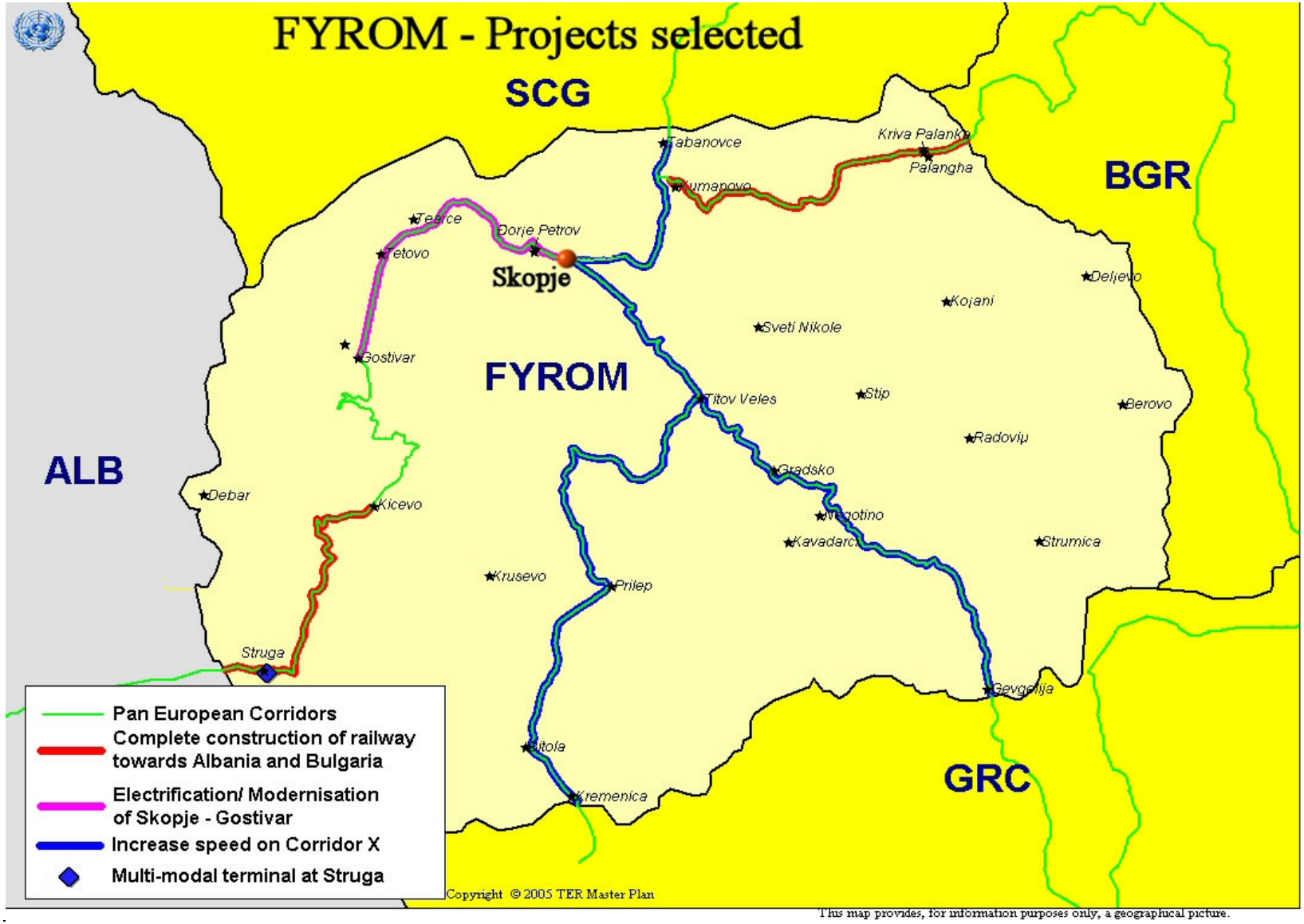
FYROM - Projects selected
SCG
BGR
ALB
GRC
FYROM
Tabanovce
Kriva Palanka
Palangha
Kumanovo
Tearce
Dorje Petrov
Tetovo
Skopje
Kojani
Sveti Nikole
Gostivar
Titov Veles
Stip
Berovo
Radovis
Gradsko
Debar
Kicevo
Negotino
Kavadarci
Strumica
Krusevo
Prilep
Struga
Gevgelija
Bitola
Kremenica
Pan European Corridors
Complete construction of railway towards Albania and Bulgaria
Electrification/ Modernisation of Skopje - Gostivar
Increase speed on Corridor X
Multi-modal terminal at Struga
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GEORGIA - Priority Projects Proposed
GANTIADI
ACHADARA
SUKHUMI
GALI
TSAGERI
LARSI
KAZBEGI
ABASHA
CHIATURA
TSKHINVALI
POTI
KHASHURI
GORI
ZESTAPONI
KASPI
AGARA
TELAVI
TBILISI
BATUMI
RUSTAVI
KARTSAKHI
AKHALKALAKI
SARPI
GARDABANI
RED BRIDGE
NINOTSMIND
SADAKHLO
Priority of the Projects
I (2010) No. (1)
II (2015) No. (1)
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This map provides, for information purposes only, a geographical picture.


Hungary - Order of Priority
for the Projects Proposed
SVK
UKR
AUT
SVN
HRV
SCG
ROU
HUN
HU-R-1
HU-R-2
HU-R-3
HU-R-4
HU-R-5
HU-R-6
HU-R-7
HU-R-8
HU-R-9
HU-R-10
HU-R-11
HU-R-12
HU-R-13
HU-R-14
HU-R-15
HU-R-16
HU-R-17
HU-R-18
HU-R-19
HU-R-20
HU-R-21
HU-R-23
Hegyeshalom
Gyor
Csorna
Gyor szentivan
Tatabanya
Szombathely
Mosonmagyarovar
Sopron
Fertod
Porpac
Kormend
Zalaegerszeg
Zalaszentivan
Zalalovo
B.Mar.furdo
B.sz.Gyorgy
Nagykanizsa
Gyekenyes
Somogyszob
Kaposvar
Dombovar
Godisa
Pecs
Pecs-BPOS
Szentlorinc
Villany
Villany- BPOS
Siklos
Godollo
Vac
Szob
Almasfuzito
Nagy maros
Dunakeszi
Aszod
Hatvan
Bicske
Tarnok
Varpalota
Papa
Ajka
Ukk
Zalaber
Tapolca
Siofok
Lepsany
Szekesfehervar
Szabadbattyany
Sarbogard
Retszilas
Fonyod
Keszohidegkut
Monor
Puszta
Lajosmizse
Kecskemet
Kiskoros
Kiskunhalas
Kiskunfélegyháza
Kelebia
Szeged
Cegled
Abony
Abony bpos
Ujszasz
Szajol
Szolnok
Tiszatenyo
Tiszatenyo BPOS
Mezotur
Gyoma
Murony
Bekescsaba
Ketegyhaza
Lokoshaza
Biharkeresztes
Puspokladany
Debrecen
Apafa
Nyiregyhaza
Sostohegy
Eszaki k.
Nyiregyhaza
Nyekladhaza
Gorogszallas
Miskolc r.
Miskolc T.
Felsozsolca
Szerencs
Mezozombor
Kisvarda
Fuzesabony
Nagyut
Ka'l-Kapolna
Vamosgyork
Nagykata
Saturaljaujhely
Somoskoujfalu
Priority of the Projects Proposed
II (2015) (23)
TER Line Sections
Pan European Corridors
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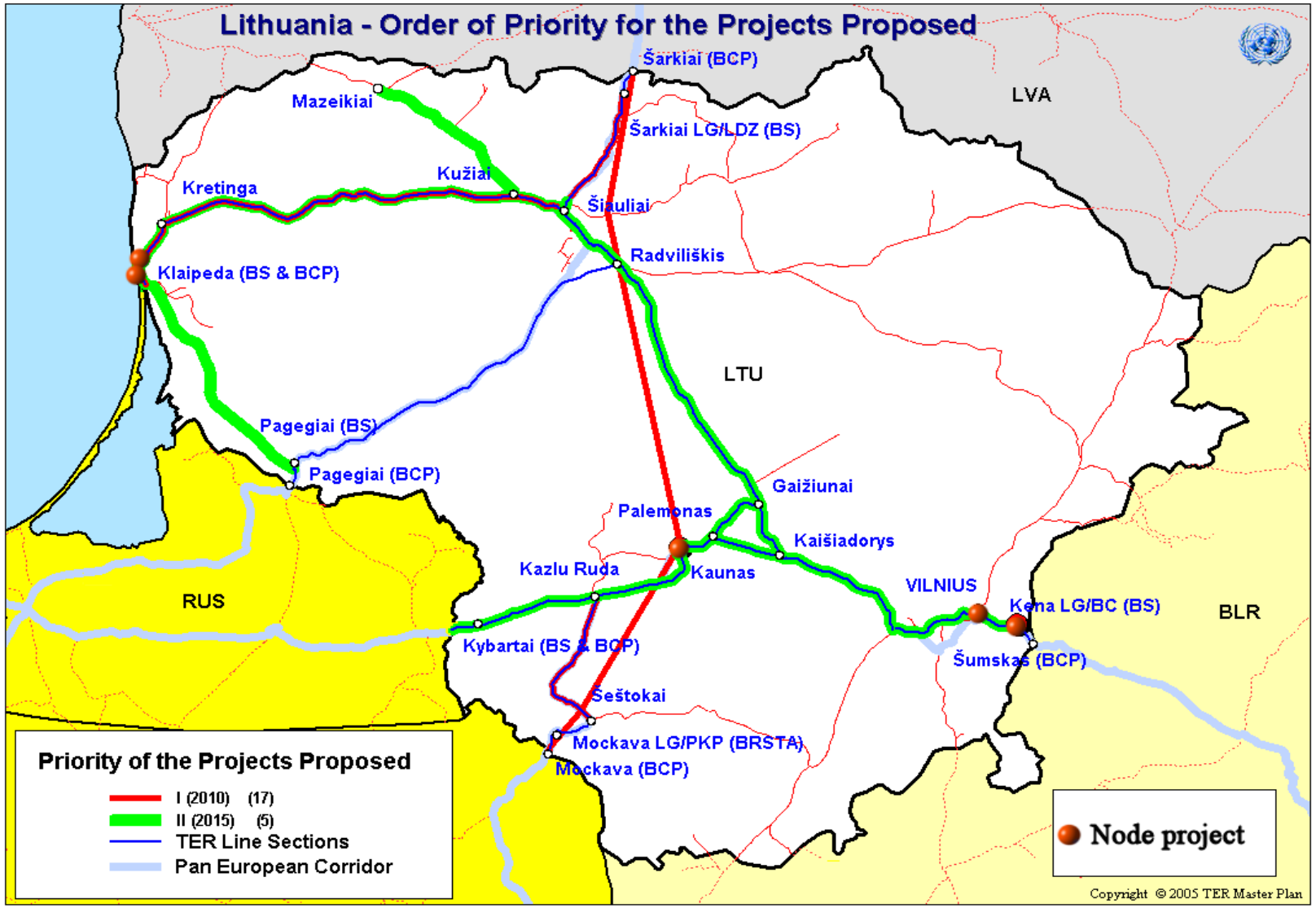
This map provides, for information purposes only, a geographical picture


Lithuania - Order of Priority for the Projects Proposed
Šarkiai (BCP)
Mazeikiai
LVA
Šarkiai LG/LDZ (BS)
Kužiai
Kretinga
Šiauliai
Radviliškis
Klaipeda (BS & BCP)
LTU
Pagegiai (BS)
Pagegiai (BCP)
Gaižiunai
Palemonas
Kaišiadorys
Kazlu Ruda
Kaunas
VILNIUS
Kena LG/BC (BS)
BLR
RUS
Kybartai (BS & BCP)
Šumskas (BCP)
Šeštokai
Mockava LG/PKP (BRSTA)
Mockava (BCP)
Priority of the Projects Proposed
I (2010) (17)
II (2015) (5)
TER Line Sections
Pan European Corridor
Node project
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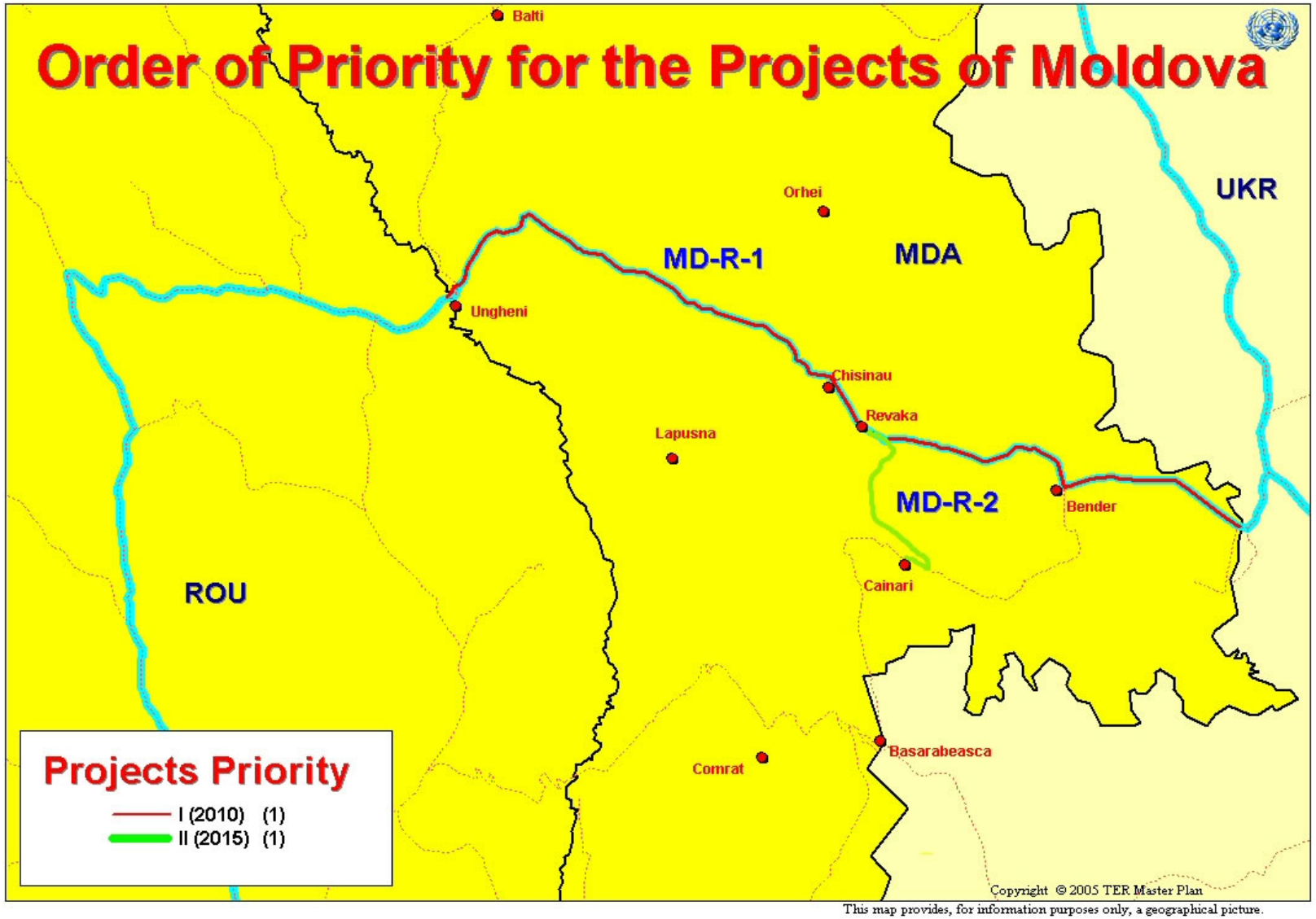
Order of Priority for the Projects of Moldova
Balti
Orhei
UKR
MD-R-1
MDA
Ungheni
Chisinau
Revaka
Lapusna
MD-R-2
Bender
Cainari
ROU
Basarabeasca
Comrat
Projects Priority
I (2010) (1)
II (2015) (1)
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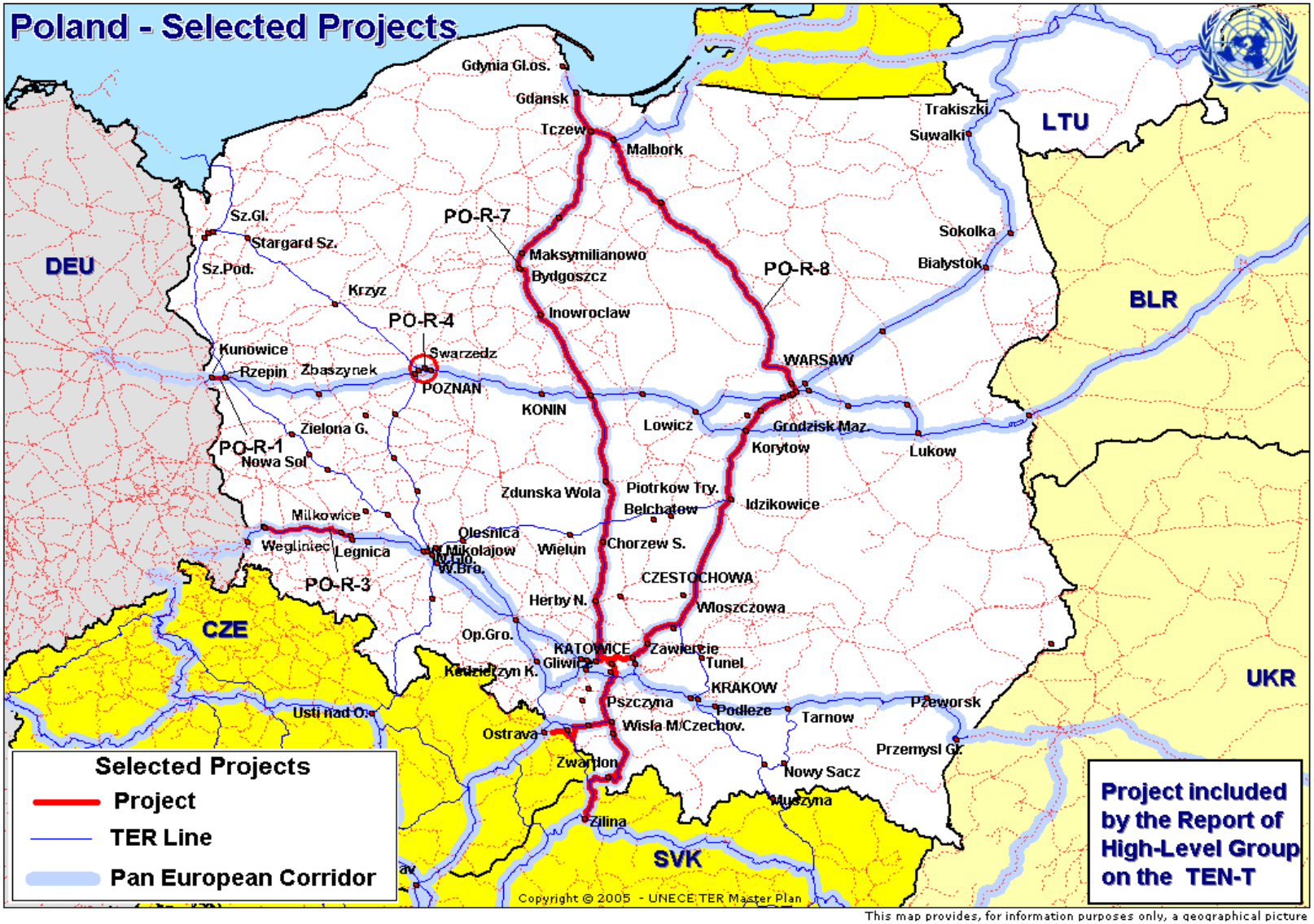
This map provides, for information purposes only, a geographical picture.


Poland - Selected Projects
Gdynia Gl.os.
Gdansk
Tczew
Malbork
Trakiszki
Suwalki
LTU
Sz.Gl.
Stargard Sz.
Sz.Pod.
Krzyz
PO-R-7
Maksymilianowo
Bydgoszcz
Inowroclaw
PO-R-8
Sokolka
Bialystok
BLR
DEU
PO-R-4
Kunowice
Rzepin
Zbaszynek
Swarzedz
POZNAN
KONIN
WARSAW
Lowicz
Grodzisk Maz.
Korytow
Lukow
Zielona G.
PO-R-1
Nowa Sol
Zdunska Wola
Piotrkow Try.
Belchatow
Idzikowice
Milkowice
Oleśnica
Wegliniec
Legnica
W.Mikolajow
W.Ilo.
W.Bro.
Wielun
Chorzew S.
PO-R-3
CZESTOCHOWA
Herby N.
Wloszczowa
CZE
Op.Gro.
KATOWICE
Zawiercie
Gliwice
Tunel
Kedzierzyn K.
KRAKOW
UKR
Pszczyna
Podleze
Przeworsk
Usti nad O.
Tarnow
Wisla M/Czechov.
Ostrava
Przemysl Gl.
Zwardon
Nowy Sacz
Muszyna
Zilina
SVK
Selected Projects
Project
TER Line
Pan European Corridor
Project included by the Report of High-Level Group on the TEN-T
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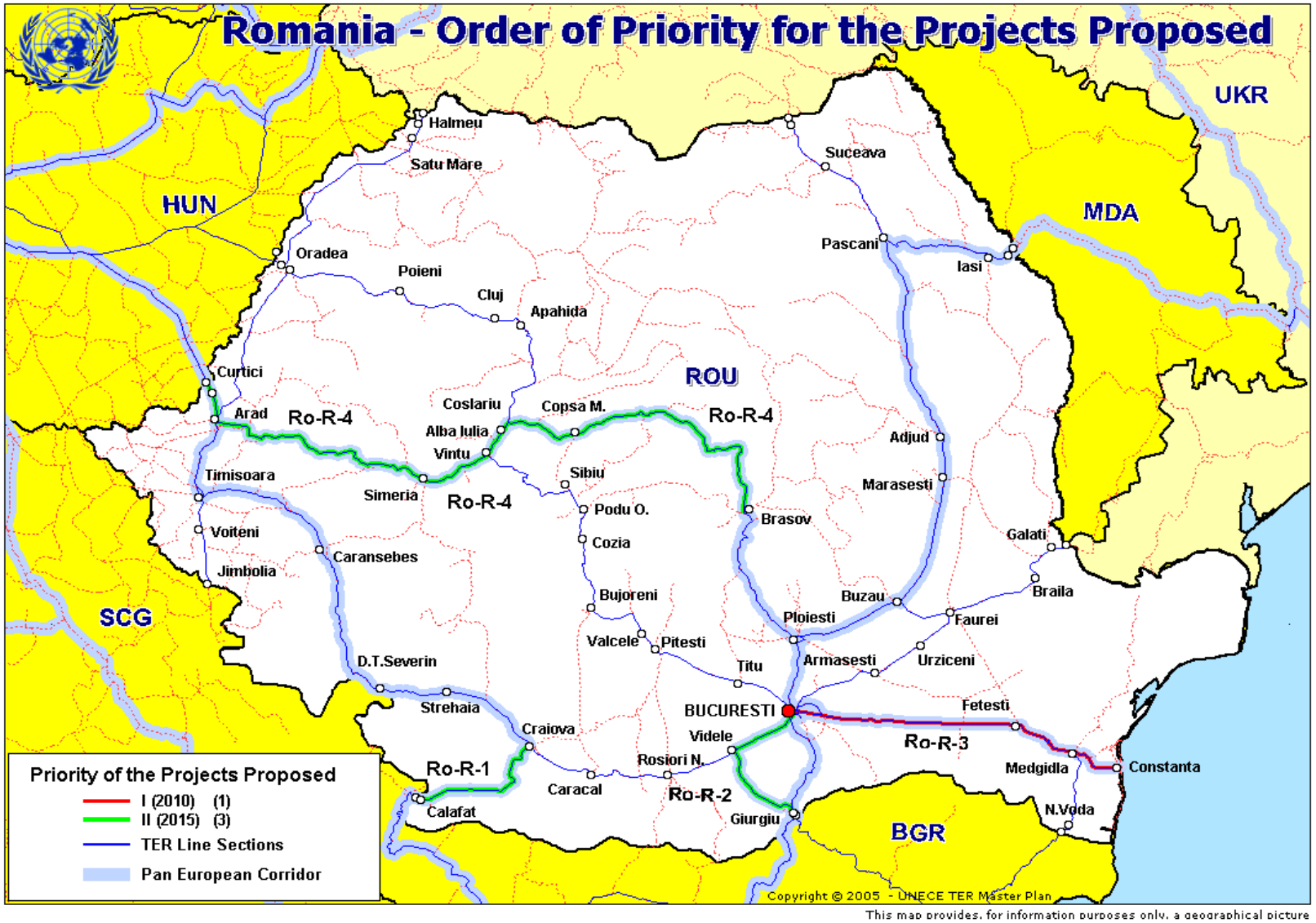
Romania - Order of Priority for the Projects Proposed
UKR
HUN
MDA
ROU
SCG
BGR
Halmeu
Satu Mare
Suceava
Oradea
Poieni
Pascani
Iasi
Cluj
Apahida
Curtici
Arad
Ro-R-4
Coslariu
Copsa M.
Alba Iulia
Vintu
Adjud
Timisoara
Sibiu
Marasesti
Simeria
Podu O.
Brasov
Voiteni
Cozia
Galati
Caransebes
Jimbolia
Braila
Bujoreni
Buzau
Ploiesti
Faurei
Valcele
Pitesti
Armasesti
Urziceni
D.T.Severin
Titu
Strehaia
BUCURESTI
Fetesti
Craiova
Videle
Ro-R-3
Rosiori N.
Medgidia
Constanta
Ro-R-1
Caracal
Ro-R-2
N.Voda
Calafat
Giurgiu
Priority of the Projects Proposed
I (2010) (1)
II (2015) (3)
TER Line Sections
Pan European Corridor
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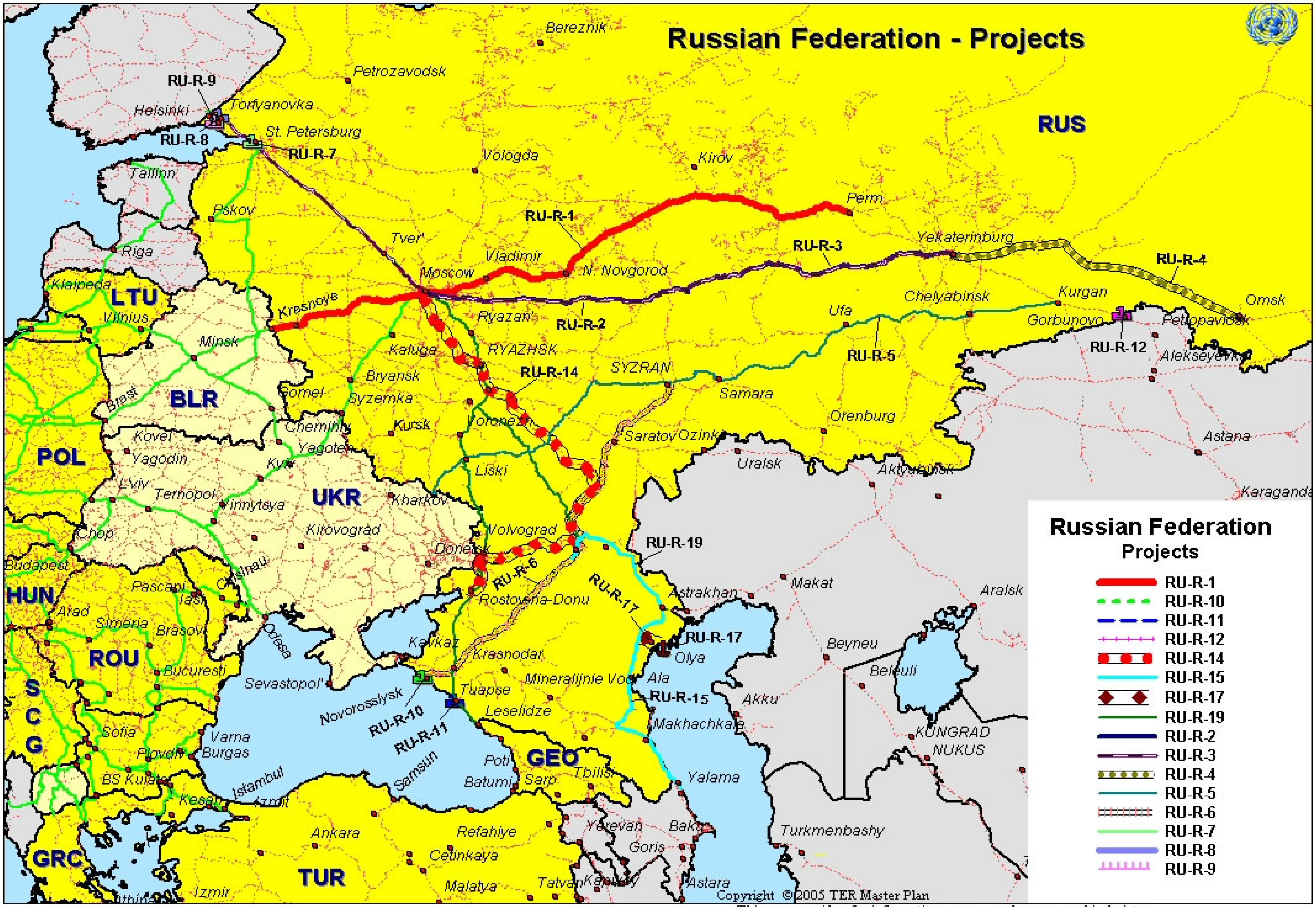
This map provides, for information purposes only, a geographical picture



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Serbia and Montenegro Projects Selected and Pan European Corridors
HUN
HRV
BIH
ROU
SCG
ALB
BGR
Kelebia
Subotica
Zednik
Novi Sad
Tovarnik
Kuzmin
Stara Pazova
Ruma
Belgrade
Ripanj
Ralja
Zvornik
Valjevo
Sevojno
Pozega
Cicevac
Aleksinac
Nis
Pirot
Dimitrovgrad
Obilic
Pristina
Vranje
Podgorica
Bujanovac
Presevo
Kacanik
Bar
Pan European Corridor
SCG Project Proposed for rail line
SCG Project Proposed for reconstruction of the rail bridge
Rail Network
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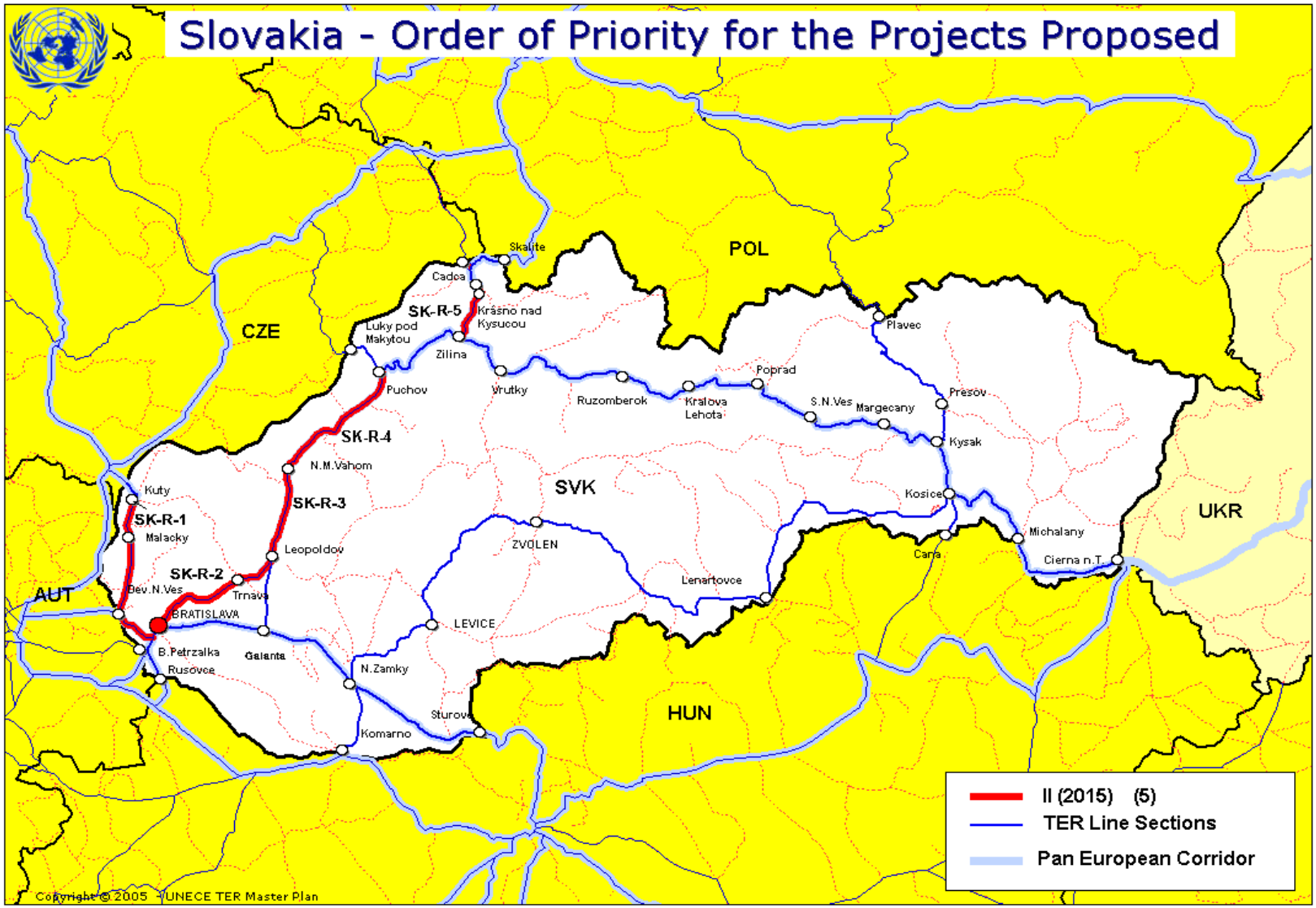
This map provides, for information purposes only, a geographical picture.


Slovakia - Order of Priority for the Projects Proposed
POL
CZE
AUT
HUN
UKR
SVK
SK-R-1
SK-R-2
SK-R-3
SK-R-4
SK-R-5
Skalite
Cadca
Krásno nad Kysucou
Luky pod Makytou
Zilina
Puchov
Vrutky
Ruzomberok
Kralova Lehota
Poprad
S.N.Ves
Margecany
Presov
Kysak
Plavec
Kosice
Michalany
Cierna n.T.
Carna
Kuty
Malacky
Dev.N.Ves
BRATISLAVA
Trnava
Leopoldov
N.M.Vahom
ZVOLEN
Lenartovce
LEVICE
B.Petrzalka
Rusovce
Galanta
N.Zamky
Sturovo
Komarno
II (2015) (5)
TER Line Sections
Pan European Corridor
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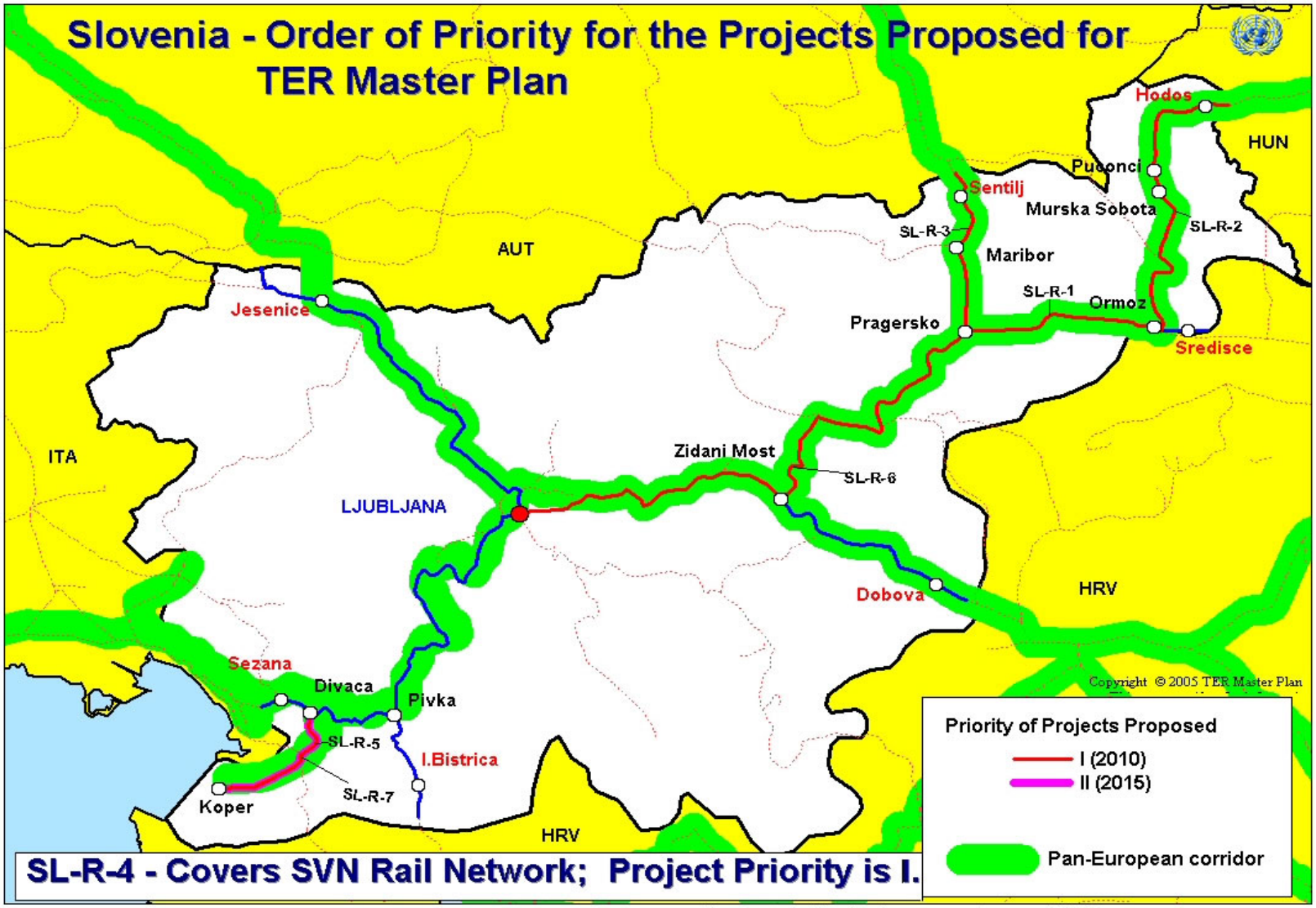
This map provides, for information purposes only, a geographical picture


Slovenia - Order of Priority for the Projects Proposed for TER Master Plan
Hodos
HUN
Puconci
Sentilj
Murska Sobota
SL-R-2
SL-R-3
AUT
Maribor
SL-R-1
Ormoz
Jesenice
Pragersko
Sredisce
ITA
Zidani Most
SL-R-6
LJUBLJANA
HRV
Dobova
Sezana
Divaca
Pivka
SL-R-5
I.Bistrica
SL-R-7
Koper
HRV
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Priority of Projects Proposed
I (2010)
II (2015)
Pan-European corridor
SL-R-4 - Covers SVN Rail Network; Project Priority is I.
This map provides, for information purposes only, a geographical picture.


Turkey - Prority of Project Proposed over TER line sections and Pan-European Corridors
RUS
GEO
BGR
ARM
AZE
Iran
Syria
Iraq
Cyprus
GRC
Kapikule
TU-R-3
Sirkeci
Haydarpasa
Halkali
Pehlivankoy
Mandira
Istanbul
Gebze
Kosekoy
Izmit
Arifiye
Inonu
TU-R-1
Eskisehir
Hasanbey
Sincan
Behicbey
Kayas
Irmak
TU-R-2
Yozgat
ANKARA
Samsun
Yildizeli
Yapi
Sivas
Kalin
Balikesir
Kutahya
Alayunt
Manisa
Izmir
Bogazkopru
Kayseri
Cetinkaya
Divrigi
Yolcati
Malatya
Erzurum
Aktas
TU-R-4
Kars
Doğukapi
Van
Tatvan
Kapikoy
TOPRAKKALE
Koprugozi
Narli
Fevzipasa
Adana
Yenice
Mersin
ISKENDERUN
Priority of the Projects Proposed
I (2010) (1)
II (2015) (3)
TER Line Sections
Train Ferry Link
Pan European Corridors
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This map provides, for information purposes only, a geographical picture

This map provides, for information purposes only, a geographical picture.

ANNEX III – SOCIOECONOMIC STATISTICS

Table 1 Observed and Forecasted Trends of Population (in million) – Moderate Scenario, Base Year: 2000

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	8,1	8,1	8,1	8,2	8,2	8,2	8,3	8,3	8,3	8,4	8,4	8,4	8,5	8,5	8,5	8,6	8,6	8,6	8,6	8,7	8,7
Greece	10,6	10,6	10,6	10,7	10,7	10,7	10,7	10,8	10,8	10,8	10,8	10,8	10,9	10,9	10,9	10,9	11,0	11,0	11,0	11,0	11,0
Italy	57,8	57,9	57,9	58,0	58,1	58,1	58,2	58,3	58,3	58,4	58,5	58,5	58,6	58,7	58,7	58,8	58,9	58,9	59,0	59,1	59,1
Bulgaria	8,2	8,2	8,1	7,5	7,5	7,4	7,4	7,3	7,3	7,2	7,2	7,1	7,1	7,0	7,0	6,9	6,9	6,8	6,8	6,7	6,7
Czech Rep.	10,3	10,3	10,3	10,2	10,2	10,2	10,2	10,2	10,2	10,1	10,1	10,1	10,1	10,1	10,1	10,0	10,0	10,0	10,0	10,0	10,0
Hungary	10,0	10,0	10,0	10,0	10,1	10,1	10,1	10,1	10,1	10,1	10,2	10,2	10,2	10,2	10,2	10,2	10,2	10,3	10,3	10,3	10,3
Lithuania	3,5	3,5	3,5	3,6	3,6	3,7	3,7	3,7	3,8	3,8	3,8	3,9	3,9	3,9	4,0	4,0	4,0	4,1	4,1	4,1	4,2
Poland	38,6	38,7	38,8	38,0	37,8	37,6	37,4	37,2	37,0	36,8	36,7	36,5	36,3	36,1	35,9	35,7	35,5	35,3	35,2	35,0	34,8
Romania	22,4	22,4	22,4	22,3	22,2	22,2	22,1	22,1	22,1	22,0	22,0	21,9	21,9	21,9	21,8	21,8	21,7	21,7	21,6	21,6	21,6
Slovakia	5,4	5,4	5,4	5,4	5,4	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,6	5,6	5,6	5,6	5,6	5,6
Slovenia	2,0	2,0	2,0	1,9	1,9	1,9	1,9	1,9	1,8	1,8	1,8	1,8	1,8	1,7	1,7	1,7	1,7	1,7	1,6	1,6	1,6
Turkey	67,5	68,5	69,6	68,1	68,3	68,5	68,8	69,0	69,2	69,4	69,6	69,8	70,1	70,3	70,5	70,7	70,9	71,2	71,4	71,6	71,8
Belarus	10,0	10,0	9,9	9,9	9,8	9,8	9,8	9,7	9,7	9,7	9,6	9,6	9,6	9,5	9,5	9,4	9,4	9,4	9,3	9,3	9,3
Bosnia & Herzegovina	3,9	3,9	4,0	4,0	4,0	4,0	4,1	4,1	4,1	4,1	4,2	4,2	4,2	4,2	4,3	4,3	4,3	4,3	4,4	4,4	4,4
Croatia	4,5	4,5	4,5	4,5	4,5	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,3	4,3	4,3	4,3	4,3
Georgia	5,3	5,2	5,2	5,1	5,1	5,1	5,1	5,0	5,0	5,0	5,0	4,9	4,9	4,9	4,9	4,8	4,8	4,8	4,7	4,7	4,7
Serbia & Montenegro	10,6	10,6	10,6	10,6	10,6	10,7	10,7	10,7	10,7	10,7	10,7	10,7	10,7	10,7	10,8	10,8	10,8	10,8	10,8	10,8	10,8
F.Y.R.O.M	2,0	2,0	2,0	2,0	2,0	2,0	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,2	2,2	2,2
Russian Federation	145,6	144,8	144,1	143,4	142,8	142,2	141,5	140,9	140,3	139,7	139,0	138,4	137,8	137,2	136,6	136,0	135,4	134,8	134,2	133,6	133,0
Ukraine	49,5	49,1	48,7	48,3	47,9	47,6	47,2	46,8	46,4	46,1	45,7	45,3	45,0	44,6	44,3	43,9	43,6	43,2	42,9	42,5	42,2
Rep. Of Moldova	4,3	4,3	4,3	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,1	4,1	4,1	4,1	4,1	4,1	4,1	4,1	4,1

Table 2 Observed and Forecasted Trends of Population (in million) – Optimistic Scenario, Base Year: 2000

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	8,1	8,2	8,2	8,2	8,3	8,3	8,3	8,3	8,4	8,4	8,4	8,5	8,5	8,5	8,6	8,6	8,6	8,7	8,7	8,7	8,8
Greece	10,6	10,7	10,7	10,8	10,8	10,8	10,8	10,9	10,9	10,9	10,9	11,0	11,0	11,0	11,0	11,0	11,1	11,1	11,1	11,1	11,2
Italy	57,8	58,4	58,5	58,6	58,6	58,7	58,8	58,8	58,9	59,0	59,0	59,1	59,2	59,3	59,3	59,4	59,5	59,5	59,6	59,7	59,7
Bulgaria	8,2	8,2	8,2	7,6	7,6	7,5	7,5	7,4	7,4	7,3	7,3	7,2	7,2	7,1	7,1	7,0	7,0	6,9	6,9	6,8	6,8
Czech Rep.	10,3	10,4	10,4	10,4	10,3	10,3	10,3	10,3	10,3	10,3	10,2	10,2	10,2	10,2	10,2	10,2	10,1	10,1	10,1	10,1	10,1
Hungary	10,0	10,1	10,1	10,1	10,2	10,2	10,2	10,2	10,2	10,2	10,3	10,3	10,3	10,3	10,3	10,3	10,3	10,4	10,4	10,4	10,4
Lithuania	3,5	3,6	3,6	3,6	3,7	3,7	3,7	3,8	3,8	3,8	3,9	3,9	3,9	4,0	4,0	4,0	4,1	4,1	4,1	4,2	4,2
Poland	38,6	39,1	39,2	38,4	38,2	38,0	37,8	37,6	37,4	37,2	37,0	36,8	36,6	36,4	36,3	36,1	35,9	35,7	35,5	35,3	35,2
Romania	22,4	22,6	22,6	22,5	22,5	22,4	22,4	22,3	22,3	22,2	22,2	22,2	22,1	22,1	22,0	22,0	21,9	21,9	21,9	21,8	21,8
Slovakia	5,4	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,6	5,6	5,6	5,6	5,6	5,6	5,6	5,6	5,6	5,6	5,7
Slovenia	2,0	2,0	2,0	2,0	1,9	1,9	1,9	1,9	1,9	1,8	1,8	1,8	1,8	1,8	1,7	1,7	1,7	1,7	1,7	1,6	1,6
Turkey	67,5	69,2	70,2	68,8	69,0	69,2	69,4	69,7	69,9	70,1	70,3	70,5	70,8	71,0	71,2	71,4	71,7	71,9	72,1	72,3	72,6
Belarus	10,0	10,1	10,0	10,0	9,9	9,9	9,9	9,8	9,8	9,8	9,7	9,7	9,6	9,6	9,6	9,5	9,5	9,5	9,4	9,4	9,4
Bosnia & Herzegovina	3,9	4,0	4,0	4,0	4,1	4,1	4,1	4,1	4,2	4,2	4,2	4,2	4,3	4,3	4,3	4,3	4,4	4,4	4,4	4,4	4,5
Croatia	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4	4,4
Georgia	5,3	5,3	5,2	5,2	5,2	5,1	5,1	5,1	5,1	5,0	5,0	5,0	5,0	4,9	4,9	4,9	4,8	4,8	4,8	4,8	4,7
Serbia & Montenegro	10,6	10,7	10,7	10,7	10,7	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,8	10,9	10,9	10,9	10,9	10,9	10,9	10,9
F.Y.R.O.M	2,0	2,0	2,0	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,1	2,2	2,2	2,2	2,2	2,2	2,2
Russian Federation	145,6	146,2	145,5	144,9	144,2	143,6	142,9	142,3	141,7	141,0	140,4	139,8	139,2	138,6	137,9	137,3	136,7	136,1	135,5	134,9	134,3
Ukraine	49,5	49,6	49,2	48,8	48,4	48,0	47,7	47,3	46,9	46,5	46,2	45,8	45,4	45,1	44,7	44,3	44,0	43,6	43,3	43,0	42,6
Rep. Of Moldova	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,2	4,1	4,1	4,1	4,1	4,1

Table 3 Observed and Forecasted Trends of GDP (in billion $) – Moderate Scenario, Base Year: 2000

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	190,7	189,6	204,1	209,5	215,1	220,9	226,7	232,8	239,0	245,4	252,0	258,7	265,6	272,7	280,0	287,4	295,1	303,0	311,1	319,4	327,
Greece	112,1	117,2	132,8	136,5	140,3	144,2	148,2	152,3	156,5	160,8	165,3	169,9	174,6	179,4	184,4	189,5	194,7	200,1	205,7	211,4	217,
Italy	1074,8	1091,8	1184,3	1214,0	1244,5	1275,7	1307,7	1340,5	1374,2	1408,7	1444,0	1480,3	1517,4	1555,5	1594,6	1634,6	1675,6	1717,7	1760,8	1805,0	1850
Bulgaria	12,6	13,6	15,5	16,0	16,4	16,9	17,4	18,0	18,5	19,0	19,6	20,2	20,8	21,4	22,1	22,7	23,4	24,1	24,9	25,6	26,4
Czech Rep.	51,4	57,2	69,5	72,3	75,2	78,2	81,3	84,6	88,0	91,5	95,1	98,9	102,9	107,0	111,3	115,7	120,4	125,2	130,2	135,4	140,
Hungary	46,7	51,8	65,8	69,1	72,6	76,2	80,0	84,0	88,2	92,6	97,3	102,1	107,3	112,6	118,2	124,2	130,4	136,9	143,7	150,9	158,
Lithuania	11,2	11,9	13,8	14,2	14,6	14,9	15,3	15,8	16,2	16,6	17,1	17,5	18,0	18,5	19,0	19,5	20,0	20,6	21,1	21,7	22,3
Poland	164,1	183,4	189,0	198,1	207,6	217,5	227,9	238,8	250,3	262,3	274,8	288,0	301,8	316,2	331,4	347,3	363,9	381,3	399,6	418,7	438,
Romania	37,1	40,2	45,7	47,1	48,5	50,0	51,5	53,0	54,6	56,3	58,0	59,7	61,5	63,3	65,2	67,2	69,2	71,3	73,4	75,6	77,9
Slovakia	19,7	20,5	23,7	24,4	25,1	25,9	26,7	27,5	28,3	29,1	30,0	30,9	31,8	32,8	33,8	34,8	35,8	36,9	38,0	39,1	40,3
Slovenia	19,0	19,5	22,0	22,7	23,5	24,3	25,2	26,1	27,0	27,9	28,9	29,9	31,0	32,1	33,2	34,3	35,5	36,8	38,1	39,4	40,8
Turkey	199,3	145,2	183,7	192,3	201,3	210,7	220,5	230,9	241,7	253,0	264,8	277,2	290,2	303,8	318,0	332,9	348,4	364,7	381,8	399,7	418,
Belarus	12,7	12,4	14,3	15,1	15,9	16,7	17,6	18,5	19,5	20,5	21,6	22,8	24,0	25,2	26,6	28,0	29,5	31,0	32,7	34,4	36,2
Bosnia & Herzegovina	4,5	5,0	5,6	5,9	6,1	6,4	6,7	7,0	7,3	7,6	8,0	8,3	8,7	9,1	9,5	9,9	10,4	10,8	11,3	11,8	12,4
Croatia	18,4	19,5	22,4	23,1	23,8	24,4	25,2	25,9	26,6	27,4	28,2	29,0	29,9	30,7	31,6	32,5	33,5	34,4	35,4	36,5	37,5
Georgia	3,0	3,2	3,4	3,5	3,5	3,6	3,7	3,7	3,8	3,9	3,9	4,0	4,1	4,2	4,3	4,3	4,4	4,5	4,6	4,7	4,8
Serbia & Montenegro	8,6	11,6	15,7	16,3	17,0	17,6	18,3	19,1	19,8	20,6	21,5	22,3	23,2	24,1	25,1	26,1	27,2	28,2	29,4	30,5	31,8
F.Y.R.O.M	3,6	3,4	3,8	4,0	4,1	4,3	4,5	4,7	4,9	5,2	5,4	5,6	5,9	6,2	6,4	6,7	7,0	7,3	7,7	8,0	8,4
Russian Federation	259,7	309,9	346,5	362,5	379,1	396,6	414,8	433,9	453,9	474,7	496,6	519,4	543,3	568,3	594,4	621,8	650,4	680,3	711,6	744,3	778,
Ukraine	31,3	38,0	41,5	43,6	45,7	48,0	50,4	52,9	55,6	58,4	61,3	64,3	67,6	70,9	74,5	78,2	82,1	86,2	90,5	95,1	99,8
Rep. Of Moldova	1,3	1,5	1,6	1,7	1,7	1,8	1,8	1,9	1,9	2,0	2,0	2,1	2,2	2,2	2,3	2,4	2,4	2,5	2,6	2,6	2,7

Table 4 Observed and Forecasted Trends of GDP (in billion $) – Optimistic Scenario, Base Year: 2000

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	190,7	189,6	204,1	210,6	217,3	224,3	231,5	238,9	246,5	254,4	262,5	270,9	279,6	288,6	297,8	307,3	317,2	327,3	337,8	348,6	359,
Greece	112,1	117,2	132,8	137,2	141,8	146,5	151,4	156,4	161,6	166,9	172,5	178,2	184,1	190,2	196,6	203,1	209,8	216,8	224,0	231,4	239,
Italy	1074,8	1091,8	1184,3	1219,9	1256,6	1294,5	1333,4	1373,6	1414,9	1457,5	1501,4	1546,6	1593,1	1641,1	1690,5	1741,3	1793,8	1847,7	1903,4	1960,7	2019
Bulgaria	12,6	13,6	15,5	16,0	16,5	17,0	17,6	18,1	18,7	19,3	19,9	20,5	21,2	21,9	22,5	23,3	24,0	24,8	25,6	26,4	27,2
Czech Rep.	51,4	57,2	69,5	73,5	77,8	82,3	87,0	92,1	97,4	103,0	109,0	115,3	121,9	129,0	136,4	144,3	152,7	161,5	170,8	180,7	191,
Hungary	46,7	51,8	65,8	70,3	75,0	80,1	85,5	91,3	97,5	104,1	111,1	118,6	126,6	135,2	144,3	154,1	164,5	175,6	187,5	200,2	213,
Lithuania	11,2	11,9	13,8	14,2	14,7	15,2	15,7	16,2	16,7	17,2	17,8	18,4	19,0	19,6	20,2	20,9	21,6	22,3	23,0	23,7	24,5
Poland	164,1	183,4	189,0	199,9	211,4	223,5	236,4	250,0	264,4	279,6	295,6	312,6	330,6	349,6	369,7	391,0	413,5	437,2	462,4	489,0	517,
Romania	37,1	40,2	45,7	47,4	49,1	50,9	52,7	54,6	56,6	58,6	60,7	62,9	65,2	67,5	69,9	72,5	75,1	77,8	80,6	83,5	86,5
Slovakia	19,7	20,5	23,7	24,5	25,4	26,3	27,3	28,3	29,3	30,3	31,4	32,6	33,7	34,9	36,2	37,5	38,9	40,3	41,7	43,2	44,8
Slovenia	19,0	19,5	22,0	22,8	23,6	24,4	25,3	26,2	27,2	28,1	29,1	30,2	31,3	32,4	33,6	34,8	36,0	37,3	38,7	40,1	41,5
Turkey	199,3	145,2	183,7	194,0	204,9	216,4	228,6	241,4	255,0	269,3	284,4	300,4	317,3	335,1	354,0	373,9	394,9	417,1	440,5	465,3	491,
Belarus	12,7	12,4	14,3	15,2	16,2	17,3	18,4	19,6	20,9	22,2	23,7	25,2	26,9	28,6	30,5	32,4	34,5	36,8	39,2	41,7	44,4
Bosnia & Herzegovina	4,5	5,0	5,6	6,0	6,4	6,8	7,2	7,7	8,2	8,8	9,3	10,0	10,6	11,3	12,1	12,9	13,7	14,6	15,6	16,6	17,7
Croatia	18,4	19,5	22,4	23,5	24,6	25,8	27,1	28,4	29,7	31,2	32,6	34,2	35,9	37,6	39,4	41,3	43,3	45,3	47,5	49,8	52,2
Georgia	3,0	3,2	3,4	3,6	3,8	4,0	4,3	4,5	4,8	5,1	5,4	5,7	6,0	6,4	6,8	7,2	7,6	8,0	8,5	9,0	9,5
Serbia & Montenegro	8,6	11,6	15,7	16,7	17,8	18,9	20,1	21,4	22,8	24,2	25,8	27,4	29,2	31,0	33,0	35,1	37,4	39,8	42,3	45,0	47,9
F.Y.R.O.M	3,6	3,4	3,8	4,0	4,3	4,5	4,8	5,1	5,4	5,8	6,1	6,5	6,9	7,3	7,8	8,3	8,8	9,3	9,9	10,5	11,2
Russian Federation	259,7	309,9	346,5	377,7	411,7	448,8	489,1	533,2	581,1	633,5	690,5	752,6	820,3	894,2	974,6	1062,4	1158,0	1262,2	1375,8	1499,6	1634
Ukraine	31,3	38,0	41,5	44,4	47,5	50,8	54,4	58,2	62,2	66,6	71,3	76,3	81,6	87,3	93,4	100,0	106,9	114,4	122,4	131,0	140,
Rep. Of Moldova	1,3	1,5	1,6	1,7	1,8	1,9	2,0	2,1	2,2	2,3	2,4	2,5	2,6	2,8	2,9	3,1	3,2	3,4	3,5	3,7	3,9

Table 5 Observed and Forecasted Trends of Exports of Goods and Services (index: 2000=100) – Moderate Scenario, Base Year: 2000

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	100,0	105,2	104,5	109,3	120,2	125,4	124,7	129,5	140,4	145,6	144,9	149,7	160,6	165,8	165,0	169,9	180,8	186,0	185,2	190,1	200,95
Greece	100,0	93,0	82,2	85,3	103,4	96,4	85,6	88,8	106,9	99,8	89,0	92,2	110,3	103,2	92,5	95,6	113,7	106,7	95,9	99,1	117,15
Italy	100,0	100,3	94,9	91,9	102,3	102,5	97,2	94,1	104,5	104,8	99,5	96,4	106,8	107,1	101,7	98,7	109,1	109,3	104,0	100,9	111,35
Bulgaria	100,0	99,7	94,5	89,2	112,9	112,6	107,4	102,1	125,7	125,5	120,3	114,9	138,6	138,3	133,1	127,8	151,5	151,2	146,0	140,7	164,35
Czech Rep.	100,0	101,6	92,1	95,2	110,9	112,5	103,0	106,1	121,8	123,4	113,8	116,9	132,6	134,2	124,7	127,8	143,5	145,1	135,6	138,7	154,40
Hungary	100,0	99,2	83,4	87,4	102,9	102,1	86,3	90,3	105,9	105,1	89,2	93,3	108,8	108,0	92,2	96,2	111,8	110,9	95,1	99,2	114,70
Lithuania	100,0	111,2	118,0	103,4	116,2	127,3	134,1	119,6	132,3	143,5	150,3	135,7	148,5	159,6	166,4	151,9	164,6	175,8	182,6	168,0	180,75
Poland	100,0	112,3	112,2	105,1	112,6	111,8	111,8	104,6	112,1	111,4	111,4	104,2	111,7	111,0	110,9	103,7	111,2	110,5	110,5	103,3	110,8
Romania	100,0	102,0	111,4	116,1	120,9	125,9	131,1	136,4	141,8	147,4	153,2	159,2	165,3	171,6	178,1	184,8	191,7	198,8	206,2	213,7	221,47
Slovakia	100,0	103,8	101,7	104,7	122,9	126,7	124,6	127,6	145,7	149,5	147,4	150,4	168,6	172,4	170,3	173,3	191,5	195,3	193,2	196,2	214,35
Slovenia	100,0	102,5	102,4	95,2	102,2	104,7	104,7	97,4	104,5	107,0	106,9	99,6	106,7	109,2	109,1	101,9	109,0	111,4	111,4	104,1	111,20
Turkey	100,0	139,7	123,4	118,7	122,1	161,9	145,5	140,9	144,3	184,0	167,6	163,0	166,4	206,1	189,8	185,2	188,6	228,3	211,9	207,3	210,70
Belarus	100,0	95,8	100,5	100,8	117,7	113,6	118,3	118,5	135,5	131,3	136,0	136,3	153,2	149,1	153,8	154,0	171,0	166,8	171,5	171,8	188,70
Bosnia & Herzegovina	100,0	99,3	100,1	97,3	99,4	98,6	99,4	86,7	98,8	98,0	98,8	96,1	98,2	97,4	98,2	105,5	117,0	129,6	143,5	158,8	175,58
Croatia	100,0	105,0	97,1	100,3	116,0	121,0	113,1	116,3	132,0	137,0	129,1	132,3	148,0	153,0	145,1	148,3	164,0	169,0	161,1	164,3	180,05
Georgia	100,0	109,1	126,3	131,3	136,5	141,8	147,3	152,9	158,7	164,7	170,9	177,2	183,8	190,5	197,5	204,6	212,0	219,6	227,4	235,4	243,71
Serbia & Montenegro	100,0	83,7	70,4	63,9	102,0	85,7	82,4	75,9	114,1	87,8	74,4	67,9	106,1	99,8	86,5	80,0	118,2	91,9	78,5	72,0	110,2
F.Y.R.O.M	100,0	95,6	84,9	87,3	102,2	97,8	97,1	99,5	114,4	100,0	89,3	91,6	106,5	112,1	101,5	103,8	118,7	104,3	93,7	96,0	110,9
Russian Federation	100,0	75,1	70,1	108,5	111,2	86,3	81,3	119,7	122,4	97,5	92,5	130,9	133,6	108,7	103,6	142,1	144,8	119,9	114,8	153,3	155,95
Ukraine	100,0	83,3	85,3	89,4	93,5	97,8	102,2	106,7	111,4	116,2	121,2	126,3	131,5	137,0	142,5	148,3	154,2	160,3	166,6	173,1	179,73
Rep. Of Moldova	100,0	99,9	107,6	120,1	114,7	114,7	122,4	134,8	129,5	129,4	137,1	149,6	144,2	144,1	151,8	164,3	158,9	158,9	166,6	179,0	173,65

Table 6 Observed and Forecasted Trends of Exports of Goods and Services (index: 2000=100) – Optimistic Scenario, Base Year: 2000

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	100	106,3	105,5	110,4	121,4	126,7	125,9	130,8	141,8	147,0	146,3	151,2	162,2	167,4	166,7	171,6	182,6	187,8	187,1	192,0	203,0
Greece	100	93,9	83,0	86,2	104,5	97,3	86,5	89,7	107,9	100,8	89,9	93,1	111,4	104,3	93,4	96,6	114,9	107,7	96,9	100,1	118,3
Italy	100	101,3	95,9	92,8	103,3	103,5	98,2	95,1	105,6	105,8	100,5	97,4	107,9	108,1	102,7	99,7	110,2	110,4	105,0	101,9	112,5
Bulgaria	100	100,7	95,5	90,1	114,0	113,7	108,5	103,1	127,0	126,7	121,5	116,1	140,0	139,7	134,5	129,1	153,0	152,7	147,5	142,1	166,0
Czech Rep.	100	102,6	93,0	96,1	112,0	113,6	104,0	107,1	123,0	124,6	115,0	118,1	134,0	135,6	126,0	129,1	145,0	146,6	137,0	140,1	155,9
Hungary	100	100,2	84,2	88,3	104,0	103,1	87,2	91,2	106,9	106,1	90,1	94,2	109,9	109,1	93,1	97,2	112,9	112,0	96,1	100,2	115,8
Lithuania	100	112,3	119,1	104,4	117,3	128,6	135,5	120,8	133,6	144,9	151,8	137,1	149,9	161,2	168,1	153,4	166,2	177,5	184,4	169,7	182,6
Poland	100	113,4	113,4	106,1	113,7	113,0	112,9	105,7	113,2	112,5	112,5	105,2	112,8	112,1	112,0	104,8	112,4	111,6	111,6	104,3	111,9
Romania	100	103,0	112,5	117,3	122,2	127,2	132,4	137,7	143,2	148,9	154,7	160,7	166,9	173,3	179,9	186,7	193,6	200,8	208,2	215,8	223,7
Slovakia	100	104,8	102,7	105,7	124,1	127,9	125,8	128,8	147,2	151,0	148,9	151,9	170,3	174,1	172,0	175,0	193,4	197,2	195,1	198,1	216,5
Slovenia	100	103,5	103,4	96,1	103,3	105,8	105,7	98,4	105,5	108,0	108,0	100,6	107,8	110,3	110,2	102,9	110,0	112,6	112,5	105,2	112,3
Turkey	100	141,1	124,6	119,9	123,4	163,5	147,0	142,3	145,7	185,8	169,3	164,6	168,1	208,2	191,7	187,0	190,4	230,6	214,0	209,4	212,8
Belarus	100	96,8	101,5	101,8	118,9	114,7	119,5	119,7	136,8	132,6	137,4	137,6	154,8	150,5	155,3	155,6	172,7	168,5	173,2	173,5	190,6
Bosnia & Herzegovina	100	100,2	101,1	98,3	100,4	99,6	100,4	87,6	99,8	99,0	99,8	97,1	99,2	98,4	99,2	106,5	118,1	130,9	144,9	160,4	177,3
Croatia	100	106,0	98,1	101,3	117,2	122,2	114,2	117,5	133,3	138,4	130,4	133,6	149,5	154,6	146,6	149,8	165,7	170,7	162,7	166,0	181,9
Georgia	100	110,1	127,5	132,6	137,8	143,2	148,7	154,4	160,3	166,3	172,6	179,0	185,6	192,4	199,4	206,7	214,1	221,8	229,6	237,8	246,1
Serbia & Montenegro	100	84,5	71,1	64,5	103,1	86,6	83,2	76,6	115,2	88,7	75,2	68,6	107,2	100,8	87,3	80,8	119,3	92,8	79,3	72,7	111,3
F.Y.R.O.M	100	96,5	85,8	88,1	103,2	98,7	98,1	100,4	115,5	100,9	90,2	92,5	107,6	113,3	102,5	104,8	119,9	105,4	94,6	96,9	112,0
Russian Federation	100	75,9	70,8	109,6	112,3	87,2	82,1	120,9	123,6	98,5	93,4	132,2	134,9	109,8	104,7	143,5	146,2	121,1	116,0	154,8	157,5
Ukraine	100	84,2	86,2	90,2	94,4	98,8	103,2	107,8	112,5	117,4	122,4	127,5	132,9	138,3	144,0	149,8	155,8	161,9	168,3	174,8	181,5
Rep. Of Moldova	100	100,9	108,7	121,3	115,9	115,8	123,6	136,2	130,8	130,7	138,5	151,1	145,6	145,6	153,3	165,9	160,5	160,4	168,2	180,8	175,4

Table 7 Observed and Forecasted Trends of Imports of Goods and Services (index: 2000=100) – Moderate Scenario, Base Year: 2000

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	100,0	103,8	100,3	105,7	115,9	119,7	116,2	121,5	131,7	135,5	132,0	137,4	147,6	151,4	147,9	153,2	163,4	167,2	163,7	169,1	179,25
Greece	100,0	91,2	82,6	81,5	95,2	86,4	87,8	86,7	100,4	91,7	83,0	101,9	115,7	106,9	98,2	117,2	130,9	122,1	113,5	142,4	156,10
Italy	100,0	98,2	93,6	96,0	112,6	110,8	106,2	108,6	125,2	123,5	118,9	121,2	137,9	136,1	131,5	133,9	150,5	148,7	144,1	146,5	163,10
Bulgaria	100,0	104,5	97,2	104,6	127,5	132,0	124,7	132,2	155,1	159,5	152,3	159,7	182,6	187,1	179,8	187,3	210,2	214,6	207,3	214,8	237,70
Czech Rep.	100,0	100,5	90,5	93,7	112,5	113,0	103,1	106,2	125,0	125,5	115,6	118,7	137,6	138,1	128,1	131,3	150,1	150,6	140,6	143,8	162,60
Hungary	100,0	95,5	81,2	87,0	104,0	99,6	85,2	91,1	108,1	103,6	89,3	95,1	112,1	107,6	93,3	99,1	116,1	111,7	97,3	103,1	120,15
Lithuania	100,0	107,2	113,0	98,9	102,5	109,7	115,5	101,5	105,0	112,3	118,0	104,0	107,6	114,8	120,6	106,5	110,1	117,3	123,1	109,0	112,60
Poland	100,0	100,7	99,6	96,9	104,1	94,8	103,7	101,0	108,2	98,9	97,8	115,1	122,2	112,9	111,9	109,2	116,3	107,0	106,0	103,3	110,4
Romania	100,0	108,4	108,9	116,1	134,5	142,9	143,5	150,7	169,1	177,5	178,0	185,2	203,6	212,0	212,6	219,7	238,2	246,6	247,1	254,3	272,70
Slovakia	100,0	111,8	108,2	101,7	114,4	126,2	122,5	116,1	128,7	140,6	136,9	130,4	143,1	154,9	151,3	144,8	157,5	169,3	165,6	159,2	171,85
Slovenia	100,0	97,3	93,8	91,7	97,1	104,4	110,9	108,8	114,2	111,5	108,0	105,9	111,4	128,7	125,1	123,0	128,5	125,8	122,3	120,2	125,60
Turkey	100,0	99,2	94,5	90,8	107,5	106,7	102,0	98,3	115,0	114,2	109,5	105,8	122,5	121,7	117,0	113,3	130,0	129,2	124,5	120,8	137,50
Belarus	100,0	96,7	102,3	98,8	115,6	112,3	118,0	114,4	131,3	128,0	133,6	130,0	146,9	143,6	149,2	145,7	162,5	159,2	164,9	161,3	178,15
Bosnia & Herzegovina	100,0	103,0	105,1	93,0	89,6	92,6	104,7	92,6	89,2	92,2	94,3	102,2	98,8	101,8	103,9	111,8	108,4	111,5	113,5	131,4	128,05
Croatia	100,0	104,9	105,3	105,5	111,5	116,4	116,7	117,0	122,9	127,8	128,2	128,5	134,4	139,3	139,6	139,9	145,8	150,8	151,1	151,4	157,30
Georgia	100,0	97,9	98,0	101,1	105,8	103,7	103,8	106,9	111,6	109,5	109,6	112,7	117,4	115,3	115,3	118,4	123,2	121,0	121,1	124,2	128,95
Serbia & Montenegro	100,0	93,8	91,2	101,2	139,0	132,7	130,2	140,2	178,0	171,7	169,2	179,2	216,9	210,7	208,2	218,2	255,9	249,7	247,2	257,1	294,90
F.Y.R.O.M	100,0	87,7	90,7	83,7	102,0	89,7	92,7	85,7	104,0	91,7	94,7	87,7	106,0	93,7	96,7	89,7	108,0	95,7	98,7	91,7	109,95
Russian Federation	100,0	97,9	99,7	106,3	97,6	95,5	107,3	113,9	105,2	103,1	104,9	131,5	122,8	120,7	122,5	149,1	140,4	138,3	140,1	176,7	167,95
Ukraine	100,0	90,7	86,1	95,4	117,3	108,0	103,5	112,7	134,7	125,4	120,8	130,1	152,0	142,7	138,1	147,4	169,4	160,0	155,5	164,7	186,70
Rep. Of Moldova	100,0	98,7	105,4	101,4	109,6	108,3	115,0	111,0	119,3	118,0	124,7	120,7	128,9	127,6	134,3	130,3	138,5	137,2	143,9	139,9	148,15

Table 8 Observed and Forecasted Trends of Imports of Goods and Services (index: 2000=100) – Optimistic Scenario, Base Year: 2000

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Austria	100	104,9	101,3	106,7	117,0	120,9	117,3	122,7	133,0	136,9	133,3	138,7	149,0	152,9	149,3	154,8	165,0	168,9	165,3	170,8	181,04
Greece	100	92,1	83,4	82,3	96,2	87,3	88,7	87,6	101,4	92,6	83,9	102,9	116,8	107,9	99,2	118,3	132,2	123,3	114,6	143,8	157,66
Italy	100	99,2	94,5	96,9	113,7	111,9	107,3	109,7	126,5	124,7	120,0	122,4	139,2	137,4	132,8	135,2	152,0	150,2	145,5	147,9	164,73
Bulgaria	100	105,5	98,2	105,7	128,8	133,3	126,0	133,5	156,6	161,1	153,8	161,3	184,4	189,0	181,6	189,1	212,3	216,8	209,4	216,9	240,08
Czech Rep.	100	101,5	91,4	94,6	113,6	114,2	104,1	107,3	126,3	126,8	116,7	119,9	138,9	139,4	129,4	132,6	151,6	152,1	142,0	145,2	164,23
Hungary	100	96,5	82,0	87,9	105,1	100,6	86,1	92,0	109,1	104,6	90,1	96,0	113,2	108,7	94,2	100,1	117,3	112,8	98,3	104,2	121,35
Lithuania	100	108,3	114,1	99,9	103,5	110,8	116,7	102,5	106,1	113,4	119,2	105,0	108,6	115,9	121,8	107,6	111,2	118,5	124,3	110,1	113,73
Poland	100	101,7	100,6	97,9	105,1	95,7	104,7	102,0	109,2	99,8	98,8	116,3	123,5	114,1	113,0	110,3	117,5	108,1	107,0	104,3	111,50
Romania	100	109,5	110,0	117,3	135,9	144,4	144,9	152,2	170,8	179,3	179,8	187,0	205,7	214,1	214,7	221,9	240,5	249,0	249,6	256,8	275,43
Slovakia	100	112,9	109,2	102,7	115,5	127,5	123,7	117,2	130,0	142,0	138,3	131,7	144,5	156,5	152,8	146,2	159,1	171,0	167,3	160,8	173,57
Slovenia	100	98,3	94,7	92,6	98,1	105,5	112,0	109,9	115,4	112,6	109,1	107,0	112,5	129,9	126,4	124,3	129,8	127,0	123,5	121,4	126,86
Turkey	100	100,2	95,4	91,7	108,6	107,8	103,0	99,3	116,2	115,3	110,6	106,8	123,7	122,9	118,2	114,4	131,3	130,5	125,7	122,0	138,88
Belarus	100	97,7	103,4	99,8	116,8	113,5	119,1	115,6	132,6	129,2	134,9	131,3	148,4	145,0	150,7	147,1	164,1	160,8	166,5	162,9	179,93
Bosnia & Herzegovina	100	104,0	106,1	93,9	90,5	93,5	105,7	93,5	90,1	93,2	95,2	103,2	99,8	102,9	104,9	112,9	109,5	112,6	114,6	132,7	129,33
Croatia	100	106,0	106,3	106,6	112,6	117,5	117,9	118,2	124,1	129,1	129,5	129,7	135,7	140,7	141,0	141,3	147,3	152,3	152,6	152,9	158,87
Georgia	100	98,9	98,9	102,1	106,8	104,7	104,8	107,9	112,7	110,6	110,6	113,8	118,5	116,4	116,5	119,6	124,4	122,3	122,3	125,5	130,24
Serbia & Montenegro	100	94,7	92,2	102,2	140,4	134,1	131,5	141,6	179,7	173,4	170,9	181,0	219,1	212,8	210,3	220,3	258,5	252,2	249,6	259,7	297,85
F.Y.R.O.M	100	88,6	91,6	84,6	103,0	90,6	93,7	86,6	105,0	92,6	95,7	88,6	107,0	94,6	97,7	90,6	109,0	96,6	99,7	92,6	111,05
Russian Federation	100	98,9	100,7	107,4	98,6	96,5	108,4	115,0	106,2	104,2	105,9	132,8	124,0	121,9	123,7	150,6	141,8	139,7	141,5	178,4	169,63
Ukraine	100	91,6	87,0	96,3	118,5	109,1	104,5	113,8	136,0	126,6	122,0	131,4	153,5	144,1	139,5	148,9	171,1	161,6	157,0	166,4	188,57
Rep. Of Moldova	100	99,7	106,4	102,4	110,7	109,4	116,2	112,2	120,5	119,1	125,9	121,9	130,2	128,9	135,6	131,6	139,9	138,6	145,3	141,3	149,63

ANNEX IV – TRANSPORT STATISTICS

Table 9a **Group 1 Countries - Passenger Demand Forecasts (Road –car and bus/coaches- and Rail) Moderate Scenario**

Years	Road*		Rail*	Percentages		Annual Road Growth		Annual Rail Growth
	Car	Coach		Road	Rail	Car	Bus	
2000	3.831	382	382	92%	8%	-	-	-
2001	3.873	382	387	92%	8%	1,10%	0,03%	1,09%
2002	3.917	383	391	92%	8%	1,12%	0,03%	1,12%
2003	3.961	383	395	92%	8%	1,14%	0,04%	1,15%
2004	4.007	383	400	92%	8%	1,15%	0,04%	1,18%
2005	4.054	383	405	92%	8%	1,17%	0,05%	1,21%
2006	4.102	383	410	92%	8%	1,19%	0,06%	1,24%
2007	4.151	384	415	92%	8%	1,21%	0,06%	1,28%
2008	4.202	384	421	92%	8%	1,23%	0,07%	1,31%
2009	4.254	384	426	92%	8%	1,25%	0,08%	1,35%
2010	4.308	384	432	92%	8%	1,27%	0,08%	1,40%
2011	4.364	385	439	92%	8%	1,29%	0,09%	1,44%
2012	4.421	385	445	92%	8%	1,31%	0,10%	1,49%
2013	4.480	386	452	91%	9%	1,33%	0,11%	1,55%
2014	4.540	386	459	91%	9%	1,35%	0,11%	1,61%
2015	4.603	386	467	91%	9%	1,38%	0,12%	1,67%
2016	4.667	387	475	91%	9%	1,40%	0,13%	1,74%
2017	4.734	387	484	91%	9%	1,43%	0,13%	1,82%
2018	4.803	388	493	91%	9%	1,45%	0,14%	1,91%
2019	4.874	389	503	91%	9%	1,48%	0,15%	2,01%
2020	4.947	389	514	91%	9%	1,51%	0,16%	2,12%

Source: Data up to 2010, based on growth and modal split data and projections of European Commission (2000).

** Billion Passenger-kms*

*** Percentages are per total of road and rail (other modes not included)*

Table 9b **Group 1 Countries - Passenger Demand Forecasts (Road –car and bus/coaches- and Rail) Optimistic Scenario**

Years	Road*		Rail*	Percentages		Annual Road Growth		Annual Rail Growth
	Car	Coach		Road	Rail	Car	Bus	
2000	3.831	382	382	92%	8%	-	-	-
2001	3.882	382	387	92%	8%	1,32%	0,03%	1,31%
2002	3.934	383	393	92%	8%	1,34%	0,04%	1,34%
2003	3.987	383	398	92%	8%	1,36%	0,05%	1,38%
2004	4.043	383	404	92%	8%	1,38%	0,05%	1,41%
2005	4.099	383	410	92%	8%	1,40%	0,06%	1,45%
2006	4.158	383	416	92%	8%	1,43%	0,07%	1,49%
2007	4.218	384	422	92%	8%	1,45%	0,08%	1,53%
2008	4.280	384	429	92%	8%	1,47%	0,09%	1,58%
2009	4.344	384	436	92%	8%	1,49%	0,09%	1,63%
2010	4.410	385	443	92%	8%	1,52%	0,10%	1,68%
2011	4.478	385	451	92%	8%	1,54%	0,11%	1,73%
2012	4.548	386	459	91%	9%	1,57%	0,12%	1,79%
2013	4.621	386	467	91%	9%	1,60%	0,13%	1,86%
2014	4.696	387	476	91%	9%	1,62%	0,13%	1,93%
2015	4.774	387	486	91%	9%	1,65%	0,14%	2,01%
2016	4.854	388	496	91%	9%	1,68%	0,15%	2,09%
2017	4.937	388	507	91%	9%	1,71%	0,16%	2,19%
2018	5.023	389	518	91%	9%	1,74%	0,17%	2,29%
2019	5.112	390	531	91%	9%	1,78%	0,18%	2,41%
2020	5.205	391	544	91%	9%	1,81%	0,19%	2,55%

* Billion Passenger-kms

** Percentages are per total of road and rail (other modes not included)

Table 10a **Group 1 Countries - Freight Demand (Road and Rail) Moderate Forecasts**

Years	Road*	Rail*	Percentages**		Annual Growth	
			Road	Rail	Road Growth	Rail Growth
2000	1.299	253	84%	16%	-	-
2001	1.333	260	84%	16%	2,67%	2,86%
2002	1.369	268	84%	16%	2,67%	2,87%
2003	1.405	276	84%	16%	2,68%	2,88%
2004	1.443	284	84%	16%	2,69%	2,89%
2005	1.482	292	84%	16%	2,70%	2,90%
2006	1.522	300	84%	16%	2,70%	2,91%
2007	1.563	309	83%	17%	2,71%	2,92%
2008	1.606	318	83%	17%	2,72%	2,93%
2009	1.650	327	83%	17%	2,73%	2,94%
2010	1.695	337	83%	17%	2,73%	2,95%
2011	1.741	347	83%	17%	2,74%	2,96%
2012	1.789	357	83%	17%	2,75%	2,97%
2013	1.838	368	83%	17%	2,76%	2,98%
2014	1.889	379	83%	17%	2,77%	2,99%
2015	1.942	390	83%	17%	2,77%	3,00%
2016	1.996	402	83%	17%	2,78%	3,01%
2017	2.052	414	83%	17%	2,79%	3,03%
2018	2.109	427	83%	17%	2,80%	3,04%
2019	2.168	440	83%	17%	2,81%	3,05%
2020	2.229	453	83%	17%	2,82%	3,06%

Source: Data up to 2010, based on growth and modal split data and projections of European Commission (2000).

** Billion tone-kms*

*** Percentages are per total of road and rail (other modes not included)*

Source: Data up to 2010, based on projections of European Commission, 2000

Table 10b **Group 1 Countries - Freight Demand Forecasts (Road and Rail)**

Optimistic Scenario

Years	Road*	Rail*	Percentages**		Annual Growth	
			Road	Rail	Road Growth	Rail Growth
2000	1.299	253	84%	16%	-	-
2001	1.340	262	84%	16%	3,20%	3,43%
2002	1.383	271	84%	16%	3,21%	3,45%
2003	1.428	280	84%	16%	3,22%	3,46%
2004	1.474	290	84%	16%	3,23%	3,47%
2005	1.521	300	84%	16%	3,23%	3,48%
2006	1.571	310	83%	17%	3,24%	3,49%
2007	1.622	321	83%	17%	3,25%	3,50%
2008	1.675	333	83%	17%	3,26%	3,52%
2009	1.729	344	83%	17%	3,27%	3,53%
2010	1.786	357	83%	17%	3,28%	3,54%
2011	1.845	369	83%	17%	3,29%	3,55%
2012	1.906	382	83%	17%	3,30%	3,57%
2013	1.969	396	83%	17%	3,31%	3,58%
2014	2.034	410	83%	17%	3,32%	3,59%
2015	2.102	425	83%	17%	3,33%	3,60%
2016	2.172	441	83%	17%	3,34%	3,62%
2017	2.245	457	83%	17%	3,35%	3,63%
2018	2.320	473	83%	17%	3,36%	3,64%
2019	2.399	490	83%	17%	3,37%	3,66%
2020	2.480	508	83%	17%	3,38%	3,67%

* Billion tone-kms

** Percentages are per total of road and rail (other modes not included)

Table 11a **Group 2 Countries - Passenger Demand Forecasts (Road and Rail) in a Moderate Scenario***

Years	Percentages**		Annual Road Growth		Annual Rail Growth
	Road	Rail	Car	Bus	
2000	87%	13%	-	-	-
2001	87%	13%	1,73%	-0,03%	0,62%
2002	87%	13%	1,75%	-0,01%	0,63%
2003	87%	13%	1,78%	0,00%	0,65%
2004	87%	13%	1,81%	0,01%	0,67%
2005	87%	13%	1,84%	0,03%	0,68%
2006	87%	13%	1,87%	0,03%	0,70%
2007	87%	13%	1,91%	0,05%	0,72%
2008	87%	13%	1,94%	0,06%	0,74%
2009	87%	13%	1,98%	0,07%	0,76%
2010	88%	12%	2,02%	0,09%	0,77%
2011	88%	12%	2,06%	0,10%	0,79%
2012	88%	12%	2,11%	0,12%	0,81%
2013	88%	12%	2,15%	0,13%	0,84%
2014	88%	12%	2,21%	0,14%	0,85%
2015	88%	12%	2,26%	0,15%	0,87%
2016	88%	12%	2,32%	0,17%	0,89%
2017	88%	12%	2,38%	0,18%	0,92%
2018	88%	12%	2,44%	0,20%	0,94%
2019	88%	12%	2,51%	0,21%	0,96%
2020	89%	11%	2,58%	0,23%	0,98%

Source: TREMOVE Model served as the basic source since it has provided very analytical forecasts for some of these countries. The "average" passenger traffic growth of some selected countries, presented in TREMOVE, was used for TEM and TER forecasting.

* *Projections based on a "moderate" socio-economic/GDP scenario*

** *Modal Shares per total of road and rail (no other modes included)*

Table 11b **Group 2 Countries - Passenger Demand Forecasts (Road and Rail) Optimistic Scenario***

Years	Percentages**		Annual Road Growth		Annual Rail Growth
	Road	Rail	Car	Bus	
2000	87%	13%	-	-	-
2001	87%	13%	2,07%	-0,01%	0,75%
2002	87%	13%	2,11%	0,00%	0,76%
2003	87%	13%	2,14%	0,01%	0,79%
2004	87%	13%	2,17%	0,02%	0,81%
2005	87%	13%	2,21%	0,04%	0,82%
2006	87%	13%	2,25%	0,05%	0,84%
2007	87%	13%	2,29%	0,06%	0,86%
2008	87%	13%	2,33%	0,07%	0,89%
2009	88%	12%	2,38%	0,09%	0,91%
2010	88%	12%	2,42%	0,11%	0,93%
2011	88%	12%	2,48%	0,12%	0,95%
2012	88%	12%	2,53%	0,14%	0,97%
2013	88%	12%	2,59%	0,15%	1,00%
2014	88%	12%	2,65%	0,17%	1,02%
2015	88%	12%	2,71%	0,18%	1,05%
2016	88%	12%	2,78%	0,21%	1,07%
2017	89%	11%	2,85%	0,22%	1,10%
2018	89%	11%	2,93%	0,24%	1,13%
2019	89%	11%	3,01%	0,25%	1,15%
2020	89%	11%	3,10%	0,28%	1,18%

* Projections based on an “optimistic” socio-economic/GDP scenario

** Modal Shares per total of road and rail (no other modes included)

Table 12a **Group 2 Countries - Freight Demand Forecasts (Road and Rail) Moderate Scenario***

Years	Percentages**			Annual Road Growth	Annual Rail Growth
	Road	Rail			
2000	54%	46%		-	-
2001	54%	46%		2,19%	2,27%
2002	54%	46%		2,21%	2,28%
2003	54%	46%		2,22%	2,28%
2004	55%	45%		2,24%	2,28%
2005	60%	40%		2,25%	2,28%
2006	61%	39%		2,27%	2,28%
2007	61%	39%		2,28%	2,28%
2008	63%	37%		2,29%	2,28%
2009	65%	35%		2,31%	2,28%
2010	68%	32%		2,32%	2,28%
2011	71%	29%		2,33%	2,28%
2012	73%	27%		2,35%	2,28%
2013	75%	25%		2,36%	2,28%
2014	75%	25%		2,37%	2,28%
2015	77%	23%		2,38%	2,28%
2016	80%	20%		2,40%	2,28%
2017	81%	19%		2,41%	2,29%
2018	81%	19%		2,42%	2,29%
2019	82%	18%		2,43%	2,28%
2020	83%	17%		2,44%	2,29%

Source: TREMOVE Model served as the basic source since it has provided very analytical forecasts for some of these countries. The "average" freight traffic growth of some selected countries, presented in TREMOVE, was used for TEM and TER forecasting.

* *Projections based on a "moderate" socio-economic/GDP scenario*

** *Modal Shares per total of road and rail (no other modes included)*

Table 12b **Group 2 Countries - Freight Demand Forecasts (Road and Rail) Optimistic Scenario***

Years	Percentages**			Annual Road Growth	Annual Rail Growth
	Road	Rail			
2000	58%	42%		-	-
2001	58%	42%		2,49%	2,57%
2002	58%	42%		2,50%	2,58%
2003	58%	42%		2,52%	2,58%
2004	58%	42%		2,53%	2,58%
2005	60%	40%		2,55%	2,58%
2006	61%	39%		2,57%	2,58%
2007	61%	39%		2,58%	2,58%
2008	63%	37%		2,60%	2,58%
2009	65%	35%		2,62%	2,59%
2010	68%	32%		2,63%	2,58%
2011	71%	29%		2,64%	2,58%
2012	73%	27%		2,66%	2,59%
2013	75%	25%		2,67%	2,59%
2014	75%	25%		2,69%	2,59%
2015	77%	23%		2,70%	2,59%
2016	80%	20%		2,71%	2,59%
2017	81%	19%		2,73%	2,59%
2018	81%	19%		2,74%	2,59%
2019	82%	18%		2,76%	2,59%
2020	83%	17%		2,77%	2,59%

* Projections based on an “optimistic” socio-economic/GDP scenario

** Modal Shares per total of road and rail (no other modes included)

Table 13a **Accumulated Road Traffic Growth in Group 2 Countries (Moderate scenario)**

Countries		**1995-2005**	**2005-2015**	***2000-2020****
Bulgaria		47,00%	38,00%	*37,31%*
Czech Rep.		21,00%	18,00%	*15,58%*
Hungary		38,00%	20,00%	*23,91%*
Lithuania		53,00%	38,00%	*40,21%*
Poland		59,00%	38,00%	*43,10%*
Romania		117,00%	83,00%	*107,94%*
Slovakia		129,00%	47,00%	*85,85%*
Slovenia		27,00%	17,00%	*18,11%*
Turkey		-	-	-
		2001-2015	**2001-2025**	***2000-2020****
Croatia	Passenger	72%	114%	*93%*
	Freight	96%	214%	*159%*

Source: Based on TINA projections for all except Croatia, which was based on REBIS.

* Used TINA forecasts until 2015, and then with 2000 as base year trend forecasting was performed for 2020, based on a moderate socio-economic scenario. For Croatia, using REBIS projections until 2025, and then with 2000 as base year, trend forecasting was performed for 2020, based on a moderate socio-economic scenario

Table 13 b **Accumulated Road Traffic Growth in Group 2 Countries (Optimistic scenario)**

Countries		**1995-2005**	**2005-2015**	***2000-2020****
Bulgaria		47,00%	38,00%	*44,77%*
Czech Rep.		21,00%	18,00%	*18,70%*
Hungary		38,00%	20,00%	*28,69%*
Lithuania		53,00%	38,00%	*48,25%*
Poland		59,00%	38,00%	*51,72%*
Romania		117,00%	83,00%	*129,53%*
Slovakia		129,00%	47,00%	*103,02%*
Slovenia		27,00%	17,00%	*21,73%*
Turkey		-	-	-
		2001-2015	**2001-2025**	***2000-2020****
Croatia	Passenger	72%	114%	*111,60%*
	Freight	96%	214%	*190,80%*

Source: Based on TINA projections for all except Croatia, which was based on REBIS.

* Used TINA forecasts until 2015, and then with 2000 as base year trend forecasting was performed for 2020, based on an optimistic socio-economic scenario. For Croatia, using REBIS projections until 2025, and then with 2000 as base year, trend forecasting was performed for 2020, based on an optimistic socio-economic scenario

Table 14a **Accumulated Rail Traffic Growth in Group 2 Countries (Moderate scenario)**

Countries		**1995-2005**	**2005-2015**	***2000-2020****
Bulgaria		13,00%	14,00%	*37,89%*
Czech Rep.		-8,00%	7,00%	*15,68%*
Hungary		35,00%	11,00%	*65,32%*
Lithuania	Passenger	-57%	35%	*18%*
	Freight	67%	23%	*91%*
Poland		-	48,00%	*62,71%*
Romania		-	-	-
Slovakia		8,00%	7,00%	*20,90%*
Slovenia		-	-	-
Turkey		-	-	*37,89%*
		2001-2015	**2001-2025**	***2000-2020****
Croatia	Passenger	39%	74%	*57%*
	Freight	33%	62%	*48%*

Source: Based on TINA projections for all except Croatia, which was based on REBIS.

* Used TINA forecasts until 2015, and then with 2000 as base year trend forecasting was performed for 2020, based on a moderate socio-economic scenario. For Croatia, using REBIS projections until 2025, and then with 2000 as base year, trend forecasting was performed for 2020, based on a moderate socio-economic scenario

Table 14b **Accumulated Rail Traffic Growth in Group 2 Countries (Optimistic scenario)**

Countries		**1995-2005**	**2005-2015**	***2000-2020****
Bulgaria		13,00%	14,00%	*45,47%*
Czech Rep.		-8,00%	7,00%	*18,82%*
Hungary		35,0041%%	11,00%	*78,38%*
Lithuania	Passenger	-51%	41%	*62%*
	Freight	73%	32%	*109%*
Poland		-	48,00%	*75,25%*
Romania		-	-	-
Slovakia		8,00%	7,00%	*25,08%*
Slovenia		-	-	-
Turkey		-	-	*45,47%*
		2001-2015	**2001-2025**	***2000-2020****
Croatia	Passenger	39%	74%	*68,40%*
	Freight	33%	62%	*57,60%*

Source: Based on TINA projections for all except Croatia, which was based on REBIS.

* Used TINA forecasts until 2015, and then with 2000 as base year trend forecasting was performed for 2020, based on an optimistic socio-economic scenario. For Croatia, using REBIS projections until 2025, and then with 2000 as base year, trend forecasting was performed for 2020, based on an optimistic socio-economic scenario.

Table 15a **Accumulated Road Traffic Growth in Group 3 Countries**

(Moderate Scenario, Base Year: 2000)

Road Traffic (in % of growth)		2001-2006	2001-2015	2001-2020	*2000-2020**
Belarus	Passenger	-	-	-	-
	Freight	-	-	-	-
Bosnia & Herzegovina	Passenger	30%	108%	206%	*159%*
	Freight	29%	102%	232%	*172%*
Georgia	Passenger	-	-	-	-
	Freight	-	-	-	-
Serbia & Montenegro	Passenger	30%	110%	226%	*171%*
	Freight	30%	119%	292%	*213%*
F.Y.R.O.M	Passenger	25%	99%	207%	*156%*
	Freight	25%	96%	222%	*164%*
Russian Federation	Passenger	-	-	-	-
	Freight	-	-	-	-
Ukraine	Passenger	-	-	-	-
	Freight	-	-	-	-
Rep. Of Moldova	Passenger	-	-	-	-
	Freight	-	-	-	-

Source: Based on REBIS

* Using REBIS projections until 2025, and then with 2000 as base year, trend forecasting was performed for 2020, based on a moderate socio-economic scenario

** Due to limited data no specific projections were made, but a general hypothesis says that these countries will probably follow the rest Group 3 countries or we can use the formula of TIRS (1,25)*(GDP Growth) as GDP is forecasted.

Table 15b **Accumulated Road Traffic Growth in Group 3 Countries**

(Optimistic Scenario, Base Year: 2000)

Road Traffic (in % of growth)		2001-2006	2001-2015	2001-2020	*2000-2020**
Belarus	Passenger	-	-	-	-
	Freight	-	-	-	-
Bosnia & Herzegovina	Passenger	30%	108%	206%	*190,80%*
	Freight	29%	102%	232%	*206,40%*
Georgia	Passenger	-	-	-	-
	Freight	-	-	-	-
Serbia & Montenegro	Passenger	30%	110%	226%	*205,20%*
	Freight	30%	119%	292%	*255,60%*
F.Y.R.O.M	Passenger	25%	99%	207%	*187,20%*
	Freight	25%	96%	222%	*196,80%*
Russian Federation	Passenger	-	-	-	-
	Freight	-	-	-	-
Ukraine	Passenger	-	-	-	-
	Freight	-	-	-	-
Rep. Of Moldova	Passenger	-	-	-	-
	Freight	-	-	-	-

Source: Based on REBIS

* Using REBIS projections until 2025, and then with 2000 as base year, trend forecasting was performed for 2020, based on a moderate socio-economic scenario

** Due to limited data no specific projections were made, but a general hypothesis says that these countries will probably follow the rest Group 3 countries or we can use the formula of TIRS (1,25)*(GDP Growth) as GDP is forecasted.

Table 16a **Accumulated Rail Traffic Growth in Group 3 Countries**

(Moderate Scenario, Base Year: 2000)

Rail Traffic (in % of growth)		2000-2006	2000-2015	2000-2025	*2000-2020**
Belarus**	Passenger	-	-	-	-
	Freight	-	-	-	-
Bosnia & Herzegovina	Passenger	13%	39%	76%	*58%*
	Freight	11%	35%	66%	*51%*
Georgia**	Passenger	-	-	-	-
	Freight	-	-	-	-
Serbia & Montenegro	Passenger	13%	44%	89%	*68%*
	Freight	12%	39%	78%	*60%*
F.Y.R.O.M	Passenger	11%	37%	89%	*65%*
	Freight	10%	33%	78%	*57%*
Russian Federation*	Passenger	-	-	-	-
	Freight	-	-	-	-
Ukraine*	Passenger	-	-	-	-
	Freight	-	-	-	-
Rep. Of Moldova*	Passenger	-	-	-	-
	Freight	-	-	-	-

Source: Based on REBIS

* Using REBIS projections until 2025, and then with 2000 as base year, trend forecasting was performed for 2020, based on a moderate socio-economic scenario.

** Due to limited data no specific projections were made, but a general hypothesis says that these countries will probably follow the rest Group 3 countries or we can use the formula of TIRS (1,25)*(GDP Growth) as GDP is forecasted.

Table 16b **Accumulated Rail Traffic Growth in Group 3 Countries**

(Optimistic Scenario, Base Year: 2000)

Rail Traffic (in % of growth)		**2000-2006**	**2000-2015**	**2000-2025**	***2000-2020****
Belarus*	Passenger	-	-	-	-
	Freight	-	-	-	-
Bosnia & Herzegovina	Passenger	13%	39%	76%	*69,60%*
	Freight	11%	35%	66%	*61,20%*
Georgia**	Passenger	-	-	-	-
	Freight	-	-	-	-
Serbia & Montenegro	Passenger	13%	44%	89%	*81,60%*
	Freight	12%	39%	78%	*72,00%*
F.Y.R.O.M	Passenger	11%	37%	89%	*78,00%*
	Freight	10%	33%	78%	*68,40%*
Russian Federation*	Passenger	-	-	-	-
	Freight	-	-	-	-
Ukraine*	Passenger	-	-	-	-
	Freight	-	-	-	-
Rep. Of Moldova*	Passenger	-	-	-	-
	Freight	-	-	-	-

Source: Based on REBIS

* Using REBIS projections until 2025, and then with 2000 as base year, trend forecasting was performed for 2020, based on a moderate socio-economic scenario.

** Due to limited data no specific projections were made, but a general hypothesis says that these countries will probably follow the rest Group 3 countries or we can use the formula of TIRS (1,25)*(GDP Growth) as GDP is forecasted.

ANNEX V – EVALUATION/TECHNICAL PRIORITISATION RESULTS

Table 17 **Results of Projects Evaluation/ Technical Prioritization – TEM (Road)**

Project ID	*Project Description*	*Score*	*Category*	*Comments*
AT-M-1	New motorway link fm A 4 Motorway to border cross.at Kittsee to link with Slovak motorway D 4 to Bratislava	4,16	I	
BG-M-1	Reconstruction of road E85	3,8	II	
BG-M-2	Maritza Motorway, Section 1	3,94	II	
BG-M-3	Maritza Motorway, Section 2	3,86	II	
BG-M-4	Maritza Motorway, Section 3	3,86	II	
BG-M-5	Kalotina-Sofia Motorway, section: Dragoman – Slivnitza – Sofia	3,48	II	
BG-M-6	Kalotina-Sofia Motorway, section: Kalotina-Dragoman	3,4	II	
BG-M-7	Kalotina-Sofia Motorway, Section: Hemus Connector	4,4	I	
BG-M-8	Kalotina-Sofia Motorway, Section: Sofia Ring Road – North Arc	3,6	II	
BG-M-9	Hemus Motorway, Section 1	3,8	II	
BG-M-10	Hemus Motorway, Section 2	3,8	II	
BH-M-1	Construction of Bosanski - Gradiska - Banja Luka Motorway (along E-661 route)	3,38	II	
BH-M-2	Construction of Tuzia-Orasja Expressway	3,42	II	
BH-M-3	Construction of Jablanica Detour (E-73 road)	3,38	II	
BH-M-4	Improvement of Foca-Hum Road	3,22	II	
BH-M-5	Construction of Mostar Bypass (E-73 road)	3,38	II	
BH-M-6	Improvement of Lasva-Travnik Road M5/E-761	3,70	II	
BH-M-7	Improvement of Stolac-Neum Road (M17-3)	3,14	II	
BH-M-8	Construction of Corridor V Motorway	3,36	II	
BL-M-1	Upgrading of the M1/E30 road, section from km 1.7 to km 9.8		n.a.	Belarus TEM projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from Euro-Asian Corridors Info Sheet on Investments.
BL-M-2	Upgrading of the M1/E30 road, section from Telmy to Kozlovichi (21 km lengs)		n.a.	
BL-M-3	Upgrading of the M1/E30 road, section from (n.a.)		n.a.	
CR-M-1	A3-01 Zupanja - Lipovac	3,50	II	
CR-M-2	A4-01 Gorican	3,29	II	
CR-M-3	A6-01 Bosiljevo - Kupjak	3,51	II	
CR-M-4	A6-01Kupjak – Kikovica	3,51	II	
CR-M-5	A7-01 Rijeka – Krizisce	3,88	II	
CR-M-6	A7-02 Krizisce – Senj	3,31	II	
CR-M-7	A7-03 Senj - Zuta Lokva	3,34	II	
CR-M-8	A1-01 Sveti Rok Tunel	3,91	II	
CR-M-9	A1-02 Pirovac – Sibenic	3,88	II	
CR-M-10	A1-03 Sibenic – Vrpolje	3,83	II	
CR-M-11	A1-04 Dugopolje - Zagvozd (Makarska)	3,55	II	
CR-M-12	A1-05 Zagvozd (Makarska) - Ploce	3,35	II	
CR-M-13	A1-06 Ploce – Neum	3,43	II	
CR-M-14	A1-07 Neum - Dubrovnik	3,18	II	
CR-M-15	A2-01 Macelj – Krapina	3,72	II	
CR-M-16	A2-02 Zapresic - Zagreb	4,13	I	
CR-M-17	A1-08 Mala Kapela	4,29	I	
CR-M-18	A1-09 Dugopolje – Klis	3,67	II	
CR-M-19	A1-10 Klis – Split	3,67	II	
CR-M-20	A5-01 Knezevo - Ceminac	3,42	II	

Project ID	Project Description	Score	Category	Comments
CR-M-21	A5-02 Ceminac - Osijek	3,42	II	
CR-M-22	A5-03 Osijek - Sredanci	3,55	II	
CR-M-23	A5-04 Sredanci – Svilaj	3,29	II	
CR-M-24	A10-01 Metkovic - Ploce	3,42	II	
CR-M-25	A5-05 Ceminac - Batina	3,29	II	
CR-M-26	A9-01 Vodnjan – Pula	3,73	II	
CR-M-27	A9-02 Umag - Kanfanar	3,77	II	
CZ-M-1	Motorway D8: Trmice-German border	4,18	I	
CZ-M-2	Motorway D8: Lovosice-Rehlovice	4,26	I	
CZ-M-3	Motorway D11: Podebrady-Hradec Kralove	4,32	I	
CZ-M-4	Motorway D1: Vyskov-Kromeriz	3,3	II	
CZ-M-5	Motorway D47: Lipnik-Polish border	4,06	I	
GM-1	World Bank Credit No3357GE	n.a.	n.a.	
GM-1	World Bank Credit No3357GE	n.a.	n.a.	Georgia TEM projects were not given in details so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from Euro-Asian Corridors Info Sheet
GE-M-2	Kuwaiti Fund Credit No589	n.a.	n.a.	
GE-M-3	KfW - Road Component	n.a.	n.a.	
GE-M-4	World Bank Credit	n.a.	n.a.	
GR-M-1	"Strymonas-Nea Peramos" of Egnatia Moto r way**:**Construction 41,5 Km dual carriageway	3,24	II	
GR-M-2	"Profitis – Macedonia Airport" (code: 59.1)**:** Construction of 40 Km dual carriageway (Kavala bypass)	3,44	II	
GR-M-3	"Derveni–Serres–Promahonas" (code:60) – Section: Derveni – Lefkonas**:** Construction of 64km motorway	3,34	II	
GR-M-4	"Siatista-Kristallopigi" (code: 45) Section Siatista-Kostarazi**:**Construction of 30 Km motorway (Siatista-Argos Orestiko)	3,38	II	
GR-M-5	Ardanio-Ormenio(code: 80)-Sect.:Ardani o-Soufli**:**Construction 30 Kmexpressway	3,54	II	
HU-M-1	M0: M1 to M5	high	I	These projects (all HU-M) were not evaluated using the MCA method since no sufficient data existed. Hungary provided the qualitative scores and therefore the priorities.
HU-M-2	M0: M5 to M2	high	I	
HU-M-3	M2: Bp.-Vác	high	I	
HU-M-4	M2: Vác-H/SK border	medium	II-III	
HU-M-5	M3: Polgár-Nyíregyh.	High	I	
HU-M-6	M3: Nyíregyh.-H/UA b.	medium	II-III	
HU-M-7	M5: Kiskunf.-H/YU b.	High	I	
HU-M-8	M6: Bp.-Dunaújv.	High	I	
HU-M-9	M6: Dunaújv.-Boly	medium	II-III	
HU-M-10	M6: Boly-H/Cr b.	medium	II-III	
HU-M-11	M7: Zamárdi-H/CR .b	high	I	
HU-M-12	M15: Mmóvár-H/SK b.	high	I	
HU-M-13	M43: Szeged-Makó	medium	II-III	
HU-M-14	M43: Makó-H/R b.	medium	II-III	
HU-M-15	Sopron-N.kanizsa	medium	II-III	
HU-M-16	M30: SK/H b.-Miskolc	medium	II-III	
HU-M-17	M30: Miskolc-Emőd	high	I	
HU-M-18	M35: Emőd-Debrecen	high	I	
HU-M-19	M35: Debrecen bypass	high	I	

Project ID	Project Description	Score	Category	Comments
HU-M-20	47/42:Debrecen-H/R b.	medium	II-III	
LT-M-1	Development of I Transport Corridor (Via Baltica) in the Years 2004-2005	3,82	II	
LT-M-2	Development of Transport Corridor IXB in the Years 2004-2006	3,48	II	
LT-M-3	Development of Roads (E85 Lyda-Vilnius, E 272Vilnius-Panevėžys, E272 Panevėžys- Ši auliai+ E272 Šiauliai – Palanga) of Transeur opean Road Netw. in the Years 2004-2006	3,44	II	
LT-M-4	Widening of bridge on road A1 across Neris river in Kaunas city.	1	IV	No data provided.
LT-M-5	Widening of road A1 (6 traffic lanes)	1	IV	
LT-M-6	Widening of road A1 (6 traffic lanes)	1	IV	
LT-M-7	Road A5 Kaunas-Marijampolė-Suvalkai (construction of second driving direction)	1	IV	
LT-M-8	Road A5 Kaunas-Marijampolė-Suvalkai (construction of second driving direction)	1	IV	
LT-M-9	Road A8 Panevėžys-Aristava-Sitkūnai (construction of second driving direction)	1	IV	
LT-M-10	Road A8 Panevėžys-Aristava-Sitkūnai (construction of second driving direction)	1	IV	
Ma-H-1	Construction of Demir Kapija - Udovo - Smokvica section: Phase I (33 km)	n.a.	I	FYROM provided data insufficient to support the elaboration of the MCA method. Priorities resulted after fax-communication with national representative. The scores therefore are missing.
Ma-H-2	Construct. Sect.Tavanovce-Kumanovo 7,3km	n.a.	I	
Ma-H-3	Finalise construction of works along Corridor VIII	n.a.	II	
MD-M-1	Improvement of Traffic Conditions along the Road Leuseni-Chisinau-Dubasari - the Bord er with Ukraine on Section Chisinau Bypass.	3,42	II	
PL-M-1	A18-I	n.a.	I	Poland provided data insufficient to support the elaboration of the MCA methodology. Priorities resulted for some projects after communication with the TEM representative. The sc ores therefore are missing for tho se projects that belong in priority I or II.
PL-M-2	A1-I	1,46	IV	For projects belonging in priority IV, Poland repres. made no comments.
PL-M-3	A1-II	1,54	IV	
PL-M-4	A1-III	1,62	IV	
PL-M-5	A1-IV	1,38	IV	
PL-M-6	AI-V	1,54	IV	
PL-M-7	A1-VI	1,54	IV	
PL-M-8	A1-VII	1,54	IV	
PL-M-9	A1-VIII	1,54	IV	
PL-M-10	A1-IX	1,62	IV	
PL-M-11	A1-X	n.a.	II	
PL-M-12	A2-I	1,38	IV	
PL-M-13	A2-II	n.a.	I	
PL-M-14	A2-III	n.a.	I	
PL-M-15	A2-IV	n.a.	I	
PL-M-16	A2-V	n.a.	I	
PL-M-17	A2-VI	n.a.	I	
PL-M-18	A2-VII	n.a.	I	
PL-M-19	A2-VIII	1,46	IV	
PL-M-20	A2-IX	1,54	IV	
PL-M-21	A4-I	n.a.	I	

Project ID	Project Description	Score	Category	Comments
PL-M-22	A4-II	n.a.	I	
PL-M-23	A4-III	n.a.	I	
PL-M-24	A4-IV	n.a.	I	
PL-M-25	A4-V	n.a.	I	
PL-M-26	A4-VI	1,46	IV	
PL-M-27	A4-VII	1,46	IV	
PL-M-28	A4-VIII	1,54	IV	
PL-M-29	A4-IX	1,54	IV	
PL-M-30	A6-I	n.a.	I	
PL-H-1	S1-I	1,62	IV	
PL-H-2	S1-II	n.a.	I	
PL-H-3	S1-III	n.a.	I	
PL-H-4	S1-IV	n.a.	I	
PL-H-5	SI-V	n.a.	I	
PL-H-6	S1-VI	1,62	IV	
PL-H-7	S3-I	1,62	IV	
PL-H-8	S3-II	1,62	IV	
PL-H-9	S3-III	1,62	IV	
PL-H-10	S3-IV	1,62	IV	
PL-H-11	S3-V	1,62	IV	
PL-H-12	S3-VI	1,62	IV	
PL-H-13	S3-VII	1,62	IV	
PL-H-14	S3-VIII	1,62	IV	
PL-H-15	S3-IX	1,62	IV	
PL-H-16	S3-X	1,62	IV	
PL-H-17	S3-XI	1,3	IV	
PL-H-18	S3-XII	1,62	IV	
PL-H-19	S3-XIII	1,62	IV	
PL-H-20	S3-XIV	1,62	IV	
PL-H-21	S3-XV	1,62	IV	
PL-H-22	S3-XVI	1,62	IV	
PL-H-23	S5-I	1,62	IV	
PL-H-24	S5-II	1,62	IV	
PL-H-25	S5-III	1,62	IV	
PL-H-26	S5-IV	1,62	IV	
PL-H-27	SI-V	n.a.	I	
PL-H-28	S5-VI	1,62	IV	
PL-H-29	S5-VII	1,62	IV	
PL-H-30	S69-I	1,62	IV	
PL-H-31	S69-II	1,62	IV	
PL-H-32	S69-III	1,62	IV	
PL-H-33	S69-IV	1,62	IV	
PL-H-34	S69-V	1,62	IV	
PL-H-35	S69-VI	n.a.	II	
PL-H-36	S69-VII	n.a.	II	
PL-H-37	S69-VIII	n.a.	I	
PL-H-38	S69-IX	n.a.	I	
PL-H-39	S69-X	1,62	IV	
PL-H-40	S6-I	1,62	IV	
PL-H-41	S6-II	1,62	IV	
PL-H-42	S6-III	1,62	IV	
PL-H-43	S8-I	1,62	IV	
PL-H-44	S8-II	n.a.	I	
PL-H-45	S8-III	1,62	IV	
PL-H-46	S8-IV	1,3	IV	
PL-H-47	S8-V	1,62	IV	
PL-H-48	S8-VI	1,62	IV	
PL-H-49	S8-VII	1,38	IV	
PL-H-50	S8-VIII	1,62	IV	
PL-H-51	S8-IX	1,62	IV	
PL-H-52	S8-X	1,54	IV	
PL-H-53	S8-XI	1,3	IV	

Project ID	Project Description	Score	Category	Comments
PL-H-54	S8-XII	n.a.	II	
PL-H-55	S8-XIII	n.a.	II	
PL-H-56	S8-XIV	1,62	IV	
PL-H-57	S8-XV	1,62	IV	
PL-H-58	S8-XVI	1,62	IV	
PL-H-59	S8-XVII	1,62	IV	
PL-H-60	S8-XVIII	1,62	IV	
PL-H-61	S8-XIX	1,62	IV	
RO-M-1	Nădlac - Timişoara	4,04	I	
RO-M-2	Timişoara – Lugoj	3,82	II	
RO-M-3	Lugoj – Deva	3,65	II	
RO-M-4	Deva – Sebeş	4,21	I	
RO-M-5	Sebeş – Sibiu	3,91	II	
RO-M-6	Sibiu – Piteşti	3,55	II	
RO-M-7	Bucharest South By-pass	3,65	II	
RO-M-8	Bucharest North By-pass	3,73	II	
RO-M-9	Bucharest – lehliu	4,2	I	
RO-M-10	Lehliu – Feteşti	4,14	I	
RO-M-11	Feteşti - Cernavodă	4,24	I	
RO-M-12	Cernavodă - Constanţa	3,72	II	
RO-M-13	Bucharest - Giurgiu	4,27	I	
RO-M-14	Lugoj - Drobeta Turnu Severin	3,61	II	
RO-M-15	Drobeta Turnu Severin - Craiova	3,43	II	
RO-M-16	Craiova - Bucharest	3,38	II	
RO-M-17	Timişoara - Stamora Moraviţa	3,74	II	
RO-M-18	Oradea – Zalău	4,3	I	
RO-M-19	Halmeu - Satu Mare	3,3	II	
RO-M-20	Satu Mare – Zalău	3,33	II	
RO-M-21	Zalău - Cluj Napoca	4,16	I	
RO-M-22	Cluj – Turda	4,46	I	
RO-M-23	Turda – Sebeş	3,29	II	
RO-M-24	Turda – Ogra	4,34	I	
RO-M-25	Ogra – Sighişoara	4,18	I	
RO-M-26	Sighişoara – Braşov	4,1	I	
RO-M-27	Braşov – Predeal	3,8	II	
RO-M-28	Predeal – Comarnic	3,96	II	
RO-M-29	Comarnic – Ploieşti	3,58	II	
RO-M-30	Ploieşti – Bucureşti	4,24	I	
RO-M-31	Albiţa – Crasna	3,57	II	
RO-M-32	Crasna – Tecuci	3,44	II	
RO-M-33	Tecuci – Mărăşeşti	3,6	II	
RO-M-34	Mărăşeşti - Râmnicu Sărat – Buzău	3,76	II	
RO-M-35	Buzîu - Bucharest N/E	3,64	II	
RO-M-36	Siret – Suceava	3,61	II	
RO-M-37	Suceava – Săbăoani	3,34	II	
RO-M-38	Săbăoani – Bacău	3,29	II	
RO-M-39	Bacău – Mărăşeşti	3,43	II	
RO-M-40	Sculeni – Iaşi	3,19	II	
RO-M-41	Iaşi - Târgu Frumos	2,54	III	
RO-M-42	Târgu Frumos – Săbăoani	2,69	III	
RU-H-1	Development of the direction: BelaruS border - Moscow - Nizhni Novgorod	n.a.	n.a.	Russian federation TEM projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from country's National report for Euro-Asian Corridors.
RU-H-2	Development,direction: Ukraine border- Kursk - Saratov	n.a.	n.a.	
RU-H-3	Development direction:Syzran-Saratov-Volgograd	n.a.	n.a.	
RU-H-4	Development of the direction: Finland border - St. Petersburg - Vologda - Kirov - Perm - Ekarinburg	n.a.	n.a.	

Project ID	Project Description	Score	Category	Comments
RU-H-5	Development of the direction: Ekarinburg - Tyumen	n.a.	n.a.	
RU-H-6	Construction of Chita - Khabarovsk (Part of world national highway: Krasnoe - Moscow - Vladivostok)	n.a.	n.a.	
RU-M-1	Reconstruction of sections on the route: Ukraine border - Kursk - Voronezh - Saratov	n.a.	n.a.	
RU-M-2	Construction and reconstruction of Motorway "Don" on the section Moscow - Voronezh	n.a.	n.a.	
RU-M-3	Motorway «Don» on the section Voronezh – Rostov on Don – Novorossiisk/Sochi: Length of the section with necessity of construction and reconstruction - 302 km	n.a.	n.a.	
RU-M-4	Motorway"Kaspiy"Moscow-Tambov- Volgograd-Astrakhan+ and road Astrakhan-Makhachkala:Length of the section for cotruction, modernization+reconstruction -515 km	n.a.	n.a.	
RU-M-5	Motorway"Caucasus"on the section Pavlovskaya-Mineralnie Vodi-Kochubey/Makhachkala:Length of section for reconstruction359km	n.a.	n.a.	
RU-M-6	Auxiliary and service infrastructure	n.a.	n.a.	
SK-M-1	Motorway D1 Bidovce - Dargov	3,87	II	
SK-M-2	Motorway D1 Dargov - Pozdisovce	3,94	II	
SK-M-3	Motorway D1 Pozdisovce-State border SR/UA	4,1	I	
SK-M-4	Motorw.D3HricovskePodhradie-Zilina, Strazov	4,16	I	
SK-M-5	Motorway D3 Cadca, Bukov - Svrcinovec	3,88	II	
SK-M-6	Motorway D3 Svrcinovec - Skalite	3,99	II	
SK-H-1	Expressway R3 Horna Stubna, bypass	3,97	II	
SK-H-2	Expressway R4 Kosice - Milhost	4,28	I	
SK-H-3	Expressway R4 Svicnik, relocation	3,91	II	
SK-M-7	Motorway D1 Sverepec - Vrtizer	4,18	I	
SK-M-8	Motorway D1 Hricovske Podhradie - Dubna Skala	4,08	I	
SK-M-9	Motorway D1 Dubna Skala - Turany	4,14	I	
SK-M-10	Motorway D1 Turany - Hubova	3,79	II	
SK-M-11	Motorway D1 Hubova - Ivachnova	4,04	I	
SK-M-12	Motorway D1 Janovce - Jablonov	3,9	II	
SK-M-13	Motorway D1 Jablonov - Beharovce	3,94	II	
SK-M-14	Motorway D1 Fricovce - Svinia	3,86	II	
SK-M-15	Motorway D1 Presov West - Presov South	3,76	II	
SK-M-16	Motorway D1 Budimir - Bidovce	3,88	II	
SL-M-1	Maribor-Pince	4,06	I	
SL-M-2	Bič-Obrežje	4,2	I	
SL-M-3	Vrba-Peračica	3,96	II	
SL-M-4	Šentvid-Koseze	3,96	II	
SL-M-5	Koper-Dragonja	3,6	II	
SL-M-6	Slivnica-Draženci	4,1	I	
SL-M-7	Draženci-Gruškovje	3,52	II	
SM-H-1	Upgrading border-crossing at Kotroman	n.a.	n.a.	Serbia & Montenegro TEM projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from REBIS.
SM-H-2	Upgrading border-crossing at Presevo	n.a.	n.a.	
SM-H-3	Upgrading border-crossing at Gradina	n.a.	n.a.	
SM-H-4	Upgrading bor.-crossing at Debeli Brijek	n.a.	n.a.	
SM-H-5	Upgrading border-crossing at Bozaj	n.a.	n.a.	
SM-H-6	Rehabilitation of Bujanovac-Presevo road	n.a.	n.a.	
SM-H-7	Rehabilitation of Leskovac - Bujanovac	n.a.	n.a.	
SM-H-8	Rehabilitation of Liberty bridge in Novi Sad	n.a.	n.a.	
SM-H-9	Rehabilitation of Belgrade-Nis road	n.a.	n.a.	
SM-H-10	Improvement Rzav Nova Varos road	n.a.	n.a.	
SM-M-1	Completion of Motorway Novi Sad - Horgos	n.a.	n.a.	
SM-M-2	Completion of Motorway Belgrade - Novi ad	n.a.	n.a.	
SM-H-11	Upgrading Nis-Pirot-Gradina road	n.a.	n.a.	

Project ID	Project Description	Score	Category	Comments
SM-H-12	Completion of belgrade bypass	n.a.	n.a.	
SM-H-13	Rehabilitation of Pancevo-Roman. Bord. road	n.a.	n.a.	
SM-H-14	Removal of bottlenecks on Ovcar Banja roads	n.a.	n.a.	
SM-H-15	Sozina Tunnel, access roads	n.a.	n.a.	
SM-H-16	Eastern mini bypass of Podgorica	n.a.	n.a.	
SM-H-17	Rehabilitation of road Podgorica - Bjelo Polje: Improve capacity and safety	n.a.	n.a.	
SM-H-18	Rehabilitation of road Podgorica - Bjelo Polje: Improving speed, capacity and safety	n.a.	n.a.	
SM-H-19	Rehabilitation of Cacak-Pozega road	n.a.	n.a.	
SM-H-20	Cacak bypass, Phase 1	n.a.	n.a.	
SM-H-21	Bypass Niksic	n.a.	n.a.	
SM-H-22	Rehabilitation of Petrovac-Budva road	n.a.	n.a.	
SM-H-23	Leskovac Bujanovac	n.a.	n.a.	
SM-H-24	Verige bridge at Kotor	n.a.	n.a.	
SM-H-25	Bypass Bijelo Polje	n.a.	n.a.	
SM-H-26	Podgorica - Niksic Bosnian border	n.a.	n.a.	
TU-M-1	Ankara-Pozanti Mot.Section1:Ankara-Acikuyu	3,85	II	
TU-M-2	Ankara-Pozanti Mot. Sect.2:Acikuyu- Ortakoy	3,85	II	
TU-M-3	Ankara-Pozanti Mot.Section3:Ortakoy- Golcuk	4,1	I	
TU-M-4	Ankara – Pozanti Motorway, Section 4: Golcuk - Pozanti	3,6	II	
TU-M-5	Bursa – Izmir Motorway, Section 1: Orhangazi – Bursa	3,8	II	
TU-M-6	Bursa – Izmir Motorway, Section 2: (Bursa-Karacabey) Jun.-Susurluk	4,05	I	
TU-M-7	Bursa – Izmir Motorway, Section 3: Susurluk-(Balikesir-Edremit)Junc.	4,05	I	
TU-M-8	Bursa – Izmir Motorway, Section 4: (Balikesir-Edremit)Junc.- Kirkagac	4,1	I	
TU-M-9	Bursa – Izmir Motorway, Section 5: Kirkagac-Manisa	4	I	
TU-M-10	Bursa-Izmir Motorway,Section5:Manisa-Izmir	4,1	I	
TU-M-11	Tekirdag – İpsala border Road, Section 1: Kinali Junc. – Tekirdag	3,91	II	
TU-M-12	Tekirdag – İpsala border Road, Section 2: Tekirdag Bypass	4,05	I	
TU-M-13	Tekirdag – İpsala border Road, Section 3: Tekirdag – Malkara Junction	4,25	I	
TU-M-14	Tekirdag – İpsala border Road, Section 4: Malkara junc.-İpsala Border	4,35	I	
TU-M-15	Sanliurfa – Habur Border, Section 1: Sanliurfa – Viransehir	4,01	I	
TU-M-16	Sanliurfa – Habur Border, Section 2: Viransehir-Kiziltepe	3,91	II	
TU-M-17	Sanliurfa – Habur Border, Section 3: Kiziltepe-Nusaybin Junc.	4,01	I	
TU-M-18	Sanliurfa – Habur Border, Section 4: Nusaybin Junc.- Oyali	4,01	I	
TU-M-19	Sanliurfa-Habur Border,Section5:Oyali-Cizre	4,01	I	
TU-M-20	Sanliurfa-Habur Border,Section6:Cizre-Silopi	4	I	
UKR-M-1	Building and maintenance of motorway West Border of Ukraine (Kosyny) -Kyiv on road' part Vinnytza-Kyiv on the term of oncession.	3,26	II	
UKR-M-2	Building and maintenance of new motorway Lviv-Krakovets on the term of concession.	3,22	II	
UKR-M-3	Building and maintenance of new motorway Lviv-Brody on the term of concession.	3,24	II	

UKR-M-4	Building +maintenance of motorway fm Rus sia bor.(Scherbakivka) to the motorway of state value Kyiv – Kharkiv – Dovzhansky.	3,3	II	

Table 18 Results of Projects Evaluation/ Technical Prioritization – TER (Rail)

Project ID	*Project Description*	*Score*	*Category*	*Comments*
AT-R-1	New lines, upgrading and modernisation of network	n.a.	**I - II**	These projects (all AT-R) were not evaluated u sing the MCA method since no sufficient data existed. Priorities result ed from the investment plan provided by the co untry concering transprt infrastructure, in which it was mentioned that all t hese projects will be fin alized and funded until 2013.
AT-R-2	Nodes, stations, terminals, short-distance traffic	n.a.	**I - II**	
AT-R-3	Various other projects	n.a.	**I - II**	
AT-R-4	Safety (tunnels, railway crossings)	n.a.	**I - II**	
AT-R-5	Re-investment, quality improvements, streamling	n.a.	**I - II**	
AT-R-6	Planning for long-term investments	n.a.	**I - II**	
BG-R-1	Plovdiv-Svilengrad: Modernization and electrification of Plovdiv-Svilengrad railine	3,94	II	
BG-R-2	Vidin-Calafat: Construction of Danube bridge Vidin-Calafat	3,52	II	
BG-R-3	Dragoman-Kalotina: Electrification of Dragoman-Kalotina railway line	4,34	I	
BG-R-4	Vidin-Sofia-Kulata: Modernisation of Vidin-Sofia-Kulata railway line	3,72	II	
BG-R-5	Sofia-Plovdiv-Burgas/Varna: Modernisation of Sofia-Plovdiv-Burgas/Varna railway line	3,88	II	
BG-R-6	Radomir-Gueshevo: Modernisation and electrification of Radomir-Gueshevo railine	3,18	II	
BG-R-7	Sofia-Zimnitsa: Modernisation of Sofia-Karlovo-Zimnitsa railway line	3,3	II	
BG-R-8	Sofia-Dragoman: Modernisation of Sofia-Dragoman railway line	4,26	I	
BH-R-1	BOSANSKI SAMAC-SARAJEVO: Track overhaul and reconstruction of 123 km of the line to meet TER standards	3,9	II	
BH-R-2	SARAJEVO-CAPLJINA: Track overhaul and reconstruction of 145 km of the line	3,72	II	
BH-R-3	BOSANSKI SAMAC-CAPLJINA: Modernization of signaling system	3,64	II	
BH-R-4	BOSANSKI SAMAC-CAPLJINA: Modernization of telecommunication system	3,88	II	
BH-R-5	Doboj-Dobrljin:Track overhaul and reconstruction of 78 km of the line to meet TER standards	3,82	II	
BH-R-6	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik:Modernization of signaling system	3,5	II	
BH-R-7	Dobrljin-B.Luka-Doboj-Tuzla-Zvornik:Modernization of telecommunication system	3,66	II	
BL-R-1	Organisation of speed traffic of passenger trains (section Krasnoje-Minsk-Brest)	n.a.	n.a.	Belarus TEM projects were not given in details by coun try so they were not technI cally evaluated. They were examined directly in the “fi nancial feasibility priorityza tion phase” based on info taken from Euro-Asian Cor Info Sheet on Investments.

CR-R-1	Reconstruction of Railway section of Corridor Vc	n.a.	n.a.	Croatia TER projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial information taken from REBIS.
CR-R-2	Electrification of north section (78,9) Beli Manastir - Strizivojna/Vrpolje	n.a.	n.a.	
CR-R-3	Track overhaul of railway section of Corridor Vb	n.a.	n.a.	
CR-R-4	Construction of 2nd rail track on 36km Dugo Selo - Krizevci section	n.a.	n.a.	
CR-R-5	Modification of the electical traction system on rail line Moravice-Rijeka-Sapjane (Skriljevo-Bakar)	n.a.	n.a.	
CR-R-6	Remote control system on rail line Botovo-Zagreb-Rijeka (329km) section	n.a.	n.a.	
CR-R-7	Reconstruction of Zagreb Main Railway Station	n.a.	n.a.	
CR-R-8	Ostarije-Knin-Split: Track reconstruction on Kosovo (Knin) -Split section	n.a.	n.a.	
CR-R-9	Reconstruction of stations on rail line Ostarije-Knin-Split	n.a.	n.a.	
CR-R-10	Construction of 2nd rail track on 53km Zagreb-Kalrovac section	n.a.	n.a.	
CR-R-11	Rail track overhaul Ostarije-Ogulin (6,2km), Skrad - Drivenik (32,2km) & Skriljevo - Rijeka (11,4km) sections. Total 54,8km of single track line	n.a.	n.a.	
CR-R-12	Construction of 2nd track on section Zagreb-V. Gorica	n.a.	n.a.	
CR-R-13	Remote rail control traffic system Savski marof - Zagreb-Tovarnik (319km)	n.a.	n.a.	
CR-R-14	Rail track overhaul Savski Marof-Zagreb & Ivankovo-Tovarnik sections, total 92,8km	n.a.	n.a.	
CR-R-15	Project of optical telecommunication rail network (whole HZ network)	n.a.	n.a.	
CR-R-16	Electrification of Ostarije-Knin-Spli/Sibenic	n.a.	n.a.	
CZ-R-1	Benesov-Ceske Budejovice	3,86	II	
CZ-R-2	Ceske Budejovice-Horni Dvoriste	4,42	I	
CZ-R-3	State border - Cheb-Plzen	4,1	I	
CZ-R-4	Detmarovice-Mosty u Jablunkova	4,1	I	
CZ-R-5	Electrification of the railway line Kadan-Karlovy Vary	3,62	II	
CZ-R-6	Electrification of the railway line Letohrad-Lichkov	4,26	I	
CZ-R-7	Plzen-Praha	3,9	II	
CZ-R-8	Praha-Benesov	3,98	II	
GE-R-1	Reconstruction of Zestaponi-Khashuri Section	3,68	II	
GE-R-2	Georgia -Turkey New Railway Link Construction	4	I	
GR-R-1	Aharnes (Athens) - Tithoraia - Domokos - Thessaloniki: Completion of the construction of double line, substructure works, signalling and electrification	3,8	II	
GR-R-2	Tithoraia - Lianokladi:Completion of the construction of double line, substructure works, signalling and electrification, stations	3,68	II	
GR-R-3	Lianokladi - Domokos:Completion of the construction of double line, substructure works, signalling and electrification, stations	3,5	II	
GR-R-4	Aharnes-Kiato:Completion of the construction of double line, substructure works, signalling, electrification, stations and group of Thriasio Field	4,18	I	
GR-R-5	Kiato-Patras:Completion of the construction of double line, substructure works, signalling and electrification, stations	3,88	II	
GR-R-6	Aharnes-Spata Airport:Completion of the	4,26	I	

	construction of double line, substructure works, signalling, electrification, traffic group of Aharnes Center			
GR-R-7	Thessaloniki-Alexandroupoli: Construction of new single line to detected sections	4,01	I	
GR-R-8	Aharnes-Patra:Electrification	3,88	II	
GR-R-9	Inoi-Chalkis:Electrification	3,88	II	
GR-R-10	West Axis/Section 1:Igoumenitsa-Kalambaka-Kozani	2,86	III	
GR-R-11	West Axis/Section 2:Rion-Ioannina	2,94	III	
GR-R-12	West Axis/Section 3:Rio-Patra-Kalamata	3,04	II	
HU-R-1	Track reconstruction on the line Győr–Celldömölk	3,48	II	
HU-R-2	Reconstruction of Budapest – Hegyeshalom main lines phase II.	3,76	II	
HU-R-3	Rehabilitation of Hatvan – Somoskőújfalu railway line	3,54	II	
HU-R-4	Rehabilitation of Mezőzombor – Sátoraljaújhely railway line	3,54	II	
HU-R-5	Reconstruction of Budapest – Hatvan – Miskolc railway line	3,18	II	
HU-R-6	Reconstruction of Budapest – Szob railway line	3,44	II	
HU-R-7	Reconstruction of Dombóvár – Gyékényes railway line	3,16	II	
HU-R-8	Reconstruction of Budapest – Pusztaszabolcs – Dombóvár railway line	3,38	II	
HU-R-9	Reconstruction of Budapest – Székesfehérvár railway line	3,28	II	
HU-R-10	Rehabilitation and electrification of railway line Budapest-Esztergom	3,44	II	
HU-R-11	Rehabilitation anelectrification of Szabadbattyán – Tapolca railway line	3,28	II	
HU-R-12	Reconstruction of Zalalövő – Ukk – Boba railway line	3,52	II	
HU-R-13	Reconstruction of Székesfehérvár – Szombathely railway line	3,52	II	
HU-R-14	Electrification of Szombathely – Nagykanizsa railway line	3,18	II	
HU-R-15	Electrification of Hegyeshalom – Szombathely railway line	3,4	II	
HU-R-16	Rehabilitation of Budapest – Kelebia railway line	3,16	II	
HU-R-17	Rehabilitation of Budapest – Lajosmizse – Kecskemét railway line	3,3	II	
HU-R-18	Rehabilitation of Cegléd – Szeged railway line	3,4	II	
HU-R-19	Rehabilitation of railway line Budapest-Újszász-Szolnok-Lökösháza -Phase I.	3,3	II	
HU-R-20	Reconstruction of railway line Püspökladány–Biharkeresztes	3,1	II	
HU-R-21	Reconstruction of railway line Szolnok-Debrecen-Nyíregyháza-Záhony	3,12	II	
HU-R-22	Reconstruction of railway line Miskolc – Nyíregyháza	3,04	II	
HU-R-23	Railway line Budapest–Cegléd–Szolnok	3,36	II	
LT-R-1	Modernisation of Telecommunicatios on the Rail Corridor IXB	4,18	I	
LT-R-2	Modernisation of Telecommunicatios equipments on the Rail Corridor IXD	4,06	I	
LT-R-3	Modernisation of Signalling and Power supply on Crete corridor sectin Šiauliai – Klaipėda	4,16	I	
LT-R-4	Modernisation of power supply on Crete Corridor IX B section Kaisiadorys-Radvilislis	4,16	I	
LT-R-5	Reconstruction of Kaunas tunnel	4,02	I	
LT-R-6	Elimination of crossings (road overpasses building) on corridor IXD	4,02	I	
LT-R-7	Elimination of crossings (road overpasses	4,02	I	

	building) on corridor IXB			
LT-R-8	Infrastructures renovation of main tracks links	3,78	II	
LT-R-9	Tracks modernization for speed up to 160 km/h on Kena – Kybartai line	4,02	I	
LT-R-10	Tracks modernization for speed up to 160 km/h on Kaisiadorys – Siauliai line	4,02	I	
LT-R-11	Modernization of Signalling and Power supply on lines Kena-Kybartai, Radviliskis-Siauliai	3,98	II	
LT-R-12	Modernization of radio system	4,1	I	
LT-R-13	Development of Klaipeda railway node	4,1	I	
LT-R-14	Extension of tracks length up to 1050 m on the corridor IXD, IXB stations	4,14	I	
LT-R-15	Development of Vilnius node	4,1	I	
LT-R-16	Construction of new standart gauge section State border with Poland –Kaunas	"Rail Baltica"	I	These project s were not evaluated using the MCA, after request of Lithuania, since belong to Rail Baltica. They were prioritized directly by country.
LT-R-17	Construction of new standard gauge section Kaunas- State border with Latvia	"Rail Baltica"	I	
LT-R-18	Electrification of Kena-Kybartai line	3,86	II	
LT-R-19	Electrification of Kaišiadorys-Radviliskis,Palemonas-Gaižiūnai line	3,86	II	
LT-R-20	Electrification of Radviliskis-Klaipeda line	3,86	II	
LT-R-21	Reconstruction of Kena border station	4,06	I	
LT-R-22	Hot boxes axles detectors modernization	4,18	I	
Ma-R-1	Complete construction of railway towards Albania and Bulgaria	n.a.	n.a.	FYROM provided data insufficient to support the elaboration of the MCA method, so priorities and scores are missing.
Ma-R-2	Electrification/ Modernisation of Skopje - Gostivar	n.a.	n.a.	
Ma-R-3	Increase speed on certain section along Corridor X	n.a.	n.a.	
Ma-R-4	Multi-modal terminal at Struga	n.a.	n.a.	
Ma-R-5	Free Economic Zone in Durres	n.a.	n.a.	
MD-R-1	Rehabilitation and Electrification of the Railway Line Ukrainian border – Bender – Chişinău – Ungheni – Romanian Border	4,04	I	
MD-R-2	Construction (Restoration) of the Revaca – Cainari Railway Line	3,44	II	
PL-R-1	Rzepin-Kunowice (E20): Rail upgrading	n.a.	n.a.	Poland'sTER projects were not given in details by country so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from ISPA info sheets.
PL-R-2	Siedlce-Terspol: Modernisation of rail section (Phase 1)	n.a.	n.a.	
PL-R-3	Wegliniec-Legnica Modernisationof E30 rail section	n.a.	n.a.	
PL-R-4	Poznan modernisation rail node E20	n.a.	n.a.	
PL-R-5	Improvement of railway infrastructure and liquidation of operational bottlenecks	n.a.	n.a.	
PL-R-6	Modernisation of E30 railway line section	n.a.	n.a.	
RO-R-1	Rehabilitation and Modernisation of the Railway line Craiova – Calafat, component of the Pan-European Corridor IV (the southern branch)	3,34	II	
RO-R-2	Rehabilitation the Railway Line Bucharest – Videle - Giurgiu, component of the Pan-European Corridor IX for the traffic of the trains with a maximum speed of 160 km/hour	3,86	II	
RO-R-3	Rehabilitation of the Railway Line Bucharest – Constanta, component of the Pan-European Corridor IV for the traffic of the trains with a maximum speed of 160 km/hour	4,1	I	
RO-R-4	Rehabilitation of the Railway Line Brasov – Sighisoara - Curtici, component of the Pan-European Corridor IV for the traffic of the trains with a maximum speed of 160 km/hour	3,74	II	

RU-R-1	Development of the railway direction: Belarus border - Moscow - Nizhni Novgorod - Perm	n.a.	n.a.	Russian federation TER projects were not given in details so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from country's National report for Euro-Asian Corridors.
RU-R-2	Development of the railway direction:Moscow - Kazan - Ekaterinburg	n.a.	n.a.	
RU-R-3	Development of the railway direction:Finland border - St.Petersburg - Ekaterinburg	n.a.	n.a.	
RU-R-4	Development of the railway direction:Ekaterinburg - Omsk	n.a.	n.a.	
RU-R-5	Development of the railway direction:Ukraine border - Liski - Syzran - Samara - Chelyabinsk - Kurgan	n.a.	n.a.	
RU-R-6	Development of the railway direction: Novorossisk-Vologograd-Syzran	n.a.	n.a.	
RU-R-7	Development of dock station at St. Petersburg	n.a.	n.a.	
RU-R-8	Development of dock station at Vyborg	n.a.	n.a.	
RU-R-9	Development of dock station at Vysotsk	n.a.	n.a.	
RU-R-10	Development of dock station at Novorossisk	n.a.	n.a.	
RU-R-11	Development of dock station at Tuapse	n.a.	n.a.	
RU-R-12	Development of border station at Gorbunovo (border with Kazakhstan)	n.a.	n.a.	
RU-R-13	Development of border station at Solovey (border with Ukraine)	n.a.	n.a.	
RU-R-14	Moscow - Ryasah - Rostov: Modernisation and reconstruction of two way electrified rairoad (1228 kms)	n.a.	n.a.	
RU-R-15	Modernisation and reconstruction of railway line: Volgograd - Astrakham - Samur	n.a.	n.a.	
RU-R-16	Railway line Kochetovca - Saratov - Urbakh - Verkhniy Raskunchak: Modernisation and reconstruction for line and electrification for branch Kochetovka - Rtischevo	n.a.	n.a.	
RU-R-17	Construction of railway approach to port Olja: 50km length and port station	n.a.	n.a.	
RU-R-18	Construction of check points at the border stations: Aksarayskaya, Ozinki, Verkhniy, Baskunchak, Pallasovka, Elton	n.a.	n.a.	
RU-R-19	Modernisation of technical means to increase safety in railway lines which are part of the ITC "North-South"	n.a.	n.a.	
SK-R-1	ZSR Kuty - Bratislava Modernisation	3,84	II	
SK-R-2	ZSR Bratislava-Trnava Modernisation	3,24	II	
SK-R-3	ZSR Trnava-Nove Mesto nad Vahom Modernisation	3,36	II	
SK-R-4	ZSR Nove Mesto nad Vahom - Puchov	3,48	II	

	Modernisation			
SK-R-5	ZSR Zilina-krasno nad Kysucou	3,96	II	
SL-R-1	Modernisation of railway line Pragersko – Ormož – Project A	4,3	I	
SL-R-2	Electrification of railway line Pragersko - Hodoš	4,1	I	
SL-R-3	Construction of 2nd track on railway line Maribor – Šentilj – border with the Republic of Austria	4,12	I	
SL-R-4	Introduction of the ERTMS/ETCS, GSM-R system with the implementation of remote control of fixed installations of the electric traction system on the Slovenian rail network	4,58	I	
SL-R-5	Modernisation of the existing railway line Koper - Divača	4,14	I	
SL-R-6	Upgrading the Ljubljana – Zidani most – Maribor railway line	4,02	I	
SL-R-7	Construction of 2nd track on railway line Divača - Koper	3,68	II	
SM-R-1	Priority rehabilitation works Belgrade-S. Pazova Tovarnik rail line	n.a.	n.a.	Serbia & Montenegro TER projects were not given in details so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from REBIS.
SM-R-2	Priority rehabilitation on Belgrade-Nis-Presevo rail line	n.a.	n.a.	
SM-R-3	Widening of rail tunnels Ripanj and Ralja	n.a.	n.a.	
SM-R-4	Priority rehabilitation works on S. Pazova Kelebia - section Petrovaradin Cortanovci rail line	n.a.	n.a.	
SM-R-5	Priority rehabilitation of Stara pazova - kelebia rail line	n.a.	n.a.	
SM-R-6	Priority rehabilitation on Nis-Pirot-Dimitrovgrad	n.a.	n.a.	
SM-R-7	Upgrading of Valjevo-Pozega rail line	n.a.	n.a.	
SM-R-8	Rehabilitation of Vrbnica-Podgorica-Bar rail line	n.a.	n.a.	
SM-R-9	Rehabilitation of Vrbnica-Podgorica-Bar	n.a.	n.a.	
SM-R-10	Repair of danube and Ostruznica rail bridges at Belgrade	n.a.	n.a.	
SM-R-11	Reconstruction of Zezelj rail bridge at Novi sad	n.a.	n.a.	
SM-R-12	Completion of belgrade railway junction	n.a.	n.a.	
SM-R-13	Electrification of rail lines	n.a.	n.a.	
TU-R-1	Ankara-İstanbul rehabilitation Project (Existing Railway Line)	3,38	II	
TU-R-2	Ankara-Yozgat-Yıldızeli New Railway Project	3,4	II	
TU-R-3	Project of Bosphorus Rail Tube Tunnel and Gebze-Halkalı Surface Metro system	3,82	II	
TU-R-4	Turkey (Kars)-Georgia (Tbilisi) New Railway Project	4	I	
UKR-R-1	Purchase of modern track technique for modernization and maintanance of track at section Lvov - Schmerinka-Kiev	n.a.	n.a.	Ukraine's TER projects were not given in details so they were not technically evaluated. They were examined directly in the "financial feasibility prioritization phase" based on information taken from country's National report for Euro-Asian Corridors.
UKR-R-2	Building of Beskidskiy tunnel (Pan-European transport corridor №5); passenger's coachs purchase; track technique purchase.	n.a.	n.a.	

The only TER country that provided no data and no data found elsewhere by consultant and therefore is not included is Italy

ANNEX VI – INVESTMENT-TIME PLAN/ FINAL PRIORITISATION RESULTS

PART I – INVESTMENT PLAN PER COUNTRY

(**NOTE**: The previous Tables included the INITIAL priorities. For the investment planning, Priorities were replaced from CLASSES)

AUSTRIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	AT-M-1	I	1	2004	2009	173,8	100%	0%	0%	0%
TER	AT-R-1	I - II	1	2002	2013	6200	100%	0%	0%	0%
TER	AT-R-2	I - II	1	2002	2013	1700	100%	0%	0%	0%
TER	AT-R-3	I - II	1	2002	2013	900	100%	0%	0%	0%
TER	AT-R-4	I - II	1	2002	2013	300	100%	0%	0%	0%
TER	AT-R-5	I - II	1	2002	2013	1500	100%	0%	0%	0%
TER	AT-R-6	I - II	1	2002	2013	300	100%	0%	0%	0%
						11073,8				

BELARUS

Network	*Project ID*	*Category**	*Class** *	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TER	BL-R-1	n.a.	1	2003	2005	0,57	100%	0%	0%	0%
TEM	BL-M-1	n.a.	1	2003	2004	1,80	100%	0%	0%	0%
TEM	BL-M-2	n.a.	1	2000	2004	12,86	100%	0%	0%	0%
TEM	BL-M-3	n.a.	1	2005	2005	7,78	100%	0%	0%	0%
						23,01				

* Since no technical prioritization phase was applied, the category is missing.

** CLASS is based on the investment timeplan as indicated in the Euro-Asian Investment Info Sheet

BOSNIA&HERZEGOVINA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TER	BH-R-1	I	1	2004	2006	83,00	0%	100%	0%	0%
TER	BH-R-3	I	1	2004	2010	63,25	0%	100%	0%	0%
TER	BH-R-4	II	2	2011	2014	13,75	0%	100%	0%	0%
TER	BH-R-5	II	2	2011	2013	60,00	0%	100%	0%	0%
TER	BH-R-2	II	2	2011	2013	72,00	0%	100%	0%	0%
TEM	BH-M-6	II	2	2011	2015	51,00	0%	0%	0%	0%
TER	BH-R-7	II	2	2011	2014	11,10	0%	100%	0%	0%
TER	BH-R-6	II	2	2011	2014	51,00	0%	100%	0%	0%
TEM	BH-M-2	II	2	2014	2022	350,00	0%	0%	0%	0%
TEM	BH-M-1	II	2	2015	2021	83,50	0%	0%	0%	0%

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured/ Source			
							National	Bank	Grant	Private
TEM	BH-M-3	II	2	2011	2015	9,00	0%	0%	0%	0%
TEM	BH-M-5	II	2	2015	2020	72,00	0%	0%	0%	0%
TEM	BH-M-8	II	2	After 2020	n.a.	3500	0%	0%	0%	0%
TEM	BH-M-7	II	2	2014	2018	12,00	0%	0%	0%	0%
TEM	BH-M-4	II	2	2020	2024	88,00	0%	0%	0%	0%
						4519,60				

BULGARIA

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured/ Source			
							National	Bank	Grant	Private
TEM	BG-M-7	I	1	2004	2008	28,03	0%	0%	0%	0%
TER	BG-R-3	I	1	2004	2005	7	100%	0%	0%	0%
TER	BG-R-8	I	1	2005	2010	55	27%	0%	55%	0%
TER	BG-R-1	II	1	2001	2006	340	11%	44%	45%	0%
TEM	BG-M-10	II	1	2004	2012	190,968	0%	0%	0%	0%
TER	BG-R-2	II	1	2005	2009	180	9%	50%	41%	0%
TEM	BG-M-5	II	1	2004	2008	122,30	0%	0%	0%	0%
TEM	BG-M-2	II	2	2011	2014	72,50	0%	0%	0%	0%
TER	BG-R-5	II	2	2015	2026	937	25%	0%	75%	0%
TEM	BG-M-3	II	2	2011	2014	89,00	0%	0%	0%	0%
TEM	BG-M-4	II	2	2011	2014	88,50	0%	0%	0%	0%
TEM	BG-M-1	II	2	2011	2016	113,001	0%	0%	0%	0%
TEM	BG-M-9	II	2	2011	2018	177,619	0%	0%	0%	0%
TER	BG-R-4	II	2	2011	2037	2400	25%	0%	75%	0%
TEM	BG-M-8	II	2	2011	2015	136,38	0%	0%	0%	0%
TER	BG-R-7	II	2	2017	2026	900	0%	0%	0%	0%
TER	BG-R-6	II	3	2011	2016	150	20%	0%	80%	0%
TEM	BG-M-6	II	3	2016	2019	25,47	0%	0%	0%	0%
						6012,76				

CROATIA

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured/ Source			
							National	Bank	Grant	Private
TEM	CR-M-17	I	1	2004	2004	32,50	0%	100%	0%	0%
TEM	CR-M-16	I	1	2004	2005	40,00	0%	0%	0%	100%
TEM	CR-M-8	I	1	2004	2005	7,40	0%	100%	0%	0%
TEM	CR-M-5	II	1	2004	2005	108,00	0%	100%	0%	0%
TEM	CR-M-9	II	1	2004	2004	105,00	0%	100%	0%	0%
TEM	CR-M-10	II	1	2005	2005	95,00	0%	100%	0%	0%
TEM	CR-M-27	II	1	2007	2007	129,00	0%	0%	0%	100%

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	CR-M-15	II	1	2004	2008	260,00	0%	0%	0%	100%
TEM	CR-M-1	II	1	2005	2006	99,70	0%	100%	0%	0%
TER	CR-R-1	n.a.	1	2004	2005	61,40	0%	100%	0%	0%
TER	CR-R-2	n.a.	1	2008	2009	20,60	n.a.	n.a.	n.a.	n.a.
TER	CR-R-3	n.a.	1	2004	2006	28,10	100%	0%	0%	0%
TER	CR-R-4	n.a.	1	2004	2007	56,10	n.a.	n.a.	n.a.	n.a.
TER	CR-R-5	n.a.	1	2004	2007	56,20	n.a.	n.a.	n.a.	n.a.
TER	CR-R-6	n.a.	1	2004	2006	3,20	n.a.	n.a.	n.a.	n.a.
TER	CR-R-7	n.a.	1	2005	2008	54,70	n.a.	n.a.	n.a.	n.a.
TER	CR-R-8	n.a.	1	2004	2004	29,90	0%	100%	0%	0%
TER	CR-R-9	n.a.	1	2004	2005	6,00	n.a.	n.a.	n.a.	n.a.
TER	CR-R-10	n.a.	1	2005	2007	54,70	n.a.	n.a.	n.a.	n.a.
TER	CR-R-11	n.a.	1	2004	2005	27,90	n.a.	n.a.	n.a.	n.a.
TER	CR-R-12	n.a.	1	2005	2006	20,00	n.a.	n.a.	n.a.	n.a.
TER	CR-R-13	n.a.	1	2004	2006	23,40	n.a.	n.a.	n.a.	n.a.
TER	CR-R-14	n.a.	1	2004	2006	47,10	n.a.	n.a.	n.a.	n.a.
TER	CR-R-15	n.a.	1	2004	2005	30,70	n.a.	n.a.	n.a.	n.a.
TEM	CR-M-26	II	2	2011	2013	33,00	0%	0%	0%	100%
TEM	CR-M-18	II	2	2011	2013	30,00	0%	100%	0%	0%
TEM	CR-M-19	II	2	2011	2013	45,00	0%	100%	0%	0%
TEM	CR-M-11	II	2	2014	2015	185,00	0%	100%	0%	0%
TEM	CR-M-22	II	2	2011	2013	199,80	0%	100%	0%	0%
TEM	CR-M-3	II	2	2011	2013	100,00	0%	100%	0%	0%
TEM	CR-M-4	II	2	2011	2014	120,00	0%	100%	0%	0%
TEM	CR-M-13	II	2	2013	2016	210,00	0%	100%	0%	0%
TEM	CR-M-20	II	2	2011	2012	46,80	0%	100%	0%	0%
TEM	CR-M-21	II	2	2011	2013	80,00	0%	100%	0%	0%
TEM	CR-M-24	II	2	2011	2013	32,00	0%	100%	0%	0%
TEM	CR-M-12	II	2	2016	2017	280,00	0%	100%	0%	0%
TEM	CR-M-7	II	2	2013	2016	138,00	0%	100%	0%	0%
TEM	CR-M-6	II	2	2015	2017	270,00	0%	100%	0%	0%
TEM	CR-M-2	II	2	2011	2012	11,20	0%	100%	0%	0%
TEM	CR-M-23	II	2	2011	2013	18,40	0%	100%	0%	0%
TEM	CR-M-25	II	2	2018	2019	90,00	0%	100%	0%	0%
TEM	CR-M-14	II	2	2018	2022	350,00	0%	100%	0%	0%
TER	CR-R-16	n.a.	2	2011	2013	75,60	n.a.	n.a.	n.a.	n.a.

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured/ Source			
							National	Bank	Grant	Private
						3711,40				

CZECH REPUBLIC

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured/ Source			
							National	Bank	Grant	Private
TER	CZ-R-2	I	1	2005	2007	39,5	43%	25%	32%	0%
TEM	CZ-M-3	I	1	2004	2007	389,00	83%	17%	0%	0%
TEM	CZ-M-2	I	1	2004	2007	189,00	100%	0%	0%	0%
TER	CZ-R-6	I	1	2005	2008	102	100%	0%	0%	0%
TEM	CZ-M-1	I	1	2004	2006	501	88%	0%	12%	0%
TER	CZ-R-3	I	1	2005	2010	413,1	33%	35%	32%	0%
TER	CZ-R-4	I	1	2007	2013	428,7	33%	35%	32%	0%
TEM	CZ-M-5	I	1	2004	2008	1164,00	77%	23%	0%	0%
TER	CZ-R-5	II	1	2004	2007	88	100%	0%	0%	0%
TEM	CZ-M-4	II	1	2004	2009	1030,00	100%	0%	0%	0%
TER	CZ-R-8	II	2	2011	2016	256	43%	25%	32%	0%
TER	CZ-R-7	II	2	2011	2016	767,62	33%	35%	32%	0%
TER	CZ-R-1	II	2	2013	2020	948	43%	25%	32%	0%
						6315,92				

F.Y.R.O.M.

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured/ Source			
							National	Bank	Grant	Private
TEM	Ma-H-1	I	1	2004	2007	58	0%	100%	0%	0%
TEM	Ma-H-2	I	1	2004	2006	5,7	0%	100%	0%	0%
TEM	Ma-H-3	n.a.	n.a.	n.a.	n.a.	850	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-1	n.a.	n.a.	n.a.	n.a.	487	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-2	n.a.	n.a.	n.a.	n.a.	24,6	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TER	Ma-R-5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
						1425,27				

GEORGIA

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured/ Source			
							National	Bank	Grant	Private
TER	GE-R-2	I	1	2004	2034	1310,40	10%	90%	0%	0%
TEM	GE-M-1	n.a.*	1**	2000	2004	45,05	17%	73%	0%	0%
TEM	GE-M-2	n.a.*	1**	2000	2004	19,82	32%	0%	68%	0%
TEM	GE-M-3	n.a.*	1**	2004	2005	2,46	17%	0%	83%	0%
TEM	GE-M-4	n.a.*	1**	2005	2009	21,29	23%	7%	0%	0%
TER	GE-R-1	II	2	2035	2046	515,97	20%	20%	50%	10%
						1914,99				

* Since no technical prioritization phase was applied the category is missing.

** CLASS is based on the investment timeplan as indicated in the Euro-Asian Investment Info Sheet

GREECE

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured /Source			
							National	Bank	Grant	Private
TER	GR-R-6	I	1	2004	2006	216,35	50%	0%	50%	0%
TER	GR-R-4	I	1	2004	2006	220,7	50%	0%	50%	0%
TER	GR-R-7	I	1	2004	2011	63,1	15%	0%	85%	0%
TER	GR-R-5	I	1	2004	2011	825,95	32%	0%	32%	0%
TER	GR-R-1	II	1	2004	2008	355,53	50%	0%	50%	0%
TEM	GR-M-5	II	1	2004	2006	44,00	0%	0%	0%	0%
TEM	GR-M-3	II	1	2004	2008	175,00	0%	0%	0%	0%
TER	GR-R-8	II	2	2011	2019	101,25	0%	0%	0%	0%
TER	GR-R-9	II	2	2011	2013	4,6	50%	0%	50%	0%
TER	GR-R-2	II	2	2011	2017	505,39	42%	0%	42%	0%
TER	GR-R-3	II	2	2011	2019	632,56	24%	0%	24%	0%
TEM	GR-M-4	II	2	2011	2015	100,00	0%	0%	0%	0%
TEM	GR-M-1	II	2	2011	2015	240	0%	0%	0%	0%
TER	GR-R-12	II	2	2011	2020	415	0%	0%	0%	0%
TER	GR-R-11	III	2	2011	2020	776	0%	0%	0%	0%
TER	GR-R-10	III	2	2011	2019	1510	0%	0%	0%	0%
TEM	GR-M-2	II	3	2016	2021	235,00	0%	0%	0%	0%
						6420,43				

HUNGARY

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured /Source			
							National	Bank	Grant	Private
TEM	HU-M-1	I	1	These projects will be implemented between 2004 – 2010 but it is unknown when they will be completed		The cost of these projects is unknown	n.a.	n.a.	n.a.	n.a.
TEM	HU-M-2	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-3	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-5	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-7	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-8	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-11	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-12	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-17	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-18	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-19	I	1				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-4	II-III	2	These projects will be implemented between 2010 – 2015 but it is unknown when they will be completed			n.a.	n.a.	n.a.	n.a.
TEM	HU-M-6	II-III	2				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-9	II-III	2				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-10	II-III	2				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-13	II-III	2				n.a.	n.a.	n.a.	n.a.

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured /Source*			
							National	*Bank*	*Grant*	*Private*
TEM	HU-M-14	II-III	2				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-15	II-III	2				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-16	II-III	2				n.a.	n.a.	n.a.	n.a.
TEM	HU-M-20	II-III	2				n.a.	n.a.	n.a.	n.a.
TER	HU-R-2a	II	1	2004	2006	111,41	15%	35%	50%	0%
	HU-R-2b			2004	2008	39,79	40%	50%	0%	10%
	HU-R-2c			2006	2007	2,39	0%	0%	0%	100%
	HU-R-2d			2007	2009	31,83	100%	0%	0%	0%
	HU-R-2e			2012	2014	23,87	100%	0%	0%	0%
TER	HU-R-23a	II	1	2003	2006	174,27	0%	0%	100%	0%
	HU-R-23b			2007	2010	55,70	0%	0%	100%	0%
TER	HU-R-19	II	1	2001	2008	399,47	0%	22%	78%	0%
TER	HU-R-18	II	1	2003	2007	56,50	0%	100%	0%	0%
TER	HU-R-9	II	1	2005	2008	232,76	0%	79%	21%	0%
TER	HU-R-21	II	1	2007	2012	517,25	0%	0%	100%	0%
TER	HU-R-7	II	1	2007	2009	159,15	0%	0%	100%	0%
TER	HU-R-8a	II	1	2005	2007	16,31	0%	100%	0%	0%
	HU-R-8b			2008	2014	318,31	0%	0%	100%	0%
TER	HU-R-12	II	1	2004	2007	202,92	0%	0%	100%	0%
TER	HU-R-1	II	1	2005	2007	25,46	0%	100%	0%	0%
TER	HU-R-15	II	1	2006	2007	15,92	0%	100%	0%	0%
TER	HU-R-10	II	1	2005	2012	32,23	40%	60%	0%	0%
TER	HU-R-13	II	1	2008	2012	169,50	0%	0%	100%	0%
TER	HU-R-5	II	2	2012	2016	477,46	0%	0%	100%	0%
TER	HU-R-22	II	2	2011	2015	119,36	0%	0%	100%	0%
TER	HU-R-20	II	2	2016	2018	83,56	0%	0%	100%	0%
TER	HU-R-17	II	1	2007	2010	33,82	0%	100%	0%	0%
TER	HU-R-14	II	1	2011	2014	27,85	0%	0%	0%	0%
TER	HU-R-4	II	2	2009	2010	23,87	100%	0%	0%	0%
TER	HU-R-3a	II	2	2006	2009	47,75	100%	0%	0%	0%
	HU-R-3b			2011	2012	15,92	100%	0%	0%	0%
TER	HU-R-11	II	1	2009	2011	19,89	20%	0%	80%	0%
TER	HU-R-6a	II	1-2	2005	2007	28,65	0%	100%	0%	0%
	HU-R-6b			2008	2010	19,89	0%	100%	0%	0%
	HU-R-6c			2012	2014	31,83	0%	100%	0%	0%
TER	HU-R-16a	II	2-3	2012	2015	222,81	0%	0%	100%	0%
	HU-R-16b			2018	2022	716,19	0%	0%	100%	0%
						4453.89				

LITHUANIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TER	LT-R-16	I	1	2004	2010	300	20%	0%	80%	0%
TER	LT-R-17	I	1	2004	2010	500	20%	0%	80%	0%
TER	LT-R-1	I	1	2003	2004	7	0%	0%	100%	0%
TER	LT-R-22	I	1	2004	2007	12	37%	0%	63%	0%
TER	LT-R-3	I	1	2003	2005	28,5	0%	64%	36%	0%
TER	LT-R-4	I	1	2003	2004	10,5	0%	44%	56%	0%

TER	LT-R-14	I	1	2007	2015	24,3	15%	0%	85%	0%
TER	LT-R-12	I	1	2005	2007	52	15%	0%	85%	0%
TER	LT-R-13	I	1	2003	2015	9	16%	0%	84%	0%
TER	LT-R-15	I	1	2004	2006	11	36%	0%	64%	0%
TER	LT-R-2	I	1	2003	2005	3,1	0%	0%	100%	0%
TER	LT-R-21	I	1	1999	2006	41	100%	0%	0%	0%
TER	LT-R-5	I	1	2006	2008	21	15%	0%	85%	0%
TER	LT-R-6	I	1	2005	2010	50	19%	0%	81%	0%
TER	LT-R-7	I	1	2009	2015	104	25%	0%	75%	0%
TER	LT-R-9	I	1	2005	2010	89,7	15%	0%	85%	0%
TER	LT-R-10	I	1	2009	2015	108	25%	0%	75%	0%
TEM	LT-M-1	II	1	2006	2008	20,6	15%	0%	85%	0%
TEM	LT-M-2	II	1	2004	2007	45,80	15%	0%	85%	0%
TER	LT-R-11	II	2	2011	2016	81	15%	0%	85%	0%
TER	LT-R-18	II	2	2011	2014	95	25%	0%	75%	0%
TER	LT-R-19	II	2	2011	2013	70	24%	0%	76%	0%
TER	LT-R-20	II	2	2011	2015	77	25%	0%	75%	0%
TER	LT-R-8	II	2	2011	2014	109	37%	0%	63%	0%
TEM	LT-M-3	II	2	2011	2013	30,60	15%	0%	85%	0%
TEM	LT-M-4	IV	4	After 2020. More details if and when Lithuania provides more details on these projects.		The cost of these projects is unknown	n.a.	n.a.	n.a.	n.a.
TEM	LT-M-5	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	LT-M-6	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	LT-M-7	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	LT-M-8	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	LT-M-9	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	LT-M-10	IV	4				n.a.	n.a.	n.a.	n.a.
						1900,1				

MOLDOVA

Network	***Project ID***	***Category***	***Class***	***Starting year***	***End year***	***Budget (mio €)***	***% Funding Secured /Source***			
							National	*Bank*	*Grant*	*Private*
TER	MD-R-1	I	1	2004	2026	464,29	0%	0%	0%	0%
TER	MD-R-2	II	1	2004	2005	18,02	0%	0%	0%	0%
TEM	MD-M-1	II	1	2004	2006	18,20	0%	0%	0%	0%
						500,51				

POLAND

Network	***Project ID***	***Category***	***Class***	***Starting year***	***End year***	***Budget (mio €)***	***% Funding Secured/ Source***			
							National	*Bank*	*Grant*	*Private*
TEM	PL-M-1	I	1	2004	2006	122	0%	0%	75%	0%
TEM	PL-M-13	I	1	2004	2004	203	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-14	I	1	2004	2005	83	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-15	I	1	2004	2005	88	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-16	I	1	2004	2005	45	0%	0%	75%	0%
TEM	PL-M-17	I	1	2004	2005	57	0%	0%	75%	0%

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	PL-M-18	I	1	2004	2006	52	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-21	I	1	2004	2005	332	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-22	I	1	2004	2005	230	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-23	I	1	2004	2005	84	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-24	I	1	2004	2004	120	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-25	I	1	2004	2004	91	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-30	I	1	2004	2006	24	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-2	I	1	2004	2004	20,9	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-3	I	1	2004	2006	33	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-4	I	1	2004	2006	45	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-5	I	1	2004	2005	35	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-27	I	1	2004	2005	14,4	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-37	I	1	2004	2006	5	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-38	I	1	2004	2006	13	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-44	I	1	2004	2006	63,8	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-11	II	1	2005	2007	141	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-35	II	1	2004	2006	24	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-36	II	1	2004	2006	31	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-54	II	1	2005	2007	40,7	n.a.	n.a.	n.a.	n.a.
TEM	PL-H-55	II	1	2004	2006	82,2	n.a.	n.a.	n.a.	n.a.
TER	PL-R-1	n.a.	1	2000	2004	23,6	25%	0%	75%	0%
TER	PL-R-2	n.a.	1	2002	2004	185,2	n.a.	n.a.	75%	n.a.
TER	PL-R-3	n.a.	1	2001	2004	123,8	n.a.	n.a.	75%	n.a.
TER	PL-R-4	n.a.	1	2001	2004	67,4	n.a.	n.a.	75%	n.a.
TER	PL-R-5	n.a.	1	2001	2004	111	n.a.	n.a.	75%	n.a.
TER	PL-R-6	n.a.	1	2002	2004	83,5	n.a.	n.a.	75%	n.a.
TEM	PL-M-4	IV	4	These projects will be implemented after 2020.		The cost of these projects is unknown	n.a.	n.a.	n.a.	n.a.
TEM	PL-M-10	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-1	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-6	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-7	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-8	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-9	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-10	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-11	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-12	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-13	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-14	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-15	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-16	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-18	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-19	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-20	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-21	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-22	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-23	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-24	IV	4				n.a.	n.a.	n.a.	n.a.

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	PL-H-25	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-26	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-28	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-29	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-30	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-31	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-32	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-33	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-34	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-39	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-40	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-41	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-42	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-43	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-45	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-47	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-48	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-50	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-51	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-56	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-57	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-58	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-59	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-60	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-61	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-3	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-6	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-7	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-8	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-9	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-20	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-28	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-29	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-52	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-2	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-19	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-26	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-27	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-5	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-M-12	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-49	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-17	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-46	IV	4				n.a.	n.a.	n.a.	n.a.
TEM	PL-H-53	IV	4				n.a.	n.a.	n.a.	n.a.
						2674,5				

ROMANIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	RO-M-22	I	1	2004	2007	321,65	35%	65%	0%	0%
TEM	RO-M-24	I	1	2008	2017	675,251	35%	65%	0%	0%
TEM	RO-M-18	I	1	2004	2008	455,847	35%	65%	0%	0%
TEM	RO-M-13	I	1	2005	2010	258,5	0%	0%	100%	0%
TEM	RO-M-11	I	1	2006	2008	37	0%	100%	0%	0%
TEM	RO-M-30	I	1	2004	2008	324	40%	0%	0%	60%
TEM	RO-M-4	I	1	2010	2017	665	0%	0%	100%	0%

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	RO-M-25	I	1	2008	2010	521,282	35%	65%	0%	0%
TEM	RO-M-21	I	1	2004	2012	677,38	35%	65%	0%	0%
TEM	RO-M-10	I	1	2004	2006	147,4	0%	100%	0%	0%
TEM	RO-M-26	I	1	2006	2015	782,18	35%	65%	0%	0%
TER	RO-R-3	I	1	2005	2008	656,9	26%	39%	35%	0%
TEM	RO-M-1	I	1	2010	2015	347,4	0%	100%	0%	0%
TEM	RO-M-5	II	1	2010	2015	361,6	0%	0%	25%	0%
TEM	RO-M-17	II	1	2010	2017	401,5	0%	0%	0%	0%
TEM	RO-M-31	II	1	2010	2015	275	0%	0%	0%	0%
TEM	RO-M-19	II	1	2010	2015	214,5	0%	0%	0%	100%
TEM	RO-M-42	III	2	2011	2016	165	0%	0%	0%	0%
TEM	RO-M-41	III	2	2010	2016	253	0%	0%	0%	0%
TEM	RO-M-28	II	2	2011	2015	522	40%	0%	0%	60%
TER	RO-R-2	II	2	2009	2012	535,2	20%	80%	0%	0%
TEM	RO-M-2	II	2	2016	2021	124	0%	100%	0%	0%
TEM	RO-M-27	II	2	2020	2021	322	40%	0%	0%	60%
TEM	RO-M-34	II	2	2019	2025	495	0%	0%	0%	0%
TER	RO-R-4	II	2	2010	2013	1458	20%	0%	80%	0%
TEM	RO-M-8	II	2	2016	2022	310	0%	0%	0%	0%
TEM	RO-M-12	II	2	2018	2023	242	0%	0%	0%	0%
TEM	RO-M-3	II	2	2027	2031	638	0%	100%	0%	0%
TEM	RO-M-7	II	2	2018	2023	234	0%	0%	0%	0%
TEM	RO-M-35	II	2	2018	2021	357,5	0%	0%	0%	0%
TEM	RO-M-14	II	2	2023	2028	990	0%	0%	0%	0%
TEM	RO-M-36	II	2	2015	2019	220	0%	0%	0%	0%
TEM	RO-M-33	II	2	2015	2019	137,5	0%	0%	0%	0%
TEM	RO-M-29	II	2	2022	2024	293	40%	0%	0%	60%
TEM	RO-M-6	II	2	2030	2037	1369,6	0%	0%	8%	0%
TEM	RO-M-32	II	2	2031	2034	473	0%	0%	0%	0%
TEM	RO-M-15	II	2	2030	2035	561	0%	0%	0%	0%
TEM	RO-M-39	II	2	2033	2038	484	0%	0%	0%	0%
TEM	RO-M-16	II	2	2016	2025	948	0%	0%	0%	0%
TEM	RO-M-37	II	2	2022	2027	588,5	0%	0%	0%	0%
TER	RO-R-1	II	2	2009	2012	422	70%	0%	0%	30%
TEM	RO-M-20	II	2	2025	2032	528	0%	0%	0%	100%
TEM	RO-M-23	II	2	2027	2033	440	0%	0%	0%	0%
TEM	RO-M-38	II	2	2027	2033	231	0%	0%	0%	0%
TEM	RO-M-40	II	2	2027	2033	137,5	0%	0%	0%	0%
						20601,19				

In Romania "CLASS 2" was not followed strictly as it concerns investment procedures, since the trial and error process in investment plan forced some projects in CLASS 2 to be "moved" in the time horizon in CLASS 3 or 4 as it concerns their investment. These projects were the most expensive, and that was the reasons for their movement.

Therefore in Romania, unlike other countries, the time horizon of project construction might be different from investment horizon. Maybe the investment plan could be "narrowed" if Romania reconsiders the priorities given to some projects.

RUSSIAN FEDERATION

Network	*Project ID*	*Category **	*Class***	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TER	RU-R-1	n.a.	1	2002	2010	The total budget of TRANSSIB corridor is 7,5 billion $ (6,14 billion €)	n.a.	n.a.	n.a.	n.a.
TER	RU-R-2	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-3	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-4	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-5	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-6	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-7	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-8	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-9	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-10	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-11	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-12	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-13	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-H-1	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-H-2	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-H-3	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-H-4	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-H-5	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-H-6	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-M-1	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-14	n.a.	1	2002	2005	The total budget of "North-South" corridor is 6,4 billion $ (5,2 billion €)	n.a.	n.a.	n.a.	n.a.
TER	RU-R-15	n.a.	1	2002	2003		n.a.	n.a.	n.a.	n.a.
TER	RU-R-16	n.a.	1	2004	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-17	n.a.	1	2002	2004		n.a.	n.a.	n.a.	n.a.
TER	RU-R-18	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TER	RU-R-19	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-M-2	n.a.	1	2002	2005		n.a.	n.a.	n.a.	n.a.
TEM	RU-M-3	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-M-4	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-M-5	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.
TEM	RU-M-6	n.a.	1	2002	2010		n.a.	n.a.	n.a.	n.a.

Network	*Project ID*	*Category* *	*Class** *	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
						> **11340**				

* Since no technical prioritization phase was applied, the category is missing.
** CLASS is based on the implementation timeplan as indicated in National Report

SERBIA & MONTENEGRO

Network	*Project ID*	*Category**	*Class***	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	SM-H-1	n.a.	1	2005	2005	2	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-2	n.a.	1	2004	2005	7	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-3	n.a.	1	2005	2007	10	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-4	n.a.	1	2006	2007	4	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-5	n.a.	1	2006	2007	4	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-6	n.a.	1	2004	2004	14,3	0%	100%	0%	0%
TEM	SM-H-7	n.a.	1	2004	2004	5,8	0%	100%	0%	0%
TEM	SM-H-8	n.a.	1	2004	2004	20	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-9	n.a.	1	2004	2004	27,9	0%	100%	0%	0%
TEM	SM-H-10	n.a.	1	2004	2004	9,9	n.a.	n.a.	n.a.	n.a.
TEM	SM-M-1	n.a.	1	2004	2005	92	n.a.	n.a.	n.a.	n.a.
TEM	SM-M-2	n.a.	1	2004	2004	20	100%	0%	0%	0%
TEM	SM-H-11	n.a.	1	2004	2004	5	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-12	n.a.	1	2005	2007	172,5	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-13	n.a.	1	2004	2004	3,8	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-14	n.a.	1	2005	2006	6	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-15	n.a.	1	2004	2005	14,5	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-16	n.a.	1	2004	2006	15	40%	0%	0%	0%
TEM	SM-H-17	n.a.	1	2004	2006	56	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-18	n.a.	1	2004	2004	10	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-19	n.a.	1	2005	2006	14	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-20	n.a.	1	2005	2007	25	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-21	n.a.	1	2007	2008	11	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-22	n.a.	1	2004	2004	10	n.a.	n.a.	n.a.	n.a.
TER	SM-R-1	n.a.	1	2005	2007	71	n.a.	n.a.	n.a.	n.a.
TER	SM-R-2	n.a.	1	2004	2005	14	n.a.	n.a.	n.a.	n.a.
TER	SM-R-3	n.a.	1	2005	2005	8	n.a.	n.a.	n.a.	n.a.
TER	SM-R-4	n.a.	1	2004	2004	11,2	0%	100%	0%	0%
TER	SM-R-5	n.a.	1	2004	2005	42	n.a.	n.a.	n.a.	n.a.
TER	SM-R-6	n.a.	1	2004	2006	60	n.a.	n.a.	n.a.	n.a.
TER	SM-R-7	n.a.	1	2005	2006	27	n.a.	n.a.	n.a.	n.a.
TER	SM-R-8	n.a.	1	2004	2005	7	n.a.	n.a.	n.a.	n.a.
TER	SM-R-9	n.a.	1	2004	2005	25	n.a.	n.a.	n.a.	n.a.

Network	*Project ID*	*Category**	*Class***	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TER	SM-R-10	n.a.	1	2004	2005	11,9	n.a.	n.a.	n.a.	n.a.
TER	SM-R-11	n.a.	1	2004	2005	30	n.a.	n.a.	n.a.	n.a.
TER	SM-R-12	n.a.	1	2006	2009	133	n.a.	n.a.	n.a.	n.a.
TER	SM-R-13	n.a.	1	2004	2006	25	n.a.	n.a.	n.a.	n.a.
TEM	SM-H-23	n.a.	2	2011	2012	270	n.a	n.a	n.a	n.a
TEM	SM-H-24	n.a.	2	2011	2012	57	n.a	n.a	n.a	n.a
TEM	SM-H-25	n.a.	2	2011	2012	15,1	n.a	n.a	n.a	n.a
TEM	SM-H-26	n.a.	2	2011	2012	32	n.a	n.a	n.a	n.a
						1398,9				

* Since no technical prioritization phase was applied the category is missing.
** CLASS is based on the investment timeplan as indicated in REBIS study

SLOVAKIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget(mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	SK-H-2	I	1	2004	2018	99,87	100%	0%	0%	0%
TEM	SK-M-7	I	1	2004	2018	202,29	30%	28%	42%	0%
TEM	SK-M-4	I	1	2004	2020	127,31	45%	55%	0%	0%
TEM	SK-M-9	I	1	2004	2022	193,72	35%	0%	0%	65%
TEM	SK-M-3	I	1	2004	2019	498,00	100%	0%	0%	0%
TEM	SK-M-8	I	1	2004	2018	1001,94	35%	0%	0%	65%
TEM	SK-M-11	I	1	2004	2023	355,27	35%	0%	0%	65%
TEM	SK-M-6	II	1	2004	2023	189,94	100%	0%	0%	0%
TER	SK-R-5	II	1	2007	2009	155,95	15%	0%	85%	0%
TER	SK-R-4	II	1	2007	2013	642,69	15%	0%	85%	0%
TER	SK-R-3	II	1	2004	2008	218,51	40%	0%	60%	0%
TEM	SK-H-1	II	2	2011	2019	14,67	100%	0%	0%	0%
TEM	SK-M-13	II	2	2011	2020	62,52	35%	0%	0%	65%
TEM	SK-M-2	II	2	2011	2020	95,86	100%	0%	0%	0%
TEM	SK-H-3	II	2	2011	2019	21,49	100%	0%	0%	0%
TEM	SK-M-12	II	2	2011	2022	266,60	35%	0%	0%	65%
TEM	SK-M-16	II	2	2011	2022	125,05	100%	0%	0%	0%
TEM	SK-M-5	II	2	2011	2022	85,31	100%	0%	0%	0%
TEM	SK-M-1	II	2	2011	2024	141,93	100%	0%	0%	0%
TEM	SK-M-14	II	2	2011	2024	146,86	100%	0%	0%	0%
TER	SK-R-1	II	2	2007	2011	397,51	15%	0%	85%	0%
TEM	SK-M-10	II	2	2011	2024	507,96	35%	0%	0%	65%
TEM	SK-M-15	II	2	2011	2024	242,77	100%	0%	0%	0%
TER	SK-R-2	II	2	2004	2007	405,85	44%	0%	56%	0%
						6199.88				

SLOVENIA

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TER	SL-R-4	I	1	2008	2013	154,00	25%	25%	50%	0%
TER	SL-R-1	I	1	2005	2007	63,50	19%	32%	49%	0%
TEM	SL-M-2	I	1	2002	2006	621	0%	0%	0%	0%
TER	SL-R-2	I	1	2006	2009	62,50	25%	25%	50%	0%
TER	SL-R-5	I	1	2005	2009	123,30	26%	31%	44%	0%
TER	SL-R-3	I	1	2010	2014	176,00	25%	25%	50%	0%
TEM	SL-M-6	I	1	2007	2012	267,15	0%	0%	0%	0%
TEM	SL-M-1	I	1	2003	2013	1.037,23	0%	0%	0%	0%
TER	SL-R-6	I	1	2004	2006	35,30	0%	64%	36%	0%
TEM	SL-M-3	II	1	2004	2008	119	0%	0%	0%	0%
TEM	SL-M-4	II	1	2003	2006	106	0%	0%	0%	0%
TER	SL-R-7	II	1	2006	2012	700,00	5%	25%	50%	20%
TEM	SL-M-5	II	1	2005	2006	11,7	0%	0%	0%	0%
TEM	SL-M-7	II	2	2014	2014	210	0%	0%	0%	0%
						3686,68				

TURKEY

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	TU-M-14	I	1	2004	2006	30,12	100%	0%	0%	0%
TEM	TU-M-13	I	1	2004	2006	31,60	100%	0%	0%	0%
TEM	TU-M-3	I	1	2010	2014	222,77	0%	0%	0%	0%
TEM	TU-M-8	I	1	2010	2014	184,40	0%	0%	0%	0%
TEM	TU-M-10	I	1	2010	2014	164,91	0%	0%	0%	0%
TEM	TU-M-6	I	1	2010	2014	193,85	0%	0%	0%	0%
TEM	TU-M-7	I	1	2010	2014	183,93	0%	0%	0%	0%
TEM	TU-M-12	I	1	2004	2006	20,74	100%	0%	0%	0%
TEM	TU-M-15	I	1	2004	2008	68,09	100%	0%	0%	0%
TEM	TU-M-17	I	1	2004	2008	43,92	100%	0%	0%	0%
TEM	TU-M-18	I	1	2004	2008	35,70	100%	0%	0%	0%
TEM	TU-M-19	I	1	2004	2009	45,31	100%	0%	0%	0%
TEM	TU-M-9	I	1	2010	2014	132,54	0%	0%	0%	0%
TEM	TU-M-20	I	1	2004	2008	22,70	100%	0%	0%	0%
TER	TU-R-4	I	1	2006	2010	317,1	0%	0%	0%	0%
TEM	TU-M-11	II	1	2004	2007	106,90	100%	0%	0%	0%
TEM	TU-M-16	II	1	2004	2008	56,02	100%	0%	0%	0%
TER	TU-R-1	II	1	2005	2006	1138	0%	100%	0%	0%
TEM	TU-M-1	II	2	2015	2019	294,84	0%	0%	0%	0%
TEM	TU-M-2	II	2	2015	2019	267,81	0%	0%	0%	0%
TER	TU-R-3	II	2	2011	2017	1344	0%	100%	0%	0%

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	TU-M-5	II	2	2015	2019	281,87	0%	0%	0%	0%
TEM	TU-M-4	II	2	2015	2019	735,46	0%	0%	0%	0%
TER	TU-R-2	II	2	2011	2013	735,7	0%	100%	0%	0%
						6658,27				

UKRAINE

Network	*Project ID*	*Category*	*Class*	*Starting year*	*End year*	*Budget (mio €)*	*% Funding Secured/ Source*			
							National	*Bank*	*Grant*	*Private*
TEM	UKR-M-2	II	1	2004	2009	244,00	40%	0%	0%	60%
TER	UKR-R-1	n.a.	1	2004	2004	76,00	42%	56%	2%	0%
TER	UKR-R-2	n.a.	1	2004	2008	163,80	40%	60%	0%	0%
TEM	UKR-M-1	II	2	2011	2018	466,00	20%	0%	0%	80%
TEM	UKR-M-4	II	2	2011	2018	155,30	20%	0%	0%	80%
TEM	UKR-M-3	II	2	2011	2018	177,90	79%	0%	0%	21%
						1283,00				

PART II – INVESTMENT PLAN PER COUNTRY GROUP

TEM AND TER NETWORKS - EU MEMBER COUNTRIES BEFORE 01/05/2004

Country	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
AT	7	14%	86%	-	-	-	100%	-	-
GR	17	29%	29%	35%	6%	-	29%	71%	-
IT	-	-	-	-	-	-	-	-	-

Whole Network	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
	24	25%	46%	25%	4%	-	50%	50%	-

TEM AND TER NETWORKS - EU MEMBER COUNTRIES AFTER 01/05/2004 AND ACCEDING COUNTRIES

Country	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
BG	18	33%	28%	22%	17%	-	33%	11%	-
CR	43	56%	30%	12%	2%	-	70%	-	*30%*
CZ	13	69%	8%	23%	-	-	100%	-	*0%*
HU	43	31%	18%	3%	2%	*47%*	58%	16%	*49%*
LT	32	47%	28%	3%	22%	-	78%	-	*22%*
PL	97	33%	-	-	-	*67%*	1%	3%	*96%*
RO	45	18%	16%	16%	51%	-	51%	49%	-
SK	24	4%	8%	42%	46%	-	100%	-	-
SL	14	36%	43%	7%	14%	-	50%	50%	-
TU	24	50%	29%	21%	-	-	54%	46%	-

Whole Network	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
	353	35%	16%	11%	14%	*24%*	47%	15%	*38%*

TEM AND TER NETWORKS – NON-EU, NON-ACCEDING COUNTRIES

Country	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
BL	4	100%	-	-	-	-	100%	-	-
BH	15	7%	53%	13%	27%	-	47%	53%	-
Ma	8	25%	-	-	-	*75%*	25%	-	*75%*
GE	6	67%	-	-	33%	-	67%	33%	-
MD	3	67%	-	-	33%	-	-	100%	-
RU	31	100%	-	-	-	-	-	-	*100%*
SM	41	90%	10%	-	-	-	12%	-	*88%*
UKR	6	50%	-	50%	-	-	100%	-	-

Whole Network	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
	114	74%	11%	4%	6%	*5%*	25%	11%	*64%*

PART III – INVESTMENT& IMPLEMENTATION PLAN/TOTAL RESULTS

TEM AND TER NETWORKS

Country	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	Unsecured	*Unknown*
AT	7	14%	86%	-	-	-	100%	-	-
BL	4	100%	-	-	-	-	100%	-	-
BH	15	7%	53%	13%	27%	-	47%	53%	-
BG	18	33%	28%	22%	17%	-	33%	11%	-
CR	43	56%	30%	12%	2%	-	70%	-	*30%*
CZ	13	69%	8%	23%	-	-	100%	-	*0%*
Ma	8	25%	-	-	-	*75%*	25%	-	*75%*
GE	6	67%	-	-	33%	-	67%	33%	-
GR	17	29%	29%	35%	6%	-	29%	71%	-
HU	43	31%	18%	3%	2%	*47%*	58%	16%	*49%*
IT	-	-	-	-	-	-	-	-	-
LT	32	47%	28%	3%	22%	-	78%	-	*22%*
MD	3	67%	-	-	33%	-	-	100%	-
PL	97	33%	-	-	-	*67%*	1%	3%	*96%*
RO	45	18%	16%	16%	51%	-	51%	49%	-
RU	31	100%	-	-	-	-	-	-	*100%*
SM	41	90%	10%	-	-	-	12%	-	*88%*
SK	24	4%	8%	42%	46%	-	100%	-	-
SL	14	36%	43%	7%	14%	-	50%	50%	-
TU	24	50%	29%	21%	-	-	54%	46%	-
UKR	6	50%	-	50%	-	-	100%	-	-

Whole Network	*Projects*	*TEM and TER Network Implementation Progress*					*TEM and TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
	491	44%	16%	10%	11%	*19%*	42%	16%	*42%*

TEM NETWORK

Country	*Projects*	*TEM Network Implementation Progress*					*TEM Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
AT	1	100%	-	-	-	-	100%	-	-
BL	3	100%	-	-	-	-	100%	-	-
BH	8	-	25%	25%	50%	-	-	100%	-
BG	10	20%	50%	30%	-	-	-	100%	-
CR	27	33%	44%	19%	4%	-	100%	-	-
CZ	5	100%	-	-	-	-	100%	-	-
MA	3	67%	-	-	-	*33%*	67%	-	*33%*
GE	4	100%	-	-	-	-	50%	50%	-
GR	5	40%	40%	-	20%	-	-	100%	-
HU	20	-	-	-	-	*100%*	-	-	*100%*
IT	-	-	-	-	-	-	-	-	-
LT	10	20%	10%	-	70%	-	30%	-	*70%*
MD	1	100%	-	-	-	-	-	100%	-
PL	91	29%	-	-	-	*71%*	-	3%	*97%*
RO	41	17%	17%	17%	49%	-	46%	54%	-
RU	12	100%	-	-	-	-	-	-	*100%*
SM	28	86%	14%	-	-	-	14%	-	*86%*
SK	19	-	-	47%	53%	-	100%	-	-
SL	7	57%	43%	-	-	-	-	100%	-
TU	20	50%	30%	20%	-	-	50%	50%	-
UKR	4	25%	-	75%	-	-	100%	-	-

	Projects	*TEM Network Implementation Progress*					*TEM Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
Whole Network	319	36%	13%	10%	13%	*27%*	31%	21%	*48%*

TER NETWORK

Country	*Projects*	*TER Network Implementation Progress*					*TER Network Funding*		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
AT	6	-	100%	-	-	-	100%	-	-
BL	1	100%	-	-	-	-	100%	-	-
BH	7	14%	86%	-	-	-	100%	-	-
BG	8	50%		13%	38%	-	75%	25%	-
CR	16	94%	6%	-	-	-	19%	-	*81%*
CZ	8	50%	13%	38%	-	-	100%	-	-
MA	5	-	-	-	-	*100%*	-	-	*100%*
GE	2	-	-	-	100%	-	100%	-	-
GR	12	25%	25%	50%	-	-	42%	58%	-
HU	23	58%	33%	6%	3%	-	76%	21%	*3%*
IT	-	-	-	-	-	-	-	-	-
LT	22	59%	36%	5%	-	-	100%	-	-
MD	2	50%	-	-	50%	-	-	100%	-
PL	6	100%	-	-	-	-	17%	-	*83%*
RO	4	25%	-	-	75%	-	100%	-	-
RU	19	100%	-	-	-	-	-	-	*100%*
SM	13	100%	-	-	-	-	8%	-	*92%*
SK	5	60%	40%	0%	0%	-	100%	-	-
SL	7	14%	43%	14%	29%	-	100%	-	-
TU	4	50%	25%	25%	-	-	75%	25%	
UKR	2	100%	-	-	-	-	100%	-	-

Whole Network	***Projects***	***TER Network Implementation Progress***					***TER Network Funding***		
		Up to 2010	**2010-2015**	**2015-2020**	**After 2020**	***Unknown***	**Secured**	**Unsecured**	***Unknown***
	172	58%	22%	9%	7%	*3%*	58%	10%	*32%*

ANNEX VII –LIST OF PARTICIPANTS IN TEM AND TER PROJECTS' MASTER PLAN WORK

UNECE

Mr. Jose CAPEL FERRER, UNECE Director of Transport Division, Geneva, SWITZERLAND

Mr. Michalis ADAMANTIADIS, UNECE Regional Adviser on Transport, Geneva, SWITZERLAND

Mr. Marian HANTAK, TEM Project Manager, SLOVAKIA

Mr. Helmut MEELICH, TER Project Manager, AUSTRIA

Mr. Petr POSPISIL, TEM Deputy TEM Project Manager, CZECH REPUBLIC

Mr. Mircea LUPESCU, TER Deputy Project Manager, ROMANIA

EXTERNAL CONSULTANTS

Prof. Dimitrios TSAMBOULAS, external consultat, National Technical University of Athens, GREECE

Prof. Alan PEARMAN, external consultant, University of Leeds, UNITED KINGDOM

Prof. Laszlo GASPAR, consultant, University of Gyor, HUNGARY

Prof. Krzystof BUCZKOWSKI, consultant, University of Warsaw, POLAND

Ms. Angeliki KOPSACHEILI, consultant, National Technical University of Athens, GREECE

Mr. Romeo GALBENU, Romanian Railways, Bucharest, ROMANIA

Mr. Zdenek TRCKA, consultant, Prague, CZECH REPUBLIC

Mr. Darek PRZYBYLA, mapping expert, POLAND

COUNTRY EXPERTS – TEM MASTER PLAN

Mr. Kurt NEMEC, TEM National Coordinator, AUSTRIA

Mr. Dragan MIHAJLOVIC, TEM National Coordinator, BOSNIA and HERZEGOVINA

Mr. Stefan POPOV, TEM National Coordinator, BULGARIA

Mr. Ivan LEGAC, TEM National Coordinator, CROATIA

Mr. Milan MACHART, TEM National Coordinator, CZECH REPUBLIC

Mr. Roman DALAKISHVILI, TEM National Coordinator, GEORGIA

Mr. Boldizsar VASARHELYI, TEM National Coordinator, HUNGARY

Mr. Enrico SAMMARTINO, TEM National Coordinator, ITALY

Mr. Algimantas JANUSAUSKAS, TEM National Coordinator, LITHUANIA

Mr. Ludomir SZUBERT, TEM National Coordinator, POLAND

Mr. Mihai IUGA, TEM National Coordinator, ROMANIA

Mr. Peter BAREK, TEM National Coordinator, SLOVAKIA

Mr. Mucahit ARMAN, TEM National Coordinator, TURKEY

Mr. Genady V. CHEPTSOV, expert, REPUBLIC of BELARUS

Mr. Franjo MIHOCI, expert, CROATIA

Mr. Zoran LAPEVSKI, expert, FORMER YUGOSLAV REPUBLIC OF MACEDONIA

Mr. George PATRIS, expert, GREECE

Mr. MIklos KERESZTES, expert, HUNGARY

Ms. Judit FLORIAN, expert, HUNGARY

Mr. Paulius E. ZLOTINAS, expert, LITHUANIA

Ms. Bozena BIALECKA, expert, POLAND

Mr. Robert ROGOWSKI, expert, POLAND

Mr. Zenon HALASA, expert, POLAND

Mr. Nicolae CIOBANU, expert, REPUBLIC of MOLDOVA

Mr. Mirea LIVIU, expert, ROMANIA

Mr. Valery V. TIMOFEEV, expert, RUSSIAN FEDERATION

Mr. Marian MISKOVIC, expert, SLOVAKIA

Mr. Marjan VEZJAK, expert, SLOVENIA

Mr. Miograd JOCIC, expert, SERBIA and MONTENEGRO

Ms. Elif SOYKAN, expert, TURKEY

Mr. Hryhorii LEHENKYI, expert, UKRAINE

COUNTRY EXPERTS – TER MASTER PLAN

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Mr. Mikheil KHONELIDZE, Deputy Director of Marketing Service Georgian Railways Ltd., GEORGIA

Mr. Sulejman CELIC, Expert for Railway Transport Ministry of Communications and Transports of Bosnia and Herzegovina

Mr. Radoslav Georgiev IVANOV, Head of Department State Railway Infrastructure Company, BULGARIA

Mr. Todor Anguelov ANGUELOV, Expert, Executive Agency "Railway Administration", BULGARIA

Mr. Vaclav NOVACEK, Head of Department, TER National Co-ordinator Ministry of Transport and Communication, CZECH REPUBLIC

Mr. Frantisek HEP, Commercial Manager SUDOP PRAHA a.s., CZECH REPUBLIC

Mrs. Aikaterini PRINOU, Chief of International Relations Dept. Hellenic Railways Organisation, GREECE

Mrs. Jolan Montvaine PAPAI, TER national Co-ordinator Ministry of Economy and Transport, HUNGARY

Mr. Gyorgy SZABO, Deputy Head of International Department Hungarian State Railways Co., HUNGARY

Mr. Tamas NEGYESI, Deputy Head of International Department Hungarian State Railways Co, HUNGARY

Mr.Laszlo SZABO, Responsible for Master Plan Hungarian State Railways Co, HUNGARY

Mr. Simas GARUOLIS, Deputy Director of Transit and Railway Transport Department Ministry of Transport and Communication, LITHUANIA

Mr. Aldas MILISIUNAS, Chief Specialist of Technical Department Lithuanian Railways, LITHUANIA

Mrs. Svetlana MOVILA, Adviser of Rail Transport Directorate Ministry of Transport and Communications, MOLDOVA

Mrs. Maria CIOBANU, Translator Technical Service of the State Enterprise "The Railway of Moldova", MOLDOVA

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Mr. Jean NICOLAS, Technical Director Romanian Railways (CFR S.A.), ROMANIA

Mr. Georgel DRAGOTA, Head of Unit National Railway Company, ROMANIA

Mr. Alexandre KOTCHERYGIN, Head of Division Russian Railways "RZD", RUSSIAN FEDERATION

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Mr. Vladimir CEBO, System Specialist ZSR Slovak Railways, SLOVAKIA

Mr. Jozef GOLAN, Chief of Department of Railway Infrastructure Ministry of Transport, Post and Telecommunication Slovakia

Mr. Ladislav MRVA, Slovak Railways, SLOVAKIA

Mr. Borut PRHAVC, State Undersecretary, TER National Co-ordinator Ministry of Transport, SLOVENIA
Mr. Kristijan NOVAK, Public agency for railway transport, SLOVENIA

Mr. Marko FRECE, Engineer Slovenian Railways, SLOVENIA

Mr. Ismet DUMAN, Head of Reserch and Development Department Turkish State Railways, TURKEY

Ms. Nihat BILGEN, Division Manager in RPC Dept. Turkish State Railways, TURKEY

Mr. Goran KALICANIN, Executive manager for Corridor X Public Railway Transport Enterprise, SERBIA AND MONTENEGRO

Mr. Yosyp KRANTS, Head of Development Department State Railway Administration, UKRAINE

ORGANIZATIONS

Mr. Peter KRAUSZ, Head Goods Transport Council, IRU, SWITZERLAND

Mr. Gilberto GALLONI, President, Europlatforms, BELGIUM

Mr. Kent BENTZEN, Vice President, Europlatforms, BELGIUM

Mr. Jerzy WISNIEWSKI, Director, UIC, FRANCE

ANNEX VIII – LETTER OF MINISTER OF ECONOMIC DEVELOPMENT OF GEORGIA

საქართველოს ეკონომიკური
განვითარების სამინისტრო

MINISTRY OF ECONOMIC
DEVELOPMENT OF GEORGIA

"07" 04 2006 წ. № 26/747/9-6

Mr. José CAPEL FERRER
Director
UNECE Transport Division

Dear Mr. Ferrer,

First, let me express my respect personally to you and the Transport Division of the UN Economic Commission for Europe. The Ministry of Economic Development of Georgia highly considers support and cooperation from the UNECE side.

We have the honor to inform you that the Ministry of Economic Development of Georgia considered final report on TEM and TER Master Plan (January 2006). We apologize for the inconvenience, but coming out of the fact that it is necessary to make correction in the above-mentioned document and following our conversation with Mr. Michalis P. Adamantiadis – Regional Adviser of the UNECE Transport Division earlier this week, we kindly ask you to consider and make appropriate corrections in the final report on TEM and TER Master Plan (**ANNEX VI – INVESTMENT-TIME PLAN/FINAL PRIORITIZATION RESULTS**; **PART I – INVESTMENT PLAN PER COUNTRY**; Page 163). It will lead to appropriate chances in **PART II – INVESTMENT PLAN PER COUNTRY GROUP**; page 186 and **PART III – INVESTMENT&IMPLEMENTATION PLAN/TOTAL RESULTS**; page 187, page 191.

Please find attached document i.e. appropriate table with all necessary corrections from our side.

Let me, once again apologize for inconvenience.

Thank you in advance for cooperation.

Attachment: 1 page

Truly yours,

David TSIKLAURI

Deputy Minister

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12, G. Chanturia Str., 0108 Tbilisi, Georgia

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GEORGIA

Network	Project ID	Category	Class	Starting year	End year	Budget (mio €)	% Funding Secured/ Source			
							National	Bank	Grant	Private
TER	GE-R-2	I	1	2007	2010	368.09	n.a.	n.a.	n.a.	n.a.
TEM	GE-M-1	n.a.*	1**	2000	2004	45.05	17%	73%	0%	0%
TEM	GE-M-2	n.a.*	1**	2000	2004	19.82	32%	0%	68%	0%
TEM	GE-M-3	n.a.*	1**	2004	2005	2.46	17%	0%	83%	0%
TEM	GE-M-4	n.a.*	1**	2005	2009	21.29	23%	7%	0%	0%
TER	GE-R-1	II	2	2010	2015	423.91	n.a.	n.a.	n.a.	n.a.
						880.62				