Council of Ministers

TRANSPORT INFRASTRUCTURE REGIONAL STUDY (TIRS) IN THE BALKANS

Main political messages and Executive Summary

This document is submitted for discussion under item 6 “Transport Infrastructure Regional Study in the Balkans” of the draft agenda of the Bucharest session of the Council of Ministers.

This document will be discussed on Thursday 30 May morning from 8.30 to 9.15 in a special session to which all those Ministers interested are invited.

Ministers are invited to:
-- consider the results of the TIRS study;
-- discuss the policy recommendations provided by the study;
-- identify any actions that should be taken for their implementation;
-- provide guidelines for ECMT’s possible role in the follow-up to the TIRS study.
TIRS: MAIN POLICY MESSAGES

The Transport Infrastructure Regional Study in the Balkans (the TIRS), which the ECMT has been supervising, has just been completed and published (see Reference Document). A summary of the Study is appended.

In addition to a list of priority infrastructure projects, the Study has provided the basis for a number of policy recommendations. These recommendations are given below in order to be discussed by the Ministers concerned at a special session planned during the Ministerial meeting in Bucharest.

1. **Infrastructure projects**
   - For Category I projects, countries should proceed rapidly with pre-feasibility studies, taking action in the very near term so as to secure the necessary finance and begin actual construction immediately. Launching these projects will require close co-ordination within countries in order to reach consensus on the action to take.
   - For Category II projects (probably eligible for finance), some additional studies should be conducted, particularly for Category IIa projects, which are more likely to be eligible for international finance.
   - Category III projects, given the budgetary envelopes available, should be discarded for the time being as they cannot be justified at least in the period covered by the Study.

2. **Railways**
   - Investment should concentrate on renovating lines, as there are no real capacity problems.
   - However, systematic reconstruction of the old network should be avoided, as it is no longer appropriate in the light of demand in the foreseeable future given the changes in the economic fabric of the countries under consideration.
   - In-depth market studies should be developed for the railways of different countries and analysis of the actual financing capabilities of railway companies -- crucial for investment finance -- should be conducted.
   - Railway companies should be restructured in order to improve productivity and focus activities on the most profitable segments.
   - Rolling stock should be pooled in order to facilitate trade between networks and increase rolling stock productivity.
3. **Roads**

- Adequate infrastructure maintenance policies should be implemented and sufficient resources should be allocated for maintenance. Usage of existing infrastructure should be optimised.

- User charging systems should be developed in order to raise the necessary financial resources and enable the implementation of a coherent, sustainable strategy for infrastructure development/maintenance.

- The feasibility of introducing a BOT system for the construction of certain infrastructure projects, particularly motorways, should be examined, although we should be under no illusion that this type of arrangement is universally applicable.

4. **Inland waterways and ports**

- There appears to be no justification for investing in capacity at the moment.

- Efforts should focus on upgrading equipment and some rehabilitation work and, for inland waterways, on measures aimed at re-establishing permanent safe access to these routes.

5. **Documentation, statistics, information**

- Consistent information systems on transport infrastructure and activities should be developed at inter-regional level in order to ensure that the basic data essential for adequate programming and planning of infrastructure maintenance and development work are available in standardised formats. This is the key pre-requisite for setting up data exchange systems.

- Governments should see that relevant statistical data are collected and should ensure that all the data already available and studies and evaluations already carried out are kept and are accessible.

6. **Institutional issues**

- Adequate administrative and institutional structures for project management should be put in place so as to facilitate the efficient monitoring of progress on infrastructure projects and the formulation of efficient infrastructure maintenance and upkeep policies.

- In some countries, the problems posed by the division of responsibilities between local and federal levels (particularly noticeable with inland waterways and air control in Yugoslavia).

- The requisite legal and statutory framework in areas such as the appropriation of land, environmental assessment, etc.

- Countries should ratify certain UNECE Conventions which they have not yet signed, including the convention on customs controls, and enforce those that they have signed, including the TIR Convention.
- Countries should review their customs procedures and facilitate border crossing by implementing modern, streamlined procedures including a single clearance point for goods and on-board inspection of passenger trains.

- An international agreement should be concluded on the Sava river, the status of the port of Ploce with regard to Bosnia-Herzegovina should be clarified, the regional port co-operation in the Adriatic should be reinforced and Bulgaria and Yugoslavia should come to an agreement on passage through the Iron Gates.

**Ministers are invited to:**

- discuss the policy recommendations mentioned above;
- identify any actions that should be taken for their implementation;
- consider the results of the TIRS study as described in the TIRS Executive Summary (annex to this document) and the TIRS Final Publication (Reference Document);
- provide guidelines for ECMT’s possible role in the follow-up to the TIRS study.
ANNEX

TIRS EXECUTIVE SUMMARY

The present report constitutes the Final Report of the Transport Infrastructure Regional Study in the Balkans, commonly referred to as the TIRS study. This study is undertaken in the context of the Stability Pact and constitutes actually the first phase of a longer exercise. Its Terms of Reference, attached in Appendix 11, have been established by the lead European agencies involved in the development of the regional transport network in South-Eastern Europe, namely the European Investment Bank (EIB), the European Commission and the European Conference of Ministers of Transport (ECMT). The French Government, through the "Agence Française de Développement" (AFD), provided the grant resources for this first phase, ECMT being responsible for the supervision of the work. The World Bank and EBRD were also involved in the reviews and commented on the draft reports.

The study was contracted to a French consulting firm, Louis Berger S.A. after a tender, and has been conducted between March 2001 and January 2002. An Interim Report, with preliminary conclusions, was presented in June 2001 and discussed at a Conference in Bucharest, on the 12th and 13th July 2001. The Draft Final Report of the study was issued at the beginning of January 2002 and discussed at a Conference in Paris, on the 14th and 15th February 2002. The study team visited on several occasions the different countries involved in the study, and endeavoured to develop close relations with the Authorities in charge of transport management and development in these countries, in order to better assess the transport conditions and requirements prevailing at the present time and likely to develop in the future. Advice, guidance and comments have been regularly solicited from these Authorities, in particular through the two conferences organised during the study, in order to arrive at final recommendations both realistic and acceptable by all countries.

The study area encompasses seven countries, Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Federal Republic of Yugoslavia, the Former Yugoslav Republic of Macedonia and Romania. The objectives of TIRS Phase 1, as stipulated by the Terms of Reference, were essentially:

- To identify major international and regional routes in the region,
- To define a coherent medium term network to be used as a framework for planning, programming and co-ordinating infrastructure investments, and
- To define short-term priority projects suitable for international financing.

TIRS has, of necessity, been an independent yet critical review of existing plans and programmes which the different Authorities in the region have developed as their basis for infrastructure improvements in response to defined objectives for transport development in their countries.
These objectives are varied. At present the seven countries in the region are facing very different situations. As a result, their individual requests for transport infrastructure investments are of a different nature and result in substantially different types of projects. The national objectives which regularly appear are:

a. Reconstruction of destroyed or damaged facilities,

b. Rehabilitation of existing facilities severely deteriorated through lack of maintenance,

c. Upgrading principal facilities in order to offer improved levels of service, and

d. Development of substantial and modern transport infrastructure on the main communication axes so as to meet expected long-term requirements.

The current objectives for each country are a mix of the above and depend directly on the time at which a country started its transition process and the extent of its involvement in the recent crises within the Balkans. Typically, for example, FRY is focused on the first two objectives, attempting to upgrade its facilities as far as possible; Bosnia-Herzegovina has mostly attained the first objective and is at present preoccupied by the two following ones; Bulgaria and Romania are concerned by the two last objectives whereas Croatia is mainly concerned with the fourth objective. Albania on the other hand is developing from many years of under-investment, and is concentrating, like BiH, on the second and third objectives.

The report suggests that at the level of the region as a whole, and in line with the Terms of Reference of TIRS, specific transport infrastructure objectives could be expressed as follows:

- Raise or maintain the transport communication system between the main economic and demographic centres in the region at technical standards and with the quality of service required by transport demand,

- Facilitate, improve and shorten wherever possible the connections between different national transport networks,

- Facilitate access to the region and transit through the region, of foreign traffic, at required standards of comfort and safety,

- Rationalise, simplify and accelerate the procedures at border crossings throughout the region, and

- Introduce inter-regional agreements in order to co-ordinate development of the main transport infrastructure and to improve transport services by jointly operating equipment or rolling stock whenever feasible.

Such objectives at a regional level do not contradict national objectives of internal accessibility and distribution. They should, however, result in investment programmes giving greater emphasis to projects on links of inter-regional importance and to those with the greatest impact on international traffic.
Transport networks in the Balkans have developed for centuries according to actual trade and travel requirements but also to political constraints. Both factors have significantly changed recently, but the links to provide basic accessibility to the region already exist, even if many of them are sub-standard and provide a poor level of service, largely as a result of accumulated under-investment and a lack of adequate maintenance. This report has therefore defined a network for the TIRS study that is mostly based on existing infrastructure, which has been described using a geographic information system. The report also summarises transport organisation by country and the current activities on the various modes throughout the region. This includes the difficulties and constraints to transport movement across borders.

Economic conditions in the region have been examined as part of the assessment of the overall potential for growth and more specifically for determining the parameters for insertion into the gravity model developed for forecasting passenger and freight demand over the period 2000 – 2015. Given the difficulties of forecasting in the region, sensitivity analyses have been undertaken reflecting three scenarios spanning optimistic, medium and pessimistic levels of growth for GDP, population and agricultural and industrial activity. The results of the analysis indicate that transport demand by road should continue to increase regularly in the medium term, supported by the steady economic recovery expected in the region. On average, road traffic should more than double before 2015. Conversely, railway transport is not expected to develop significantly in the same time, as rail freight traffic is largely dependent on the future of mining and industrial activities.

Whilst goods transport development seems to depend mostly on the success of reconverted mining and industrial activities, any increase in prosperity will surely be reflected in more passenger mobility, which will be linked to an increase in car ownership. Development of Road transport networks will be mainly governed by the growth of local traffic, which represents 85 to 98 % of total traffic, except near border-crossing points. Local traffic is expected to grow a little faster than international traffic on most international routes. For the Railways, which have suffered the most from recent Balkan crises, the prospect of restoring pre-war levels of traffic before 2015 should be considered an optimistic assumption. On the other hand Inland Waterways transport, especially along the Danube, which has suffered extensively from the recent crises and in parts has collapsed completely, should be restored as quickly as possible because of its competitiveness, by cleaning and rehabilitating navigation channels to required safety standards.

The capacity of existing infrastructure has been examined, leading to the general conclusion that, once ongoing reconstruction of railway bridges in Bosnia & Herzegovina is completed, there will be no physical bottlenecks on the surface transportation networks, with the exception of a few bridges destroyed or damaged in Yugoslavia.

Traffic congestion is however expected to become a constraint in the medium term, but only on a few sections of the highway network, namely:

− on Corridor IV between Sofia and the Greek border,

− on Corridor X between Belgrade and Hungary and, to a lesser extent, between Leskovac and Kumanovo,

− along the roads servicing the Adriatic coast in Croatia, between Zagreb/Rijeka and Split,

− on the E 763 road between Belgrade and Cacak, and
near the largest cities, like Bucharest, Sofia, Belgrade and Sarajevo.

All of the links listed above should require upgrading to four lanes expressway/motorway in the medium term. Other localised congestion in the region should be significantly reduced by upgrading existing roads to regular 2 lane highway standards, with the addition of crawler lanes, when necessary, in mountainous terrain.

The existing facilities of other modes of transport should not be congested for some considerable time to come. Ports and Airports currently support much less traffic than ten years ago; as a consequence, future development of air and maritime transport should only need investment for appropriate modernisation or rehabilitation projects in response to the evolving nature of traffic. Railway lines should not experience any noticeable increase in traffic, and those lines which are already close to their capacity could, with some minor adaptations in signalling and crossings, handle higher levels of traffic if necessary. Given the unclear prospects for rail transportation in the region and the generally poor financial situation of the railway companies, any strategy for rail infrastructure development should remain modest for the moment and concentrate on the most trafficked lines, basically those along the Pan European Transport Corridors. Systematic rehabilitation and progressive upgrading of these lines should give railway transportation a chance to play its role and to protect its natural markets. Major investments, such as those which may lead to a significant increase in the nominal minimum speed, the doubling of tracks or the electrification of lines, should be carefully analysed. The management of rail companies and their financial situation has in most cases to improve before more important and long-term investments may be envisaged.

Regarding intermodal transport, the study found that this form of transport is still limited in the countries of South-Eastern Europe and that specific intermodal facilities, when they exist, are largely under-utilized. Most intermodal transfer operations are accommodated in seaports or river-ports, or in railway stations, with equipment and personnel under the responsibility of relevant rail or port companies/agencies. The development of intermodal transfer capabilities is thus generally included in individual development plans for ports and railways.

The long list of projects, presented through the TIRS initiative for future investments in transport infrastructure in the Balkan region, has been established in close liaison with the transport authorities in each country and selectively reviewed when it has been possible to make a more detailed examination of specific project materials. The presentation of some projects may nevertheless prove to be obsolete, as financing agreements are continuously discussed between countries and financing institutions. Recently decided funding agreements may therefore not have been taken into account in this report.

The definition of the proposed infrastructure projects, the associated cost estimates and the status of their financing have been systematically checked with the different responsible departments or entities in every country, under the supervision of the official correspondent for TIRS in the local administration. Whenever possible, the Consultant has checked the essential elements of critical projects. It was not possible to do this for every project, as relevant documentation was in many cases not readily available.

In evaluating this long list of projects for establishing future investment programmes across the region, potential projects have been classified through a multi-criteria analysis centred around two basic concerns, namely the socio-economic return on investment on the one hand and the functionality and coherence of the network on the other hand. Projects have been classified into four categories, depending on their overall interest and on the reliability of their definition. Projects under Category I are deemed to be immediately eligible for financing and should be implemented immediately. Projects under Categories IIa and IIb necessitate some additional analyses before they may be approved for financing. Category IIa includes the most worthwhile and well-defined projects whilst Category IIb contains rather more
questionable projects. Category III includes all projects which, in the Consultant’s view, should be discarded for the moment.

In arriving at the final selection of projects for inclusion in the short and near term programmes for infrastructure development, budgetary envelopes for Categories I and IIa have been tailored to fit approximately with the estimated global financial affordability of transport infrastructure investments by the countries in the region, taken as 1.5% of GDP\(^1\). This level of investment is compatible with the earlier TINA studies for infrastructure development in countries being considered for accession to the European Union.

The consequent analysis of the projects considered as eligible or likely to be eligible (Categories I and IIa) produced the following results:

- Out of 151 projects, rehabilitation projects account for 83 (55 %), upgrading projects for 37 (25 %) and extension or new infrastructure projects for 31 (20 %).

- Distribution of the corresponding budget between the modes gives 42 % for highways, 40 % for railways, 6.5 % for seaports, 7 % for inland waterways and 4.5 % for airports.

- At first sight, reimbursement capabilities could constitute a real constraint for Bosnia and Herzegovina and Bulgaria, whereas Croatia has still some spare capacity in this respect. For the four other countries, the budgets corresponding to projects categorised in Categories I and IIa fit with the theoretical financing capabilities of those countries.

Distribution of projects and investment budget by category is given hereunder for each country and for the region as a whole.

<table>
<thead>
<tr>
<th>Country/ Category</th>
<th>By</th>
<th>I</th>
<th>IIa</th>
<th>IIb</th>
<th>III</th>
<th>All projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>Number</td>
<td>8</td>
<td>9</td>
<td>2</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Cost in € Mio</td>
<td>136</td>
<td>260</td>
<td>67</td>
<td>342</td>
<td>805</td>
</tr>
<tr>
<td>Bosnia-Herzegovina</td>
<td>Number</td>
<td>11</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Cost in € Mio</td>
<td>305</td>
<td>838</td>
<td>186</td>
<td>488</td>
<td>1,817</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>Number</td>
<td>15</td>
<td>11</td>
<td>6</td>
<td>6</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Cost in € Mio</td>
<td>1,364</td>
<td>1,295</td>
<td>767</td>
<td>951</td>
<td>4,377</td>
</tr>
<tr>
<td>Croatia</td>
<td>Number</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Cost in € Mio</td>
<td>347</td>
<td>554</td>
<td>1,416</td>
<td>474</td>
<td>2,791</td>
</tr>
<tr>
<td>Fed.R.of Yugoslavia</td>
<td>Number</td>
<td>32</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Cost in € Mio</td>
<td>1,373</td>
<td>60</td>
<td>504</td>
<td>57</td>
<td>1,994</td>
</tr>
<tr>
<td>FYROM</td>
<td>Number</td>
<td>9</td>
<td>6</td>
<td>7</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Cost in € Mio</td>
<td>173</td>
<td>155</td>
<td>319</td>
<td>418</td>
<td>1,064</td>
</tr>
<tr>
<td>Romania</td>
<td>Number</td>
<td>14</td>
<td>18</td>
<td>5</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Cost in € Mio</td>
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<td>4,436</td>
<td>2,916</td>
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<td>14,735</td>
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<td>All 7 countries</td>
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<td>59</td>
<td>35</td>
<td>35</td>
<td>223</td>
</tr>
<tr>
<td></td>
<td>Cost in € Mio</td>
<td>5,368</td>
<td>7,598</td>
<td>6,175</td>
<td>8,442</td>
<td>27,583</td>
</tr>
</tbody>
</table>

\(^1\) ECMT Resolution n° 97/1 on Transport and Infrastructure Development adopted in Berlin on 21-22 April 1997.
The full value of many infrastructure projects will only be realised if institutional or bilateral/multilateral arrangements are reached in the meantime.

Among the most critical institutional problems in achieving an appropriate management of infrastructure development, is the reduced capacity of most of the States or of the State-owned companies to generate the necessary funds to operate, maintain and renew transport facilities. Regarding road infrastructure, budgetary resources derived from fuel or vehicle taxes are in most countries either largely used for other purposes or are insufficient to finance adequate maintenance and upgrading of the network at the same time. Awareness of appropriate measures to levy and earmark the necessary budgetary resources may exist but the introduction and full implementation of such measures is still slow. Financing capabilities are also limited for most railway companies, which in general have not adapted their organisation and their staffing to the rapid decline in demand and are over-subsidised at present. Drastic restructuring will in many cases be a pre-requisite before railways recover their attractiveness and play their normal role.

Infrastructure maintenance has been seriously neglected in the last decade and it is vital that countries introduce or reinforce their maintenance systems, with appropriate financing, to protect their existing assets.

Information systems on transport infrastructure and transport activities are in general insufficient to support adequate planning and programming of development and maintenance.

Among the bilateral/multilateral arrangements to be reached in the near future, we should mention inter alia:

- The recognition of international status for the Sava river and distribution of responsibilities among the riparian countries for its maintenance and operations,

- The facilitation of use of the Croatian port of Ploce by traffic to or from Bosnia-Herzegovina, and the reinforcement of the regional port-cooperation in the Adriatic,

- The facilitation of the passage through the Iron Gates,

- The facilitation and speeding-up of border crossing operations in general, in particular for railway transport, with a single control point for cargo and custom control on line for passengers.

The recommendations in this report should be refined by future works, in particular the second phase of TIRS that is being implemented by the European Commission. It is envisaged that Phase 2 will include, amongst other actions, some pre-feasibility studies and selective prospective analysis, the development of an appropriate information system at regional level based on the creation of a documentation centre to ensure that the most important information or documentation on the transport system of the Balkans is collected and made accessible for future users.