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**ROAD TRANSPORT INFRASTRUCTURE**

**Trans-European North-South Motorway (TEM) Project – Progress Report**

Note by the Project Manager

1. The Trans-European North-South Motorway (TEM) is an international motorway and expressway network connecting the Baltic, Adriatic, Aegean and Black Seas.
2. In the Project, 13 Central Eastern and Southern Eastern European countries (Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Italy, Lithuania, Poland, Romania, Slovakia and Turkey) participate and three other countries – Sweden, Ukraine and Serbia and Montenegro – have observer status.
3. Its high-capacity, double and grade-separated carriageways, each with a minimum of two traffic lanes will ensure an adequate quality of services for modern traffic by providing for safety, speed and comfort in accordance with commonly adopted standards, thus contributing to the economic and social development of the whole European continent.
4. The United Nations Economic Commission for Europe is its Executing Agency, responsible for technical and administrative backstopping of the Project and the coordination of its activities.

5. The total planned length of the TEM network as of 1 January 2005 was 23,325 km, out of which 10,632 km were in operation and 1106 km under construction (Annex 1). The schematic map of TEM Network 2005 is attached to this report as Annex 3.

6. Taking into account the corresponding comparative indicators (last three columns of Annex 1), Turkey had the highest percentage of the TEM network length (29.6%), Croatia had the fastest construction pace (11.2% of its national TEM network under construction) and Italy had the highest degree of completion of its TEM network (99.7%). In total, 45.6% of the whole TEM network was in operation and 4.7% of its length was under construction.

7. Pending total completion, nevertheless, TEM is already an operational reality because of the TEM Corridor, which consists of upgraded national roads linking the already constructed motorway sections.

8. The main objectives set for the Project are:

- To assist the participating countries in accelerating the construction of the TEM network through the identification of investment needs and priorities, investigation of financial resources needed for its construction and determination of appropriate payback systems for use on the TEM motorway.
- To assist in designing, building, maintaining, operating and administering the TEM motorway network on the territories of participating countries as part of an integrated European transport infrastructure, thus filling the gaps in the existing motorway network in the region.
- To pay special attention, in view of present economic constraints, to the upgrading of existing roads and to envisage the stage construction of motorways.
- To promote and improve cooperation in all matters concerning road transport between TEM countries having different levels of development.
- To continue to disseminate the knowledge, expertise and know-how developed so far in the TEM region to other regions of the world.

9. In the whole period of 28 years during which the TEM Project has been underway, an efficient type of co-operation and understanding has been established between the respective motorway and/or highway authorities of the participating countries, together with the Project's institutional framework and organizational structure.

10. The highest decision-making body of the TEM Project is the Steering Committee, which meets twice a year, determines the policy of the Project as well as the general measures to be taken concerning TEM activities, and takes decisions for common action.

11. The TEM Steering Committee held its last (forty-third) session on 13-15 June 2005 in Vienna, Austria. The next (forty-fourth) session of the Committee will be held in December this year in Geneva.

12. The Project has a Project Central Office (PCO) set up to coordinate all the activities carried out under the terms of the Programme of Work. It operates under the direction of the Steering Committee and under guidance from the Economic Commission for Europe. The PCO is located in Warsaw and the Polish Government covers office expenses.
13. The Project Central Office is headed by the Project Manager. The past TEM Project Managers were made available by the Governments of Greece, Turkey, Romania, former Czechoslovakia, Slovakia and the Czech Republic, respectively. The present Project Manager has been provided by the Government of Slovakia with an assignment until 31 December 2008.
14. The TEM has a National Coordinator in each participating country appointed by the respective Government, responsible for the coordination of all Project activities within the country.
15. The funding of all Project activities in-kind as well as in cash is provided exclusively by the participating countries. In this respect, the TEM Cooperation Trust Fund has been established, based on the Trust Fund Agreement signed in Geneva in December 1991. According to this Agreement, each participating country contributes USD 7,500 annually to the Project in addition to its in-kind contribution. Under the terms of the Agreement, the UNECE is responsible for the management of the funds contributed in cash. As a result of this, the Project has a well established and permanent arrangement for the continuous administration and co-ordination of its technical, managerial and economic activities.
16. According to the financial report for 2004, approved by the forty-third session of the TEM Steering Committee, the total funds available in 2004 amounted to USD 128,206 with total expenditures (including UNECE Programme support costs) representing USD 98,720, resulting in a total unencumbered positive balance as at 31 December 2004 amounting to USD 29,486.
17. The TEM Programme of Work for 2005, based on the provisions of the Trust Fund Agreement and approved by the forty-second session of the TEM Steering Committee (29 November - 1 December 2004, Geneva) is attached to this report as Annex 2.
18. In addition to the co-operation and assistance activities of the Project regarding the acceleration of the TEM construction itself, the TEM Project performs a piloting function in private sector funding of motorway and road construction and maintenance, focusing on the legal framework for building motorways with foreign credits and concession systems, evaluation of payback systems, including conditions for the application of motorway tolls, investigation and/or development of issues for assessing Public Private Partnership arrangements and technical assistance in the areas of private financing of motorways.
19. In the recent period, the scope of technology and know-how transfer in the framework of TEM has also widened, going from motorway design, construction and operation to the broader field of common motorway and road issues, such as pavement and bridge management, environmental impact assessment, standardization, harmonization of signing, introduction of intelligent transport systems, etc. The forms, tools and techniques used in technology transfer within TEM vary according to the aim and type of activities. They include seminars, workshops and round tables usually organized by one member country jointly with the TEM Project Central

Office in accordance with the annual programme of work, often in collaboration with one or more non-TEM institutions or consultants.

20. These transfer and technical assistance activities have also included valuable inputs from other OECD countries, especially from the countries of the European Union and the United States of America. Within the multitude of technology transfer programmes directed now to Central and Eastern European countries, TEM is unique in that it deals not only with the transfer from the more developed Western countries to the region, but also with the technology transfer, coordination and exchange of experience and know-how between the participating countries of the region themselves. The technical potential amassed, in terms of experts trained also constitutes a substantial resource now possessed by the TEM Project, which can be capitalized on in other regions.

21. The TEM Project collaborates with international organizations dealing with transport issues, especially the relevant Directorates General of the Commission of the European Union, European Conference of Ministers of Transport, CEI (Central European Initiative), CEDR (Conference of European Directors of Roads), US-based HEEP (Highway Engineering Exchange Program), UN/TER Project Central Office in Budapest, International Road Transport Union (IRU), International Road Federation (IRF) and the European Association of Companies with Concessions for Motorway, Bridge and Tunnel Tolls (ASECAP).

22. In the reporting period, the involvement of the TEM PCO in monitoring the development of Pan-European Transport Corridors continued and was manifested *inter alia* by the presence of the TEM Project Manager and his Deputy in the meeting of the Steering Committee of Corridor VI, on behalf of its Secretariat, held in Bratislava, Slovak Republic on 9 November 2004 and in the meeting of the Steering Committee of Corridor II (TEM Project Manager only) held in Skrzynky, Poland on 12-13 May 2005.

23. Moreover, the TEM Project Manager participated in the 8<sup>th</sup> meeting of the Corridors and Areas Co-ordinators Group held in Brussels on 21 April 2005.

24. The TEMSTAT database and mapping activity was successfully developed in the course of the whole reporting period. On 7-8 March 2005, the TEMSTAT Data Collection and Mapping Meeting was held in Prague, Czech Republic, in which experts of 8 TEM member countries took part. In the meeting, the TEM Status data and TEMSTAT 1 and 2 data for 2005 were transferred to the TEM PCO to be used for elaboration of the TEM Status report, country and regional maps as well as for elaboration of the TEM Master Plan.

25. The TEMSTAT database represents the basic input to the TEM ArcView mapping programme, consisting of regional and country infrastructure status maps, traffic flow maps and TEM Master Plan maps presenting envisaged network development until the year 2020.

26. In 1993, with FHWA's and HEEP's financial and technical support, the TEM/HEEP Area V (Central Eastern Europe) was inaugurated as the first one in Europe. HEEP is a non-profit association in charge of promoting free exchange of computer programmes, systems and concepts between its members in the fields of civil engineering, transportation and management with the aim of increasing the effectiveness of computer usage. The establishment of the HEEP Area V

provided TEM participating countries and their software experts with free access to the latest developments in highway electronic engineering.

27. The TEM/HEEP Area V 2005 Annual Meeting was held in Palanga, Lithuania on 25-27 April 2005. In the framework of the HEEP Educator and Student Participation Programme, one student from the Technical University of Vilnius was granted a scholarship to present a report on his research achievements at the 2005 HEEP Annual International Conference to be held in Bismarck, North Dakota, USA in September 2005.

28. In the reporting period, the already very close cooperation of the TEM Project Central Office with the UNECE further intensified. The Project Manager participated in the 67<sup>th</sup> session of the UNECE Inland Transport Committee held on 15-17 February 2005 and in the meeting of the Working Party on Transport Statistics, which took place on 8-10 June 2005 in Geneva.

29. On the recommendation of the Chairman of the Working Party on Transport Trends and Economics (WP.5) and at the invitation of the UNECE, the TEM Project Manager also took part in a brainstorming meeting on the future of WP.5 on 14 April and in an informal meeting on Euro-Asian Transport links on 15 April 2005, both in Geneva, Switzerland.

30. The practical implementation of the Memorandum of Understanding between the UNECE and ASECAP (European Association of Companies with Concessions for Motorway, Bridge and Tunnel Tolls) regarding collaboration with the TEM Project continued by the attendance of the TEM Project Manager at the International Transportation Finance Summit in Nice, France on 17-19 April 2005.

31. At the thirty-ninth session of the TEM Steering Committee, the revised TEM Master Plan Terms of Reference, representing one of the most important outcomes of the TEM Short-term Strategy were approved. The Master Plan aims at the elaboration of a strategic plan of actions for the implementation of TEM Project objectives in terms of updated and prioritized road transport infrastructure needs of the TEM member countries i.e. (1) identification of investment priorities, (2) establishment of a timetable for their realization, (3) assessment of the costs involved and of appropriate financing arrangements. In order to secure the necessary continuity of the TEM network to neighbouring countries, it was proposed that the TEM Master Plan should cover also 8 non-TEM countries (Belarus, Former Yugoslav Republic of Macedonia, Greece, Republic of Moldova, Russian Federation, Serbia and Montenegro, Slovenia, Ukraine (see Annex 4). Thanks to a generous contribution of the International Road Transport Union (IRU) amounting to 100,000 Swiss francs, the elaboration of the TEM Master Plan (broken down into 10 Work Packages) started in September 2003.

32. Based on available data, projections of population, economy and trade in the TEM 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 extrapolations. The forecasted economic and traffic growths served as inputs to the methodology for evaluation of the road/motorway projects in the framework of the Master Plan.

33. The ultimate goal of the methodology was to prioritize projects in order to support the elaboration of a medium and long-term investment strategy in the region and to encourage the realization of projects that had good chances of implementation and fell within the Master Plan

objectives. Altogether, 319 projects proposed were included in the TEM Master Plan. The implementation of the TEM network as a whole will need 49.556 billion €

34. The other very important achievement was the definition of the TEM backbone network, which was the starting point of the Master Plan for a differential network design. This network was defined by the TEM PCO and its consultants in close co-operation with the participating countries. Special consideration was given to the interconnections and continuity of the additional links with parts of the backbone network (Annex 5).

35. Furthermore, potential bottlenecks with respect to truck and bus traffic were identified. The TEM sections with bottlenecks expected to appear until 2020 were listed in the Master Plan final report and shown also on the maps reflecting the bottleneck status in 2005, 2010, 2015 and 2020.

36. Finally, possible sources of funding for country projects without secure financing were identified, the eligibility criteria for the respective countries to receive funds as well as the required procedures were outlined and analysed in the Master Plan final report.

37. Further information regarding the TEM Master Plan can be found on the UNECE website: [www.unece.org/trans](http://www.unece.org/trans)

38. In the reporting period, collaboration with the TER Project Central Office in Budapest, established in 1991, continued. The collaboration concentrated mostly on the administration of both Projects, on the possibilities for cooperation with the European Commission in activities with a multimodal scope and on the coordination and finalization of all matters concerning the elaboration of the TEM and TER Master Plans.

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Annex 1

**STATUS OF TEM NETWORK (as of 1.01.2005)**

COUNTRY	Total length	PROGRAMMED (in study, preliminary design and design phases)		UNDER CONSTRUCTION		IN OPERATION		COMPARATIVE INDICATORS		
	km	one carriageway	both carriageways	one carriageway	both carriageways	one carriageway	both carriageways	% of total TEM length	CONSTRUCTION PROGRESS (% of length under construction)	DEGREE OF COMPLETION (% of length in operation)
Column No.	1	2	3	4	5	6	7	8	9	10
AUSTRIA	485	-	-	35	22	35	428	2.1	8.1	91.9
BOSNIA and HERZEGOVINA	331	-	319	-	-	-	12	1.4	-	3.6
BULGARIA	925	-	617	-	15	19	274	4.0	1.6	30.7
CROATIA	1465	31	508	6	161	88	742	6.3	11.2	53.7
CZECH REPUBLIC	987	-	359	26	85	-	543	4.2	9.9	55.0
GEORGIA	1053	-	1045	-	-	-	8	4.5	-	0.8
HUNGARY	1658	638	276	15	101	67	522	7.1	6.6	33.5
ITALY	1519	-	-	-	4	-	1515	6.5	0.3	99.7
LITHUANIA	731	204	12	-	-	254	466	3.1	-	81.1
POLAND	3317	312	2178	-	135	86	607	14.2	4.1	19.6
ROMANIA	3026	-	2631	-	202	-	201	13.0	6.7	6.6
SLOVAKIA	932	-	527	3	45	577	355	4.0	5.0	69.1
TURKEY	6896	-	378	-	293	3659	2566	29.6	4.2	63.7
<b>TOTAL</b>	<b>23325</b>	<b>1185</b>	<b>8850</b>	<b>85</b>	<b>1063</b>	<b>4785</b>	<b>8239</b>	<b>100.00</b>	<b>4.7</b>	<b>45.6</b>

Annex 2

TRANS-EUROPEAN NORTH-SOUTH MOTORWAY (TEM)  
PROJECT PROGRAMME OF WORK FOR THE YEAR 2005

Objective		Activity		Action	Implemented by	2005			
No.	Description	No. <u>Priority</u>	Description			I	II	III	IV
1.	Updating of TEM network, acceleration of its construction and review of TEM priorities	1.1. <b>I.</b>	Follow-up actions of the TEM Master Plan aiming at covering the identified priority projects and needs	1.1.1. Attaining maximum compatibility between TEM network, Pan-European Transport Corridors and Euro-Asian Transport Linkages	PCO Governments	*	*	*	
				1.1.2. Formulating proposals and considering measures aiming at removing bottlenecks and solving the problems of missing links and other priority transport infrastructure needs on main TEM road corridors resulting from the TEM Master Plan	PCO Governments UNECE	*	*	*	
				1.1.3. Investigation of alternative links within the TEM region incorporating intermodal approach and formulating proposals for their possible implementation	PCO Governments	*	*	*	
				1.1.4. Presentation and dissemination of the TEM Master Plan final report with conclusions and recommendations	UNECE PCO	*			
				1.1.5. Presentation of Master Plan results on the UNECE/TEM webpage	UNECE PCO	*			



Objective		Activity		Action	Implemented by	2005			
No.	Description	No. <u>Priority</u>	Description			I	II	III	IV
				1.1.6. Publication of the Master Plan newsletter and summary report, findings and conclusions	UNECE PCO	*	*		
				1.1.7. Organisation of Workshop/seminar to implement the Master Plan results	UNECE PCO Governments			*	
				1.1.8. Implementation of TEM Master Plan follow-up actions and supporting their implementation with involvement of TEM in finding financial means	PCO Governments	*	*	*	*
				1.1.9. Definition on a macro-scale of the necessary technical and institutional actions for assisting the implementation of the TEM Master Plan	UNECE PCO Governments		*	*	
				1.1.10. Investigation of possibilities to expedite the construction of the TEM backbone network	UNECE PCO Governments	*	*	*	*
		1.2. <b>I.</b>	TEM integration in the new European Transport Environment	1.2.1. Strengthening TEM as monitoring and management instrument of Pan-European Corridors development	UNECE PCO Governments	*	*	*	*
				1.2.2. Carrying out the function of secretariat of the Pan-European Transport Corridor VI	PCO Poland	*	*	*	*

Objective		Activity		Action	Implemented by	2005			
No.	Description	No. <u>Priority</u>	Description			I	II	III	IV
2.	Promotion of TEM	2.1. <b>I.</b>	Development of new contacts and relationships with neighbouring countries aiming at their joining the Project	2.1.1. Contacts of ECE and PCO representatives with countries in line with the TEM Trust Fund Agreement to discuss possibilities and conditions for their joining TEM, focusing especially on non-TEM member countries covered by the TEM Master Plan	UNECE PCO	*	*	*	*
				2.1.2. Bilateral and multilateral contacts between neighbouring countries encouraged and supported by PCO	PCO Governments	*	*	*	*
		2.2. <b>I.</b>	Providing information on TEM: information brochure, international events, mass media information, etc.	2.2.1. Regular dispatching of press releases and providing other types of information related to the Project's activities	UNECE PCO	*	*	*	*
				2.2.2. Disseminating all information about the Project within the countries	Governments	*	*	*	*
				2.2.3. Permanent updating of TEM Project webpage within the UNECE website	UNECE PCO	*	*	*	*
				2.2.4. Printing and distribution of TEM 2005 brochure	PCO			*	
				2.2.5. Feedback members with TEM news	PCO	*	*	*	*
				2.2.6. Presence in European Transport fora	PCO Governments	*	*	*	*

Objective		Activity		Action	Implemented by	2005			
No.	Description	No. <u>Priority</u>	Description			I	II	III	IV
				2.2.7. Organisation/participation in regional and national events to present the Project	PCO Governments	*	*	*	*
				2.2.8 Strengthening TEM PCO by securing more financial and human resources	UNECE Governments	*	*	*	*
3.	Ensuring safe, sustainable and homogeneous driving conditions on TEM by assisting in TEM design, maintenance, operation and management	3.1.  <b>I.</b>	TEM information systems	3.1.1. Performing HEEP Area V regular activities	PCO Lithuania		*		
				3.1.2. Data processing of TEMSTAT databases	PCO	*		*	
				3.1.3. Meeting of TEMSTAT contact persons	PCO Governments		*		
				3.1.4. Elaboration of TEMSTAT 2005 maps	PCO			*	

Objective		Activity		Action	Implemented by	2005			
No.	Description	No. <u>Priority</u>	Description			I	II	III	IV
		3.2 <b>II.</b>	TEM Permanent Table on Development and Coordination of Motorway Construction and Operation in the TEM South-Western region	3.2.1. Regular meeting of the Permanent Table	PCO Austria, Bosnia and Herzegovina, Croatia, Hungary, Italy, Slovakia				*
				3.2.2. Joint promotion of the Project for possible funding from EU sources	UNECE PCO Governments involved	*	*	*	*
				3.2.3. Meeting of the Working Group of the Permanent Table	PCO Governments involved		*		
4.	TEM integration into Pan European transport environment	4.1. <b>I.</b>	Co-operation with respective EC bodies and other EU States' organisations and institutions	4.1.1. Institutional co-operation with EC DG TREN, REGIO, ENLARGEMENT	UNECE PCO	*	*	*	*
				4.1.2. Co-operation with CEI (Central European Initiative) in transport related activities of common interest	UNECE PCO respective Governments	*	*	*	*
				4.1.3. Further strengthening of regular dialogue and co-operation with non-governmental organizations (IRU, CEDR, Europlatforms, ASECAP, Eurochambres), universities and research institutions	UNECE PCO Governments Related organizations	*	*	*	*

Objective		Activity		Action	Implemented by	2005			
No.	Description	No. <u>Priority</u>	Description			I	II	III	IV
				4.1.4 Promotion of TEM Standards and Recommended Practice	UNECE PCO	*	*	*	*
		4.2.	TEM involvement in the development of Euro-Asian Transport Linkages	4.2.1. Elaboration of a strategy for the effective involvement of TEM in the development of Euro-Asian Transport Linkages					
				4.2.2. Developing new contacts and relationships with countries involved in the Euro-Asian Transport Linkages and encouraging their full membership in the TEM Project					
				4.2.3. Transfer of know-how to countries involved in the Euro-Asian Transport Linkages and sharing TEM experience and practices with them					
		4.3. <b>I.</b>	Co-operation with other countries and fora	4.3.1. Development of close co-operation with other related initiatives and projects	UNECE PCO	*	*	*	*
				4.3.2. Development of contacts aiming at investigating possibilities of co-operation with European NGOs	UNECE PCO	*	*	*	*
				4.3.3. Connection of TEM plans to other components of the network (rail, sea ports, inland ports, airports)	UNECE PCO Governments				*

Objective		Activity		Action	Implemented by	2005			
No.	Description	No. <u>Priority</u>	Description			I	II	III	IV
				4.3.4. Identification and facilitating the connections of TEM network to the transport networks of neighbouring regions	UNECE PCO			*	*
				4.3.5. Involvement of TEM in supporting the application of new technologies & techniques (ITS, telematics, informatics, etc.)	UNECE PCO Governments	*	*	*	*
5.	Project management enhancement	5.1. <b>I.</b>	Steering Committee activities	5.1.1. Regular sessions	UNECE PCO Governments		*		*
		5.2. <b>I.</b>	Co-operation with UNECE	5.2.1. Continuation and further strengthening of co-operation with UNECE ITC and its subsidiary bodies	UNECE PCO Governments	*	*	*	*
		5.3. <b>I.</b>	Co-operation among TEM countries in all matters concerning road transport	5.3.1. Contacting the Governments with respect to their needs	PCO Governments	*	*	*	*



**TRANS-EUROPEAN NORTH-SOUTH MOTORWAY  
(TEM) NETWORK**

Annex 3







