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Working Party on Road Transport (Ninety-third session, 19-21 October 1999, agenda item 3 (b))

## ROAD TRANSPORT INFRASTRUCTURE

#### Trans-European North-South Motorway (TEM) Project

#### **Progress report**

#### Note by the TEM Project Manager

1. The Trans-European North-South Motorway (TEM) Project is a regional infrastructure project aimed at the planning, design, construction and operation of an international motorway and expressway network connecting the Baltic, Adriatic, Aegean and Black Seas.

2. The following Central Eastern and Southern Eastern European countries are participating in the project at present: Austria, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Italy, Lithuania, Poland, Romania, Slovakia and Turkey as full or associate members. Two additional countries - Sweden and Ukraine - have observer status.

3. To the west, the TEM terminals will link up with the Trans-European Road Network of the European Union, while to the east and south-east it will provide direct links with the road systems of Western Asia and North Africa.

4. 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.

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5. The United Nations Economic Commission for Europe is its Executing Agency, responsible for technical and administrative backstopping of the Project and the co-ordination of its activities. In 1977, the invitation of the Government of Poland to establish the Project Central Office in Warsaw was accepted and work on the Trans-European North-South Motorway started officially on 1 September 1977.

6. The original TEM itinerary was limited to one main north-south and south-east link from the Polish city of Gdansk to the eastern borders of Turkey with shorter branch links to the Mediterranean and Black Sea ports. The total length of main axis and branch links was 10,400 km.

7. To reflect the political and economic changes in Central and Eastern Europe after 1989, the basic decision to expand the system by adding east-west itineraries, and thus to transform the TEM into the real motorway and expressway network of the region, was taken by the Steering Committee in 1991.

8. The total planned length of the TEM network at present is 22,303 km, out of which 6,118 km are currently in operation (1999) and 1,575 km under construction (annex 1).

9. 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.

10. 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 the present economic constraints, to the upgrading of existing roads and to envisage the stage construction of motorways.
- To promote and improve co-operation in all matters concerning road transport between TEM countries with 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.

11. In the whole period of over twenty years during which the TEM Project has been under way, 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 institutional framework and organizational structure which have proved themselves practical.

12. Within this structure, the highest decision-making body of the TEM Project is the Steering Committee. This is composed of officially appointed members, representing the participating countries. The Steering Committee 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.

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13. The TEM Steering Committee held its last (thirty-first) session on 22-24 June 1999 in Geneva, Switzerland. The next (thirty-second) session of the Committee will take place in Trieste (Italy) on 1-3 December this year.

14. The Project has a Project Central Office (PCO) set up to co-ordinate 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.

15. The Project Central Office is headed by the Project Manager. The Project Manager's duties are many and varied, but it is worth mentioning here that he acts as Secretary to the Steering Committee, maintains liaison with National Coordinators regarding all matters concerning the implementation of TEM activities, prepares the Project Manager's reports for the Steering Committee sessions and executes the Project budget in accordance with the Steering Committee's decisions.

16. The past TEM Project Managers were made available by the Governments of Greece, Turkey, Romania, former Czechoslovakia and Slovakia, respectively. The present Project Manager has been provided by the Government of the Czech Republic and commenced his assignment on 1 January 1998.

17. The TEM has a National Coordinator in each participating country appointed by the respective Government, responsible for the co-ordination of all Project activities within the country.

18. 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 was established, based on the Trust Fund Agreement signed in Geneva in December 1991. According to this Agreement, each participating country contributes US\$ 7,500 annually to the Project in addition to its in-kind contribution. Under the terms of the Agreement, the UN/ECE 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.

19. Besides the co-ordination and assistance activities of the Project regarding the acceleration of the TEM construction proper, the TEM Project performed the 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 BOT concessionaire arrangements and technical assistance in the areas of private sector financing of motorways.

20. In the most recent period, the scope of technology and know-how transfer in the framework of the 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 the 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.

21. These transfer and technical assistance activities have also included valuable inputs from other OECD countries, especially from the European Union and the United States of America. Within the

multitude of technology transfer programmes directed now to Central and Eastern European countries, the 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, co-ordination and exchange of experience and know-how between the participating countries of the region themselves. This is of extraordinary importance since the mutual contacts between some of the Central and Eastern European countries in the road and motorway field are now much less frequent than in the past and sometimes even neglected. 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.

22. The TEM Project collaborates with international organizations dealing with transport issues, especially with the respective Directorates General of the Commission of the European Union, OECD Transport Division, United States of America Federal Highway Administration (FHWA), US-based HEEP (Highway Engineering Exchange Program) and International Road Federation (IRF).

23. More specifically, the TEM Project participates actively in the EU PHARE Multi-Country Transport Programme, assisting <u>inter alia</u> in the elaboration of the multimodal transport forecast for the region, in the Phare studies on Road Transport Charges, on Transport and the Environment and on Road and Motorway Management as well as in the Road Safety project for the Phare Countries.

24. The TEM Project is also one of the three co-organizers of the OECD/ECMT/TEM Conference on Strategic Environmental Impact Assessment for Sustainable Multimodal Transport Networks to be held in Warsaw, Poland on 14–15 October 1999.

25. In November 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.

26. In May this year, at the TEM/HEEP Area V Annual Meeting held in Antalya, Turkey, the TEM/HEEP Educator and Student Participation Program was commenced, in the framework of which two students from Turkey were granted scholarships to present reports on their research achievements in the United States of America.

27. In June 1998, a Co-operation Agreement was signed between the ECE and the WTB TINA (Transport Infrastructure Needs Assessment) Secretariat in Vienna, Austria, under the terms of which the TEM Project Central Office made available its database on roads and motorways for setting the transport infrastructure construction priorities in the region. In accordance with this Agreement, the TINA Secretariat transferred to the TEM Co-operation Trust Fund in Geneva the sum of US\$ 38,108.55. These resources have been used to purchase specific hardware and software for the TEM Project Central Office in Warsaw, compatible with those used by the TINA Secretariat and the TER Project Central Office in Budapest and also to cover the costs of the TEMSTAT Data Collection and Training Meeting held in Vilnius, Lithuania in April 1999.

The list of TEM Meetings in 1999 is attached to this report as Annex 2.

#### Annex 1

#### TEM Project Central Office UN/ECE Warsaw, Poland

# STATUS OF TEM NETWORK (as of 1.01.1999)

| COUNTRY                   | total<br>length | (in study, p<br>design a | AMMED<br>preliminary<br>nd design<br>(ses) | UNDER<br>CONSTRUCTION |                      | IN OPERATION       |                      | COMPARATIVE INDICATORS   |   |  |
|---------------------------|-----------------|--------------------------|--|-----------------------|----------------------|--------------------|----------------------|--------------------------|---|--|
|                           | km              | one<br>carriageway       | both<br>carriageways                       | one<br>carriageway    | both<br>carriageways | one<br>carriageway | both<br>carriageways | % of total<br>TEM length | CONSTRUCTION<br>PROGRESS<br>(% of length under<br>construction) | DEGREE OF<br>COMPLETION<br>(% of length in<br>operation) |
| Column No.                | 1               | 2                        | 3  | 4                     | 5                    | 6                  | 7                    | 8                        | 9   | 10   |
| AUSTRIA                   | 485             | 35                       | 36   | -                     | 19                   | 35                 | 395                  | 2.2                      | 3.9   | 85.2   |
| BOSNIA AND<br>HERZEGOVINA | 792             | -                        | 792  | -                     | -                    | -                  | -                    | 3.6                      | -   | -  |
| BULGARIA                  | 925             | 19                       | 617  | -                     | 20                   | 19                 | 269                  | 4.2                      | 2.2   | 30.2   |
| CROATIA                   | 1,564           | 354                      | 651  | 258                   | 131                  | 238                | 357                  | 7.0                      | 16.6  | 30.4   |
| CZECH<br>REPUBLIC         | 968             | -                        | 431  | -                     | 29                   | -                  | 508                  | 4.3                      | 3.0   | 52.5   |
| GEORGIA                   | 1053            | -                        | 1045                                       | -                     | -                    | -                  | 8                    | 4.7                      | -   | 0.8  |
| HUNGARY                   | 1624            | 65                       | 1012                                       | -                     | 98                   | 65                 | 449                  | 7.3                      | 6.0   | 29.7   |
| ITALY                     | 1519            | -                        | 143  | -                     | -                    | -                  | 1376                 | 6.8                      | -   | 90.6   |
| LITHUANIA                 | 741             | -                        | 270  | -                     | -                    | -                  | 471                  | 3.3                      | -   | 63.6   |
| POLAND                    | 3295            | 45                       | 2,803                                      | 15                    | 144                  | 30                 | 303                  | 14.8                     | 4.6   | 9.7  |
| ROMANIA                   | 2527            | -                        | 2,286                                      | -                     | 134                  | _                  | 107                  | 11.3                     | 5.3   | 4.2  |
| SLOVAKIA                  | 913             | 15                       | 536  | 68                    | 47                   | 53                 | 262                  | 4.1                      | 8.9   | 31.7   |
| TURKEY                    | 5897            | -                        | 4112                                       | -                     | 612                  | -                  | 1,173                | 26.4                     | 10.4  | 19.9   |
| TOTAL                     | 22,303          | 533                      | 14,734                                     | 341                   | 1,234                | 440                | 5,678                | 100.0                    | 6.3   | 26.4   |

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#### Annex 2

## **LIST OF ACTIVITIES IN 1999**

| No. | Action  | Programme<br>of Work Item<br>No. | Date     | Country<br>Place      | Remarks   |
|-----|---|----------------------------------|----------|-----------------------|---|
| 1.  | Meeting of Group of Experts on<br>Environmental Impact Assessment   | 3.2.1.                           | 22-24.03 | Czech Rep.<br>Prague  |   |
| 2.  | TEM Multilateral Meeting on<br>Motorway Connections between<br>Austria, Croatia, Hungary, Italy and<br>Slovenia | 2.1.2.                           | 25-26.03 | Italy<br>Trieste      |   |
| 3.  | TEMSTAT Data Collection and Training Meeting  | 1.3.2.                           | 7-9.04   | Lithuania<br>Vilnius  |   |
| 4.  | Meeting of Group of Experts on TEM Standards  | 3.1.1.                           | 19-21.04 | Hungary<br>Budapest   |   |
| 5.  | TEM/HEEP Area V<br>Annual Meeting   | 3.5.2.                           | 5-7.05   | Turkey<br>Antalya     |   |
| 6.  | Training on Road and Motorway<br>Maintenance  | 3.4.1.                           | 17-21.05 | Sweden<br>Borlänge    |   |
| 7.  | Training on Software for Optimisation of Financing-FINITO   | 1.1.3.                           | 7-9.06   | Slovakia<br>Modra     |   |
| 8.  | 31 <sup>st</sup> Session of TEM Steering<br>Committee   | 5.1.1.                           | 22-24.06 | Switzerland<br>Geneva |   |
| 9.  | Workshop on Intelligent Transport<br>Systems  | 3.7.1.                           | 1-3.09   | Hungary<br>Gyor       |   |
| 10. | OECD/ECMT/TEM Conference on<br>Strategic Environmental Assessment<br>of Transport                               | 2.2.2.                           | 14-15.10 | Poland<br>Warsaw      |   |
| 11. | Meeting of Group of Experts on Financing  | 1.1.1.                           | 8-10.11  | Romania<br>Bucuresti  |   |
| 12. | 32 <sup>nd</sup> Session of TEM Steering<br>Committee   | 5.1.1.                           | 1-3.12   | Italy<br>Trieste      |   |
| 13. | Meeting of Road Directors   | 5.2.1.                           | December |                       | Location to<br>be specified<br>later              |
| 14. | TEM Trilateral Meeting on Motorway<br>Connections between Poland, Romania<br>and Ukraine                        | 2.1.2.                           |          |                       | Location and<br>dates to be<br>specified<br>later |