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**Economic Commission for Europe****Inland Transport Committee****Working Party on Transport Trends and Economics****Thirty-third session**

Geneva, 7–9 September 2020

Item 4(b) of the provisional agenda

**Transport infrastructure data****Benchmarking Transport Infrastructure Construction Costs****Rationale for the establishment of the United Nations  
Economic Commission for Europe Group of Experts on  
Benchmarking of Transport Infrastructure Construction  
Costs and proposals on the way ahead****Note by the secretariat****I. Background**

1. During the twenty-seventh session of the Working Party on Transport Trends and Economics (WP.5) (Geneva, 8–10 September 2014) a workshop was organized on “Good practices and new tools for Financing Transport Infrastructure”. During the workshop it was agreed by the participants that the benchmarking of transport infrastructure construction costs is significant for having realistic construction costs and a stable investment program with no unforeseen costs. The Working Party requested the secretariat to draft a formal document based on inputs received by the experts on benchmarking of transport infrastructure construction costs where proposals for possible further actions to be taken by the Working Party on this issue were to be included. (ECE/TRANS/WP.5/56, paras. 10 and 12).
2. During its twenty-eighth session (Geneva, 7–9 September 2015) the Working Party considered and adopted the Terms of Reference (ToR) of the Group of Experts on Benchmarking of Transport Infrastructure Construction Costs (ECE/TRANS/WP.5/58, para 40).
3. These Terms of Reference (ECE/TRANS/2016/4) were subsequently adopted by the Inland Transport Committee at its seventy-eighth session (Geneva, 23–26 February 2016) (ECE/TRANS/254, para. 21) and by the Executive Committee during its May 2016 session.



## Box 1

At a joint, Euro-Asian Transport Links (EATL) project - Trans-European Motorways (TEM) and Trans-European Railway (TER) projects – and Working Party on Transport Trends and Economics, workshop on “Financing Transport Infrastructure”, Geneva, September 2013

## Participants:

- Recalled that financing of transport infrastructure includes the planning for and building of new infrastructure, as well as the planning for and realization of rehabilitation and/or maintenance of existing one.
- Agreed on the need to prepare feasibility studies where the economic viability will be analysed by taking into consideration the social aspects of such investments such as road safety and environmental costs.
- Agreed on the need to identify and harmonize, if possible, the cost per unit of investment, i.e. cost of constructing 1 kilometre of road or the cost of constructing 1 kilometre of railroad or high-speed railroad.
- Observed the need to harmonize the technical standards of transport infrastructure and referred to the technical standards included in international agreements serviced by ECE e.g. AGR<sup>1</sup>, AGC<sup>2</sup>, AGTC<sup>3</sup> and AGN<sup>4</sup> as best practices to be followed.
- Noted that an observatory for exchange of information and lessons learned from implementing public private partnership (PPP) schemes as a transport infrastructure financing tool could be beneficial.
- Observed that the development of investment plans and especially their harmonization is an efficient step forward to finance transport infrastructure. Also noted the work developing investment plans during the EATL phase II and agreed on the need to focus on funding these projects.
- Observed that improvements should also take place on non-physical obstacles – border crossings facilitation, etc. — in parallel with the physical ones such as transport infrastructure.

## II. Scope of issues and achievements expected:

4. Based on its ToRs it was agreed that the Group of Experts should focus its work on the following issues:
  - Identify models, methodologies, tools and good practices for evaluating, calculating and analysing inland transport infrastructure construction costs.
  - Identify and list terminologies used in the ECE region for construction costs of inland transport infrastructure; if possible, create a glossary of agreed terminologies and related explanations.
  - Collect and analyse data in order to prepare a benchmarking of transport infrastructure construction costs along the ECE region for each inland transport mode – road, rail, inland waterways – including intermodal terminals, freight/logistics centres and ports; Analyse and describe the conditions / parameters under which these costs have been calculated on.

<sup>1</sup> European Agreement on Main International Traffic Arteries

<sup>2</sup> European Agreement on Main International Railway Lines

<sup>3</sup> European Agreement on Important International Combined Transport Lines and Related Installations

<sup>4</sup> European Agreement on Main Inland Waterways of International Importance

5. It was also decided that the Group of Experts should base its considerations on previous work of ECE in this field, in particular the work on:

- Cost benefit analysis of transport infrastructure projects, 2003.<sup>5</sup>
- A methodological basis for the definition of common criteria regarding the identification of bottlenecks, missing links and quality of service in infrastructure networks, 2009.<sup>6</sup>
- The Trans-European North-South Motorway (TEM) Project standards and Recommended Practice, 2002.<sup>7</sup>
- The TEM and TER revised Master Plan – Final Report, 2012.<sup>8</sup>
- The Euro Asian Transport Linkages Project studies, 2008/2012.<sup>9, 10</sup>

### III. Methods of work

6. Participation in the Group of Experts was opened to all concerned United Nations member countries and experts. Concerned intergovernmental and non-governmental organizations, as well as concerned road, railway and inland waterways administration authorities and companies, freight and forwarding industries, intermodal terminals, freight and logistics centres as well as ports authorities are invited to participate and provide expert advice in compliance with United Nations rules and practices.

7. It was agreed that translation of documents and simultaneous interpretation of its sessions in English, French, and Russian shall be provided by ECE for all sessions held at the Palais des Nations in Geneva.

8. Representatives of the following ECE Member States participated in the first session and to varying degrees remained involved in the subsequent sessions: Austria, Croatia, Cyprus, Czechia, Finland, Germany, Latvia, Lithuania, Norway, Poland, Slovakia, Sweden and Turkey.

9. At a later stage representative of the Russian Federation engaged in the work of the Group as well.

### IV. Time frame

10. The initial mandate of the Group of Experts was for two years but was then extended with one more year until May 2020.

11. In the course of these 3 years the Group of Experts met on the following occasion:

- First session: 31 October 2016 – 1 November 2016
- Second session: 10–11 April 2016
- Third session: 10–11 July 2016
- Fourth session: 16–17 October 2017
- Fifth session: 30–31 January 2018
- Sixth session: 1–2 May 2018
- Seventh session: 28 June 2018
- Eighth session: 15–16 July 2019

<sup>5</sup> [www.unece.org/fileadmin/DAM/trans/doc/2008/wp5/CBAe.pdf](http://www.unece.org/fileadmin/DAM/trans/doc/2008/wp5/CBAe.pdf)

<sup>6</sup> [www.unece.org/fileadmin/DAM/trans/doc/2009/wp5/ECE-TRANS-205e.pdf](http://www.unece.org/fileadmin/DAM/trans/doc/2009/wp5/ECE-TRANS-205e.pdf)

<sup>7</sup> [www.unece.org/fileadmin/DAM/trans/main/tem/temdocs/TEM-Std-Ed3.pdf](http://www.unece.org/fileadmin/DAM/trans/main/tem/temdocs/TEM-Std-Ed3.pdf)

<sup>8</sup> [www.unece.org/fileadmin/DAM/trans/main/temterm/docs/TEM\\_and\\_TER\\_Vol\\_I.pdf](http://www.unece.org/fileadmin/DAM/trans/main/temterm/docs/TEM_and_TER_Vol_I.pdf)

<sup>9</sup> [www.unece.org/fileadmin/DAM/trans/main/eatl/in\\_house\\_study.pdf](http://www.unece.org/fileadmin/DAM/trans/main/eatl/in_house_study.pdf)

<sup>10</sup> [www.unece.org/fileadmin/DAM/trans/main/eatl/docs/EATL\\_Report\\_Phase\\_II.pdf](http://www.unece.org/fileadmin/DAM/trans/main/eatl/docs/EATL_Report_Phase_II.pdf)

- Ninth session: 29 September – 1 October 2019
- Tenth session: 30–31 January 2020
- Eleventh session: May 2020 cancelled due to COVID-19 (replaced by shorter virtual sessions on 14 May 2020 and 18 June 2020 respectively)

## V. Work plan/ Sequence of work

12. The Group conducted its activities based on a prepared work plan in order to ensure its smooth implementation.

13. The following work phases are to be distinguished:

- Development of specific questionnaires, included in Informal Document No. 2:
  - Questionnaire on Benchmarking Road Transport Infrastructure Construction Costs
  - Questionnaire on Benchmarking Rail Transport Infrastructure Construction Costs
  - Questionnaire on Benchmarking Intermodal Terminal Infrastructure Construction Costs
  - Questionnaire on Benchmarking Inland Waterway Infrastructure Construction, Upgrading and Maintenance Costs
  - Questionnaire on Benchmarking Inland Waterway Port Construction, Upgrading and Maintenance Costs
  - The development of a set of 4 open questions on different national benchmarking models and approaches in use across the ECE region
- Development of a consolidated list of terminologies on benchmarking of road, rail, inland waterway and intermodal terminals construction costs (ECE/TRANS/WP.5/GE.4/2019/1/Rev.2)
- Dissemination of the questionnaires among delegates participating in WP.5 which is the GE.4 parent body.
- Dissemination of the questionnaires among delegates in mode-specific Working Parties including SC.1 on Road Transport, SC.2 on Rail Transport, SC.3/WP.3 Inland Water Transport and WP.25 on Intermodal Transport and Logistics.
- In parallel, reaching out to and building partnerships with other relevant organizations in the field of benchmarking of transport infrastructure construction costs, including TEM and TER Projects, the International Union of Railways (UIC), the International Road Federation and European Union networks of road and rail infrastructure operators.
- The following GE.4 members acted as lead countries for the drafting process of the final report:
  - Turkey: conducted a benchmarking literature review and provided substantive inputs to the road transport terminology and the analysis of data for the road sector.
  - Poland: provided substantive inputs to the rail transport terminology and conducted the analysis of data for the rail sector.
  - Russian Federation: provided substantive inputs to the road data analysis and contributed to the compilation of national benchmarking approaches and methodologies.
  - All other members of the Group actively participated in the drafting process of the final report and contributed through the provision of national case studies and data on benchmarking.

## **VI. Challenges experienced and opportunities identified by the Group**

14. The Group faced several challenges in the conduct of its work:

(a) The quantity and quality of road and railway data

The data received was often sparse and scattered. In some cases, there were misrepresentations or omissions in the datasets provided by respondents. The first challenge was to turn the data into a workable format which could later be analysed. For that purpose, all the questionnaires with missing or inaccurate data had to be removed from the final dataset.

(b) Delays in data collection for intermodal terminals, inland waterways and ports

In particular the data collection efforts for ports, intermodal terminals and inland waterways were delayed and the data received was often insufficient or inaccurate. The present study has therefor mostly focused on road and rail sectors.

15. Given however that the available analysis proves to be of great value added it is worthwhile to continue data collection efforts of the Group across all modes. In doing so, efforts need to be made to make sure that there is a better understanding among ECE member States wishing to submit additional data regarding the exact requirements.

## **VII. Guidance by the Working Party**

16. WP.5 is invited to consider the proposals on the way forward and provide guidance.

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