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## Economic Commission for Europe

### Inland Transport Committee

#### Working Party on Transport Trends and Economics

##### Group of Experts on Benchmarking Transport Infrastructure Construction Costs

###### First session

Geneva, 31 October and 1 November 2016

## Report of the Group of Experts on Benchmarking Transport Infrastructure Construction Costs on its first session

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## **I. Attendance**

1. The Group of Experts (hereafter called the Group) on Benchmarking Transport Infrastructure Construction Costs held its first session on 31 October and 1 November 2016.
2. Representatives of the following United Nations Economic Commission for Europe (UNECE) member States participated: Austria, Croatia, Cyprus, Czech Republic, Finland, Germany, Latvia, Lithuania, Norway, Poland, Slovakia, Sweden and Turkey.
3. Representatives of the following United Nations specialized agency attended the meeting: TER Project.

## **II. Adoption of the agenda (agenda item 1)**

*Documentation:* ECE/TRANS/WP.5/GE.4/1

4. The Group adopted the agenda.

## **III. Election of Officers (agenda item 2)**

5. The Group elected its officers, Mr. Andrzej Maciejewski (Poland) as Chair and Ms. Leyla Ünal (Turkey) as Vice-Chair for the period of its establishment.

## **IV. Mandate: Terms of Reference of the Group of Experts on Benchmarking Transport Infrastructure Construction Costs (agenda item 3)**

*Documentation:* ECE/TRANS/2016/4

6. The Group of Experts recalled that during the twenty-seventh session of the Working Party on Transport Trends and Economics (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 programme with no cost explosions. The Working Party requested the secretariat to draft a formal document based on inputs received from the experts of benchmarking where proposals for possible further actions to be taken by the Working Party on this issue should be included. (ECE/TRANS/WP.5/56, paras. 10, 12).
7. During its twenty-eighth session (Geneva, 7-9 September 2015) the Working Party considered and adopted the Terms of Reference (ToR) of the Group (ECE/TRANS/WP.5/58, para 40). This ToR (ECE/TRANS/2016/4) was adopted by the Inland Transport Committee (seventy-eighth session, Geneva, 23-26 February 2016, ECE/TRANS/254, para. 21) and by the Executive Committee during its May 2016 session.
8. Based on these ToR the Group of Experts should focus its work on the following issues:
  - (a) Identify models, methodologies, tools and good practices for evaluating, calculating and analysing inland transport infrastructure construction costs;

(b) 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;

(c) Collect and analyse data in order to prepare a benchmarking of transport infrastructure construction costs in 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.

## V. Programme of work (agenda item 4)

*Documentation:* ECE/TRANS/WP.5/GE.4/2016/1

9. The Group considered document ECE/TRANS/WP.5/GE.4/2016/1 prepared by the secretariat containing the proposed programme of work of the Group and scheduled activities. The Group, after discussions, approved their programme of work (ECE/TRANS/WP.5/GE.4/2016/1) and prepared a concrete and detailed action plan in order to ensure its smooth implementation.

10. The approved action plan is as follows:

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### *Action Plan*

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Until April 2017:

(a) Collect national standards, best practices, terminology, models/methodologies and others –national governments;

(b) Collect international experience (e.g. International Transport Forum, World Bank, European Infrastructure Managers, Network for the Dissemination of Knowledge on the Management and Organisation of Large Infrastructure Projects in Europe, World Road Association, Conference of European Directors of Roads) – national governments and secretariat;

(c) Send to the leader of subgroup - national governments and secretariat;

(d) Compare sent information - subgroup;

(e) Proposals of common terminology and methodology.

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In parallel for sub-groups which are not established or without leader:

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(a) Secretariat will try to arrange leaders and team members within governments not present at the first session or within different UNECE bodies;

(b) Web platform - delivered by UNECE.

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Way of work (How and Who)

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(a) Sub-groups work via Internet, unless they decide to meet;

(b) Secretariat will facilitate that cooperation;

(c) Leader is responsible for monitoring works in team countries;

(d) Leader sends information to the secretariat;

(e) Secretariat and leader prepare draft documents;

(f) Countries should establish focal points - at least one for a country but may have also for each group.

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1. Governments participation:

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*Action Plan*

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- (a) Roads: Leader: Turkey (Team: 8 - Austria, Cyprus, Czech Republic, Finland, Latvia, Lithuania, Norway, Slovakia, Sweden);
  - (b) Rails: Leader: TBD (Team: 6 - Czech Republic, Finland, Latvia, Sweden, Turkey, TER);
  - (c) IWW: Leader: TBD (Team: TBD);
  - (d) Intermodal terminal/Logistics centres: Leader: tbd (Team: TBD, for now only Turkey);
  - (e) Ports: Leader: TBD (Team: - Cyprus).
2. Secretariat
  3. Other organizations (after April 2017)
  4. Islamic Bank of Development consultant
  5. Working Parties and Groups of Experts within UNECE
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## **VI. Transport Infrastructure Construction Costs: Overview of main concerns and considerations (agenda item 5)**

11. The Group discussed and made an overview of the main concerns and considerations regarding transport infrastructure construction costs. The Group agreed that there are several reasons that not only justify the mandate of the Group but make imperative to produce results and deliver the benchmarking exercise as soon as possible. Among other things the Group mentioned the following possible advantages from the efficient implementation of their mandate and programme of work:

- (a) Improvement of productivity;
- (b) Common understanding of terminology;
- (c) Easier cost-benefit analysis;
- (d) Control of projects costs and easier costs estimates;
- (e) Easier comparing among countries;
- (f) Better budget allocations;
- (g) Better use of materials;
- (h) Detailed feasibility studies.

12. The Experts considered presentation made by Mr. A. Huomo (Finland) on planning of projects undertaken by the Finnish Transport Agency. The Finnish Transport Agency is a multidisciplinary expert organization specialising in transport responsible for the Finnish roads, railways and waterways and for the comprehensive development of the transport system. The proposed appropriations for 2016 reached the €1,843 million where €965 million were for basic transport infrastructure management. The delegate from Finland pointed out that there is a decrease of funding for investment projects for the period of 2020-2023. He also illustrated the structure of the software of the Finnish Transport Agency which calculates the construction costs of different transport infrastructure projects. The Fore software follows a bottom up and top down approach.

13. The Experts also considered presentation made by Mr. M. Arman (Turkey) on Turkey's road infrastructure development as well as on road infrastructure cost studies.

General Directorate of Highways (KGM) is an organization with the legal entity under the Ministry of Transport, Maritime Affairs and Communications. Highway network of Turkey excluding urban roads is approximately 385,000 km in length. The highway network under the jurisdiction of the General Directorate of Highways is made up of 2,489 km of toll motorway, 31,126 km of state roads and 33,355 km of provincial roads, total of 66,970 km. Out of this length 24,813 km of road operate as dual carriageways. The length of dual carriageways network is 37 per cent of the total highway network. A study was undertaken with main purpose to calculate real (realized) road unit construction costs and to find out which parameters are important to specify construction cost.

14. The representative of Cyprus following the presentation made by the Turkish delegate and regarding slides 9 and 28 where the occupied part of the Republic of Cyprus presented under the name “KKTC” made the following statement: “The Republic of Cyprus is an independent State, member of the United Nations and of the European Union, with 36.2 per cent of its territory under Turkish military occupation since the Turkish invasion in 1974. The occupied area was purportedly and illegally declared an independent state, under the name ‘Turkish republic of northern Cyprus’ in November 1983. With resolutions 541 (1983) and 550 (1984), the United Nations Security Council condemned the purported declaration of independence, declared it as legally invalid and called upon all States to respect the sovereignty of the Republic of Cyprus, and ‘not to facilitate or in any way assist the aforesaid secessionist entity’. As a consequence, no country other than Turkey has recognized the said illegal regime and the Republic of Cyprus remains the only recognized State on the island and its government is recognized as having jurisdiction over the entire island.”

15. The Experts welcomed the presentations made by the delegates and thanked them for their contribution. In addition, they kindly ask the experts to prepare a short summary of maximum four pages of their presentations in order to be included in the final report of the Group. The secretariat kindly invited experts from other Governments to present during next Group’s sessions in order to collect more National good practices on calculating transport infrastructure construction costs and include them in the final report of the Group. The presentations made can be found at the following link: [www.unece.org/trans/main/wp5/wp5\\_ge\\_benchmarking\\_transport\\_infrastructure\\_construction\\_costs\\_01.html](http://www.unece.org/trans/main/wp5/wp5_ge_benchmarking_transport_infrastructure_construction_costs_01.html).

## **VII. Preliminary discussion on the structure of the final report of the Group of Experts (agenda item 6)**

16. The Group exchanged views on the possible structure of its final report. The Group concluded in the following draft outline:

- Chapter 1: Introduction;
- Chapter 2: Overview of challenges and considerations – Purpose of the Project:
  - (a) Literature Review;
  - (b) International and national experience and best/good practices;
  - (c) Stock of models/methodologies.
- Chapter 3: Glossary on construction costs:
  - (a) Introduction, challenges and concerns;
  - (b) Road:
    - (i) Construction;

- (ii) Maintenance;
  - (iii) Operations;
  - (c) Rail:
    - (i) Construction....
  - (d) Inland Waterways, Intermodal Terminals, Ports.
- Chapter 4: Benchmarking transport infrastructure construction costs:
- (a) Review of Methodology – Questionnaire;
  - (b) Benchmarking Database:
    - (i) Road:
      - a. Construction;
      - b. Maintenance;
      - c. Operations.
    - (ii) Rail:
      - a. Construction....
    - (iii) Inland Waterways, Intermodal Terminals, Ports.
  - (c) Analysis.
- Chapter 5: Conclusions and Recommendations.

17. The Group decided that this outline should be further reviewed and possibly adjusted depending on the progress of the work.

## **VIII. Other business (agenda item 7)**

18. There were no other items.

## **IX. Date and place of next meeting (agenda item 8)**

19. The Group of Experts second session is tentatively scheduled to take place in Geneva on 10 and 11 April 2017.

## **X. Adoption of main decisions (agenda item 9)**

20. The Group adopted the list of main decisions of its first session and requested the secretariat and the Chair to prepare the full and complete report to be circulated to the members of the Group for comments on items other than those contained in the list of main decisions.

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