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## **Economic Commission for Europe**

### **Inland Transport Committee**

#### **Working Party on Transport Trends and Economics**

##### **Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport**

###### **Twenty fourth session**

Geneva, 9 and 10 March 2023

Item 6 of the provisional agenda

###### **Guidelines for integrating climate change considerations in planning and operational processes**

## **Annotated outline for the guide for assessing transport asset criticality**

### **Note by the Chairs and the secretariat**

#### **I. Introduction**

1. At its twenty-third session, the Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport (GE.3) agreed to start working on developing a guide for assessing transport asset criticality, especially to present the different types of approaches to criticality and provide guidance to choose the most relevant approach based on the goal of the assessment, data and time available. GE.3 called upon interested experts to discuss criticality and develop an annotated outline for the guide for consideration at the next session.

2. This document contains the draft annotated outline for the guide. GE.3 is invited to consider and modify it further as appropriate.

#### **II. Outline for the guide for assessing transport asset criticality**

3. It is proposed to include the following main sections in the guide.

##### **I. Introduction:**

*This section is to describe what is the asset/network criticality in terms of climate change hazards and what is the purpose for assessing criticality. Criticality is to be referred to as significance of the consequences on the transport services (transport of people and goods) in case of a disruption. The consequences to be referred to can be for example the asset's loss of connectivity and loss of performance.*

##### **II. Methods for assessing criticality of transport asset/network**

*This section is to describe the various methods that can be used for assessing criticality, among them, assessments based on selected criticality indicators, scenario analyses, multicriteria analyses, application of traffic modelling. Each method would also be considered from the angle of when it makes sense to apply it, in particular with regard to data availability and the coverage of the network, e.g. assessment of national, or regional networks consisting of multiple roads/railway lines versus assessments of criticality made in urban context or a specific road or railway line. This section should also describe methodologies to perform a criticality assessment from a multi-modal point of view. This section will also address how to take into account, in a criticality assessment, climate hazards and their evolution due to climate change. Finally, this section will explain how the criticality assessment can be encompassed in a broader resilience strategy, to trigger adaptation measures when used in combination with a vulnerability assessment.*

III. Step-approach to determine transport asset criticality

*This section is to present steps needed to perform criticality assessment in an effective way. A flowchart can be developed.*

*The steps will concern such as: define transport asset/network for criticality assessment, define resources and time available for criticality assessment, examine availability of data, choose a method for assessment, apply the method, analyse the results.*

IV. Case studies

*This section is to present anonymized examples of criticality assessment for the methods (as far as feasible) presented in section II.*

V. Traffic maps for the UNECE region

*This section will present traffic maps for the UNECE region for the various road, rail and inland waterways networks.*

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