Towards a more resilient transport infrastructure:

The FORESEE EU Project – Final conference

Policy and Regulatory framework: transport resilience to extreme nature and human-made events

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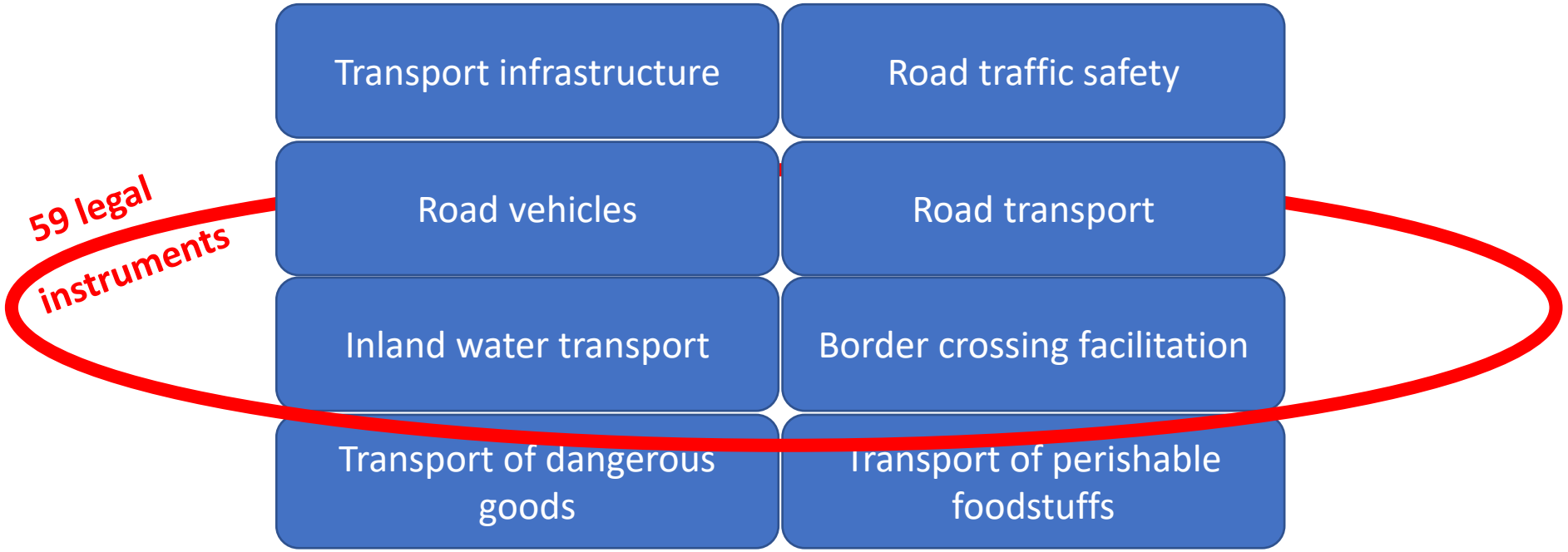
UNECE transport regulatory framework



Transport infrastructure

UNECE

E-roads
E-railways
E-waterways

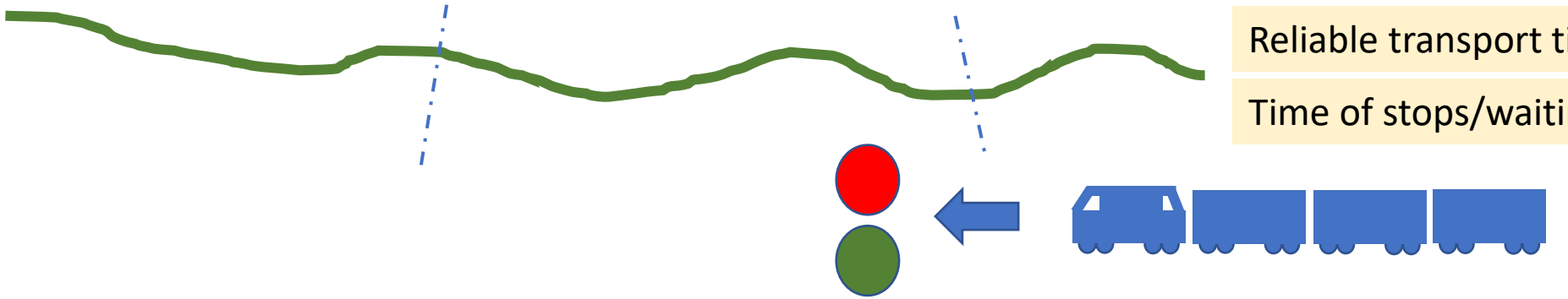
Ensure connectivity
Increase efficiencies

Infrastructure parameters

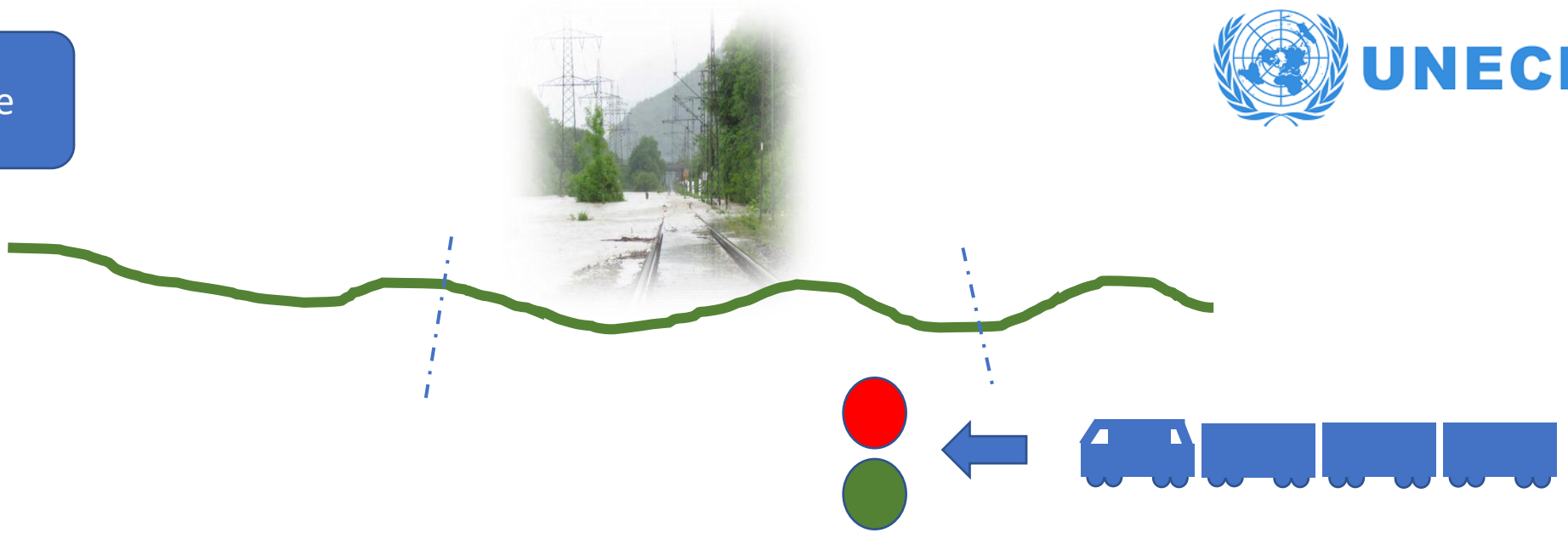
- Gauge/loading gauge?
- Permitted weight on axel?
- Electrification system (direct current/alternating current)?
- Permitted length of train?
- Maximum gradient?

Operational parameters

- Regular service
- Reliable transport times
- Time of stops/waiting times?



Transport infrastructure



Disruptions (caused by extreme weather events) impair connectivity

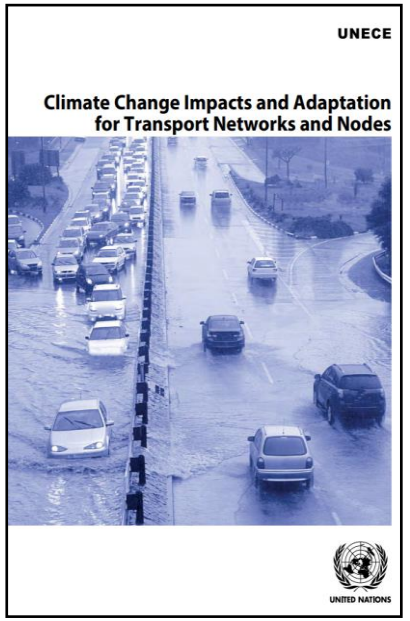
Resilience to disruptions

UNECE

UNECE <u>policy</u> efforts to make transport infrastructure/transport systems resilient to disruptions caused by climate change and extreme weather events

UNECE Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport (2020-2025)

UNECE Group of Experts on Climate Change Impacts and Adaptation for Transport Networks and Nodes (2015-2019)



Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport (2020-2025)

Driven by two key objectives:

(i) raise awareness, build capacity and integrate knowledge from countries and the scientific community on climate change impact assessment and adaptation for transport, and

(ii) further advance the state of knowledge, the analysis of climate change impacts on inland transport and identification of suitable and costs-effective adaptation measures

Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport (2020-2025)

Focus:

- Exposure analysis in UNECE region (maps overlaying climate change projections and transport assets)
  - Analysis of thresholds for impacts (precipitation/temperature)
  - Resource material on changing thresholds

Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport (2020-2025)

Focus:

- Discuss/analyse the asset sensitivity => changing thresholds => adapt the design parameters
- Analyse the asset criticality => prioritization for adaptation (criticality indicators)

Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport (2020-2025)

Focus:

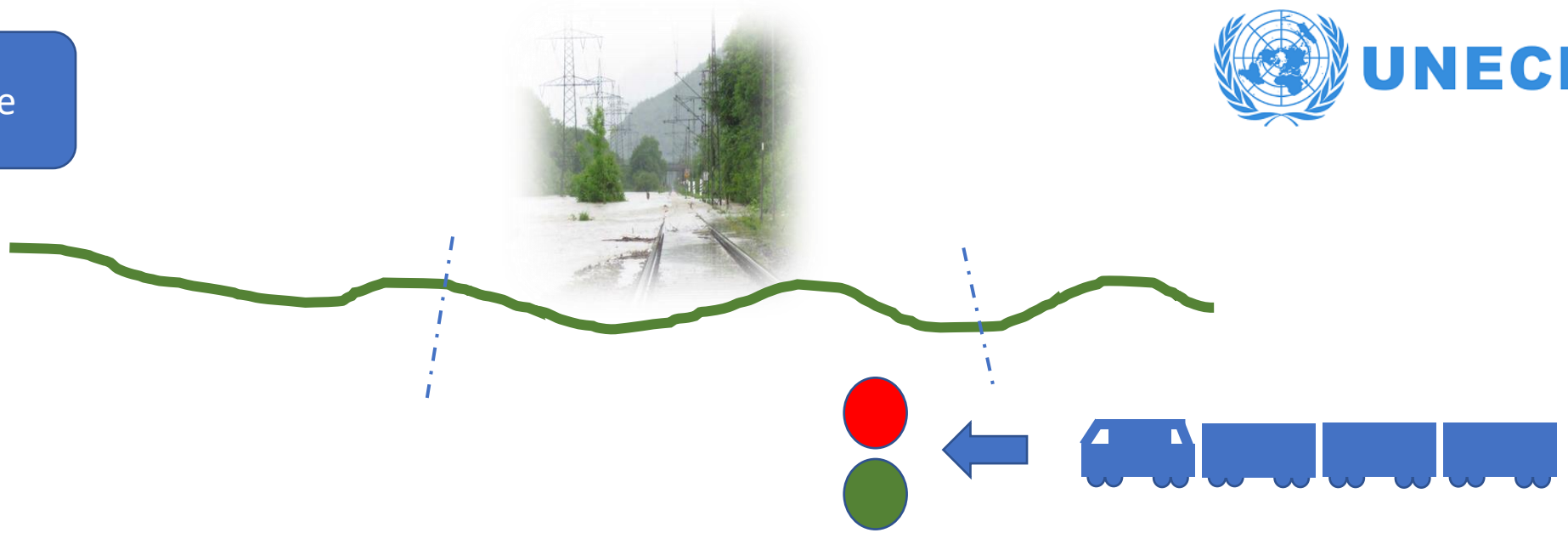
- Changing thresholds => Database with adaptation measures (measures to typical hazards for selected assets)

Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport (2020-2025)

Focus:

- Support to integrating climate change considerations in planning and operational practices
  - business case for adaptation (losses vs adaptation costs)
  - from assesses risks to adaptation

Transport infrastructure

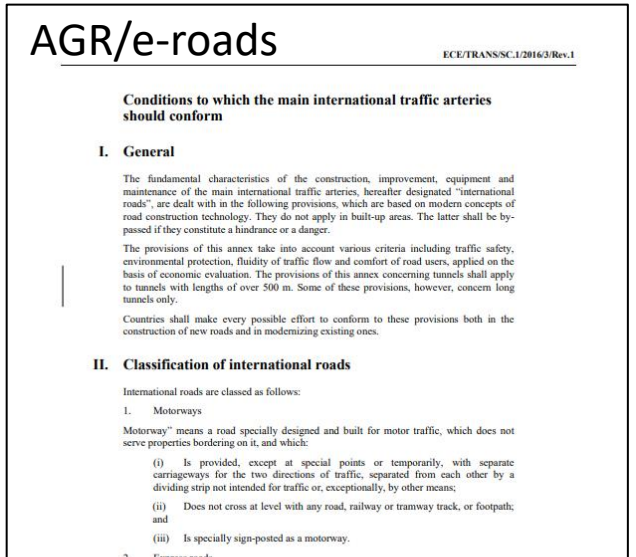


Policy work of the group of experts → Transport infrastructure agreements

Threshold analysis → Design parameters

Adaptation measures → General conditions for conformity

AGR/e-roads



ECE/TRANS/SC.1/2016/3/Rev.1

Conditions to which the main international traffic arteries should conform

I. General

The fundamental characteristics of the construction, improvement, equipment and maintenance of the main international traffic arteries, hereafter designated "international roads", are dealt with in the following provisions, which are based on modern concepts of road construction technology. They do not apply in built-up areas. The latter shall be by-passed if they constitute a hindrance or a danger.

The provisions of this annex take into account various criteria including traffic safety, environmental protection, fluidity of traffic flow and comfort of road users, applied on the basis of economic evaluation. The provisions of this annex concerning tunnels shall apply to tunnels with lengths of over 500 m. Some of these provisions, however, concern long tunnels only.

Countries shall make every possible effort to conform to these provisions both in the construction of new roads and in modernizing existing ones.

II. Classification of international roads

International roads are classed as follows:

1. Motorways

Motorway" means a road specially designed and built for motor traffic, which does not serve properties bordering on it, and which:

(i) Is provided, except at special points or temporarily, with separate carriageways for the two directions of traffic, separated from each other by a dividing strip not intended for traffic or, exceptionally, by other means;

(ii) Does not cross at level with any road, railway or tramway track, or footpath; and

(iii) Is specially sign-posted as a motorway.

Thank you

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