A solid orange horizontal bar is positioned at the top left of the slide.

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

SC.1, 117th session
18-20 October 2022

Lukasz Wyrowski

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

the Group's key tasks:

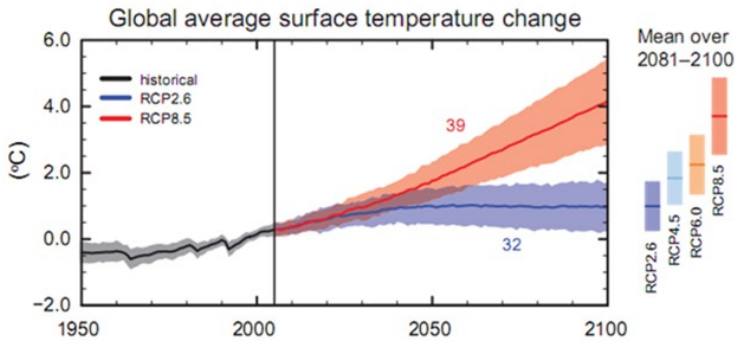
- (i) raise awareness, build capacity and integrate knowledge from countries and the scientific community on climate change impact assessment and adaptation for transport, and
- (ii) further advance the state of knowledge, the analysis of climate change impacts on inland transport and identification of suitable and costs-effective adaptation measures

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Expected outputs:

- Maps overlaying climate change projections and transport assets
- Analysis of possible impacts, areas of vulnerability
- Review of national projects
- Database of (successfully implemented) adaptation measures
- Guidelines for integrating climate change considerations in planning and operational practices

Maps overlaying climate change projections and transport assets/ Analysis of possible impacts, areas of vulnerability



In focus:

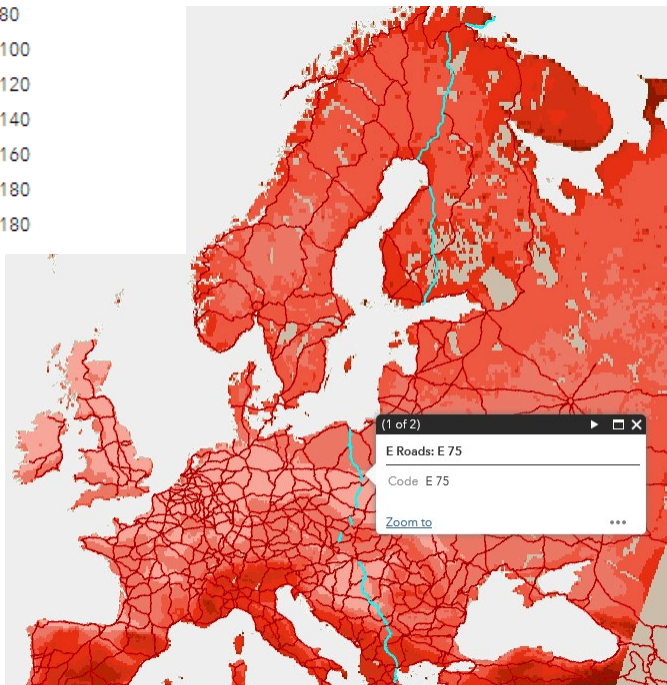
- High temperatures
- Heavy precipitation

In consideration:

- Windstorms

Warm spell duration index

Scenario 8.5 (mean)



Analysis is done looking at weather phenomena thresholds such as 25, 32 and 43°C (for temperatures) and 50, 100 and 150mm (for precipitation) to relate it to infrastructure relevant parameters

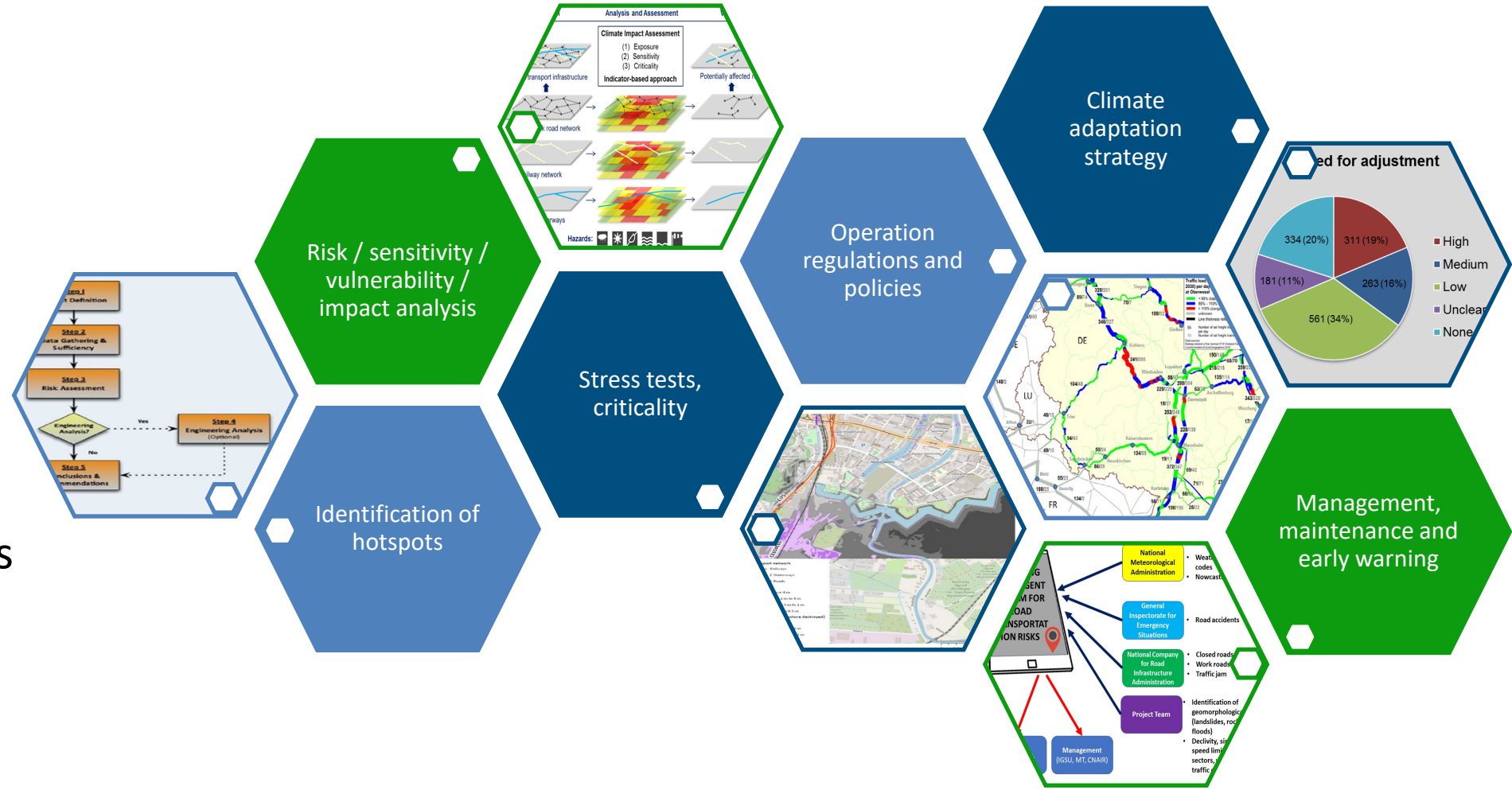
The analysis is to answer the following questions:

- Can we expect changes to thresholds?
- How should these changes be considered in terms of infrastructure construction parameters

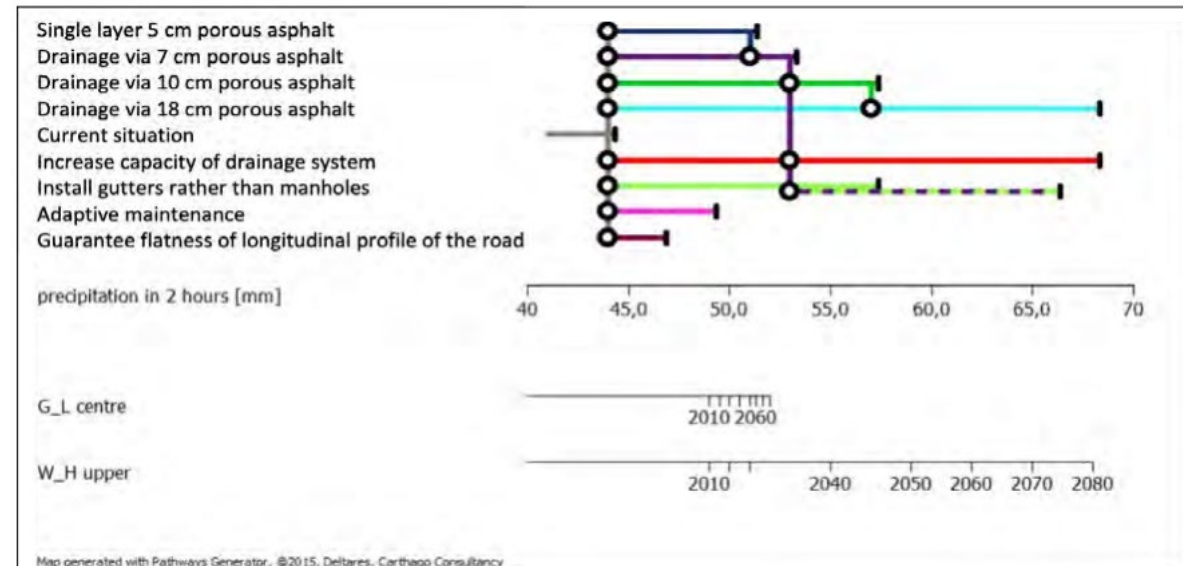
Review of national projects

Review of:

- Approaches
- Methodologies
- Practices
- Tools
- Lessons learned from past events



- Implemented adaptation measures in transport – limited availability
- Research on adaptation pathways in transport – consideration on elaboration of a guide on use of adaptation pathways in transport



- Business cases for adaptation (economic losses)
 - Dissemination of a survey on losses from incidents caused by climate change/extreme weather events => collaboration with UIC, TEM, TER (create understanding on the level of losses due to delays, disruptions and damage)
- Guide/standard for conducting transport asset stress test to climate change hazard(s) (*can the asset maintain its level of service in view of the climate change hazard vs intervention programme would be needed*)

Survey on impacts of climate/weather related events on road transport assets

Purpose of this survey:

Through this survey we want to collect information on impacts of climate/weather related events on road transport assets. We are interested in impacts which led to any incidents.

Please consider as incidents any kind of traffic/operational disruption with or without infrastructure damage, which influenced the regular operation, and which may have required an intervention of an operation team to bring the service to the level before the incident.

Please consider separately the following climate hazards:

- heavy precipitation - please see Section A
- high temperature - please see Section B

Please also provide additional responses to Section C

Your contact details:

Country:

Name of
institution:

Network/asset
(for network:
length of roads per
type)

Please return this survey filled out to lukasz.wyrowski@un.org before 31 December 2022

For any additional questions, please contact lukasz.wyrowski@un.org

Survey



Please provide some additional information by answering the three questions below

Following any of the incidents/disruptions described in Section A or B, did you as road asset manager implement any measures to mitigate the consequences of subsequent precipitation/heatwave events. If so, please describe the measure and provide cost breakdown.

Have there been measures implemented by other bodies – e.g. relevant authorities or other sectors – which had a positive effect on the road/road network? For example: revision of flooding risks maps affecting existing or planned rail sections; Crisis Management Plans; considerations on climate change in design standards, etc.

If so, please briefly describe them. Please indicate if the measures led to prevention of incidents on the network (affected section of network) despite precipitation levels/heatwaves of the same ranges which led to disruptions prior to the measure implementation.

Guidelines for integrating climate change considerations in planning and operational practices



- Conference in Moscow on 15-16 November 2021 held to raise awareness and exchange experience in work on climate change impacts on transport and adaptation work
- Transport Research Arena 2022 Conference in Lisbon (November) will be informed about the work of the Group of Experts
- Joint work between France, UNECE and UNESCWA to hold in the first half of 2023 a workshop on climate change and climate adaptation for the Mediterranean region

Thank you

Lukasz Wyrowski

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