International and national future work
Content

- 2015-2019 Group of Experts on Climate Change Impacts and Adaptation for Transport Networks and Nodes – lessons learned and recommendations

- 2020-2025 Group of Experts on assessment of climate change impacts and adaptation for inland transport

- National work
Lessons learned (1/3)

- Complex tasks

- Limited experience in countries (some countries as forerunners)

- Data limitations
  - on transport infrastructure (geo-coded) and on usage data (traffic volumes, freight processed)
  - no one climatic data set for UNECE region
Lessons learned (2/3)

- First step analysis as a good basis – exposure identified

- First step analysis insufficient / complementary analysis needed (natural and anthropogenic factors, characteristics of specific asset, downscaling of projections, impact modelling....)
Lessons learned (3/3)

- Sharing country experience key to identification and prioritization of transport adaptation needs

- Intermodal, cross-sectoral interactions and transboundary impacts key to avoid maladaptation
Recommendations (1/3)

- Create awareness and understanding of urgency
- Disseminate approaches, tools and methodologies
- Improve availability of geo-coded networks and nodes data (call to WPs managing the infrastructure agreements)
- Geo-code networks and nodes data and present them in GIS
Recommendations (2/3)

- Share data on use (census by WP.6)
- Attempt to obtain consistent data projections for UNECE region (through CORDEX-Core project)
- Expand the analysis on climate impacts (absolute/relative terms, additional indices)
- Implement national projects (with assistance where necessary) to better understand vulnerability to climate change of transport systems
Recommendations (3/3)

- Establish a knowledge database with
  - features and conditions that make a section of a network or a node vulnerable to climate change
  - adaptation measure and their cost-effectiveness

- Elaborate guidance and /or mechanisms for better integration of climate change impacts and projections into planning and operational processes
Ongoing steps

Ongoing process to establish a Group of Experts on assessment of climate impacts and adaptation for inland transport as subsidiary body of WP.5

First step taken by WP.5
Group of Experts on assessment of climate impacts and adaptation for inland transport

Mandate (2020-25)

- Raise awareness, build capacity and integrate knowledge from countries and the scientific community on climate change impact assessment and adaptation for inland transport
Group of Experts on assessment of climate impacts and adaptation for inland transport

Mandate (2020-25)

- Further advance the state of knowledge on, and the analysis of climate change impacts on inland transport (new indices, absolute/relative analysis)

- Heatwave
  - Warm spell duration index
    - Annual count of days with at least 6 consecutive days when daily max. temp. > 90th percentile
    - Road and rail networks

- Heat on rail and road
  - Number of very hot days
    - Annual count of days when daily maximum temperature > 30°C
    - Rail and road networks

- Permafrost thaw
  - Number of icing days
    - Annual count of days when daily maximum temperature < 0°C
    - Road network

- Downpours / flashfloods
  - R20mm
    - Annual count of days when precipitation is > 20mm
    - Road and rail networks

- Flooding
  - Rx5day
    - Maximum 5-day consecutive precipitation amount
    - Road and rail networks

- Low river flow
  - Maximum length of dry spell
    - Maximum number of consecutive days when daily precipitation is < 1 mm
    - Waterways
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Mandate (2020-25)

- Further advance the state of knowledge on, and the analysis of climate change impacts on inland transport (cover UNECE region)
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Mandate (2020-25)

- Identify suitable and costs-effective measures
  - Collection and analysis of data from national projects (analysis on features and conditions that make a section of network or a node vulnerable to climate change)
  - Collection and analysis of adaptation measures
  - Classification of entries by features and conditions
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Mandate (2020-25)

- Support national projects
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Methods of work
- GoE to work in accordance with its workplan, meeting twice a year
- Working language English
- GoE to be open to all UN member countries and experts, to interested IGOs and NGOs, to concerned railway companies, freight and forwarding industries

Secretariat: UNECE in close collaboration with WMO, UNFCCC, UNCTAD, ICAO and IMO
National work

Geo-coding of networks and nodes
National work

Collection of data on the usage of networks and nodes
National work

Conduct work on national climate impact assessment to seek/understand:

- key areas of vulnerability to climate change and extreme weather of transport assets and networks
- natural and anthropogenic factors modifying the risks to transport assets
- impact modelling and assessment of cause-effect relationships between climate parameters and impacts on the infrastructure, and
- cross-sectors and intermodal analysis

design effective adaptation measures