



Economic Commission for Europe**Inland Transport Committee****Eighty-third session**

Geneva, 23–26 February 2021

Item 7 (g) of the provisional agenda

Strategic questions of a horizontal and cross-sectoral policy or regulatory nature:**Analytical work on transport****Analytical work of the Sustainable Transport Division****Note by the secretariat****Summary*

This note summarizes the work undertaken in the framework of the Working Party on Transport Trends and Economics (WP.5), which serves as the transport think tank in the framework of the Inland Transport Committee (ITC). The note also provides a brief overview of the analytical work assumed in 2020 by the United Nations Economic Commission for Europe (ECE) Sustainable Transport Division. This work comprised publications on specific transport issues, analytical work conducted in the framework of designated Groups of Experts and Multidisciplinary Task Forces, analytical papers to support activities related to the United Nations transport conventions, capacity-building workshops, as well as the development of knowledge tools and indicators enabling Governments to measure their degree of economic connectivity in terms of transport, trade and border crossing processes.

The Committee is invited to **provide guidance** on future directions of the analytical work in the field of transport.

I. Analytical work undertaken by the Working Party on Transport Trends and Economics

1. The Working Party on Transport Trends and Economics (WP.5) provides an inter-regional forum for the exchange of experiences and ideas, in particular, on challenges relating to the development sustainable inland transport systems. Its mandate allows it to assume the unique role of a transport “think tank” in the framework of the Inland Transport Committee (ITC).

2. Following the request of the ITC at its eighty-first session inviting its subsidiary bodies to take follow-up actions to align their work with the ITC Strategy (ECE/TRANS/288, paras. 15 (a) and (c)) the WP.5 mandates and programme of work have been fully aligned

* The present document is being issued without formal editing.



with the priority actions of the Strategy included under the ITC's fourth role as a "United Nations Platform for promoting sustainable regional and interregional inland transport connectivity and mobility".

3. In view of its past activities, and considering the ITC Strategy until 2030, WP.5 at its thirty-second session in 2019 agreed on six key clusters of work and long-term (2020–2030) programme of work on the basis of which the present document has been structured:

- (a) Development of transport networks and/ or links;
- (b) Transport and climate change;
- (c) Sustainable urban mobility;
- (d) Transport infrastructure data;
- (e) Review and monitoring of emerging issues and sustainable development goals (SDGs); and
- (f) Inland transport security.

II. Overview of WP.5 activities per cluster

A. Development of transport networks and/ or links



4. On 26 November 2020, under the auspices of the UNECE Working Party on Transport Trends and Economics (WP.5) which serves as the parent body to the UNECE's work on Euro-Asian Transport operationalization a virtual round of "Consultations on next steps in the Operationalization of Euro-Asian Transport" was held jointly by the WP.5 secretariat and the Organization for Security and Co-operation in Europe (OSCE).

5. The event gathered over 155 representatives from 33 countries in the ECE region engaged in transport corridor management, including representatives of Ministries of transport, trade, customs and border management authorities as well as infrastructure managers and operators. Private sector practitioners determining and managing freight flows and independent corridor management experts, researchers and academia also participated.

6. In particular, the consultations aimed to:

- Provide a platform for inter-governmental dialogue on remaining challenges for more effective Euro-Asian inland transport connectivity.
- Take stock of the existing inter-governmental/ public-private sector stakeholder coordination mechanisms in the region and explore whether there is scope to improve/ expand/ strengthen those.
- Explore whether at regional/ sub-regional levels Governments in the region are ready to strengthen corridor-based action and identify practical means to do so incl. through the setting up of appropriate, corridor-wide agreed interoperability priorities and operational targets, developing corridor work plans, creating conducive conditions for the attraction of additional cargo flows and specific commodity types etc.

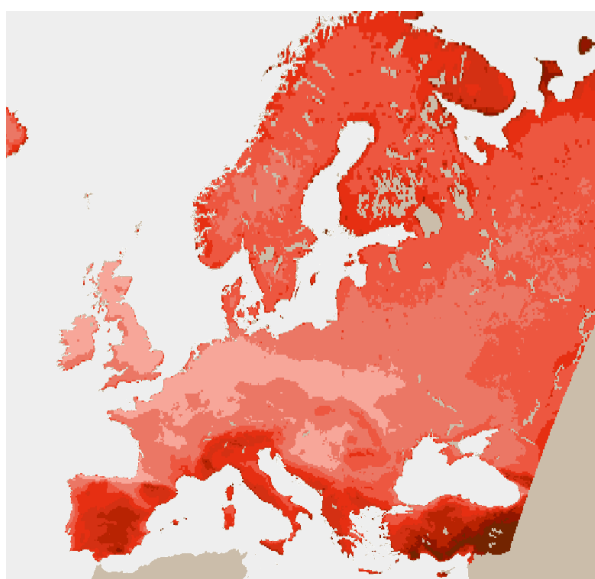
7. Participants in the consultations agreed on an outcome document titled "Proposals and inputs by Governments and other stakeholders on the next steps in the operationalization of

Euro-Asian Transport Links”. This outcome document will constitute the Governments inputs into a forthcoming working document requested by WP.5 at its thirty-third session “*Providing additional details on the proposals previously prepared by the secretariat (see [ECE/TRANS/WP.5/2020/1](https://www.ece.org/transport/publications/wp5/2020/1)) including feedback from ECE members on the operationalization of Euro-Asian Transport Links*” for discussion and endorsement of next steps at the thirty-fourth session of WP.5 in September 2021.

B. Transport and climate change

8. A newly established Group of Experts on Assessment of Climate Change Impacts and Adaptation for Inland Transport commenced its activities in 2020 focused on (i) raising awareness, building capacity and integrating knowledge from countries and scientific community on climate change impact assessment and adaption for transport, and (ii) further advancing the state of knowledge, the analysis of climate change impacts on inland transport and identification of suitable and costs-effective adaptation measures. This work is a continuation and further expansion of activities of a preceding Group of Experts who presented the results of its work in the report available at <https://unece.org/transport/publications/climate-change-impacts-and-adaptation-international-transport-networks-0>. Map I shows the multi-model mean values, and changes are in units of days per year.

Map I
Change in the warm spell duration index (WSDI) under a) RCP8.5 and b) RCP2.6 for period 2051-2080 with respect to the 1971-2000 baseline period



Map II
the E-roads network/ combined with Map I, routes that are prone to climate change impact can be identified



Source: ECE

9. Under its new mandate, the GE.3 is tasked to continue to raise awareness, build capacity and integrate knowledge from countries and the scientific community on climate change impact assessment and adaptation for inland transport. The GE.3 is also tasked to further advance the state of knowledge on, and the analysis of climate change impacts on inland transport, and the identification of suitable and cost-effective adaptation measures. The GE.3 work is to be guided by its Terms of Reference as contained in ECE/TRANS/2020/6.

C. Sustainable urban mobility

1. Expert Round Table on Economic Analysis of the Transformation of Urban Transport Systems

10. On 9 September 2020, further to a request of the Working Party at its thirty-second session the secretariat organized an expert round table on economic analysis of the transformation of urban transport systems. In preparation for the expert round table, the secretariat had in spring 2020 issued an official call for abstracts including through the Transport Health and Environment Pan-European Programme (THE PEP) Steering Committee and the ECE Urban Development, Land Management and Housing Committee.

11. Interested stakeholders, including city authorities, urban and spatial planners, national Ministry of Transport/ Mobility experts, NGOs and academia had been invited to send abstracts on case studies discussing transport policy cost-benefit analyses being implemented or designed in a variety of cities of different sizes with a focus on one of the three policy categories “Avoid policies”, “Shift policies” and “Improve policies” or combinations thereof (i.e. policy mixes).

12. The workshop featured speakers on selected case studies as well as policy makers and academia from a varied group of countries, including the United States of America, Belgium, Italy, New Zealand, the Russian Federation and Switzerland.

13. Participants in the workshop identified urban transport systems as a key enabler for the sustainable development of cities, providing urban dwellers with access to jobs, education, health care or commerce and offering seamless links among the various markets. Participants agreed that the more effective and efficient the urban transport system is (i.e. the better it facilitates access to various markets and places of interest and effectively links them), the more opportunities there are for cities and their inhabitants to develop and prosper.

14. Participants agreed that efficient urban transport needs to satisfy the numerous and diverse requirements of metropolitan mobility by:

- Providing accessibility to a variety of locations at affordable pricing.
- Minimizing travel times between those various locations.
- Internalizing transport system externalities such as air pollutants, noise emissions, road accidents and others with a view to limit negative impacts on citizens well-being and their quality of life while maximizing service quality in a context of “resource constraint” conditions.
- Participants in the workshop recognised that organizing an effective and efficient urban transport system is not an easy task given the many interdependencies in place requiring a comprehensive, multi-disciplinary approach considering spatial and urban infrastructure planning, social demography and geography as well as urban transit and logistics demands.
- Participants agreed on the need to continue to explore the development of a sound empirical basis for the development of an analytical model that would help policy makers to assess suitability of single and/or combined transport policies empowering them to make better informed decisions in the future for transformation of their urban transport systems.

15. The proceedings of the workshop, presentations and all workshop materials have been uploaded on the ECE website at: <https://unece.org/transporttrends-and-economics/workshop-economic-analysis-transformation-urban-transport-systems>

2. THE PEP European Cycling Master Plan – Infrastructure Module

16. At the Fourth High-level Meeting on Transport, Health and Environment (Paris, April 2014) Governments adopted the Paris Declaration, including a clear call for member States to promote cycling and to develop a pan-European master plan for cycling within the framework of the THE PEP. It was also decided that the development of the pan-European master plan would be coordinated by the lead partners of THE PEP Partnership on Cycling:

the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management and the French Ministry of Ecology, Sustainable Development and Energy, in close collaboration with the European Cyclists Federation (ECF) and THE PEP secretariat. Based on its experience with the development of Trans-European transport networks and standards, the WP.5 was given a leading role on the development of the cycling master plan infrastructure component.

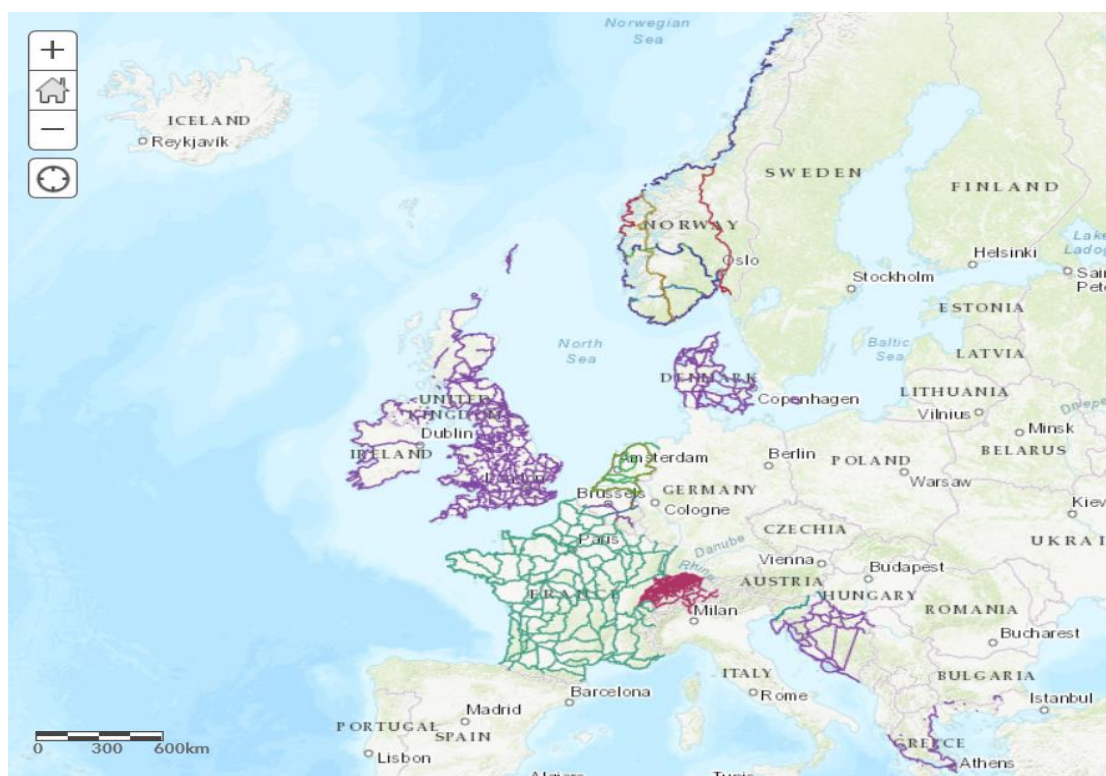
17. For the purpose of this endeavour, the ECE Sustainable Transport Division has joint forces with the Confederation of the European Bicycle Industry (CONEBI) and the European Cyclists' Federation (ECF). In May 2020, a joint letter has been sent to the network of National EuroVelo Coordination Centres and Coordinators inviting them to actively participate in this undertaking by sharing available data on their existing and planned national cycling tracks of international relevance.

18. The above efforts have resulted in the development of a “THE PEP European Cycling Master Plan – draft Infrastructure Module” (Informal Document No. 6/WP.5) as presented and discussed at the thirty-third session of WP.5 in September 2020. The report provides in chapter I a proposal for definitions of various infrastructure types of importance to cycling. It then refers to several good practices in chapter II on the organisation of cycling networks or routes. The report also discusses the EuroVelo network in chapter III. Further, in chapter IV, it presents the data on national cycling networks received and the initial analysis. Finally, chapter V offers conclusions and recommendations for consideration by WP.5.

19. All the gathered data has been made available on the ECE Geographic Information System (GIS) platform. Map III presents the data received so far on the national cycling networks.

Map III

Data received on the national cycling networks



20. *Inter alia*, the report shows that for some types of cycling infrastructure the future standardisation requires the development of new road signs that at the moment are not included in the 1968 Convention on Road Signs and Signals. These could be developed for example for the ‘cycle street’ and ‘non-mandatory cycle track/advised itinerary’. The report also provides evidence that the development of cycling infrastructure is very cost effective compared to other modes of transport and that it provides benefits that far outweigh the costs.

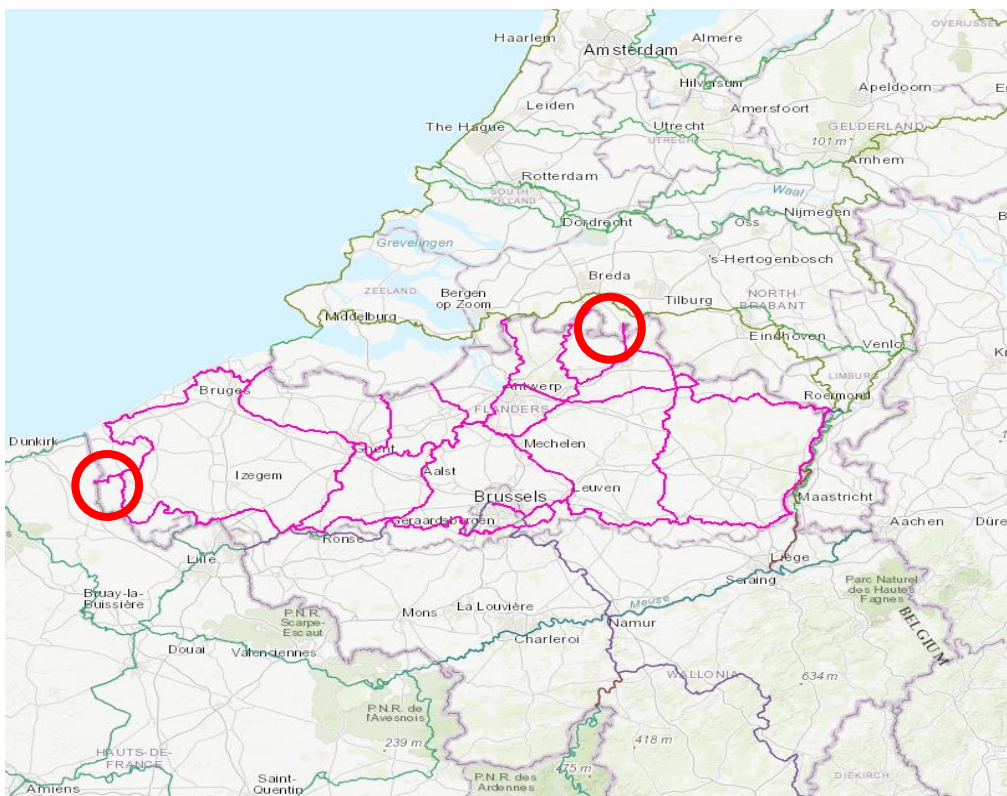
The report further presents – in chapter 2 – the best practices in organising cycle networks and/or specific routes. The report also defines that the key characteristics of a good network/route are: Coherence of the network by connecting cities and towns in a region with well-developed and continuous cycle routes and with connections to other modes of transport; Good road and wayfinding signage; Regular maintenance; and Relevant offer of additional services – accommodation providers, restaurants, bike rentals and repairs etc.

21. The report informs that the EuroVelo network has been very successful in establishing a backbone for many national, regional, and local networks across Europe. EuroVelo enjoys high popularity among cyclists and cycle tourists and connects the European nations and regions, including remote areas. It is a growing and very active network of cycle routes, users and professionals that creates jobs and economic growth. As almost half of the network is still at the planning and development stage, further investment is needed to tap the high potential for cycling outside of the most developed and popular destinations. The EuroVelo network may serve as a backbone for the establishment of the key pan-European cycle routes and network as part of the pan-European infrastructure module for cycling.

22. The development of the infrastructure module requires further data collection effort as explained in chapter 4 of the report and in many cases in the Europe region there are missing links in connecting the cycling networks of adjacent countries (see map below).

Map IV

Identification of missing international cycling network links between Belgium and France and Belgium and the Netherlands



23. Having considered the report, WP.5 at its thirty-third session urged ECE countries to work with the secretariat and its partners in supporting the process of data collection on the national cycling routes. It requested the secretariat, subject to a common decision with THE PEP Steering Committee, to prepare a draft infrastructure module for its next session as a formal document, with a particular emphasis on national networks, as well as ideas for the development of a pan-European infrastructure module for cycling, subject to the availability of data from ECE countries.

D. Transport infrastructure data

Group of Experts on Benchmarking of Transport Infrastructure Construction Costs (GE.4)

24. The mandate of the Group, which was established in October 2016 under WP.5 auspices, stipulated that the Group's final report should:

- Identify models, methodologies, tools and good practices for evaluating, calculating and analyzing inland transport Infrastructure costs
- Identify and list terminologies used for costing inland transport Infrastructure
- Collect and analyse data for benchmarking inland transport construction costs

25. During the period 2016–2020, the Group has organized its efforts in four subsequent phases:

- Phase I: Development of specific questionnaires for data collection (covering all inland modes including road, rail, inland waterways/ ports and intermodal terminals)
- Phase II: Development of a consolidated list of terminologies (covering all inland modes including road, rail, inland waterways/ ports and intermodal terminals) - ECE/TRANS/WP.5/GE.4/2019/1/Rev.2
- Phase III: Data collection – dissemination of questionnaires for collection of data and national best practices through WP.5, SC.1, SC.2, SC.3/WP.3 and WP.24
- Phase IV: Analysis of responses to questionnaires/ data received

26. At the 33rd session of the Working Party on Transport Trends and Economics, the Group reported that in the conduct of its work it experienced challenges relating to:

- The quantity and quality of data received and analyzed (sometimes sparse and scattered, misrepresentations or omissions, difficulties in normalization of data).
- Delays in data collection for intermodal terminals, inland waterways and ports and in collection of national good practices.

27. Given that the available benchmarking analysis, which mostly focused on road and rail sectors proves to be of great value added, WP.5 recommended an extension of the GE.4 mandate with 1 (one) year to continue and revamp its data collection efforts across all modes. This extension would enable GE.4 to collect more and better quality data from a larger group of countries on their transport infrastructure construction costs across all inland modes and would result in a more data-rich final report to be submitted to WP.5 at its 2021 session.

E. Review and monitoring of emerging issues and sustainable development goals

1. Establishment of an informal multidisciplinary group on transport responses to the COVID-19 crisis

Figure I

Banner of the Informal Multidisciplinary Advisory Group on Transport Responses to the COVID-19 crisis as established under WP.5 auspices



28. At its eighty-second annual session (Geneva, 25–28 February 2020), the Inland Transport Committee (ITC) requested the secretariat, in close cooperation with the Bureau, with the support of interested governments and key stakeholders to conduct necessary research on provisions in existing frameworks and new needed areas of work to promote cooperation between transport authorities in the field of counteracting the effects of emergency situations of cross-country nature, including epidemics and pandemics, and present this information to the Working Party on Transport Trends and Economics (WP.5) for consideration of further steps and for inclusion to its programme of work.

29. In response to this tasking, and as the pandemic further evolved, the secretariat established an Informal Multidisciplinary Advisory Group on Transport Responses to the COVID-19 Crisis which had its first virtual meeting on 26 June 2020 and its second on 8 September 2020 as part of the 33rd Session of WP.5. Based on inputs received from Governments and other stakeholders during these Multidisciplinary Advisory Group sessions and based on guidance received from WP.5 in September 2020 and the ITC Bureau at its session in November 2020, a working document has been prepared by the secretariat and submitted to Inland Transport Committee for consideration and possible endorsement of next steps.

30. *Inter alia*, the report identifies a set of:

(a) Lessons learned for international inland transport:

- The importance of immediate coordination in response to the outbreak and the effective ongoing coordination at regional, national and international levels.
- The importance of efficient supply chains and keeping goods moving.
- The need to collect and feed evidence and data into decision making.
- The digitalization of processes has made them contact-free and safer and more efficient.
- The need for clear communication to the public and to operators on changes to procedures and new rules.
- Engagement across sectors (e.g. health, transport, customs, business) has been crucial in using an evidence-based approach to decision making.

(b) Lessons learned for customs / border management:

- Need for enhanced preparedness – use of electronic services, risk management (selectivity and profiling before conducting physical checks), non-intrusive inspection (NII) equipment, availability of disaster response/ mitigation plans and business continuity plans.
- Need for enhanced coordination – use of a whole of government approach, Coordinated Border Management (CBM), coordination with neighbouring countries and/or at regional levels, especially in case of pandemics.

- Streamlining and simplifying Customs procedures – green lanes for freight traffic.
 - Transparency of documentary requirements – all necessary information should be publicly available.
- (c) The report also identified several possible recommendations for consideration and possible endorsement of the ITC at its next session, including:
- At regulatory level:
 - Continuation of the work of the informal multidisciplinary group of experts (incl. transport, customs, health officials) on developing transport responses to the COVID-19 and similar international crises. Build further on the work done by the informal group so far and identify specific measures/ tools to be developed aimed at increasing the resilience of the inland transport system to future pandemics, including e.g. Emergency plans/ protocols highlighting which transport networks and border crossings should be kept operational when confinement measures need to be put in place; Conduct stress-tests on the various ECE Conventions to identify where amendments can/should be made
 - Explore whether a new international regulatory regime for the inland transport sector in case of epidemics, pandemics and other cross-border emergency issues is needed or whether making amendments to existing legal instruments administered by ECE and other stakeholders suffices.
 - Work towards a uniform, broadly accepted certificate (similar to the one in Annex 3 of the Green Lane Communication) that certifies that the driver is a transport worker and, as such, waived from border crossing restrictions (under the UN Customs Convention on the International Transport of Goods). The Green Lane Communication and its annexes are available here: https://ec.europa.eu/transport/sites/transport/files/legislation/2020-03-23-communication-green-lanes_en.pdf
 - At the level of existing legal instruments/ Conventions:
 - Introduction of electronic certificates for crew and/ or passengers, such as in the existing UN transport conventions (TIR, Harmonization Convention; Railway Passenger Convention) administered by ECE.
 - Rules for transiting and cooperation among transport authorities in case of pandemics/ cross-border emergencies, such as amendments to the Harmonization Convention.
 - As referred to above, conduct stress-tests on the various ECE Conventions to identify where amendments can/should be made in order to make them more “pandemic-resilient” (i.e. TIR/ eTIR, CMR/eCMR and the Harmonization Convention) to be undertaken by relevant Working Parties.
 - At the level of digitalization:
 - Support for transport/ trade digitalisation: raise awareness globally and if possible, accelerate the digital implementation possibilities of various of the already existing transport legal instruments in the inland transport sector: TIR/eTIR, CMR/eCMR, the URL/ eURL consignment note for rail transport etc. A focus on digitalisation and automation could turn out effective pandemic mitigation tools as direct human contacts in clearance processes are no longer needed. Online training modules on the use of these digital instruments could be developed and deployed across the world with the support of the relevant ECE Working Parties (WP.30, SC.1, SC.2, WP.24 etc.).
 - At the level of continuous regional/ inter-regional/ inter-governmental dialogue:
 - Organization of multisectoral meetings as necessary (involving also the maritime and aviation sectors for instance) to share experience, and regularly

review and discuss cooperation across modes to prevent international spread of communicable diseases through transport and enhance regional and inter-regional coordination to facilitate border-crossings. This could as well be an agenda item as part of existing ECE intergovernmental platforms.

- Build further on and strengthen the Transport, Health and Environment Pan-European Programme (THE PEP) initiative, jointly led by UNECE and WHO Europe which in the wake of the COVID-19 pandemic has established a Task Force composed of representatives of member States, international organizations, civil society, academia and other stakeholders. The initiative aims at developing principles for environmentally sound and healthy transport systems based on sustainability and resilience and will explore long-term and strategic changes for the sector.

Consider developing resource materials gathering experiences from transport authorities in the ECE region and beyond in responding to the COVID-19 crisis.

31. The ITC at its next session is expected to consider these recommendations and endorse next steps.

2. Development of Sustainable Inland Transport Connectivity Indicators (SITCIN)

Figure II

UNECE is leading the implementation of a United Nations Development Account (UNDA) project on the development of Sustainable Inland Transport Connectivity Indicators



32. A United Nations Development Account (UNDA) funded project entitled “Sustainable transport connectivity and implementation of transport related SDGs in selected landlocked and transit/bridging countries” is currently underway. The project, which is led by the UN Economic Commission for Europe Sustainable Transport Division and implemented with the support of its two sister regional commissions ESCWA and ECLAC aims at developing a set of Sustainable Inland Transport Connectivity Indicators (SITCIN). In the first phase, the project involves the following pilot countries: Georgia, Kazakhstan, Serbia, Jordan and Paraguay.

(a) Objective

33. The main objective of the project is to develop a tool enabling countries to measure their degree of connectivity: both domestically & bilaterally/sub-regionally as well as in terms of soft & hard infrastructure.

34. *Inter alia*, the SITCIN, once fully developed and tested in the five pilot countries, will provide an instrument (a measurable set of criteria) for Governments enabling them to evaluate/ assess:

(a) The extent to which they implement the relevant UN legal instruments, agreements and conventions effectively and

(b) The degree to which their inland transport systems are inter-operable with the systems within their respective (sub-)regions.

35. In doing so, it will enable policymakers to assess their country's degree of external economic connectivity in terms of efficiency of inland transport, logistics, trade, customs and border crossing facilitation processes.

36. Governments can also use the SITCIN to assess and report on their progress in implementing the transport related Sustainable Development Goals (i.e. 2030 Agenda) and their commitments under the Vienna Programme of Action for Landlocked Developing Countries (for the decade 2014-2024).

(b) Project phases

- I. Development of the draft set of Sustainable Inland Transport Indicators (SITCIN)
- II. Fact-finding missions to each of the five “pilot countries” to review national transport and logistics situation, resulting in five «national connectivity reports»
- III. National policy dialogue meetings to validate the reports
- IV. Tailor-made national capacity building programmes in each of the five “pilot countries”
- V. Concluding inter-regional forum to share “lessons learnt’ and experiences of the five pilot countries with other interested Governments around the globe to further promote the use of the SITCIN

(c) SITCIN methodology

37. The current draft indicators are structured within three pillars of sustainability and applied across the four inland transport sectors including, road, rail, inland waterways and inter-modal transport.

Figure III

The SITCIN are structured along the three pillars of sustainable development: economic, social and environmental sustainability



- Economic Sustainability (validating border crossing efficiency, time, and costs as well as quality of (inter-modal) infrastructure and the use of ICT and intelligent transport solutions).
- Social Sustainability (assessing adequacy of road traffic rules enforcement, road traffic infrastructure, vehicle regulations and administrative frameworks surrounding cross border transport of perishable foodstuffs and of dangerous goods).
- Environmental Sustainability (evaluating measures aimed at reduction of greenhouse gas emissions, air pollutants and noise emissions (looks into alternative fuel share and average age of the vehicle fleet etc.).

(d) 2020 SITCIN progress up-date and way forward:

- 220+ indicators and sub-indicators have been produced for piloting and testing purposes covering road, rail, IWW and inter-modal transport sectors, including a cluster of indicators on «pandemics preparedness».
- Indicators have been tested and validated in 4 out of 5 beneficiary countries, draft National Connectivity Reports are available in Georgia, Kazakhstan, Serbia and Jordan. The data collection process is still ongoing in Paraguay.
- Virtual policy dialogue sessions will take place in early 2021 to adopt the draft NCRs, followed by tailored capacity building programmes in the second and third quarters of 2021.
- The final set of SITCIN will be made available by May/ June 2021 and will be launched at an inter-regional meeting to be held as part of the forthcoming session of the Working Party on Transport Trends and Economics (WP.5) in September 2021. Upon completion of the project the full set of indicators will be published.

F. Inland transport security

38. On 8 September 2020, in conjunction with the 33rd Session of the Working Party on Transport Trends and Economics (WP.5), a Round Table was held on “Intelligent Transport Systems and Cyber Security”. The event was held as part of a series of events co-organized by the ECE Sustainable Transport Division, in the framework of its annual Inland Transport Security Discussion Forum, and the Office of the Coordinator of OSCE Economic and Environmental Activities (OCEEA).

39. Panellists and participants in the discussions recognized that the increasingly digitalized, interconnected and automated transport system functionalities create a range of new security risks and threats to intelligent transport systems. Keynote speakers from a range of organizations including from the European Union Agency for Cybersecurity (ENISA) the Department for Transport of the United Kingdom of Great Britain and North Ireland, the Institute for Security and Safety (ISS) hosted at the Brandenburg University (Germany) and McKinsey & Company shed light on the ongoing transformation of the automotive sector and its preparedness to mitigate various types of cyber threats.

40. An overview was provided on the work done by the ECE World Forum for Harmonization of Vehicle Regulations (WP.29) and the GRVA Informal Working Group on Cyber Security and Over-the-Air Issues in the road vehicle sector following the adoption of a Guideline on Cyber Security and Data Protection (2016) and of a new United Nations Regulation No. 155 on Cyber Security (June 2020).

41. Participants agreed that given the complexities involved the following issues need to be taken into consideration when addressing cyber security issues:

- Due to the nature of cyber security, regulations are mostly based on the principle of risk-reduction (or mitigation) not risk-elimination.
- Measures should not only focus on the product design, but also take processes and people into consideration. Risk assessments should thus both take into account risks related to vehicle design as well as broader external risks, such as those within Intelligent Transport Systems.
- As vehicles become more automated and reliant on external data sources and communications, the security of those externalities will be as important as the security of the vehicle. The vehicle therefore needs to be designed (and maintained) with an awareness of the dependence it has on those externalities and how to manage the risks from them; and
- People designing Intelligent Transport Systems need to consider the end-end security of their systems and how it may affect the security and operation of vehicles using them.

42. Participants recognised the value of WP.29 regulations to guide the transport industry to play its role regarding cyber security. At the same time, the important role of nation-state actions in this field was noted as well. Participants agreed that the creation of a set of binding cyber security norms would require a strong inter-governmental dialogue and political will as well as a common understanding of the challenges at hand, the threat actions and threat vectors and the readiness to find an agreement on a performance model for cyber defence in the inland transport sector.

43. The full set of presentations delivered at the workshop including a round table concept note are available here: www.unece.org/trans/areas-of-work/trends-and-economics/activities/working-party-on-transport-trends-and-economics-wp5/events/roundtable-on-intelligent-transport-systems-and-cyber-security.html

III. Analytical work: publications by the Working Party on Transport Trends and Economics

A. Handbook on Sustainable Urban Mobility and Spatial Planning – Promoting Active Mobility (September 2020)

44. This publication has been designed to assist member States in integrating transport, health, quality of life and environmental objectives into urban and spatial planning policies. It provides many references to case studies, good practices and examples from cities across the ECE region (and beyond) covering a wide array of thematic areas, including: the future of sustainable urban mobility; spatial planning in function of sustainable urban mobility and accessibility; public transport planning as a cornerstone of sustainable urban mobility; active mobility and how it promotes health and the environment; and the potential of Intelligent Transport Systems in an urban context.

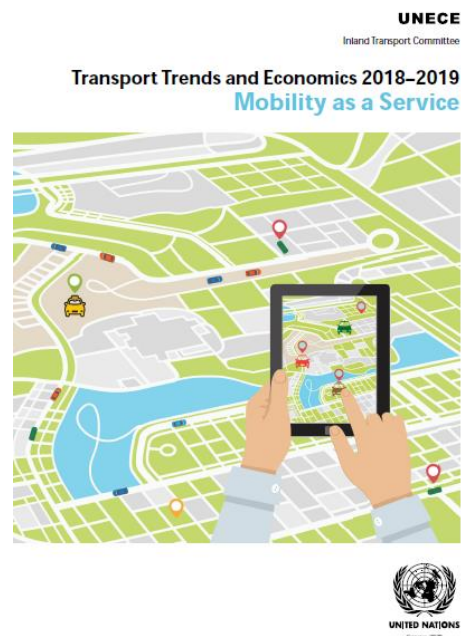
45. The Handbook, which was funded by the Government of the Russian Federation, was prepared under the auspices of the WP.5 and THE PEP Steering Committee. The publication puts forward a methodology for sustainable urban transport planning which served as a methodological basis for the workshop. It is available in English and Russian languages on the ECE website: <https://unece.org/transport/publications/handbook-sustainable-urban-mobility-and-spatial-planning>.



B. Transport Trends and Economics 2018–2019 - Mobility as a Service (February 2020)

46. Mobility as a Service (MaaS) is a new mobility concept gaining pace in many cities around the world. Its value proposition concerns integration of mobility services which is realized by providing trip planning and one-stop fare purchase for the user through a single platform. Since MaaS is only emerging, the analysis of real-life demonstrations is still limited and, thus, evidence on the potential benefits of MaaS implementation is scarce and fragmented. However, there is a growing amount of literature which documents that MaaS is a promising mobility concept and it is expected to deliver several economic, societal, transport-related and environmental benefits.

47. This publication presents the trends and economics for MaaS and is available for download here: <https://unece.org/transport/publications/transport-trends-and-economics-2018-2019-mobility-service>



C. Climate Change Impacts and Adaptation for International Transport Networks and Nodes (February 2020)

48. Extreme weather events, some of which are increasing in intensity and frequency, as well as slower onset climate changes (for example, sea level rise) and cumulative effects can result in transportation infrastructure damages, operational disruptions, and pressures on supply chain capacity and efficiency. The United Nations Economic Commission for Europe (ECE) Group of Experts on Climate Change Impacts and Adaptation for Transport Networks and Nodes (the Group of Experts) has been analysing the impacts of climate change on main transport assets in the ECE region, as presented in this report.

49. The Group of Experts considered the main networks and nodes in the ECE region, observed climate changes, as well as future projections. In this context, the report presents the analyses of several climate variables relevant to transport networks and nodes within the ECE region.

50. Regional maps have been produced in Geographical Information System (GIS) format. The Group of Experts has also reviewed and presented country experiences in the form of case studies, demonstrating a range of efforts that have been undertaken to analyse climate change impacts on transport assets and operations.

51. With its work, the Group of Experts wishes to raise awareness on the importance of considering climate change and extreme weather (for example, in planning, construction, maintenance and operations) and of strengthening the climate resilience of inland transport assets, networks and nodes. It also aims to stimulate the continuation of work to establish the necessary analytical basis to facilitate local or regional assessments, leading to the identification of specific transport assets at risk which may require adaptation efforts. The Group of Experts, within this report, also formulated a series of lessons learned which have served as a basis to recommend future action at national and international levels towards improved transportation system climate resilience. The publication is available for downloading [here:](https://unece.org/transport/publications/climate-change-impacts-and-adaptation-international-transport-networks-0)

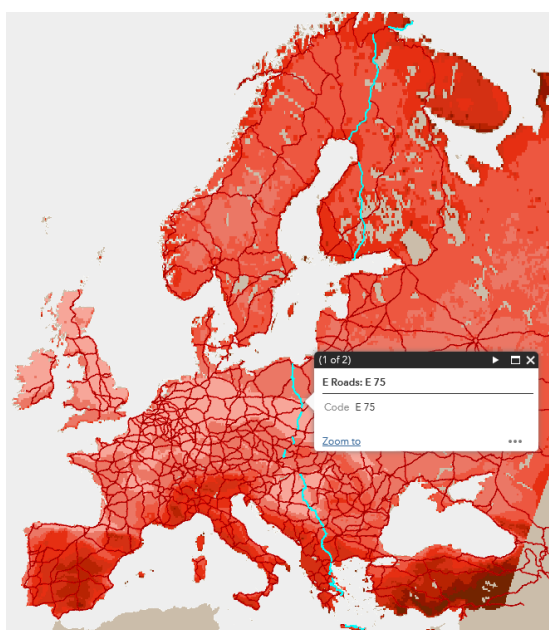
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UNECE

Climate Change Impacts and Adaptation for Transport Networks and Nodes



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IV. Analytical work: publications by the UNECE Sustainable Transport Division

A. Strengthening the capacity of Central Asian countries to develop sustainable urban mobility policy on car sharing and carpooling initiatives (October 2020)

52. Shared mobility services are the part of the shared economy, which is based on the idea of rational use of limited resources, which creates an opportunity for a person to afford high-quality goods and services at a reasonable price. This study provides a brief history of the emergence and development of shared mobility services, which contribute to a more efficient use of available resources and to achieve a number of UN sustainable development goals.

53. Various forms of shared mobility are increasingly being included in the urban multimodal transport system and impact social and public life of urban residents in the areas of economics, ecology, and safety. This study considers car sharing and carpooling in countries from Western Europe, Asia, and North America and tries to assess the possible development of similar services in Kazakhstan, Kyrgyzstan and Tajikistan. It also offers guidelines and recommendations considering the best practices that may facilitate the transition in Central Asia to modern forms of sustainable urban mobility. The study is available

https://www.unece.org/fileadmin/DAM/trans/publications/2020_CarSharing_E.pdf



B. Jobs in Green and Healthy Transport (May 2020)

54. This study, commissioned by the Steering Committee of the Transport, Health and Environment Pan-European Programme (THE PEP) through its Partnership on Jobs in Green and Healthy Transport, examines the economy-wide employment implications of an accelerated shift towards greener land transport in the region of the United Nations Economic Commission for Europe (UNECE). The study compares a 'business-as-usual' approach with scenario-based projections that run up to 2030.

55. These options envisage an accelerated expansion of public transport and the electrification of private passenger and freight transport. The study finds that 10 million additional jobs could be created worldwide - 2.9 million in the UNECE region - if 50 per cent of all vehicles manufactured were electric. In addition, almost 5 million new jobs could be created worldwide, - 2.5 million in the UNECE region - if UNECE countries doubled investment in public transport. The study is available for downloading here: <https://thepep.unece.org/sites/default/files/2020->



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C. Mobility Management – a Guide of International Good Practices (April 2020)

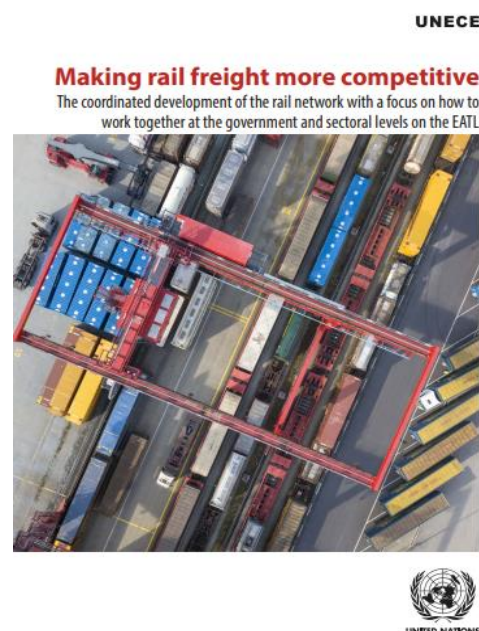
56. As part of the ongoing work in the framework of under the Transport Health and Environment Pan-European Programme (THE PEP), a study on good practices in Mobility Management has been published. Drawing on concrete experiences from across the Pan-European region, the guide, developed provides practical policy considerations enriched by a total of 22 good practices from 17 countries that set out the positive and significant impacts of mobility management programme.

57. The guide considers national and local efforts to coordinate mobility management initiatives, drawing on examples such as Austria’s “klimaaktiv mobil”, which since 2004 has funded 11,600 mobility management projects, including 9,200 for businesses, 1,100 for cities, municipalities and regions, 900 for leisure and tourism and 400 for cycling projects. Other examples include France’s National strategy for sustainable mobility development, results of which include 133 sustainable urban mobility plans covering 55% of the population. The guide is available here: <https://www.unece.org/index.php?id=54128>

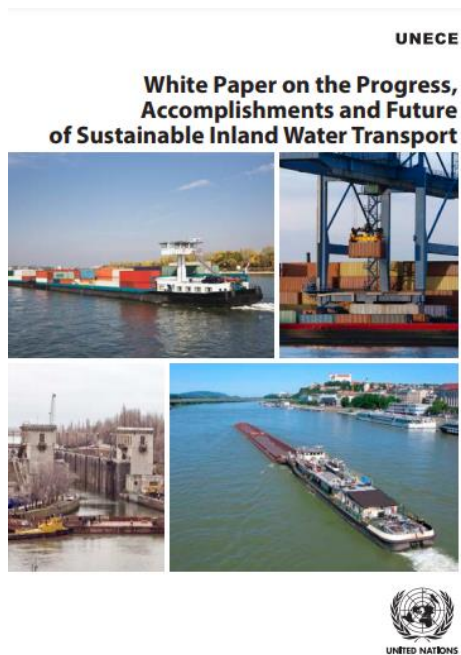


D. Making rail freight more competitive (February 2020)

58. As part of the ongoing activities of the Working Party on Rail Transport (SC.2) a workshop titled “Making rail freight more competitive: The coordinated development of the rail network with a focus on how to work together at the government and sectoral levels on the EATL” was held at the seventy-third session of the Working Party. Over 60 participants from national administrations, international organizations, non-governmental organizations and the private sector discussed, over a number of sessions, how to make rail freight more competitive, highlighting a number of good practices from and key challenges for the sector across the region. This summary document provides an overview of the main discussions, all presentations and interventions from the session are available here: https://www.unece.org/fileadmin/DAM/trans/publications/SC.2_Workshop_summary_web.pdf



E. White paper on the progress, accomplishments and future of sustainable inland water transport (February 2020)



59. The UNECE “White Paper on the progress, accomplishment and future of sustainable inland water transport” is the third edition of a policy paper on the current situation, trends and challenges in inland water transport on European inland waterways of international importance in the region of the Economic Commission for Europe.

60. This third edition follows from the International Conference on Inland Water Transport (18 and 19 April 2018, Wrocław, Poland) and particularly from the Ministerial declaration “Inland Navigation in a Global Setting”, which was supported by resolution No. 265 “Facilitating the Development of Inland Water Transport” of 22 February 2019 of the Inland Transport Committee. The overall objective is to assess the current situation of inland water transport in Europe, review progress since 2011, identify current trends and challenges, and propose

recommendations in key areas of pan-European cooperation to promote the development of the sector. The White Paper is available here: <https://www.unece.org/index.php?id=53901>