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**Economic Commission for Europe****Inland Transport Committee****Working Party on Intermodal Transport and Logistics****Sixty-third session**

Geneva, 28–30 October 2020

Item 6 (b) of the provisional agenda

**Emerging issues in freight transport and logistics:****National Master Plans on freight transport and logistics****Guidelines for the development of national master plans for freight transport and logistics****Note by the secretariat****I. Background**

1. This document proposes the guidelines for the development of national master plans for freight transport and logistics and lists examples on policy measures in support of the implementation of the guidelines.
2. WP.24 is invited to review this document in the process of elaboration of a Handbook for national master plans for freight transport and logistics.

**II. Guidelines**

3. The prerequisite for the development of a freight transport and logistics plan, and the preparation of a relevant master plan with specific and focused actions is the country's position in the sector. Countries leaders in freight transport and logistics, are interested in a different set of actions than countries who are building their positions.
4. For the first group of countries, the focus is to be given to actions on optimization, including optimization between economic, environmental and social dimensions of freight transport and logistics. In doing so, governments in these countries should ensure that they maintain or further improve the conditions for doing business for the industry as well as provide the necessary infrastructure.
5. For the other countries, the focus is to be given to actions that aim at putting in place stable and good conditions for the industry and delivery of the necessary infrastructure, which is well connected internationally. While doing so, governments in these countries should be looking at high-level objectives, including environmental and social aspects of freight transport and logistics and take actions, which do not undermine in medium to longer term the high-level objectives.

6. The following actions are recommended:

**A. Stable conditions:**

7. Actions in this area should aim at creation of rules, regulations, standards and practices and their enforcement or implementation to make freight transport operations safe, secure, efficient and fair in terms of level-playing field.

**Countries building their position in the sector:**

- Accede to and implement United Nations transport conventions and trade facilitation conventions to create stable conditions in the sector for the industry to do business and develop;
- Accede to and implement sanitary and phytosanitary conventions, agreements, regulations and standards to minimize the risk of introduction and spread of human, animal and plant pests and diseases due to trade and transport of food, animals, plants and plant products and inanimate goods;
- Ratify and implement the ILO instruments, including fundamental conventions and sectoral instruments and tools;
- Encourage establishment of freight transport and logistics associations;
- Provide a solid framework that supports the establishment of free and democratic unions and collective bargaining for the sector;
- Work with industry associations and unions to develop vocational training and improved professionalization of the sector;
- Follow international practice and standards to occupational health and safety;
- Start building enabling environments for sustainable transport and logistics enterprises and the promotion of occupational health and safety and decent work in the sector, inter alia, by acceding to and implementing relevant ILO conventions and applying ILO recommendations and guidance;
- Implement the IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units;
- Increase collaboration between government and transport and trade entities and work towards establishment of a single window facility and trade facilitating schemes.

**Countries, leaders in the sector:**

- Sustain implementation of the United Nations transport conventions and trade facilitation conventions;
- Sustain implementation of sanitary and phytosanitary conventions, agreements, regulations and standards;
- Sustain implementation of ILO instruments, including fundamental conventions and sectoral instruments and tools;
- Work with industry associations, vocational schools and universities to establish specialised courses and training possibilities, and for university courses to improve their international profile;
- Monitor the health and safety as well as decent work conditions in the sector and work with industry to further improve them;
- Optimize single window facility;
- Sustain implementation the IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units;

## **B. Infrastructure and networks:**

8. Actions in the area should aim at delivery of the necessary infrastructure and its further optimization.

### **Countries building their position in the sector:**

- Accede to and implement United Nations transport infrastructure agreements such as AGR, AGC, AGTC, AGN or the Protocol to on Combined Transport on Inland Waterways to AGTC in order to develop and maintain the essential infrastructure;
- Remove missing links;
- Develop infrastructure at major locations for intermodal shift;
- Increase application of ITS for traffic management.

### **Countries, leaders in the sector:**

- Sustain high-level of implementation of United Nations transport infrastructure agreements and further develop them to meet the increasing demand for cargo handling;
- Monitor traffic and upgrade infrastructure bottlenecks;
- Optimize infrastructure networks by better utilization of ITS and telematics by the industry;
- Further develop ITS for infrastructure optimization through supporting relevant research and development;
- Support research and development for mainstreaming ITS solutions;
- Better address ITS challenges such as systems interoperability and data exchange, fraud and violation privacy and security;
- Research on segregating freight transport from passenger transport (dedicated road lanes and rail lines for freight transport);
- Optimize use of infrastructure by further enabling intermodal shift: road to rail and waterways/sea, rail to waterways/sea;
- Create and develop short-sea shipping;
- Adjust and develop infrastructure supporting a new city logistics concept.

## **C. High-level objectives:**

9. Actions in this area should aim at increasing efficiencies through research and innovation in the sector and at minimizing external costs to human and the environment (social and environmental optimization) from freight transport and logistics.

### **Countries building their position in the sector:**

- Support application of ITS in transport operations;
- Encourage/incentivise use of low emission vehicles;
- Create assistance programme especially for SMEs to use modern, low-emission vehicles;
- Pursue legislative changes and amendments to allow women to access the sector;
- Pursue legislative changes for upping the quality of employment in the sector, or help micro, small and medium enterprises to transition from the informal to the formal economy, where needed;

- Research on best practices on training, skills development and life-long learning to professionalize the sector;
- Follow strategies and international good practices and establish relevant risk management approaches to reduce the introduction and spread of human, animal and plant health pests and diseases.

**Countries, leaders in the sector:**

- Optimize shippers' operations (with regard to ramp times);
- Optimize transit traffic;
- Optimize transport operations by better utilization of ITS and telematics and through operational research by the industry;
- Support research and development for pollution free (decreased emissions) freight transport and logistics;
- Further develop ITS for transport operations optimization through supporting relevant research and development;
- Research on policies and technologies to enhance capacity and minimize empty/low load runs;
- Rethink city logistics and support research in this area;
- Internalise external costs for supporting environmental and social optimization, including through intelligent tolling systems;
- Enhance environmental, social and safety standards, and where relevant, introduce them into the international conventions and agreements and/or national regulatory framework;
- Promote and encourage industry associations to identify and standardize practices and tools that support responsible business conduct;
- Develop programmes and sectoral strategies to improve the quality of decent jobs and diversity in the sector – this will translate in a better perception of the industry to attract new recruits and avoid shortages;
- Establish and monitor targets for inspection, due diligence and for increasing diversity and women representation in the sector;
- Establish frameworks responsibilities, penalties and redress mechanisms available to transport and logistics chain parties and workers (chain of responsibility);
- Support innovative approaches for fair and human-centred procurement, outsourcing and governance frameworks to manage privatization, including social and environmental safeguards, and monitoring mechanisms;
- Continue to develop and enhance strategies, good practices and relevant risk management approaches to reduce the introduction and spread of human, animal and plant health pests and diseases.

**D. Strategic geographical location**

10. Actions in this area should aim at improving cooperation and collaboration between governments along transport corridors to enhance international connectivity (improved operationalization of a corridor)

**Countries building their position in the sector:**

- Work towards enhanced cooperation and collaboration for supporting effective connectivity along corridors and their increasing operationalization.

**Countries, leaders in the sector:**

- Sustain high-level cooperation and collaboration for maintaining effective connectivity along corridors;
- Introduce freight transport and logistics vocabulary for transborder communication.

### **III. Policy measures in support of the implementation of the national master plans**

11. Implementation of actions can be more effective if it is taking into consideration the experience made by other countries. To this end, policy measures in support of actions listed in the Guidelines (section II) are presented here. These policy measures can be considered as a good practice available for implementation of the various actions. A non-exhaustive list of measures is provided below.

#### **A. Stable conditions:**

##### **Accession to and implementation of United Nations transport conventions and trade facilitation conventions / Sustained implementation of United Nations transport conventions and trade facilitation conventions**

Example of measures:

- Adequate transposition of the conventions' provisions into national legislation is the necessary step towards the implementation of the conventions.
- Establishment of heavy goods vehicle centres along main corridors can help prevent fraud by road hauliers in terms of vehicle safety, loading, driver rest time periods. Thanks to such control measures road safety for goods vehicles can be strengthened. Also, the level-playing field for road hauliers is supported.
- Vehicle checks and evaluation of results of the checks – hence strengthened enforcement – can lead to improvements of work conditions in road haulage sector.

##### **Accession to and implementation of the sanitary and phytosanitary conventions, agreements, regulations and standards / Sustained implementation of sanitary and phytosanitary conventions, agreements, regulations and standards**

Example of measures:

- Application of international standards, harmonised sanitary and phytosanitary measures and establishment of a strong inter agency and public-private collaboration platform helps enhance the assessment and management of sanitary and phytosanitary risks in the interests of safe trade facilitation.
- Taking reasonable steps to keep cargo transport units (CTUs) and their cargo clean can prevent the spread of pests and diseases through transport supply chains. Clean CTUs are likely to move through borders quicker, easier and cheaper. As a result stakeholders involved could experience: reduced inspections to verify that the CTUs are clean, greater certainty that containerized cargo release will be as expected, and fewer unexpected expenses, such as demurrage charges due to cargo holds or costs associated with having the CTUs quarantined, sealed and treated, cleaned, or re-exported back to origin.
- Following electronic data exchange systems such as the IPPC ePhyto can facilitate multilateral electronic certificate exchanges based upon a single, harmonized communication protocol, eliminating the cost and complexity of multiple bilateral exchange protocols.

**Ratification and implementation of the ILO instruments, including fundamental conventions and sectoral instruments and tools / Sustained implementation of the ILO conventions**

Example of measures:

- Adequate transposition of the conventions' provisions into national legislation is the necessary step towards the implementation of the conventions. Up-to-date information on ratifications, and the work of the ILO committees and commission can be found in the NORMLEX database ([www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:20060:0::NO::](http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:20060:0::NO::)).
- The Committee of Experts on the Application of Conventions and Recommendations was set up in 1926 to examine government reports on ratified Conventions. Governments, once a convention was ratified, are required to report regularly on the measures they have taken for its implementation (every three years for fundamental conventions and every six years for the others, although reports may be requested at shorter intervals). In addition, governments are required to submit copies of their reports to employers' and workers' organizations. These organizations may comment on the government reports or send comments directly to the ILO on the application of Conventions.
- Because the principle of freedom of association needed a further supervisory procedure, the ILO set up in 1951 the Committee on Freedom of Association for the purpose of examining complaints of violations of freedom of association. The committee has examined 3,300 cases, of which at least 67 relate to the transport sector.
- The ILO Commission of Inquiry is the highest-level investigative procedure examining allegations to violations of international labour standards. To date, 14 commissions have been established by the ILO, of which 6 include complaints or allegations on violations to representatives in the transport sector.
- In particular relating to the Maritime Labour Convention, 2006, as amended, governments can promote concentrated inspection campaigns within the framework of regional port state memorandum of understandings

**Support to establishment of freight transport and logistics associations/Promotion with industry associations of standardized practices and tools that support responsible business conduct;**

Example of measures:

- Ensuring that employers have a voice and are represented can be essential for the effective functioning of transport and logistics labour markets and its overall governance structure.
- Creation of association can help create and/or enhance cooperation between enterprises forming such an association and the authorities on the one hand and research institutions on the other hand. Legislative basis facilitating creation of associations should be put in place.
- Launching of public-private partnerships such as Logistics Alliance Germany – can help SMEs connect with logistics partners in foreign countries who, as part of the partnership, can be more trusted for moving cargo efficiently and safely.
- Development of codes of conduct, updated templates and formats for wide industry use, self-assessment forms, identification of best practices and policies serves as a basis to improve and support responsible business conduct.

**Creation of a solid framework that supports the establishment of free and democratic unions for the sector**

Example of measures:

- Ensuring that workers have a voice and are represented can be essential for the effective functioning of transport and logistics labour markets and its overall governance structure. This includes the removal of obstacles to, and interference with

the activities of free and independent trade unions representing transport workers that are contrary to national law or the fundamental principles and rights at work.

- Social dialogue and collective bargaining practices are seen as a key means through which workers and employers and their organizations can establish fair wages and working conditions and ensure equal opportunities between women and men. It also provides the basis for sound labour relations and for a harmonious and productive transport and logistics industry. Enhancing the inclusiveness of collective bargaining and collective agreements can be seen as a key means for reducing inequality and extending labour protection.

### **Development of vocational training and improved professionalization of the sector in collaboration with industry associations, unions, vocational schools and universities**

Example of measures:

- Introduction by regulatory bodies of a sound skills development framework, including training regulations that reflect the requirements of industry and technology and prescribe periodic re-training should result in raising the skills level and improve the sector's image. Such measure should not only result in laying foundations for good working conditions but also in making the industry develop faster with the work force working effectively with newest technologies and methods and principles of operational research. Within the scope of their training regulations, regulatory bodies should also include the regulation of instructors, training officers and other training staff, persons engaged in the maintenance and repair of vehicles; supervisors, transport managers, contractor account managers and driver recruiters and supply chain intermediaries, including freight forwarders.
- Joint meetings and consultations with industry associations, unions and practitioners on training in the freight sector can help to better design training initiatives as well as assess the ongoing training and redesign it if found ineffective.
- Introduction of internationally recognized courses of study for the basic and further training of national and international management executives in the sector can help to better link the higher education landscapes across the countries. Such measure can help disseminate good practices between countries and lead to overall improvements in the sector by having more qualified managers.
- Availability of freight transport and logistics specialities in secondary and vocational education can help attract young professionals to the industry and can help ensure continues inflow of young professionals the industry needs to develop. The secondary and vocational education training needs to be continuously adapted to market needs and technology change to deliver the necessary results.
- Establishment of educational platforms by sector's associations connecting professionals can facilitate access to training and retraining in the sector.

### **Implementation of international practice and standards to occupational health and safety**

Example of measures:

- Recognition that safety and health are fundamental, and adoption of ILO occupational safety and health conventions and tools, including ILO sectoral instruments and tools is a key first step to ensuring occupational health and safety.
- Introduction of frameworks on safety management systems, that can help to bridge the gap between transport regulation and occupational safety and health legislations is another important step.
- Improvement of welfare facilities, including safe and secure parking, rest areas and decent sanitary facilities (bathrooms and showers) is of paramount importance to improve the attractiveness of the sector.
- Recognition of the central role that free and democratic trade unions play in influencing through social dialogue and collective bargaining compliance with health

and safety legislation in the workplace, particularly in transport supply chains where there is fragmentation, a prevalence of non-standard employment or informal livelihoods, helps maintain high level of occupational health and safety.

**Creation of enabling environments for sustainable transport and logistics enterprises and the promotion of occupational health and safety and decent work in the sector / Monitoring of the health and safety as well as decent work conditions in the sector and collaboration for further improvements**

Example of measures:

- Adoption of working and driving time frameworks (AETR or ILO Convention 153) helps create decent, fair and safe work conditions in the road transport sector.
- Continuous monitoring, inspection and regular evaluation of decent working conditions in the sector by relevant state transport/logistics agencies should lead to availability of evidence base that can be used in discussion with transport and logistics buyers, supply chain parties, industry associations and unions about work conditions and their possible further improvement to make the work in the sector more attractive.
- Strategies to formalize transport undertakings where needed and raising the levels of social security access of the transport and logistics workforce creates the necessary enabling environment to health and safety in the sector.
- Adoption of regulation or programmes encouraging sustainable payment levels and fair contracting of micro, small and medium transport and logistics enterprises is a step to creating decent work in the sector.
- Increased collaboration and inter-agency support and funding between police, transport and labour inspectorates results in improved monitoring of health and safety as well as decent work conditions in the sector.
- Implementation of chain of responsibility principles through legislation or practices results in improved health and safety conditions in the sector.
- Implementation of Port State control system through memoranda of understanding helps create decent, fair and safe work conditions in the maritime sector.

**Implementation of the IMO/ILO/UNECE Code of Practice for Packing of Cargo Transport Units**

Example of measures:

- Application of the provisions of the Code of Practice for Packing of Cargo Transport Units helps ensure safe and secure transport of containers due to safe and secure stowage of cargo. It helps in providing relevant training to workers who load or unload cargo from containers. It also helps prevention of the spread and introduction of human, animal and plant pests and diseases.

**Increased collaboration between government and transport and trade entities and work towards establishment of a single window facility and trade facilitating schemes**

Example of measures:

- Establishment of an 'one-stop' principle for controls such as customs, border, veterinary, phytosanitary, radiological and other inspections decreases the time needed for controls. It also leads to decrease of fees charged. Such a measure is considered as a big contribution to facilitating trade and transport.
- A global system for production and exchange of electronic certification information incorporated into trade single window helps strengthen and simplify trade in food, animals, plants, animal and plant products reducing transaction costs, expediting the clearance of compliant products and eliminating fraud.
- Authorised Economic Operator (AEO) programme can facilitate clearing procedures for known shippers and forwarders. The AEO scheme should be continuously reviewed to ensure its compliance with latest international requirements. Authorities

wishing to understand the full benefits of AEO schemes, may learn from the experience of countries with long-standing AEO programmes.

#### **Optimization of a single window facility**

Example of measures:

- Full potential of a single window facility can be achieved when all transport documents can be received electronically by all relevant government agencies participating in the facility. The development and/or expansion of the facility is best achieved when coordinated by one entity, typically local custom authority.

### **B. Infrastructure and networks:**

#### **Accession and implementation of the United Nations transport infrastructure agreements such as AGR, AGC, AGTC, AGN or the Protocol to on Combined Transport on Inland Waterways to AGTC in order to develop and maintain the essential infrastructure / Removal of missing links;**

Example of measures:

- Creation of a dedicated national fund – e.g. Swiss Rail Infrastructure Fund (RIF) – can help better manage renewal, modernisation and further expansion of infrastructure networks. Such funds should possibly be multi-year ones and supported by performance agreements and targets.

#### **Sustained implementation of United Nations transport infrastructure agreements and their further development to meet the increasing demand for cargo handling/ Traffic monitoring and upgrade of infrastructure bottlenecks;**

Example of measures:

- Elaboration of expansion plans agreements and related network usage concepts can help in planning train path usage after the expansion.
- Elaboration of network usage plans can serve as a basis for train path allocations. Such plans are drawn to ensure meeting future demands of both passenger and freight transport as well as to prevent displacing freight transport by expansion of passenger traffic.

#### **Optimization of infrastructure networks by better utilization of ITS and telematics by the industry:**

Example of measures:

- Traffic management systems on busy sections can improve traffic fluidity. Equipping road sections with dynamic displays on maximum speed, prohibition of overtaking or lane control signals helps prevent driver behaviours which otherwise could lead to congestions or accidents. Such measure is aimed at enhancing capacity of the section of road by increasing traffic efficiency.
- Intelligent traffic information and control can help redirect long-distance traffic from road sections of elevated traffic or congested roads. The system needs to cover the full transit network and provide full information to vehicle and driver on the best route to destination taking into account predictive information on congestions, flows of traffic, speeds and construction sites, etc.
- Application of artificial intelligence into the instrument inspection via image identification at borders can accelerate control and decrease times necessary for crossing borders.

**Development of infrastructure at major locations for intermodal shift/ Monitoring of traffic and upgrade of infrastructure bottlenecks / Optimization of infrastructure use by further enabling intermodal shift**

Example of measures:

- Availability of funding for co-financing of construction and upgrade of intermodal terminals/combined transport transshipment facilities and resulting investments by private operators in the terminals infrastructure can help increase capacity of the overall system of freight transport. (E.g. Austrian terminal support programme).
- Availability of funding for construction of new and upgrading of existing private sector combined/intermodal transport terminals.

**Research on mainstreaming of ITS**

Example of measures:

- Deployment and use of harmonized river information services (RIS) in the industry can help enhancing safety, efficiency and environmental friendliness of inland waterways transport and facilitate its interfaces with other transport modes.

**Improvements to ITS interoperability and data exchange, prevention of fraud and violation of privacy and security**

Example of measures:

- Government engagement into elaboration of ITS interoperability standards can help increase availability of various compatible ITS solutions, which should help decrease their prices and lead to easier access to these solutions.

**Research on segregation of freight transport from passenger transport (dedicated road lanes and rail lines for freight transport)**

Example of measures:

- Traffic segregation on busy sections of lines can help reduce pathing conflicts between passenger and freight rail service. Experience show that relatively small-scale investment projects at the busiest sections should lead to gains of additional paths in a range of 10 to 20 per cent. Ex-ante simulations should be conducted to verify if the planned investments can bring the expected results.
- Flexibilization measures by a slight moving of schedules or through adjustments of slots can also help increase pathing capacity. Research and/or simulations of slots adjustments should be conducted to assess possible gains.
- Widening of road network and segregation of heavy trucks from passenger traffic at busiest sections can enhance the capacity of the network. The development of segregated sections for heavy trucks can be explored to be developed as PPP solutions, where relevant, e.g. where heavy trucks are subject to tolls for using the road network.

**Creation and development of short-sea shipping**

Example of measures:

- Creation of motorways of the sea on selected short high-volume transit corridors – e.g. the European North-South corridor from Scandinavia to Spain/Portugal through Germany and France – can help shift cargo transport away from road haulage on such corridors. Such measure can result in many positive effects such as decrease of congestion, decrease of air and noise pollution from the road traffic, increased road safety.

**Infrastructure for supporting new city logistics concepts**

Example of measures:

- Availability of funding programmes for the preparation of urban logistics strategies and feasibility studies on concrete individual urban logistics projects and/or funding for concrete individual urban logistics projects.

### C. High-level objectives:

#### **Support to application of ITS in transport operations / Optimization to transport operations by better utilization of ITS and telematics and through operational research by the industry**

Example of measures:

- Financial support programmes dedicated to SMEs on ITS can help increase the uptake and application of ITS solutions by SMEs.
- Financial support and training programmes to SMEs on operational research can help increase uptake and application of problem-solving techniques and methods such as advanced analytical techniques and methods.
- Digitalization support programmes for SMEs can help the latter to select appropriate software tools for optimization of their business processes. These programmes can also help the SME's workforce to receive required technical training for the use of the tools.

#### **Incentive for use of low emission vehicles / Assistance programme for SMEs to use modern, low-emission vehicles**

Example of measures:

- Creation of a premium as a financial support for retrofitting boats with low emissions motors or for purchase of lower-emission or electric vehicles can help SMEs to upgrade or replace their transport fleets. Use of electric vehicles requires availability of the necessary charging infrastructure, without which electric vehicles may not be embraced by the industry.

#### **Legislative changes and amendments to allow women to access the sector/Legislative changes for upping the quality of employment in the sector, or help micro, small and medium enterprises to transition from the informal to the formal economy, where needed**

Example of measures:

- Abolishment of laws, regulations, and cultural practices that (i) restrict the types of work in which women can engage, (ii) limit women's freedom of movement, and (iii) permit gender-based workplace discrimination, violence or harassment, is to result in creation of equal conditions for woman and man to access to occupation in the sector.
- Establishment and implementation of laws and policies to promote equal treatment, non-discrimination, maternity/paternity protection and parental leave, and generally opportunity for women to participate in the economic, social, and civil life of society should help attract women to sectors previously male-dominated, including freight transport and logistics sector.
- Facilitation in the transition of workers and economic units to the formal economy through policies and actions that protect informal workers and promote the formalization of workers and enterprises results in decent work conditions in the sector and make the sector more attractive to men and women workers.

#### **Research on best practices on training, skills development and life-long learning to professionalize the sector**

Example of measures:

- Creation of collaboration and research platforms for industry associations, unions and practitioners on training in the freight and logistics sector can help to better design training initiatives especially for the life-long learning needed to continuously improve skills level in the sector.

### **Optimization of shippers' operations**

Example of measures:

- Flexible cargo delivery and collection windows at terminals can help optimize transport operation and the use of infrastructure. This flexibility needs to be exercised in the context of existing restriction measures and provision of decent work environment for workers. Relevant simulations may be done before implementation of such measure.
- Creation of visa exception mechanisms which lift the requirement on shippers and forwarders for entry visas can help increase efficiencies in transport operations.

### **Optimization of transit traffic**

Example of measures:

- Longer trains or double-decker cargo trains or standardised high-profile routes (e.g. 4-metre corridor through the Alps<sup>1</sup>) on selected routes can lead to increasing traffic capacity. Also, multilayer container transport on selected inland waterways in accordance with applicable safety requirements can lead to increasing traffic capacity. Introduction of such measures may require pilot testing and funding support for the tests. In such case, transparent funding guidelines need to be provided.

### **Research and development on ITS for enhancement of transport operations**

Example of measures:

- Creation of collaboration platforms linking virtually government officials, academia and industry to discuss policy measures or mechanisms for application of ITS can help accelerate ITS uptake by the industry and can help increase efficiencies in transport operations.
- Development of systems to provide information on the loading condition and automatic identification systems for wagons and containers can facilitate carriage of goods by rail and increase the usage of rail for freight transport.

### **Research on policies and technologies to enhance capacity and minimize empty/low load runs**

Example of measures:

- Provision of funding for pilot projects involving innovative technologies for enhancing capacity can help drive forward innovation. Implementation of pilot projects should speed up the process of technology adaptation to market needs.

### **Internalization of external costs for supporting environmental and social optimization, including through intelligent tolling systems**

Example of measures:

- Internalization of external costs (air pollution, climate change, noise, accidents, congestion) can lead to improved competition between various modes of transport and redirect demand to transport service which is overall most economically optimal. This measure may require international approach so as to limit adverse impact on competitiveness of specific service vis-à-vis international competition.
- Implementation of a toll rate model that is based on weight and emissions but also on the selection of route and time of day (i.e. differential tolling) can help prevent congestion and contribute to a better segregation of traffic. Such a model needs to be legally and technically permissible. Technically it requires automatic toll systems. This measure, when well designed, can help make transport more environmentally friendly. When designing this measure, cost of the toll collection should be taken into account.

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<sup>1</sup>More-information on the 4-metre corridor can be found at: [www.bav.admin.ch/bav/en/home/modes-of-transport/railways/expansion-programmes-rail-infrastructure/4-metre-corridor%20.html](http://www.bav.admin.ch/bav/en/home/modes-of-transport/railways/expansion-programmes-rail-infrastructure/4-metre-corridor%20.html).

- Differentiation of track access charges for wagons depending on their noise emission level can incentivise wagon holders/railways to introduce low-noise freight wagons. This measure would allow to reduce transport noise and the impairment of health it causes, thereby making transport socially more friendly.

**Enhancement of environmental, social and safety standards, and where relevant, their introduction into the international conventions and agreements and/or national regulatory framework**

Example of measures:

- Review of national regulatory framework can help to understand if it creates fair conditions to operation of the various modes and can help the establishment of fair competition. The review, where relevant, is to be followed by legislative changes to ensure intermodal shift is not hampered by lack of regulatory level-playing field.
- Setting up of higher standards for emissions reduction and noise mitigation together with an enforceable implementation plan can help transition the transport and logistics sector to one that is more sustainable from the environmental point of view. Such measure needs typically to be bundled with assistance programmes for purchase of low emission vehicles or by supporting innovation that can help mainstream low emission vehicles or technologies. Such measure may also have a positive impact on safety, as fleet replacement to new low emissions vehicles may also mean to vehicles equipped with safety systems such as e.g. electronic stability control (ESP) or driver assistance systems. For that latter to happen, appropriate safety requirements for new vehicles have to be appropriately regulated.

**Quality improvements to jobs and diversity in the sector / Availability of diversity targets**

Example of measures:

- Transport and logistics workforces do not generally reflect the diversity of the populations, employers, and workers they serve. Therefore, campaigns, programmes or regulatory amendments, or other enhanced and sustained efforts to eliminate prejudice and discrimination in line with equality of employment, opportunity and treatment principles help to diversify employment in the sector.
- Setting up targets to greater gender, ethnic and other diversity helps to gradually increase diversity in the sector. Such targets can aim at employment of women, migrants and refugees (to the extent that they are lawfully entitled to work and while ensuring that they are trained and licensed as necessary under national laws), veterans, older and younger drivers (while avoiding child labour and the interruption of compulsory schooling and ensuring that all CMV drivers are trained and licensed as necessary under national laws) and persons with disabilities (whose capacity for execution of required task, e.g. driving, is not affected).

**Establishment of frameworks responsibilities, penalties and redress mechanisms available to transport and logistics chain parties and workers**

Example of measures:

- A chain of responsibility gap assessment tool can assist parties with responsibilities in the supply chain to identify, assess and manage risks and obligations they have in the chain. The tool consists of a series of practical questions that help a party to examine its business practices and system controls against known risks and recognized best practices. The application of the tool helps to avoid breaches of relevant legislation in force.

**Implementation of strategies and international good practices and establishment of relevant risk management approaches to reduce the introduction and spread of human, animal and plant health pests and diseases / Further improvement of the strategies and risk management approaches**

Example of measures – see measures listed in Section A, Stable conditions, under ‘Accession to and implementation of the sanitary and phytosanitary conventions, agreements, regulations

and standards / Sustained implementation of sanitary and phytosanitary conventions, agreements, regulations and standards?

**Innovative approaches for fair and human-centred procurement, outsourcing and governance frameworks to manage privatization, including social and environmental safeguards, and monitoring mechanisms**

Example of measures:

- The application of the ECE Guiding Principles on People-First Public-Private Partnerships (PPPs) in support of the United Nations Sustainable Development Goals can contribute to establishing more predictable enabling conditions and a legal and regulatory framework for PPPs that is desired to manage privatization of transport infrastructure through PPPs.

**D. Strategic geographical location**

**Work towards enhanced cooperation and collaboration for supporting effective connectivity along corridors and their increasing operationalization**

Example of measures:

- Harmonized interregional train control systems allow passage of trains without the need of changing locomotives across borders. Implementation of such systems across international corridors results in relieving congestion on the trunk railroads and helps to enhance the corridor capacity.
- Cooperation on transport security should result in making freight transport secure while ensuring that security measure do not create competitive disadvantages among transport and logistics entities from different countries.

**Sustained high-level cooperation and collaboration**

Example of measures:

- Creation of freight transport and logistics networks of fixed focal points can help increase the effectiveness of communication between partners across countries along international corridors. Such measure can result in a more efficient exchange of views and a faster adoption of joint positions. It can also help any stakeholder to have exert its influence over the common decision.

**Availability of freight transport and logistics vocabulary for transborder communication**

Example of measures:

- Availability of common vocabulary can help the stakeholders in the sector to communicate more effectively both nationally as well as across borders.

**IV. Remarks regarding the application of the guidelines**

12. The performance of the freight transport and logistics sector differs across countries. The sector has also reached a different level of development in different countries. There are countries that are leaders in freight transport and logistics. They shape, through their action, the development of the sector. There are other countries, which learning from the good practice available, work on developing their freight transport and logistics sector.

13. The position of a country in the freight transport and logistics sector determines the kind of action the country should take to develop the sector further. Countries, leaders in the sector, are usually interested in action aimed at optimization, including optimization between economic, environmental and social dimensions of freight transport and logistics. This optimization also concerns the delivery of optimal infrastructure for the industry. Countries building their position in the sector need to focus on action aimed at putting in place stable and good conditions for the industry to do business. They also need to make sure that the

necessary infrastructure providing international connectivity is available. While doing so, they also need to be integrating high-level objectives in those actions to ensure that economic development of the sector is balanced against environmental and social priorities of the country.

14. While the specific actions should vary depending on the level of the sector's development in the country, there are four focus areas for the governments to work in:

- Creation and maintenance of stable conditions for the industry in the sector to do business. This encompasses rules, regulations, standards and practices and their enforcement or implementation to make freight transport operations safe, secure, efficient and fair in terms of level-playing field and decent work.
- Delivery of adequate infrastructure and networks. This encompasses both delivery and further optimization of infrastructure, also including through privatization processes, which governments should carefully manage and make them human-centred.
- Achievement of high-level objectives. This concerns efficiencies increase through research and innovation in the sector that is human-centred. This also encompasses minimization of external costs to humans and the environment (social and environmental optimization) from freight transport and logistics.
- Attainment of strategic geographical location. This refers to international connectivity enhancement through increasing operationalization of international corridors.

15. Should a government be interested in developing the freight transport and logistics sector further, it should analyse and identify possible gaps in any of these four areas and prepare a master plan of action for gap elimination. In this process, experience from other peer countries, analysis of their actions taken, and results achieved, may be very helpful in elaboration of a master plan that is more fit-for-purpose.

16. At the same time, investments in the development of freight transport and logistics sector are advisable. The sector plays a key role in facilitating trade; thus, the sector indirectly supports economies to grow faster, be innovative, improve productivity and provide higher income and more opportunities for people.

17. The development of the sector on the basis of a master plan helps to design and manage the development process in a systematic way. Elaboration and implementation of a national master plan for freight transport and logistics is thus highly advisable. The present Guidelines should serve governments as a good basis for the elaboration or review and enhancement of their national master plans so that development of the sector follows a sustainable path and contributes to a sustainable development of a country and its economy.

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