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Measuring and monitoring transport-related aspects of the sustainable development goals

International transport links are a most important facilitator of global trade and a prerequisite for socio-economic development. Transport is, therefore, an essential component of sustainable development, a matter recognized *inter alia* by the General Assembly in its recent Resolution 69/213.

Its sustainability is controlled by socio-economic, demographic and environmental megatrends, i.e. major shifts in economic, social and environmental conditions that can impact people at all levels and transform societies. Economic growth, which has been associated with a 'reversed' geographical fragmentation of production, has created particular transport patterns such as increasing transport volumes mostly in the non-OECD regions. At the same time, significant changes in global population size, age structure, household size and urbanization expected for the 21st century may have substantial implications for transport, in terms of transport patterns, energy use and Greenhouse Gas (GHG) emissions. These will be further complicated by the mounting effects of climate change and variability on transport infrastructure and services with potentially significant broader repercussions of associated damage, disruption and delay.

Working towards sustainable transport systems requires all aspects of sustainable development to be considered. With policies targeting only one aspect, there is a risk that other dimensions may be neglected or even negatively affected. Environmental concerns, for example, are important and have to be addressed but by focusing only on those concerns certain policies may hinder social and economic sustainability. It is, therefore, imperative to consider challenges to sustainable transport under all its different dimensions.

Measuring and monitoring is going to play a key role in detailing the current situation (*the status quo*), and in establishing whether any progress has been or is being made towards the achievement of agreed sustainable development goals and targets.

In the very short time available for this presentation, I will provide some brief information on two particular ECE initiatives that are of relevance in this context. The first is an up-dated and up-scaled study on 'Transport for Sustainable

Development – the Case of Inland Transport’ to which I have had the privilege to contribute. The report, prepared by the ECE Transport Division, in cooperation with other regional Commissions and NGOs, is to be published in 2015.

The study identifies five key dimensions of sustainable transport. These are accessibility, affordability, safety, security and environmental considerations - both in terms of the effects of transport on the environment, and in terms of the exposure of transport to environmental factors, such as climate variability and change. Current trends and future developments and progress in relation to these key dimensions can be evaluated against measurable indicators, such as for instance: infrastructure density - and quality -, transport costs/price, public/private investment levels, levels of transport accidents and fatalities, as well as transport energy consumption and GHG emissions.

Let me also add a comment here on a matter which I have been closely involved with over the past few years including in the context of the UNECE Expert Group on Climate Change Impacts and Adaptation for International Transport Networks and the preparation of its final report. As already noted by our Chair earlier, in his questions, relatively little attention has been paid until now to the assessment of climate change impacts on transport infrastructure and operations as well as on potential adaptation measures. At the same time, recent studies - including the final report of the ECE Expert Group on Climate Change Impacts and have shown that climate change-induced weather conditions may have very significant implications for transport, and, thus, for the sustainability of economies and livelihoods at the global, regional and national level. In this context, too, monitoring of impacts and related costs, evaluating resilience and preparedness levels and identifying adaptation needs will be of paramount importance as will be the development of tools to assist decision-makers and planners to identify the most appropriate solutions.

Effective measurement/monitoring of suitable indicators will be crucial for the assessment of the short- and long-term progress in respect of the SDGs. High-quality data are needed to assess progress, and formulate/tune effective policies. In this regard, recent developments in e.g. the geo-spatial information generation, analysis, storage and dissemination as well as the development of specialised tools to simulate the future effects of particular policies under different assumptions/scenarios can greatly assist in the identification of the present status and the tracking of progress in respect of the selected indicators.

The second issue, which I would like to highlight is an ECE developed modelling tool which the Secretariat has asked me to briefly present. UNECE has developed and made publically available a specialized software tool, ForFITS (For Future Inland Transport Systems) that can assess the evolution of future transport-related CO2 emissions under different assumptions and policy scenarios.

Assumptions and policy scenarios considered in the ForFITS model include:

- Socio-economic growth scenarios;
- Fuel cost scenarios;
- Fuel taxation policy, including carbon taxes;
- Road pricing policies;
- Assumptions/scenarios on the evolution of the cost and performance of vehicle technologies;
- Differentiated vehicle taxation;
- Assumptions/scenarios related to structural changes in transport systems (such as modal shift policies for passenger and freight transport), the economy and logistics

The tool has been presented at different awareness raising events and capacity-building workshops in different pilot studies and regions and has been used for the assessment, monitoring and planning of sustainable transport policies in, for instance, Lithuania and Georgia. There are still challenges to be addressed, including those related to the availability of appropriate data, - which again illustrates the importance of measuring and monitoring.