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Strategic questions of a horizontal policy nature:

UNECE analytical work on Transport: A review for the year 2013

**Towards sustainable Urban Transport and Mobility
in ECE region****Note by the secretariat***Summary*

The note reproduces the draft Executive Summary of the publication “Transport review for the year 2012: Urban transport and mobility” with its recommendations for the ECE region. Since urban transport systems are integral parts of national and, therefore, of international transport systems, it also underlines the importance of further strengthening and studying urban transport and mobility. Finally, the note highlights the structure and the main objectives of the publication.

The Committee is invited to encourage governments and municipalities of their capitals to support further research on urban transport and mobility provided by UNECE, and to consider how this topic should be addressed regularly in future.

I. Mandate

1. At its seventy-fourth session in February 2012, the Inland Transport Committee of the United Nations Economic Commission for Europe (UNECE) endorsed the decision by the Working Party on Transport Trends and Economics (WP.5) to transform the review of the transport situation and emerging trends into an annual publication on transport trends and economics in the ECE region (ECE/TRANS/224, paras. 20–21). At its twenty-fifth session, WP.5 adopted theme on urban transport and mobility (ECE/TRANS/WP.5/52, paras. 31–34).

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II. Executive Summary

2. The quality of urban life is closely linked to sustainable urban transport and mobility. Urban populations should have the opportunity to use any transport mode such as private vehicles, public and non-motorized (cycling and walking) transport in safe, environmentally friendly, efficient and affordable way. The objective of sustainable urban transport policy is to allow urban populations to reach their destinations in safe, affordable and environmentally sound ways, by transport means that contribute to their health and well-being, and minimize travelling times.

3. The latest statistics show that 80 per cent of European Union (EU) citizens live in urban areas, and 40 per cent live in large urban areas of over 200,000 inhabitants. Similar trends can be observed in other UNECE countries. In their daily lives, citizens share the same infrastructure and urban space, and their mobility relies on public transport, vehicles, bicycles and plain walking. On average, a European citizen makes 1,000 trips per year, of which half are less than 5 km long. For many of the shorter trips, walking and cycling could be a viable alternative. Urban mobility accounts for 40 per cent of all CO₂ emissions from road transport and up to 70 per cent of other pollutants from transport. One in three road fatalities occurs in cities. Congestion problems, too, are mostly concentrated in and around cities.

4. The car is by far the dominating form of urban mobility, counting for about 75 per cent of kilometres travelled in EU conurbations. Vehicles cause so much congestion that, in some European cities, average traffic speeds at peak times are lower than in the days of the horse-drawn carriage. Increased car use has been accompanied by safety and environmental problems, as well as by a downward spiral of under-investment in public transport levels. Relevant national initiatives, case studies and research projects were reviewed, and experiences with mode-specific policy measures are presented together with existing best practices in the annual publication.

5. A common challenge for all capitals and other major cities in the ECE region is how to enhance mobility, while at the same time reduce congestion, accidents and pollution.

6. The overarching goals of the publication “Urban transport and mobility” are:

- (a) Review public transport policies in the ECE region;
- (b) Illustrate practical solutions for public transport which have been implemented by authorities in ECE capitals, and analyse their results;
- (c) Produce a public transport data base for ECE capitals and other major cities which could be used as a tool for sharing knowledge and best practices;
- (d) Highlight challenges specific to the capital cities in the ECE region for development of sustainable public transport and mobility;
- (e) Contribute to policy debates on effective solutions and measures for development of sustainable urban transport and mobility, as well as to facilitate their faster dissemination and implementation.

7. The publication summarizes the public transport policies in the ECE region and illustrates practical solutions and results of their implementation in various capitals. Solutions include — among others — intelligent transport systems, efficient planning, management and use of public transport and its means, etc. The publication could be used as a tool for Governments and municipalities to disseminate best practices and policies, to outline main urban transport and mobility indicators and illustrates the public transport and mobility profiles of ECE capitals. The publication presents information for 36 of the 56 ECE capitals.

III. Sustainable urban transport and mobility

8. The United Nations Secretary-General, Mr Ban Ki Moon, emphasized transport as one of the six building blocks for sustainable development in the Five Year Action Agenda for his second term in office, and announced his intention to convene aviation, marine, ferry, rail, road and urban public transport providers, along with Governments and investors, to develop and take action on recommendations for more sustainable transport systems that can address rising congestion and pollution worldwide, and particularly in urban areas.

9. “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987). The European Commission view of sustainable transport focuses on efforts to disconnect mobility from its adverse effects, by promoting co-modality, i.e. optimally combining various modes of transport within the same transport chain; promoting technical innovation and a shift towards the least polluting and most energy efficient modes of transport — especially in the case of long distance and urban travel.

10. Transport plays a crucial role in urban development by providing access for people to education, markets, employment, recreation, health care and other key services. Especially in cities of the developing world, enhanced mobility for the poor and vulnerable groups is one of the most important preconditions for achieving Millennium Development Goals. Cities with transport modes in an integrated system are more likely to evolve and prosper as centres for trade, commerce, industry, education, tourism and services. Cities which commonly rank at the top of surveys that measure urban quality of life have high quality urban transport systems that prioritize public transport and non-motorized modes.

11. The existing reality, however, is that urban transportation systems in most ECE cities are far from ideal. The most visible and frequently mentioned transport problem of any city is its traffic congestion, and it is well known that high levels of congestion have a significant impact on local and national GDP. Accessible and affordable public transport services and safe infrastructure for non-motorized transport such as cycling and walking are lacking in many ECE cities. Private vehicles have increased continuously in number and dominate the roads. As a result, the transportation sector is heavily responsible for public health issues in cities such as air pollution (acidification, smog), noise, greenhouse gas emissions, and road accidents. While transport enables the economy to grow, its mismanagement can also retard growth and the efficient delivery of essential social services. The lack of comprehensive planning of transport systems, without due consideration to social, economic, environmental and cultural elements of the city, can result in physical breaks in the fabric of communities and reinforce social exclusion. The impact on quality of life and the environment cannot be underestimated.

12. The United Nations Sustainable Development Knowledge Platform cites cities as hubs for ideas, commerce, culture, science, productivity, social development and much more. Cities can promote economically, socially and environmentally sustainable societies if a holistic approach to urban development is adopted which ensures universal access to basic services, housing and mobility. Urban planning, transport systems, water, sanitation, waste management, disaster risk reduction, access to information, education and capacity-building are all issues that need to be addressed.

IV. Urban transport and mobility challenges for the ECE region

13. The larger the city, the greater is its complexity and the potential for transport disruptions. The most important transport problems often concern urban areas and occur when transport systems, for a variety of reasons, cannot satisfy the numerous and diverse requirements of urban mobility. Urban productivity is highly dependent on the efficiency of its transport system to transfer labour, consumers and freight between multiple origins and destinations. The most notable urban transport challenges listed in order of priority are:

(a) Connectivity: connectivity should be ensured among different public transport modes with the national transport network; it is a prerequisite for the efficient functioning of an urban and national transport system;

(b) Reliability: urban dwellers use public transport if it is reliable. Confidence in reliability of services provided, time schedules and connectivity are the most important factors for a user;

(c) Public transport inadequacy: Many urban public transport systems, or parts of them, are either over or underutilized. During peak hours, when the system is in temporary surges in demand, crowded public transport discomforts the users, and usually and significantly drops in off-peak hours;

(d) Use of Intelligent Transport Systems: effective use of ITS applications in urban transport can foster sustainable urban transport solutions;

(e) Comfort, services and aesthetics: public transport users seek comfort and services. Air conditioning, cleanliness, ticket machines and alternatives, stations that protect and provide travelling info by electronic means are some of the services that passengers appreciate when using public transport.

(f) Affordability and incentives to use public transport (lower fares, commuter financial incentives, marketing, etc.): using public transport is an economic, as well as cultural and traditional issue and incentives are needed to enhance them in favour of public transport;

(g) Accessibility and parking difficulties: since vehicles are frequently parked, increased motorization has expanded the demand for parking spaces, and created land management problems, particularly in central urban areas; the spatial imprint of parked vehicles is significant and effective land planning can provide some viable solutions;

(h) Longer commuting: citizens of big cities, when looking for a better quality of life, may decide to move outside the metropolitan areas of their cities. As a result, they spend an increasing amount of time commuting between their residence and workplace; the urban sprawl creates additional demands on transport and land use planners;

(i) Traffic congestion: congestion is one of the most prevalent transport problems in large urban agglomerations with threshold above 1 million inhabitants. It is particularly linked with motorization and the diffusion of the automobile, which has increased the demand for transport infrastructures. Well-functioning, efficient and reliable public transport is one solution to reducing traffic congestion;

(j) Land use: the territorial imprint of transport is significant, particularly for the automobile. Between 30 and 60 per cent of UNECE metropolitan areas may be devoted to transportation, an outcome of the over-reliance on this mode of urban transport;

(k) Freight distribution and city logistics: globalization and the materialization of the economy, as well as a growing urban population throughout the ECE region have resulted

in growing quantities of freight moving within cities, which in turn, creates additional pressure on infrastructure and traffic management.

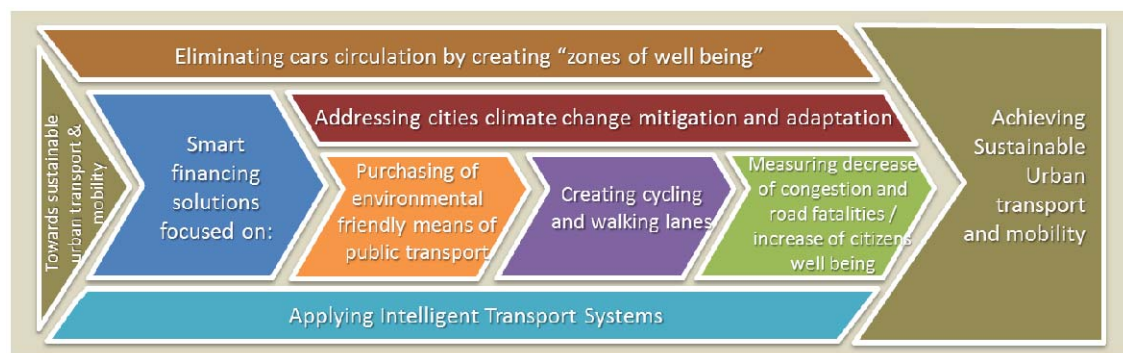
V. Conclusions and Recommendations

14. By setting medium and long term objectives, national Governments and municipal authorities should work together to achieve sustainable urban transport and mobility objectives for their citizens. The way forward is summarized in the figure below.

15. Smart financing solutions will create “zones of well-being”. In addition, investments in ITS applications or environmental friendly means of public transport are revenue generators that will further enhance the smart financing solutions. For instance, citizens would pay for using more advanced ITS solutions with their smart phones, or vehicles should pay extra tolls while entering the “zones of well-being”.

16. Investments in public transport are insufficient and should be promoted for their fast and secured returns in comparison with other transport infrastructure projects. Millions of public transport users who seek a better quality of life might willingly pay for better services and infrastructures that provide it.

Towards sustainable urban transport and mobility



Source: UNECE

17. Cities should integrate strategies on urban transport and mobility with clear long term objectives. These strategies should include detailed development plans at the neighbourhood level. All the factors in the above figure should be taken into consideration in fully interrelated and connected plans. The purchase of environmental friendly means of public transport should be part of climate change actions and mitigation: likewise with the zones of well-being, the elimination of vehicle circulation, and the development of dedicated cycling or walking lanes. City microclimates should be taken into consideration before designing such dedicated lanes.

18. The application of Intelligent Transport Systems (ITS) is an important prerequisite for the sustainability of urban transport systems. However, ITS have a broader application and should not be limited only to user applications like telematics, online information, etc.; but should include intelligent traffic managements systems with traffic lights that operate depending on the congestion, infrastructure that provides information to users and also to operators so that they can continuously, efficiently and in real time adapt traffic according to citizens' needs.

19. Delivery of cargo to cities and especially city centres is a serious obstacle against sustainability and the concept of “zones of well-being”. The solution could be the creation of logistics centres/cross docking areas at the limits of these zones where cargo would be

transferred from the light trucks to environmentally friendly means of transport such as cargo trams, electric minivans, etc. By continuing the efficient delivery of cargo to the market, such solutions would optimise the results by adopting sustainable urban transport solutions.

20. Furthermore, mobility will be enhanced with the construction of dedicated cycling and walking lanes, which are safe, pleasant, and equipped with ITS solutions. These lanes will not only be pleasant for citizens to walk or bike and thus contribute directly to their health and well-being, but will also act as connectors between different public transport modes. In this way, sustainable mobility could contribute to sustainable intermodal public transport.

21. During holidays and vacations, city populations may considerably grow from tourism, and the need for public transport could increase exponentially. If so, the authorities should evaluate the efficiency of their public transportation systems to adapt to and cope with increasing needs by keeping the same or even better quality of service. This is and should be a continuous objective for city authorities.

22. Urban transport and mobility are also a question of culture and the heritage. By making these integrated investments towards sustainable urban transport and mobility, local authorities develop and create in parallel a new culture. The duration and the impact of this new culture on changing habits vis-à-vis public transport will depend on the efficiency of urban transport networks and their capability to efficiently deliver from origin to destination.

23. Trends in individual vehicle traffic and particularly vehicle ownership are determined by macroeconomic conditions; and directly related to changes in per capita incomes. According to Chamon, Mauro and Okawa, vehicle ownership rates are lowest in the lowest income countries, but rapidly increase as per capita incomes grow above an initial threshold that they estimate at about 5,000 United States dollars per capita; then ownership falls slightly above a per capita income of USD 10,000. Following this trend, vehicle ownership is estimated to more than triple by 2050 from today's 1 billion vehicles. Many of the UNECE transition economies will reach or pass the rate of 600 vehicles per 1,000 people. We ask if it is realistic to expect that the rising per capita incomes and the average vehicle ownership rate can be de-coupled and if so, how? Would restrictive measures be politically acceptable to the broad public; can urban public transport improve at such a speed and to the extent that at least in big cities will reduce vehicle use? While one can remain sceptical, new developments or choices for mobility can have an impact when national and local transport policies have the same goals. In recent years we have witnessed behavioural changes as the number of mobility choice increased significantly in many UNECE cities with more possibilities for safe walking and biking, car-sharing, and particularly through better public transport.

24. Urban public transport has a long tradition in the UNECE countries, particularly in Europe. Most cities have rather extended systems. In the past 20 years, many cities have modernized their systems, some have introduced competitive conditions for service provisions, several Eastern European and Central Asian cities survived the 1990s crisis and have embarked on efficient urban mobility management.

VI. For consideration by the Inland Transport Committee

25. The Committee at its seventy-fifth session reiterated its interest in sustainable urban transport. The secretariat was requested to prepare a comprehensive and analytical report/publication and WP.5 was invited to regularly follow-up developments in this area.

26. Based on the results of the workshop on Urban Transport and Mobility that took place back to back with the twenty-fifth session of the WP.5 (September 2012), the conclusions and recommendations of the ECE publication Sustainable Urban Transport and Mobility (2013–2014), as well as on the Committee's decision of last year, the Committee may wish to consider and provide guidance on the following:

(a) Further research: should be encouraged and pursued based on Governments' requests and needs and under the auspices of WP.5 as the analytical body of the UNECE Transport Division.

(b) Exchange of good practices and knowledge sharing: a number of good practices are implemented in UNECE capitals on urban transport and mobility and lessons have been learned by implementing such policies and measures. WP.5 should act as the intergovernmental platform for communication, exchanges of information and lessons learned and good practices implemented in UNECE members States. Such exchanges should be fostered not only by presentation of case studies during WP.5 sessions or organization of workshops, but also by an online WP.5 website for the exchange of information and knowledge sharing among experts.

(c) In a due time, an international conference on urban transport and mobility, with the cooperation of international organizations, such as UITP, should be organized to share the collected information and consider the progress made in implementing sustainable urban transport and mobility objectives.
