

**CONCEPT PAPER FOR
THE WORLD HARMONIZATION FORUM (WP.29)
ROUND TABLE ON GLOBAL WARMING AND TRANSPORT**

A. INTRODUCTION

1. The climate is changing and political attention to its impact, as well as to mitigation measures and particularly to interventions to reduce the effects of global warming and especially to abate CO₂ emissions has been growing.
2. Transport is one of the sectors targeted where effective public interventions are being called for to reduce CO₂ emissions by the sector and where adaptation measures are needed to reduce the vulnerability to climatic changes of transport infrastructure.
3. The World Forum for Harmonization of Vehicle Regulations (WP.29) has been promoting measures for sustainable development, including global warming mitigation such as environmentally friendly vehicles, worldwide harmonized light vehicle test procedures including CO₂ measurement, hybrid and electric vehicles, hydrogen and fuel cell vehicles, and numerous other measures on fuel efficiency.
4. Several conferences have been organized to discuss the global warming and transport nexus. Among them, an International Symposium on a global approach to automotive fuel economy was held in Paris on 15-16 May 2008, which had been organized by the International Energy Agency (IEA) in cooperation with the International Transport Forum (ITF), the FIA Foundation for the Automobile and Society and United Nations Environment Programme (UNEP). The first global transport ministerial conference, the International Transport Forum held in Leipzig (Germany) 28-30 May 2008 addressed the energy and climate change challenges for the transport sector, with specific attention to global warming and the emissions of Greenhouse gases (GHG). In their key messages, they urged the World Forum (WP.29) to accelerate the work to develop common methodologies, test cycles and measurement methods for light vehicles, including CO₂ emissions. The Ministerial Conference on Global Environment and Energy in Transport (MEET) in Tokyo in January 2009 continued the debate at political level and adopted a declaration that, for the purpose of reducing greenhouse gas emissions, calls for countries to improve fuel/energy efficiency in the transport sector by the introduction of fuel efficiency or GHG emission standards and by improving motor vehicle components and fuel quality through UNECE/WP.29.
5. Following a presentation by Prof. Rothengatter on the academic framework of global warming and transport, the World Forum (WP.29) had, during its November 2008 session, a brief policy segment on the key issues and outlined that a possible strategy for the automotive sector with regard to the abatement of global warming and the reduction of CO₂ emissions could be:
 - (a) A short term objective through an improved energy efficiency and the use of sustainable biofuels (2015);
 - (b) A mid term objective with the development and introduction into the market of plug-in hybrid vehicles (2020-2025), and;
 - (c) A long term objective with development and introduction into the market of electric, hydrogen and fuel cell vehicles (2030-2040).
6. This strategy would shift the automotive sector from the use of fossil energy to the use of hydrogen and electric energy. Furthermore, an integrated approach could be very cost-effective in obtaining a short-term substantial CO₂ reduction in the existing vehicle fleet, taking into account

measures such as eco-driving and better traffic management. For the effectiveness of this integrated strategy, the energy sector has to ensure the sustainable and cost-effective generation of electricity and production of hydrogen.

7. In this respect, the World Forum WP.29 decided to organise a substantive round table on this subject, back-to-back with one of the forthcoming sessions of the World Forum. In February 2009, the Inland Transport Committee (ITC) endorsed the activities of WP.29 on market fuel quality standards and the organization of such a Round Table. At its March 2009 session, the World Forum WP.29 agreed to hold the "Round Table on Global Warming and Transport" in Geneva, in conjunction with its June 2010 session (see ECE/TRANS/WP.29/1068, para. 2; ECE/TRANS/WP.29/1070, para. 77; ECE/TRANS/WP.29/1072, paras. 3 and 20). To ensure a thorough preparation of that Round Table, WP.29 also decided to hold a brainstorming session on 12 November 2009 to consider possible topics, speakers, goals and follow-up actions to the Round Table. This document aims at facilitating that brainstorming session, as well as the preparation of the Round Table.

B. GOALS OF THE ROUND TABLE

8. As a first goal, the image of the World Forum WP.29 should be re-branded to get recognition as a forum in support of sustainable development. This is justified first of all as the reputation of the World Forum WP.29 does not always match with its history and its success that has been focusing on vehicle safety and environmental related issues of vehicle construction, and that has addressed the nexus of global warming and motor vehicles already for a long time and in a powerful way. A number of measures to mitigate global warming have been considered by WP.29 and its subsidiary Working Parties and the results have been already included in existing or new regulations annexed to the 1958 Agreement or under the 1998 Agreement. Contracting Parties to these Agreements are applying these regulations on a daily basis. However, these achievements are little known to transport policy makers, and even less to the general public.

9. As a more ambitious goal, the Round Table should become a catalyst in UNECE activities concerning climate change and transport in terms of both intra-sectoral synergies, like mainstreaming the work on climate change and transport in all the relevant working parties on inland transport issues, especially the Working Party on Transport Trends and Economies (WP.5), the Working Party on Transport Statistics (WP.6) and the Working Party on Intermodal Transport and Logistics (WP.24), and of inter-sectoral activities, particularly with regard to cooperation between transport, energy, environment and timber.

10. Finally, the Round Table is expected to discuss concrete policy issues of technical nature, i.e. to offer a professional debate beyond the general level. This way it is expected to lead to the following potential results:

- (a) Promoting the World Forum's work on:
 - (i) innovative engine technologies, advanced engine management systems and efficient vehicle powertrains,
 - (ii) the development of the new emission test cycle including the measurement procedure for CO₂ emissions,
 - (iii) the use of alternative fuels and sustainable biofuels,
 - (iv) the development of recommendations for market fuel quality,
 - (v) Intelligent Transport Systems (ITS) intended to be fitted in vehicles,
 - (vi) the development of further rules for periodical technical inspection of vehicles in use in order to ensure that vehicles fulfill the emissions requirements during their whole lifetime.
- (b) Securing the implementation of the World Forum's work programme, its activities and the proposed strategy on global warming and transport,

- (c) In order to complement WP.29's activities on global warming and transport, it would be a great step forward, if other UNECE Working Parties (e.g. WP.5, WP.6, WP.24) would get a mandate to consider the subject in depth:
 - (i) Intelligent Transport Systems (ITS), especially with regard to the transport infrastructure and the communication between vehicle, driver and infrastructure.
 - (ii) Contributions to other measures not directly linked to vehicles technologies and fuel quality such as:
 - a. driver behavior and education campaigns (promoting public transport, golden rules for eco-driving, fostering intermodal transport etc.),
 - b. improved infrastructure (avoiding congestion by a better traffic fluidity, abandon speed bumps etc.), and
 - c. legal instruments and policy models for CO₂ taxation and tax incentives for low carbon products and their implementation results.

C. TITLE AND SCOPE OF THE ROUND TABLE

11. The proposed modified title of the Round Table is: *Climate Change and Transport*.
12. The scope of the Round Table will not be restricted to the construction of vehicles. On the contrary, the World Forum WP.29 hosts the Round Table and facilitates a broader transport policy debate, addressing climate change and the implications of greening transport on the macro economic environment and other sectors, especially on the energy sector. Thus, the Round Table will address a number of potential and effective measures for governments on how to reduce GHG emissions, mainly through:
 - (a) Integrated transport policy interventions;
 - (b) An improved transport infrastructure and traffic management, including the potentials offered by ITS applications to reduce traffic congestion;
 - (c) A better use of intermodal transport (road, rail and waterways);
 - (d) User and consumer information and education (improved technology awareness, campaigns for eco-driving, use of public transport and modal transport etc.);
 - (e) Examples of legal instruments to foster the introduction of new low carbon technologies (such as tax incentives for energy efficient products and processes versus taxation of CO₂ intensive products and processes, national or regional legislation regarding CO₂ emissions of vehicles, emission trading schemes etc.).

D. EXPECTATIONS

13. The expectations of the Round Table should be aimed at:
 - (a) moving forward the UNECE agenda on climate change and transport,
 - (b) bridging the policy dialogue and technological innovations,
 - (c) building trust between the UNECE and other UN organizations, the automotive industry, the oil industry and other Non-Governmental Organizations (NGOs).
14. Two background papers are planned in support of the preparation of the Round Table: a first one would offer a literature review and a second one would take stock of on-going projects and initiatives in the world. The expected outcome of the Round Table should be summarized in a conclusion paper. A draft conclusion paper should be circulated prior to the Round Table and supplemented with further elements during the session. The conclusion paper should be published as an annex to the WP.29 report or an official WP.29 document. In addition to the existing website on global warming and transport <http://www.unece.org/trans/theme_global_warm.html>, UNECE will create a new website for the Round Table on which all related documents (programme, venue, presentations, background and conclusion papers) will be made available.

15. The results of the Round Table will be taken into account in the relevant analytical work to be carried out by UNECE. It is assumed that the global project initiative on facilitating climate change adaptation in transport through addressing the energy-environment linkage will get the support of the UN Development Account (UNDA) and will hopefully start in 2010. The expected accomplishments of this project:

- (a) Increased awareness of the causality and interrelationship between transport, energy and CO₂ emissions leading to enhanced inter-sectoral and international cooperation and planning towards sustainable transport policies;
- (b) Enhancement of the ability of the countries to monitor and assess current and future energy consumption patterns of the land transport modes and their respective CO₂ emissions through the establishment and use of a standard CO₂ toolkit that would be made available free of charge to governments.

E. THE ROLE OF THE BRAINSTORMING SESSION

16. The brainstorming session is expected to help finalize the draft programme of the Round Table and to feed into the planned background papers that will (i) offer a stock taking of "who does what" in the field of global warming and transport and (ii) give a literature review of the main relevant scientific publications in this field.

F. PROPOSAL FOR A PROGRAMME

17. The following challenges and questions need to be considered with regard to the concrete programme outline:

- (a) Defining the right level between the broad and general policy discussion on one hand and the detailed and technical discussion on the other hand;
- (b) Finding the right balance between the integrated approach and the World Forum's focus on the automotive sector;
- (c) Addressing a range of technical issues to create a platform of "concerns" versus being selective and focusing on three or four key issues aimed at promoting solution;
- (d) Finding the balance of time to facilitate the development of a roadmap for a series of constructive actions and to facilitate better understanding of controversial issues and of the limitations of policy interventions in the case of lack in substantive roots;
- (e) Defining the follow-up of the Round Table: Will it be a standalone event or will it be
 - (i) followed up by similar policy debates in the framework of the World Forum WP.29 or the Inland Transport Committee, and/or
 - (ii) plugged into future policy debates organized by other institutions.

18. The Round Table is recommended to consist of three sessions, the final content of which are subject to the brainstorming session:

- (a) Introductory session (short): opening the Round Table, underlining link between economical growth and transport, and the need for an integrated approach and giving an overview of the relevant work of the Inland Transport Committee and its subsidiary bodies, particularly of the World Forum WP.29;
- (b) Main session (long): considering the potential of measures for climate change mitigation and adaptation in transport in liaison with requirements towards the energy sector, as well as the implications on paradigm changes in environment, land-use and housing policies;
- (c) Conclusion session (short): summary of the debate identifying recommendations for effective measures, not only linked to vehicle technologies, but to broader transport policy considerations as well as recommendations for the follow-up of the Round Table.

19. A potential menu for presentations and Round Table program is offered in the below table with the understanding that brainstorming session – and particularly its outcome on challenges – will further influence the final programme:

WP.29 Round Table on "Climate change and Transport" (Palais des Nations in Geneva, 24 June 2010)		
		Speakers:
INTRODUCTION	Two Keynote speakers a/ underlining the need for an integrated approach for a global transport policy b/ giving an overview of the work of ITC and WP.29	
MAIN SESSION		
Part I:	Global warming and the environmental impact	
	Addressing: - global warming effects, - greenhouse gas and CO ₂ emissions by sectors, - climate change mitigation and adaptation, - possible actions and potentials, - needs and pillars for sustainable development (economic, social and environmental), - environmental protection, land-use and housing	
Part II:	Implications for Transport and Energy	
	Addressing: - economic growth, mobility and transport, - intermodal transport (road, railway, waterway), - measures to reduce CO ₂ emissions (new technologies, cleaner fuels, modal and public transport, legal instruments (e.g. tax incentives), consumer information, eco-driving campaigns), - WP.29 activities on energy efficiency (innovative vehicles technologies, engine management systems, energy efficient powertrains, Environmentally Friendly Vehicles (e.g. HEV, EV, HFCV) alternative fuels including biofuels, market fuel quality, etc.), - WP.29 strategy for global warming mitigation (from use of fossil fuels to electricity/hydrogen), - possible strategies (short/long term) for sustainable generation of electricity (fossil fuels combustion and carbon capture & storage, renewable energies (hydraulic, solar, biofuels, geothermal, nuclear power, ...), - CO ₂ reduction targets and monitoring methodologies.	
CONCLUSION	Presentation of the conclusions identifying recommendations for - effective measures for climate change mitigation and adaptation, - follow-up activities of the Round Table.	
