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## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### One-hundred-and-fifty-first session

Geneva, 22–25 June 2010

Item 8.5 of the provisional agenda

#### Other Business – Round table on climate change and transport

## Organization of a Round Table on Climate Change and Transport in June 2010 – Who does what in the field of transport and climate change

### Note by the Secretariat\*

The text reproduced below was prepared by the secretariat as a background paper to the brainstorming session which took place during the November 2009 session of the World Forum for Harmonization of Vehicle Regulations (WP.29) with the aim of organizing its forthcoming Round Table on Climate Change and Transport. After its review by the World Forum at its March 2010 session and and , it was agreed to submit it as a background document for the Round Table on Climate Change and Transport (ECE/TRANS/WP.29/1083, para. 74). The Secretariat has incorporated the comments received by the Environment Protection Agency (EPA).

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\* In accordance with the programme of work of the Inland Transport Committee for 2006–2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

## **I. Introduction**

1. Climate change is internationally recognized by both the scientific and political communities as an alarming issue. The Secretary-General of the United Nations, Mr. Ban Ki-moon, referred to it as “the greatest collective challenge we face as a human family”. Indeed, it will be a challenge to combat the global financial crises and accomplish the Millennium Development Goals (MDG) while preserving the earth's climate, knowing that, to date, our main sources of energy are the fossil fuels responsible for the major share of the anthropogenic greenhouse gas (GHG) emissions. The challenge referred to by the Secretary-General is actually twofold. On one hand, actions need to be taken in order to mitigate the GHG emissions and on the other hand, it is essential to adapt to the changes we have started to witness and to those that are unavoidable.

2. Transport is and will remain at the heart of the climate change debate for various reasons. Today, it contributes not only to a large share of GHG emission but transport emissions are expected to further increase in the future. The collective awareness of this fact gave rise to a great number of initiatives by various organizations, governments, companies and individuals.

3. This paper does not aim at listing and analysing all initiatives dealing with climate change and transport but rather providing general information about some key organizations dealing with climate change issues and their specific activities in the field of transport and climate change.<sup>1</sup> It also aims at providing non-exhaustive information on national initiatives on the subject. The information presented in this paper is mainly a compilation of extracts from the websites of some national and international agencies.

## **II. International Organizations**

### **A. United Nations Framework Convention on Climate Change**

4. The United Nations Framework Convention on Climate Change (UNFCCC) sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and greenhouse gases. The Convention enjoys near universal membership, with 192 countries having ratified.

5. Under the Convention, governments:

- (a) gather and share information on greenhouse gas emissions, national policies and best practices,
- (b) launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries, and
- (c) cooperate in preparing for adaptation to the impacts of climate change.

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<sup>1</sup> The UNECE work in the field of climate change and transport is reflected in ECE/TRANS/WP.29/2010/45 and, therefore, not included in this document. In this respect, interested readers can find more information on this subject at the following UNECE website: [http://www.unece.org/trans/theme\\_global\\_warm.html](http://www.unece.org/trans/theme_global_warm.html).

6. The Convention entered into force on 21 March 1994 and was complemented by the 1997 Kyoto Protocol, which has 184 Parties. Under this treaty, 37 industrialized countries and the European Community have committed to reduce their emissions by an average of 5 per cent by 2012 against 1990 levels. Industrialized countries shall first and foremost take domestic action against climate change. But the Protocol also allows them to meet their emission reduction commitments abroad through so-called “market-based mechanisms”.

7. Both the UNFCCC and the Kyoto Protocol are serviced by a secretariat which main functions are to:

- (a) make practical arrangements for sessions of the Convention and Protocol bodies,
- (b) monitor implementation of the commitments under the Convention and the Protocol through collection, analysis and review of information and data provided by Parties,
- (c) assist Parties in implementing their commitments,
- (d) support negotiations, including through the provision of substantive analysis,
- (e) maintain registries for the issuance of emission credits and for the assigned amounts of emissions of Parties that are traded under emission trading schemes,
- (f) provide support to the compliance regime of the Kyoto Protocol, and
- (g) coordinate with the secretariats of other relevant international bodies, notably the Global Environment Facility (GEF) and its implementing agencies (UNDP, UNEP and the World Bank), the Intergovernmental Panel on Climate Change (IPCC), and other relevant conventions.

8. In the framework of the UNFCCC, Contracting Parties periodically report their national GHG inventories following detailed guidelines.<sup>2</sup> In the reports, transport emissions (international transport excluded) should be broken down into civil aviation, road transportation, railways, navigation and other. The UNFCCC also provides specific guidelines regarding the separate reporting of emissions from international aviation and maritime transport.<sup>3</sup>

## **B. Intergovernmental Panel on Climate Change**

9. The Intergovernmental Panel of Climate Change (IPCC) is the leading body for the assessment of climate change, established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to provide the world with a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences.

10. The IPCC is a scientific body. It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. It does not conduct any research nor does it monitor climate related data or parameters. Thousands of scientists from all over the world contribute to the work of the IPCC on a voluntary basis. Review is an essential part of the IPCC process, to ensure an objective and complete assessment of current information.

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<sup>2</sup> See website: <http://unfccc.int/resource/docs/cop5/07.pdf>.

<sup>3</sup> See website: [http://unfccc.int/methods\\_and\\_science/emissions\\_from\\_intl\\_transport/items/1057.php](http://unfccc.int/methods_and_science/emissions_from_intl_transport/items/1057.php).

Differing viewpoints existing within the scientific community are reflected in the IPCC reports.

11. The IPCC is currently organized in three Working Groups. Working Group 1 deals with “The Physical Science Basis of Climate Change”, Working Group 2 with “Climate Change Impacts, Adaptation and Vulnerability” and Working Group 3 with “Mitigation of Climate Change”. They are assisted by a Technical Support Unit, which is hosted and financially supported by the government of the country who offered to do so.

12. The IPCC has also a Task Force on National Greenhouse Gas Inventories. The main objective of the Task Force is to develop and refine a methodology for the calculation and reporting of national GHG emissions and removals. In addition to the Working Groups and Task Force, further Task Groups and Steering Groups may be established for a limited or longer duration to consider a specific topic or question.

13. The IPCC Working Group 3 dedicated a full chapter of its contribution to the 4th assessment report to the aspects of climate change related to transport.<sup>4</sup>

### **C. United Nations Environmental Program**

14. United Nations Environmental Program (UNEP) mission statement is “to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.”

15. Not surprisingly, UNEP is involved in the climate change debate in both adaptation and mitigation aspects. Examples of UNEP work in mitigation are:

- (a) UNEP is building capacity in 25 developing countries which will allow them to participate in the Clean Development Mechanism (CDM) and global carbon markets;
- (b) UNEP is also working with UNDP and the World Bank to expand coverage of these activities;
- (c) the UNEP-facilitated Global Network on Energy for Sustainable Development engages more than 20 centres of excellence in developing and industrialized countries to provide policy solutions for clean and efficient energy sources for the world's poor;
- (d) UNEP renewable energy activities include supporting the development of criteria for the sustainable production of biofuels, and ensuring that these contribute to climate, energy and environmental goals;<sup>5</sup>
- (e) the Sustainable Buildings and Construction Initiative is promoting energy efficiency in different building sectors and investigating how market mechanisms can support energy efficiency investments;
- (f) the Sustainable Transport Programme is promoting less polluting transport systems and mobility options;
- (g) the Rural Energy Enterprise Development (REED) initiative nurtures new, clean energy enterprises in developing countries by providing enterprise development services and early stage seed finance;

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<sup>4</sup> See website: <http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter5.pdf>.

<sup>5</sup> See website: [http://www.unep.fr/scp/rpanel/pdf/Assessing\\_Biofuels\\_Summary.pdf](http://www.unep.fr/scp/rpanel/pdf/Assessing_Biofuels_Summary.pdf).

- (h) the UNEP World Conservation Monitoring Centre has reviewed the impact on livelihoods of reducing emissions from deforestation.

16. On 24 April 2009, UNEP provided a submission on transport to the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention (AWG-LCA).<sup>6</sup> It addresses issues from mitigation to adaptation and includes recommendations on technology transfers and financing mechanisms. In the concluding remarks, it states that “a post-2012 agreement shall therefore include a combination of instruments that, together with local, regional and national applications of transport policies, work for all sectors including transport.”

## **D. United Nations Conference on Trade and Development**

17. The United Nations Conference on Trade and Development (UNCTAD) presents its role on climate change as follows: “Concerns about climate change have placed this threat to development prospects high on the international agenda, particularly in terms of its economic, trade and social impacts. The main role of UNCTAD in addressing this global challenge is to help developing countries master the trade and development implications and take advantage of emerging trade and investment opportunities.”

18. In this perspective, UNCTAD undertakes and plans the following activities:

- (a) economic analysis on trade and climate change interface, for example by assessing trade and development impacts of specific emission reduction proposals;
- (b) development of training material on the rules of CDM, so that a considerable number of developing nations can attract investment via CDM towards energy development projects;
- (c) organizing international policy forums to discuss the interface and mutually supportiveness of trade and climate change policy at the international, regional and national levels;
- (d) participation in intergovernmental and technical meetings to showcase the activities of UNCTAD related to biofuels production, domestic use and trade, including assessment of Non-Tariff Barriers (NTBs) related to trade in biofuels.

19. Their activities on biofuels are directly related with transport and those on the impact of emissions reduction on trade and development might indirectly concern the transport sector.

## **E. The World Bank**

20. Working with partner organizations and using a variety of mechanisms, the World Bank (WB) group helps client countries mobilize the financing needed to combat the causes and consequences of climate change. This includes support through innovative mechanisms, such as the bank-administered Clean Technology Fund, as well as direct World Bank lending<sup>7</sup>

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<sup>6</sup> See website: <http://unfccc.int/resource/docs/2009/smsn/igo/045.pdf>.

<sup>7</sup> See website: <http://beta.worldbank.org/climatechange/>.

21. Among the active projects, 28 respond to the research criteria “transport climate change” and their commitment amounts sum up to approximately US\$ 3.5 billion.
22. Furthermore, the Climate Investment Funds (CIF), approved by the Board of Directors of the World Bank on 1 July 2008, are comprised of two trust funds, the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF). The CTF will promote investments in clean technologies and the SCF will serve as an overarching fund that can support targeted programmes with dedicated funding to provide financing to pilot new approaches with potential for scaled-up, transformational action aimed at a specific climate change challenge or sectoral response.
23. The CIFs are managed by the World Bank and implemented jointly with the Regional Development Banks (the African Development Bank (AfDB), the Asian Development Bank (AsDB), the European Bank for Reconstruction and Development (EBRD) and the Inter-American Development Bank (IDB)).
24. The World Bank is also one of the implementing agencies of the GEF.

## **F. Global Environment Facility**

25. The Global Environment Facility (GEF), established in 1991, helps developing countries fund projects and programs that protect the global environment. GEF grants support projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants.
26. The GEF is fundamentally a partnership for mainstreaming global environmental concerns into national sustainable development agendas. Its governance structure is centred around a Council composed of 32 representatives from member States who meet biannually to review GEF projects, future business plans, work programmes and policies.
27. The GEF Assembly, composed of all 176 GEF member States, meets every three or four years to review and approve general policies, operations and amendments to the founding GEF Instrument. The Conventions provide guidance to the GEF, and the Science and Technology Advisory Panel (STAP) reviews every project and provides advice regarding GEF policies. The GEF Office of Monitoring and Evaluation (GEFME) reports on results and lessons from GEF programmes and projects directly to the GEF Council.
28. GEF operations are coordinated by a Secretariat in Washington D.C. that is headed by a Chief Executive Officer (CEO). Operations are carried out by a tripartite partnership composed of the UNDP, the WB, and the UNEP, which are referred to as the three Implementing Agencies. Each Implementing Agency brings its own particular comparative advantage to the GEF. As stated in the GEF Instrument, UNDP will play the primary role in ensuring the development and management of capacity building programmes and technical assistance projects. In 1999, the GEF Council expanded opportunities for seven organizations to contribute to the implementation of GEF projects. These organizations are known as Executing Agencies under the GEF's expanded opportunities policy, and comprise four regional development banks (AsDB, AfDB, EBRD, IDB) and three United Nations bodies (Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), United Nations Industrial Development Organization (UNIDO)), some with full access to GEF funding.
29. GEF projects in climate change help developing countries and economies in transition to contribute to the overall objective of the UNFCCC to achieve “[...] stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate

change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner” (text of the UNFCCC, Art.2).

30. As the financial mechanism of the UNFCCC, GEF allocates and disburses about US\$ 250 million per year in projects in energy efficiency, renewable energies and sustainable transportation. Moreover, it manages two special funds under the UNFCCC: (a) the Least Developed Countries Fund, and (b) the Special Climate Change Fund.

31. The GEF supports projects in:

- (a) climate change mitigation: Reducing or avoiding greenhouse gas emissions in the areas of renewable energy, energy efficiency and sustainable transport.
- (b) climate change adaptation: Aiming at increasing resilience to the adverse impacts of climate change of vulnerable countries, sectors and communities.

32. Throughout the world, the transportation sector is the fastest growing source of greenhouse gas emissions. With regard to sustainable transportation projects, GEF supports projects that promote a long-term shift towards low emission and sustainable forms of transportation. Eligible activities include the following: (a) public rapid transit, which encompasses bus rapid transit, light rail transit, and trolley electric buses; (b) transport-and traffic-demand management; and (c) non-motorized transport and land-use planning.

## **G. Asian Development Bank**

33. The Asia Pacific Region will require billions of dollars to shift to low-carbon growth paths and adapt to the unavoidable impacts of climate change.

34. To respond to this challenge, the climate change initiatives of the Asian Development Bank (ADB) are creating access and incentives for financing and investment to help make mitigation and adaptation actions more competitive and affordable to developing countries.

35. On top of being the implementing partner of a GEF and CIF funds, the ADB also manages specific funds related to climate change mitigation and adaptation.<sup>8</sup> Moreover, the ADB addresses climate change mitigation and adaptation in the Asian region through two programmes. The mitigation program contains elements specifically targeted at transport.<sup>9</sup>

## **H. Organisation for Economic Co-operation and Development**

36. The Organisation for Economic Co-operation and Development (OECD) dedicates the climate change, energy and transport section of their website<sup>10</sup> to present news, documents, as well as country specific information related to these subjects.

### **1. International Transport Forum**

37. Transformed from the European Conference of Ministers of Transport, the International Transport Forum (ITF) is an inter-governmental organization within the OECD family. Its members include all OECD countries, as well as many countries in Central and Eastern Europe, and India. In addition, China and Brazil are being invited to

<sup>8/</sup> See website: <http://www.adb.org/Climate-Change/mitigation-funds.asp>.

<sup>9/</sup> See website: <http://www.adb.org/climate-change/cc-mitigation-transport.asp>.

<sup>10/</sup> See website: [http://www.oecd.org/topic/0,3373,en\\_2649\\_34359\\_1\\_1\\_1\\_1\\_37465,00.html](http://www.oecd.org/topic/0,3373,en_2649_34359_1_1_1_1_37465,00.html).

participate in the Forum. The involvement of more than 50 Ministers of Transport ensures direct links and strong relevance to policy making at both national and international levels.

38. Climate change was the theme of the 2008 Forum. Among the results of the forum, the ministerial session came out with the Key Messages <sup>11</sup> addressing the challenges of climate change.

39. Among the ongoing research activities undertaken by the ITF, the project on GHG reduction strategies in the transport sector is of great interest.

## **2. International Energy Agency**

40. The International Energy Agency (IEA) was created in 1974 as an autonomous body within the framework of the OECD. In 2002-2004, the IEA collaborated with the World Business Council on Sustainable Development (WBCSD) on the Sustainable Mobility Project (SMP) which resulted in the Mobility 2030 report of the WBCSD published in 2004. A foundation for the analysis in this project was the SMP model, developed at the IEA. After the completion of the project, several of the companies involved (BP, Honda, Nissan, Shell, StatoilHydro and Toyota) continued working with the IEA and in 2004 started the Mobility Modelling (MoMo) effort, allowing IEA to further develop the SMP model into what is now called the “MoMo model”. This has contributed to on-going improvements in the IEA's ability to characterize and project transport sector activity, efficiency and energy use around the world. The project is expected to continue, with on-going efforts to improve data and modeling capability, particularly with respect to developing countries.

41. The IEA, together with the ITF, UNEP and the FIA foundation also launched the 50 by 50 Global Fuel Economy Initiative (GFEI) which aims at improving fuel efficiency by:

- (a) 50 per cent by 2050 for the world car fleet;
- (b) 50 per cent by 2030 for new cars worldwide;
- (c) 30 per cent by 2020 for new cars in OECD countries.

## **I. European Commission**

42. The European commission (EC) deals extensively with issues related to transport and climate change through strategies as those included in the “Greening transport package” and also coordinates numerous projects under the different research framework programmes. Among those, launched in May 2007 under the European Union's Sixth Framework Programme for research (FP6), iTREN 2030 <sup>12</sup> introduced a modelling system to assess the likely future impacts of policies in the related fields of transport, energy and technology.

## **J. European Environment Agency**

43. The European Environment Agency (EEA) is an agency of the European Union. Its task is to provide sound, independent information on the environment. They are a major information source for those involved in developing, adopting, implementing and

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<sup>11</sup> See website: <http://www.internationaltransportforum.org/Topics/pdf/KeyMessages2008.pdf>.

<sup>12</sup> See website: [http://ec.europa.eu/research/fp6/ssp/itren\\_2030\\_en.html](http://ec.europa.eu/research/fp6/ssp/itren_2030_en.html).

evaluating environmental policy, and also the general public. Currently, the EEA has 32 member countries.

44. The regulation establishing the EEA was adopted by the European Union in 1990. It came into force in late 1993 immediately after the decision was taken to locate the EEA in Copenhagen. Work started in earnest in 1994. The regulation also established the European environment information and observation network (Eionet).

45. EEA's mandate is to:

- (a) help the Community and member countries make informed decisions about improving the environment, integrating environmental considerations into economic policies and moving towards sustainability, and
- (b) coordinate the European environment information and observation network (Eionet).

46. Transport and climate change are two of the themes covered by the EEA.<sup>13</sup>

47. The transport and environment reporting mechanism (TERM) was set up on request of the EU transport ministers in 1998. The main aim of TERM is to monitor the progress and effectiveness of transport and environment integration strategies on the basis of a core set of indicators. The latest TERM report (published on 31 March 2009)<sup>14</sup> examines the performance of the transport sector vis-à-vis potential future targets for greenhouse gas emission reductions and concludes that technology measures are insufficient to meet likely targets. Policy-makers have to address the growth in transport demand.

### III. National Administrations

#### A. United Kingdom

##### 1. Department of transportation

48. A section of their website<sup>15</sup> provides information on climate change as well as links to sites with information on how people individually can reduce the environmental impacts of their transport choices.

##### 2. Commissions for integrated transport

49. The Commissions for integrated transport provided a report as well as some supporting documents<sup>16</sup> regarding the issue of transport and climate change.

#### B. United States of America

##### 1. Environmental Protection Agency

50. The Environmental Protection Agency (EPA) has extensive information on Climate Change. The EPA Climate Change Web site offers comprehensive information on the issue of climate change in a way that is accessible and meaningful to all parts of society –

<sup>13</sup> See websites: <http://www.eea.europa.eu/themes/transport> and <http://www.eea.europa.eu/themes/climate>.

<sup>14</sup> See website: <http://www.eea.europa.eu/publications/transport-at-a-crossroads>.

<sup>15</sup> See website: <http://www.dft.gov.uk/pgr/sustainable/climatechange/climatechangeandtransport>.

<sup>16</sup> See website: <http://www.cfit.gov.uk/docs/2007/climatechange/index.html>.

communities, individuals, business, states and localities, and governments. The basic information page has four main sections on climate change issues and another section on “What You Can Do” to reduce your contribution. EPA has provided a frequent questions database where users can search for more specific questions and answers on climate change.<sup>17</sup> In addition there is specific site dedicated to Transportation and Climate Change. Here you will find information on carbon dioxide (CO<sub>2</sub>) and other greenhouse gas (GHG) emissions from transportation sources, including information about transportation’s contribution to total GHG emissions, relevant EPA regulations and voluntary programs, and what you can do to reduce your transportation emissions,<sup>18</sup>.

## **2. Department of Energy**

51. The Department of Energy (DOE) provides extensive information and data related to climate change and transport on their website.<sup>19</sup>

## **3. Department of Transportation**

52. The Department of Transportation (DOT) maintains a Transportation and Climate Change Clearinghouse<sup>20</sup> which aims to serve as a one-stop source of information for the transportation community on transportation and climate change issues. It is intended for use by the transportation community from all levels of government, to private industry and non-profits, and provides a forum to share information, learn about new research, and understand practices and approaches that are being used to address the linkages between transportation and climate change.

# **IV. Other Initiatives**

## **A. Roundtable on Sustainable Biofuels**

53. The Roundtable on Sustainable Biofuels is an international initiative bringing together farmers, companies, non-governmental organizations, experts, governments and inter-governmental agencies concerned with ensuring the sustainability of biofuels production and processing. The Roundtable is hosting a series of meetings, teleconferences and online discussions with the aim of achieving global, multi-stakeholder consensus around the principles and criteria of sustainable biofuels production.<sup>21</sup>

## **B. Eco-driving**

54. Numerous initiatives (national and international) promote eco-driving. As an example, the following websites present and promote eco-driving in Europe and the United States of America: [www.ecodrive.org](http://www.ecodrive.org), [www.ecodriving-online.eu](http://www.ecodriving-online.eu) and [www.ecodrivingusa.com](http://www.ecodrivingusa.com).

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<sup>17</sup> See website: <http://epa.gov/climatechange/index.html>

<sup>18</sup> See website: <http://www.epa.gov/otaq/climate/index.html>.

<sup>19</sup> See website: <http://www.eia.doe.gov/environment.html>.

<sup>20</sup> See website: <http://climate.dot.gov/>.

<sup>21</sup> See website: <http://cgse.epfl.ch/page65660.html>.

## **V. Conclusion**

55. In view of the magnitude of the climate change problem, it is not surprising that numerous programmes and initiatives have been launched to tackle the problem. As a major contributor to the problem, transport is obviously included in most of the general programs aimed at solving the climate change problem. On top of that, as shown in this paper, there are also numerous initiatives focusing directly at the transport sectors.

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