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Working Party on Pollution and Energy

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Item 11 of the provisional agenda

Exchange of information on national and international requirements on emissions

Shift of focus from toxic emission to CO₂ emission regulation

Submitted by the expert from the International Road Transport Union*

The text reproduced below was prepared by the expert from the International Road Transport Union (IRU) to inform the experts of the Working Party on Pollution and Energy (GRPE) about the implementation of the recommendations set up by IRU in its “30-by-30” Resolution.

* 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.

Implementation of the IRU recommendations set in the IRU 30-by-30 Resolution

A. Analysis

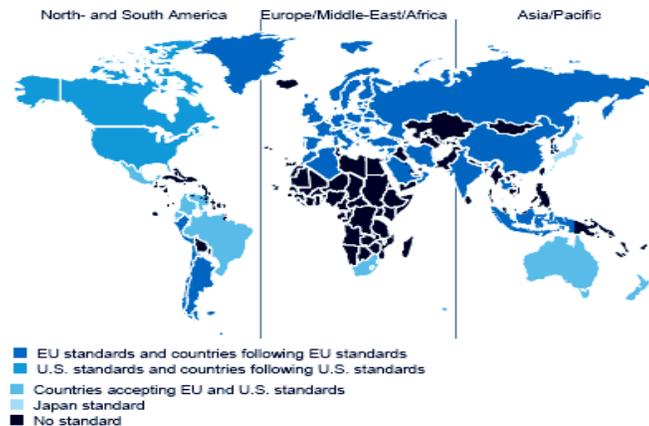
1. In today's globalized economy, professional road transport is no longer merely a mode of transport, but a vital production tool for goods transport and tourism programmes, interconnecting every business to all world markets and providing high quality door to door service.

2. In fact, the road transport industry – recognising the role that road transport plays in economic, social and environmental progress, and in accordance with the IRU's 3 "i" strategy for achieving sustainable development based on innovation, incentives and infrastructure – has taken up its responsibilities and reduced significantly toxic and non-toxic emissions which helped to significantly improve air quality.

3. By focussing on the reduction of toxic emissions, the road transport sector has dramatically improved its environmental performance through innovative technologies. Today, a clean truck, for instance in Europe – EURO VI norm – emits 88 per cent less carbon monoxide (CO), 95 per cent less hydrocarbons (HC), 97 per cent less nitrogen oxides (NO_x) and 98 per cent less particulates than a EURO 0 truck from 1990. In addition, fuel consumption and thus the emission of carbon dioxide (CO₂) have decreased by 36 per cent over the last 30 years. Nowadays, none of worldwide emission limits can be underestimated as they are all broadly equivalent but not fully harmonized. This is a sign towards global harmonization of toxic emissions.

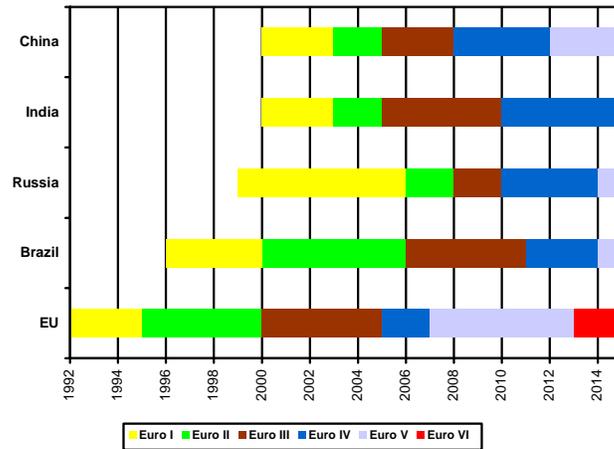
4. Currently there are three major emission standards for heavy commercial vehicles: the European Union (EU) Euro standard, the United States Environmental Protection Agency (US-EPA) standards and the Japanese standards (see picture 1).

Picture 1



5. Apart from this variety of standards, there are also different stages of implementation of the standards according to Picture 2.

Picture 2



6. It is true that globalization has also led to an increase in transport and thus CO₂ emissions and that CO₂ emissions are a remaining challenge for the transport sector. Bearing this in mind, road transport industry has proactively adopted during the last IRU General Assembly in October 2009 the so-called 30-by-30 Resolution (see informal document No. GRPE-59-28) which includes a voluntary commitment by the road transport industry to reduce CO₂ emissions by 30 per cent by 2030, which means such as:

- (a) investments in innovative engine and latest vehicle technology, which can contribute to a reduction in fuel consumption and consequently in CO₂ emissions of more than 10 per cent,
- (b) driver training, as provided by the IRU Academy and others, which can reduce fuel consumption and consequently CO₂ emissions by up to 10 per cent,
- (c) innovative logistic concepts, such as intelligent transport systems (ITS) and optimized weights and dimensions of heavy commercial vehicles, which can equally reduce fuel consumption and CO₂ emissions of more than 10 per cent.

7. In this resolution, the road transport sector also calls on governments to stop creating new legislation aiming at reducing toxic emissions but rather to focus on legislation aiming at reducing fuel consumption.

8. In order to tackle the issue correctly, governments should make it a priority to fully harmonize the emission standards in the three main economic regions (United States of America, Europe and Japan). The new proposal on emission levels (Euro VI) is already a good start, but the priorities to meet the new emissions levels should be to achieve harmonization of emission standards and use reliable technologies and adequate infrastructures. In the meantime, it is also crucial to bring the new emerging countries at the levels of the harmonized emission standards. However, in the commercial vehicle sector, none of the above emission norms include CO₂ levels. In addition, focussing on reducing toxic emissions even increases fuel consumption and thus CO₂ emissions. Euro VI limits will lead to an increase in fuel consumption and hence to higher CO₂ emissions, in the range of 2-3 per cent based on information by the European Automobile Manufacturers' Association (ACEA).

9. This is due to the fact that there is a trade off between NO_x emissions and fuel consumption / CO₂ production as lower combustion temperature gives lower NO_x emissions but increases fuel consumption and CO₂ emissions.
10. Lastly, all the current emission standards focus on the relative reduction of emissions and not on the absolute reduction of emissions. An absolute reduction can only be achieved by reducing considerably the fuel consumption.

B. IRU proposal

11. Considering the direct link between fuel consumption and CO₂ emissions and the fact that road transport has no economically viable alternative to fossil fuel, it becomes clear that CO₂ emissions are the last remaining emission challenge for the road transport industry.
12. This is the reason why the IRU and its members call on governments to stop creating new legislation aiming at the reduction of toxic emissions, which are clearly clean but rather to focus on legislation aiming at reducing fuel consumption.
13. In this perspective, the IRU proposes to:
 - (a) ask governments to draft a new regulation to keep in line with the achievements in terms of toxic emissions norms and strive for a global harmonization of standards;
 - (b) draft a legislation setting an average CO₂ emission limit applicable to commercial vehicles manufacturers ensuring that average emissions of newly registered commercial vehicles should be at least 10 per cent below the CO₂ emissions, related to the year 2007, from 2030 onwards, which result to 750 g CO₂/km (~28 litre/100 km). The emission limit value does not apply to each vehicle individually but to the average of all vehicles built and registered by the manufacturer in one calendar year. The CO₂ emission levels are measured in accordance with UN Regulation No. 49;
 - (c) implement into all emerging countries, during the same time frame (2010 - 2030), global harmonization of toxic emissions.

C. Action

14. The IRU and its Members invite GRPE representatives:
 - (a) to carefully examine this document;
 - (b) to stop suggesting new legislation aiming at the reduction of toxic emissions but rather to focus on legislation with the aim to reduce fuel consumption;
 - (c) to further facilitate road transport and to work in partnership with the road transport sector so that it can achieve the full potential of its ambitious CO₂ emission reduction targets as part of the whole logistic chain;
 - (d) to establish a working agenda to target the goals set for 2030.
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