

## H-3: Composition of the road motor vehicle fleet by fuel type

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## 1) General description

### 1.1) *Brief definition*

This indicator defines the number of motor vehicles (passenger cars, motor coaches and buses, trolleybuses, trucks, and road tractors) within a country broken down by fuel type.

### 1.2) *Units of measurement*

The number of motor vehicles by fuel type is provided in in thousands of units (vehicles); the share of each fuel type in the total road motor vehicle fleet for a respective category is expressed as a percentage.

### 1.3) *Context*

Relation to other indicators from the Guidelines - This indicator relates to indicator “H-4: Average age of road motor vehicle fleet”.

## 2) Relevance for environmental policy

### 2.1) *Purpose*

This is a driving force indicator, which shows tendencies in the transport sector’s development and is also an indirect indicator of fuel consumption. The indicator helps to understand developments in the composition of the road motor vehicle fleet by fuel type, which in turn explains observed trends in transport’s impact on the environment.

### 2.2) *Issue*

The current transport system poses significant and growing threats to the environment and human health. Continuous growth of demand for transport, especially road transport, raises concern regarding the long-term sustainability of current trends. This problem is aggravated by the high age and energy intensity as well as poor environmental standards of the vehicle fleet and the poor state of road infrastructure. Maintaining current trends in the transport

sectors of the countries of South-Eastern and Eastern Europe, Caucasus and Central Asia would lead to sharp increases in environmental and health problems related to air pollution, noise pollution and extensive land uptake. Transport policies increasingly recognize the need to improve the shares of transport modes that use environmentally friendly fuels, primarily electric and biofuel vehicles. The promotion of low- and zero-sulphur fuels will lead to decreases in pollutant emissions from road vehicles. The promotion of biofuels can help to achieve energy security.

### **2.3) International agreements and targets**

#### *a) Regional level:*

The Transport, Health and Environment Pan-European Programme (THEPEP), adopted by the High-level Meeting of the United Nations Economic Commission for Europe (ECE) and the World Health Organization (WHO) in 2002, requires the adoption of national fuel quality standards in the countries of South-Eastern and Eastern Europe, Caucasus and Central Asia and the implementation of necessary changes in taxation.

#### *b) Subregional level:*

The Environment Strategy for countries of South-Eastern and Eastern Europe, Caucasus and Central Asia calls for the development and implementation of national transport strategies for sustainable development using less energy-intensive modes of transport and for the introduction of incentives for environmentally sustainable transport.

In the European Union (EU), legislation required the reduction of the sulphur content of fuels to 50 mg/kg (low-sulphur fuels) by 2005 and its further reduction below 10 mg/kg (zero-sulphur fuels) by 2009. The legislation also required that by 2005 and 2010 biofuels constitute 2% and 5.75% respectively of EU fuel consumption. The Renewable Energy Directive (2009/28/EC) requires a 10 % share of energy from renewable sources in each Member State's transport energy consumption by 2020. A, White Paper, Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, has been adopted in 2011 which proposes to halve the use of "conventionally-fuelled" cars in urban transport by 2030 and to phase them out in cities by 2050.

## **3) Methodology and guidelines**

### **3.1) Data collection and calculations**

Data should cover the stock of road motor vehicles, namely, all road vehicles registered in a country on a given date and licensed to use roads open to public transport. Data should be collected separately for each of the following categories of road motor vehicles: passenger

cars, motor coaches and buses, trolleybuses, trucks and road tractors. For each category, vehicles should be classified according to the type of fuel used by the motor. The main types are gasoline (petrol), diesel, gas (liquefied petroleum gases and natural gas), electricity, biofuel (e.g. biodiesel) and other sources (e.g. alcohols, mixtures of alcohols with other fuels or hydrogen). Each group of fuel should be presented as percentages of the total number of vehicles for each category. The shares may be compared with a baseline year demonstrating trends in fleet composition.

### **3.2) Internationally agreed methodologies and standards**

The methodology developed jointly by ECE, International Transport Forum (ITF) and the European Union Statistical Office (Eurostat) for the Common Questionnaire on Transport Statistics.

## **4) Data sources and reporting**

In a number of countries of South-Eastern and Eastern Europe, Caucasus and Central Asia, data on the number of vehicles of different categories, including passenger cars, trucks and buses, as well as the respective fuel consumption (mainly petrol and diesel fuel) are published regularly in statistical yearbooks. Some countries report relevant data via the Common Questionnaire on Transport Statistics, circulated by ECE.

## **5) References at the international level**

- ECE, Annual Bulletin of Transport Statistics for Europe and North America: <http://www.unece.org/fileadmin/DAM/trans/main/wp6/publications/ABTS2012.pdf>;
- Illustrated Glossary for Transport Statistics, Eurostat, ICF and ECE, 4<sup>th</sup> edition, 2009: <http://www.unece.org/fileadmin/DAM/trans/main/wp6/pdfdocs/glossen4.pdf>;
- Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EC, as amended.
- Directive 2003/17/EC of the European Parliament and of the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport.

- Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC;
- EU WHITE PAPER Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, COM/2011/0144 final: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52011DC0144:EN:NOT;>
- EU Action Plan on Urban Mobility, COM/2009/0490 final: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52009DC0490:EN:NOT;>
- ECE – Transport: <http://www.unece.org/trans/welcome.html>;
- THEPEP: <http://www.unece.org/thepep/en/welcome.html>;
- International Transport Forum: <http://www.internationaltransportforum.org/>;
- European Environment Agency – Transport: <http://www.eea.europa.eu/themes/transport>;
- Eurostat – Transport statistics:  
<http://epp.eurostat.ec.europa.eu/portal/page/portal/transport/data>;
- OECD – Statistics: <http://www.oecd.org/statistics/>.