H-1: Passenger transport demand

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1) General description

1.1) Brief definition

This indicator shows (i) the number of kilometres travelled by persons in a given year by different modes of public and private transport (road, railway, inland water transport, maritime transport, domestic aviation, underground transport); and (ii) the total passenger transport demand and its breakdown by mode of transport (i.e. the share of each mode in total transport demand).

1.2) Units of measurement

The total passenger transport demand is expressed as thousand passenger-kilometres (pkm); the share of each mode in total transport demand is expressed as a percentage.

1.3) Context

Relation to other indicators from the Guidelines - This indicator relates to indicator "H-2: Freight transport demand".

2) Relevance for environmental policy

2.1) Purpose

Passenger transport demand is a driving force indicator. It can be of major importance in regulating passenger transport demand and fostering specific modes of transport. Breaking down passenger transport demand by mode helps to assess the effectiveness of response measures.

2.2) Issue

Travel is an essential part of the economic and social life of a country. However, 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 vehicle fleets 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. The relevance of the modal split policy for the environmental impact of passenger transport stems from differences in the "environmental performance" (with regard to resource consumption, greenhouse gas emissions, emissions of pollutants into the atmospheric air, noise, accidents, etc.) of different modes of transport. Electricity-driven modes of transport are more "clean" than the other modes. Policies are expected to be implemented in countries of South-Eastern and Eastern Europe, Caucasus and Central Asia which support a shift towards less environmentally harmful means of transport and a reduction of the need for travel.

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 as one of its priorities the implementation of measures supporting redistribution of passenger transport in favour of modes which comply with the need to protect health and the environment, including measures to develop high-quality integrated public transport systems and limit demand for and intensity of car use.

b) Subregional level:

The Environment Strategy of 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 the introduction of incentives for environmentally sustainable transport, including public transport. In the European Union (EU), the Thematic Strategy on Urban Development from 2006 calls for the use of "cleaner" modes of transport and for improving population mobility. 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

Available transport statistics should make it possible to calculate the passenger transport demand for the majority of modes. Data on passenger carriage are collected from enterprises, agencies and private bodies involved in the transport business. Passenger transport demand (in thousand passenger-kilometres) is assessed by multiplying the total number of passengers for each transport mode by the distance of carriage; this is done separately for each mode of transport. All data should be based on movements on national territory, regardless of the nationality of the vehicle. The reporting time in passenger carriage depends on the type of transport: one can use the time when the ticket is acquired (rail and other public transport) or the time of departure (maritime, inland water and air transport). In passenger carriage statistics the time of arrival is used only for air transport.

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 several countries of South-Eastern and Eastern Europe, Caucasus and Central Asia, data on passenger transport demand and modes of transportation (intra-city, urban, etc.) 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, 4th edition, 2009:
 http://www.unece.org/fileadmin/DAM/trans/main/wp6/pdfdocs/glossen4.pdf;
- Thematic Strategy on the Urban Environment COM/2005/0718 final: http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52005DC0718:EN:NOT;
- 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://eurlex.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/.