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INLAND TRANSPORT COMMITTEE

Working Party on Transport Statistics

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**METHODOLOGICAL DEVELOPMENT AND HARMONIZATION OF TRANSPORT  
STATISTICS**

**Follow-up to the Barcelona task force on sustainable urban transport indicators**

**Transmitted by the Czech Republic**

I. BACKGROUND AND MANDATE

1. At its fifty-first session, (24-26 October 2000) the Working Party asked the Czech Republic to draft a proposal regarding the definition of indicators for sustainable urban transport, based on the conclusions of the Barcelona Task Force (TRANS/WP.6/139, para. 22). In accordance with the Working Party's request, the Czech Republic has prepared a first draft proposal of definitions, which are reproduced below for consideration by the Working Party.

II. PROPOSED LIST OF DEFINITIONS FOR INDICATORS ON SUSTAINABLE URBAN TRANSPORT

I. **Infrastructure**

01. **Urban area**

Area within the administrative boundaries of a city, town (village).

02. **Suburban area**

Area located outside the urban area with close (transport) connections to it.

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03. **Trolleybus route**  
The route designed for use by a motor rail vehicle driven by electric engine (not using rail track), connected to electric two-wire trolley conductors and adjusted for road traffic.
04. **Tramway route**  
The route made up by a pair of rails designed for use by a motor rail vehicle driven by electric engine, connected to electric one-wire trolley conductor, partially or completely laid down on the road. The traffic is provided in accordance with road traffic rules.
05. **Tram high-speed route**  
The route designed for use by a motor rail tram-type vehicle equipped with interlocking device, as a rule, usually separated from other traffic along the whole route.
06. **Metro track**  
Rail track predominantly underground or sometimes above terrain level consistently separated from other modes of transport characterized by a sole right to the transport infrastructure. It serves for ensuring transport services in cities or agglomeration centers.
07. **Suburban (urban) rail high-speed line**  
Rail line designed for use by rail trains to ensure urban and suburban transport and equipped with interlocking device. Platform height is usually at a wagon floor level.  
  
*It serves only for urban and suburban train operation.*
08. **Operational length of a route's section**  
Length of a route section (given part of a transport network), on which public transport is operated.
10. **Operational length of a regular urban or suburban transport service**  
Total sum of operational lengths of route's sections.  
The length of route used for vehicle manipulation is not included.
11. **Total length of regular public urban or suburban transport network**  
Total sum of all operational lengths of all regular public urban or suburban transport services (calculated for each mode of transport separately).

## **II. Vehicle fleet**

01. **Bus**  
Road motor vehicle designed for the carriage of passengers and their luggage, with transport capacity of more than 9 seats, including the driver (bus with seats and places for standing passengers).
02. **Trolleybus**  
A motor rail vehicle driven by electric engine (not using rail track) connected to electric two-wire trolley conductors, designed for public transport of passengers and their luggage with transport capacity of more than 9 seats, including the driver. In some cases a trolleybus can use roads outside of the trolleybus route. *A trolleybus can be classified as a rail vehicle or as a road vehicle depending on*

*national legislation.*

03. **Tramway**  
Motor rail vehicle or set of vehicles designed for the carriage of passengers and their luggage with transport capacity of more than 9 seats, including the driver, intended to operate on tram routes or high-speed lines.
04. **Metro train**  
Rail motor vehicle or a train set of track rail vehicles of electric predominantly underground traction, with a capacity for a large transportation volume and designed to operate on metro track.
05. **Train set of suburban (urban) high-speed line**  
Rail motor vehicle or set of track rail vehicles designed for transport of passengers and their luggage and intended to operate on railway tracks ensuring urban and suburban transport services. These vehicles are adjusted for passenger's fast getting on and off.

### **III. Traffic**

01. **Regular urban and suburban public transport service**  
The regular urban and suburban public transport service (trams, trolleybuses, buses, metro, high-speed rail system), is a complex of transport connections on a given transport infrastructure in urban and suburban areas which is determined by the departure stop and terminal stop and other stops on which the traffic service is provided regularly, according to a valid license and an approved time-table.
02. **Daily number of regular urban and suburban transport services**  
The indicator represents the total daily number of regular urban and suburban transport services that are operated according to timetables by operators with a valid license.  
Each public transport service is recorded only once irrespective of the number of realized transport connections.
03. **Daily number of urban and suburban transport connections**  
The indicator represents the total daily number of all connections (relating to all services in operation) that are operated according to timetables by operators on the basis of a valid license (without supporting transport connections).

*Supporting transport connection means any extra transport connection realized off the established timetable and designed for coping with extraordinary amount of traffic.*

04. **Number of kilometers-traveled in urban and suburban public transport**  
Number of kilometers traveled by operator vehicles both with passengers carried and without the passengers in urban and suburban public transport during the period surveyed.
05. **Vehicle-kilometers traveled in urban and suburban public transport**  
This indicator represents the movement of an urban or suburban transport vehicle over one kilometer. The number of kilometers is set on the basis of timetables and theoretical graphs of train running, sets of transport means (individually, in trains with two- and multi-vehicle sets) and the length of route services, including manoeuvring movements from the depot, tram shed, garages to the route of the service and return.

*(It does not include manoeuvring kilometers travelled within areas of tram sheds, depots and workshops.*

*For rail transport systems train-kilometers are more useful (frequent use of multi-wagon trains).*

06. **Train-kilometers travelled in urban and suburban public transport**

This indicator represents the movement of an urban or suburban train over one kilometer. The number of kilometers is set on the basis of timetables and theoretical graphs of train running, sets of transport means (individually, in trains with two- and multi-vehicle sets) and the length of route services, including manoeuvring movements from the depot to the route of the service and return.

*Such performance does not include manoeuvring kilometers travelled within areas of depots.*

07. **Hours of motor vehicle (vehicles set) operation in urban and suburban public transport**

This Indicator represents the period of operation of an urban and suburban public transport motor vehicle registered in record books of carriers; the period begins with the departure of the vehicle from the station to start the transport service and ends with the return of the vehicle to the station after terminating the transport service. It covers the total time of driving and operational waiting of the vehicle per period surveyed.

*The period of preparing the vehicle before its departure and the period of its standstill after its arrival at the station are not counted as period of vehicle operation.*

08. **Vehicles put into operation in urban and suburban public transport (in peak hours/in the saddle of the frequency curve)**

Number of vehicles *put into operation in peak hours* represents the average number of motor vehicles calculated as a sum of all vehicles of urban and suburban public transport actually put into operation in the peak-hour period for the period surveyed divided by the total number of days for the period surveyed.

Number of vehicles *put into operation in the saddle of the frequency curve* represents the average number of vehicles calculated as the sum of urban and suburban public transport vehicles actually put into operation in the period following the termination of peak hours for the period surveyed divided by total number of days for the period surveyed.

IV. **Transport**

01. **Urban transport**

Transport in an urban area.

02. **Urban public transport**

Public transport of passengers carried out for the purpose of meeting the transportation needs of the urban area.

03. **Suburban public transport**

Public transport of passengers carried out for the purpose of meeting the transportation needs of the suburban area and usually integrated into urban public transport systems.

04. **Passenger transport in urban and suburban public system**  
The transport of passengers in public traffic by urban and suburban public transport vehicles, namely:
- a) based on the fare paid in cash,
  - b) free of charge without the travel document following the provisions of the tariff conditions (children, military, pensioners),
  - c) with travel documents paid in advance, travel pass
  - d) with free of charge travel documents
05. **Passengers with travel documents paid in advance**  
Passengers with single travel documents (carnet tickets, single tickets bought in advance booking, tickets issued by selling machines) and season tickets.
06. **Passengers with free-of-charge travel documents**  
Passengers with permanent and free-of-charge tickets, as well as other documents entitling to a free of charge travel, relates to the following persons:
- a) employees of the urban public transport operators and members of their families,
  - b) pensioners of the urban public transport operators,
  - c) physically handicapped persons and their guides (with appropriate valid certificates),
  - d) deputies of representative authorities carried on the basis of identity cards of deputies.
07. **Seat-kilometers in urban and suburban public transport**  
Transportation service offered; calculated as a product of vehicle-kilometers and standardized occupancy of particular types of transport vehicles per period surveyed.
08. **Transport capacity offered**  
Number of seats offered in urban or suburban transport vehicle related to the given transport route or the given urban or suburban public transport service during surveyed period.
09. **Passengers in urban and suburban transport**  
Transport of one passenger in urban and suburban transport represents transport of one passenger by an urban or suburban transport vehicle from the place of embarkment to the place of disembarkment.
10. **Passenger- kilometers in urban and suburban public transport**  
One passenger-kilometer in urban public transport represents the transport of one person by urban or suburban public transport vehicle over a distance of one kilometer.

*In the Czech Republic, the number of passenger-kilometers in urban public transport is calculated as the product of the number of passengers carried and average distance of the travel. The number of passengers carried is provided for by an expert estimate on the basis of travel documents sold. A traffic survey completed by an expert estimate is carried out in order to identify the average distance of the travel.*

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