

UNECE Transport Statistics

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*Presentation to Working Group on Environmental
Monitoring and Assessment
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Overview

- Data collected and their environmental relevance
- Glossary for Transport Statistics
- Traffic Censuses (NSO/MoT/Infrastructure agencies)
- Data collection mechanisms (NSO/MoT)
- Data for SDGs and capacity building activities

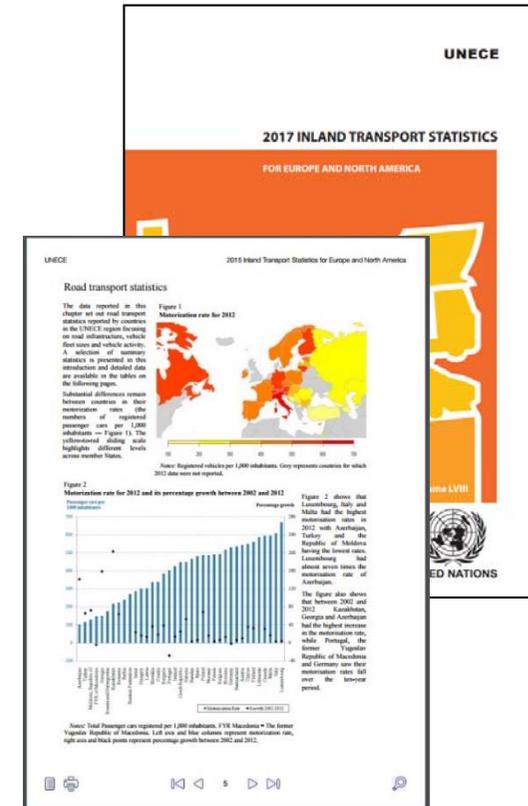
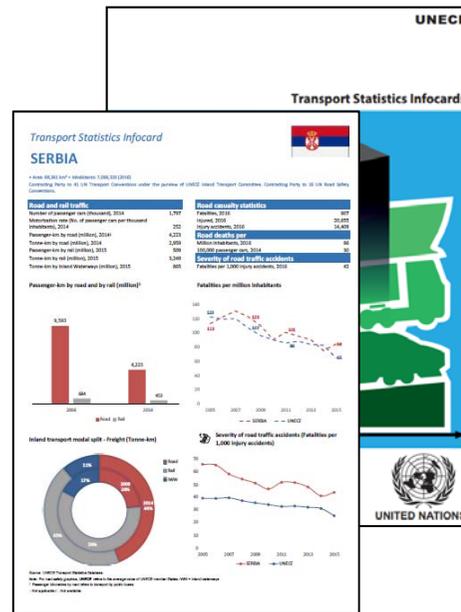
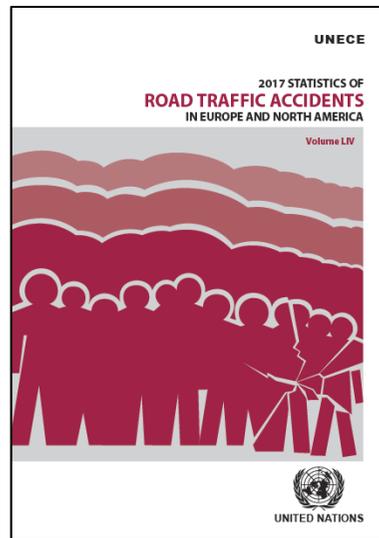


Transport Statistics at UNECE

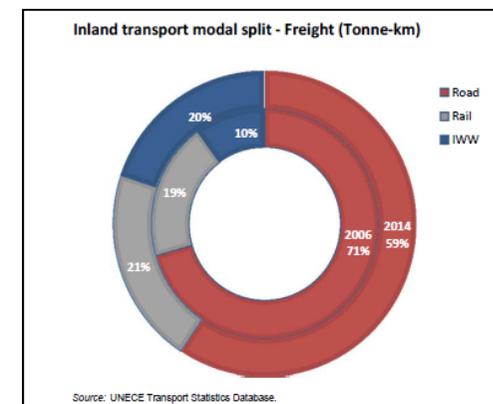
- WP.6 is a forum for inland transport statistics, covering:
 - Rail, road, inland waterways, pipeline
 - Infrastructure, vehicle fleet, traffic, transport measurement, safety
 - UNECE data come through a common questionnaire with ITF and Eurostat
- Transport statistics are important for many environmental reasons: greenhouse gas emissions, local air pollution, noise, land use.



- **Inland Transport Statistics:** Published June 2017
- **Road Accident Statistics:** Published November 2017
- **Infocards:** produced annually for the ITC (February)



Road deaths per	
Million inhabitants	91
100,000 passenger cars	22



All available from unece.org/trans/resources/publications/transport-statistics.html



Data collected (with environment-related examples)



Infrastructure

- Length of road network, by type of road
 - Motorway
 - State road
 - Provincial road
- Length of rail network
- Length of navigable inland waterway network
- **Base for other indicators, network density (per km² and per capita). Size of rail+IWW network gives indication of potential for modal switching.**



Vehicle Fleet

- Number of passenger and goods vehicles, broken down by type of vehicle:
 - Passenger cars
 - Motor coaches, buses and trolleybuses
 - Lorries
 - Road tractors
- Further breakdowns: age of vehicle, weight (for goods vehicles), fuel type.
- In parallel to this: number of **new** vehicle registrations, by type



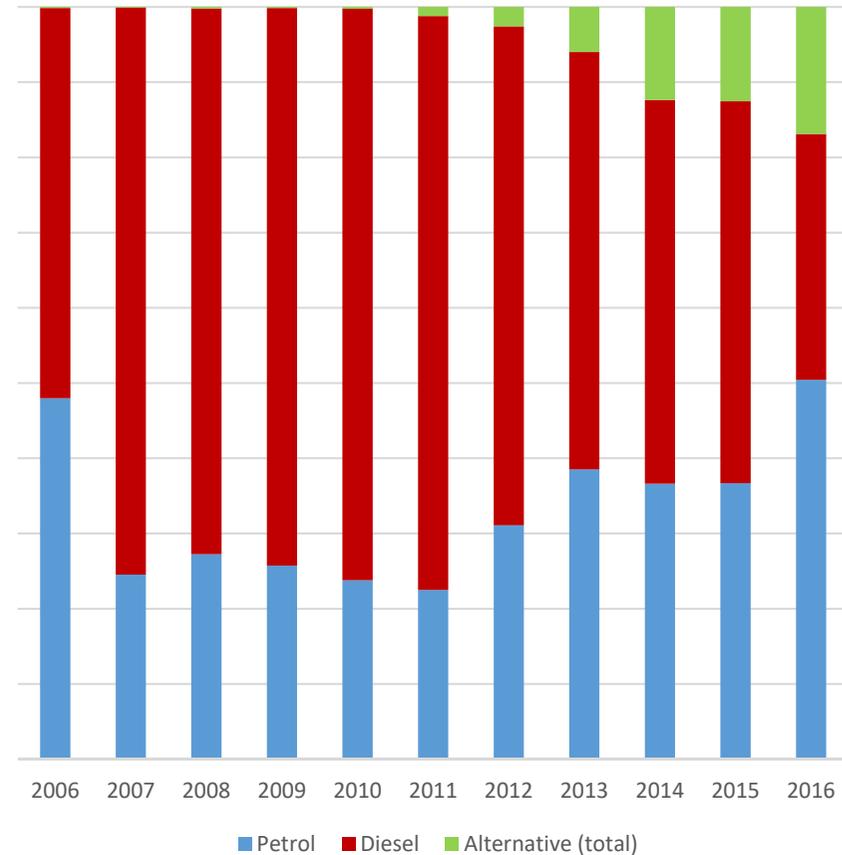
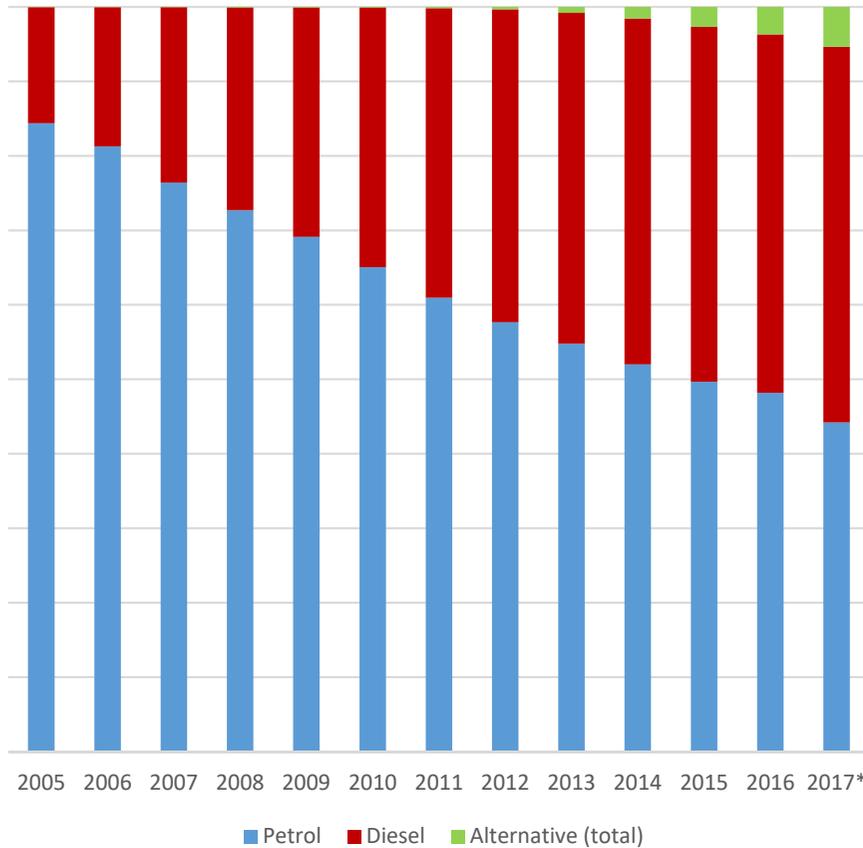
Useful to understand number of vehicles per person, age of vehicle fleet, fuels used, **emissions calculations**

Example: Passenger cars in Norway

Total Fleet

Vs.

New registrations



Total Fleet figures allow an assessment of current situation, new registrations show the direction of travel. N.b. hybrids included under petrol/diesel



Traffic measurement (vehicle-km)

- Motor vehicle movements on national territory, by vehicle type:
 - Motorcycles
 - Passenger cars
 - Coaches/buses
 - Lorries
- This is **all** motorized vehicles, goods and passengers

Gives local and national insights...AADT, total use of road network, different vehicle types' traffic levels



TRANSPORT

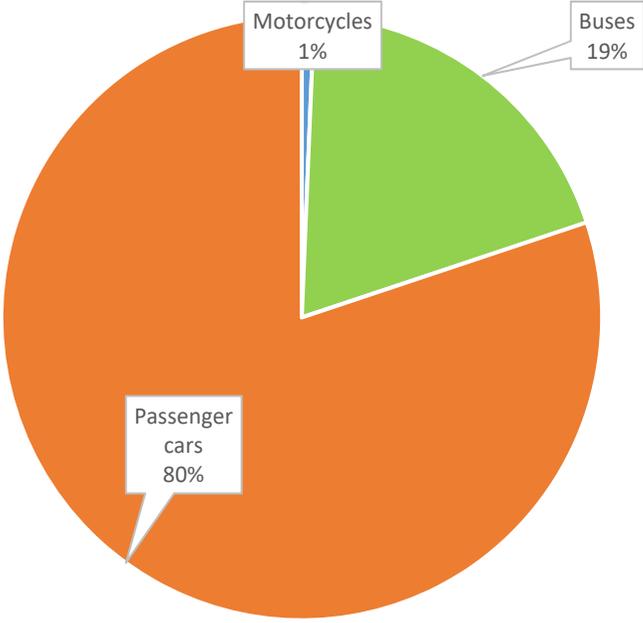
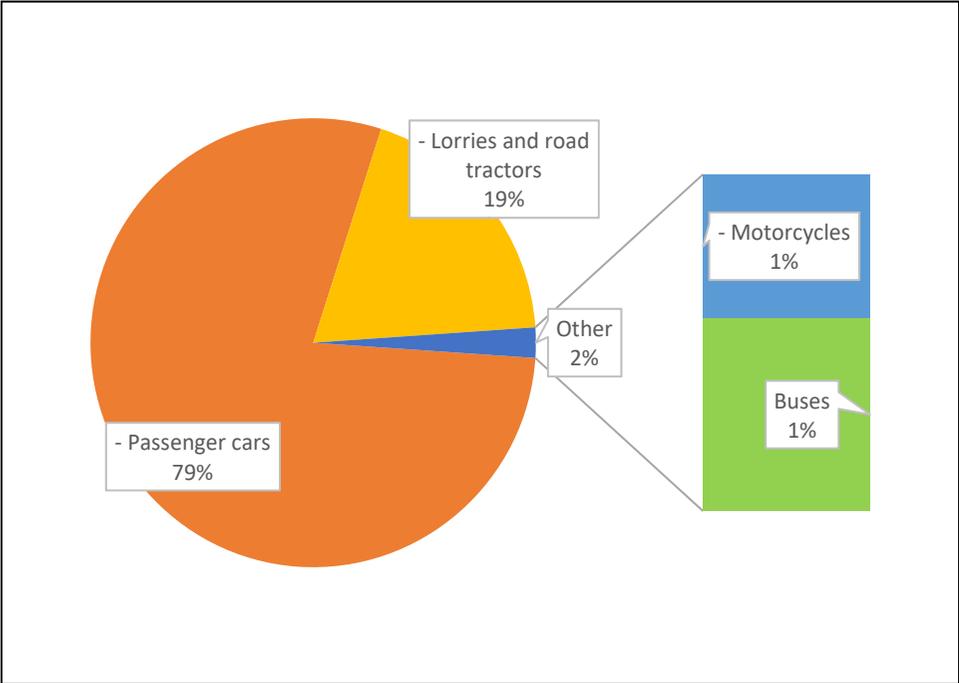


Example: Denmark 2016

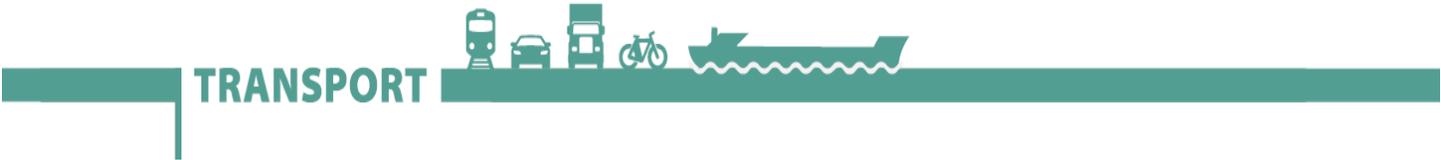
Vehicle-km

Vs.

Passenger-km



Bus transport less than 1% of vehicle-km, but 19% of passenger-km.

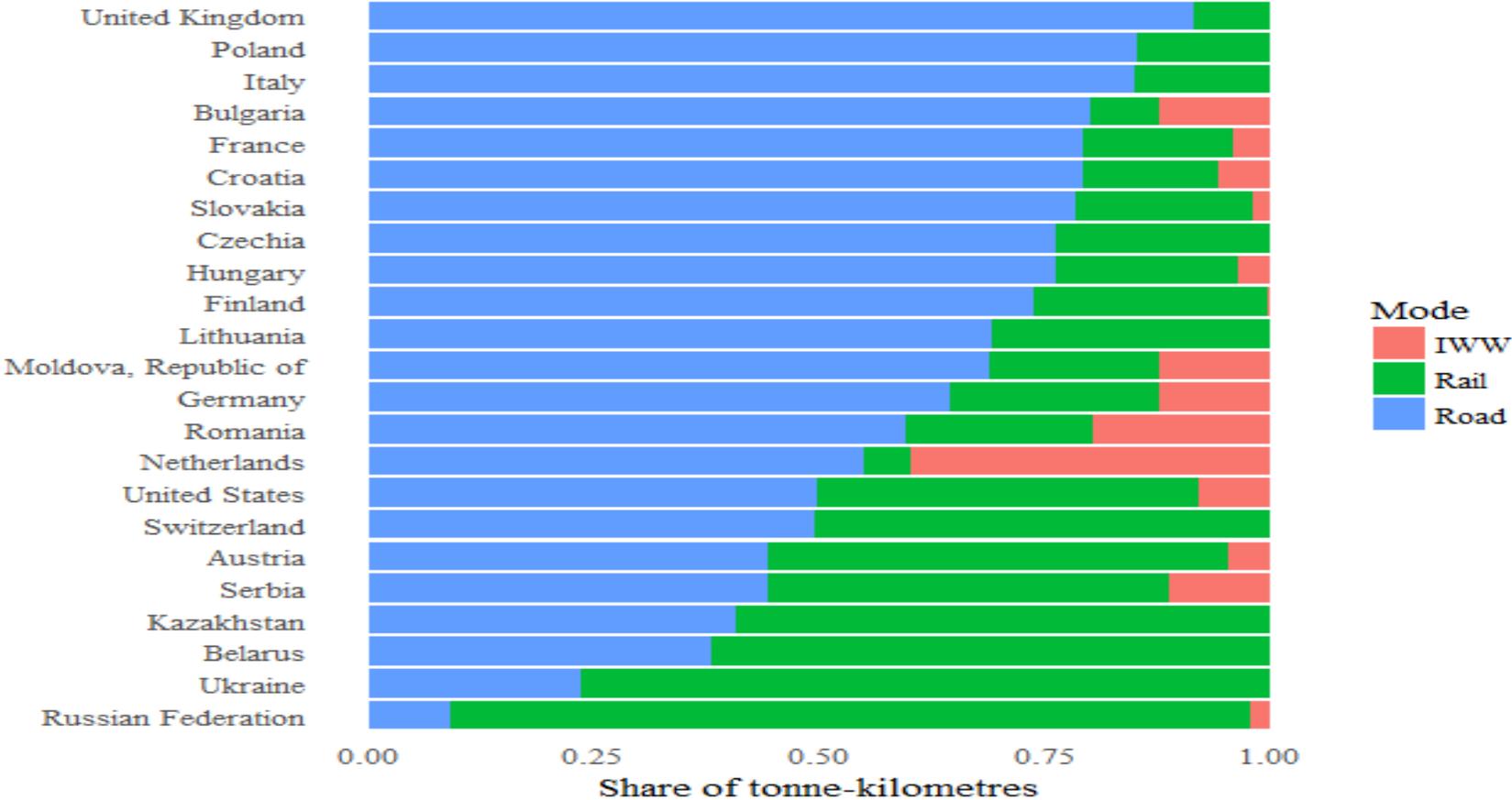


Transport measurement

- Passenger-km
 - Allows modal split calculations for personal mobility, commuting trends, access to jobs and education
 - Insights into carbon intensity of passenger travel and where there's room for improvement
- Tonnes and Tonne-km
 - Allows cross-modal comparisons on how goods are moved (carbon intensity, tonne-km/GDP)
 - Insights into pollution cost of moving goods
- Both are basis for transport energy efficiency indicators

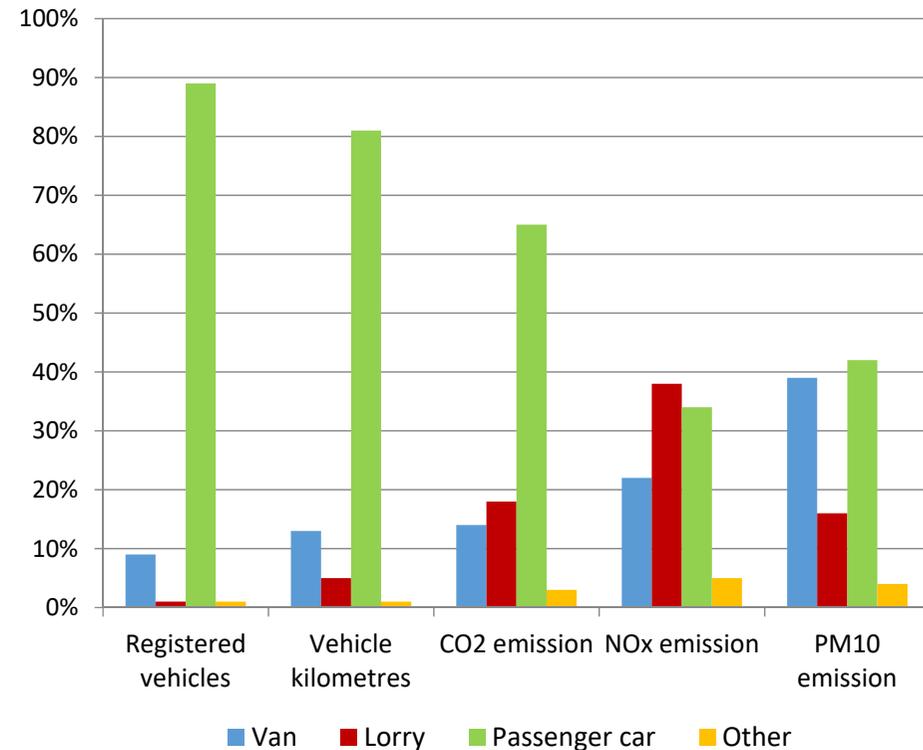
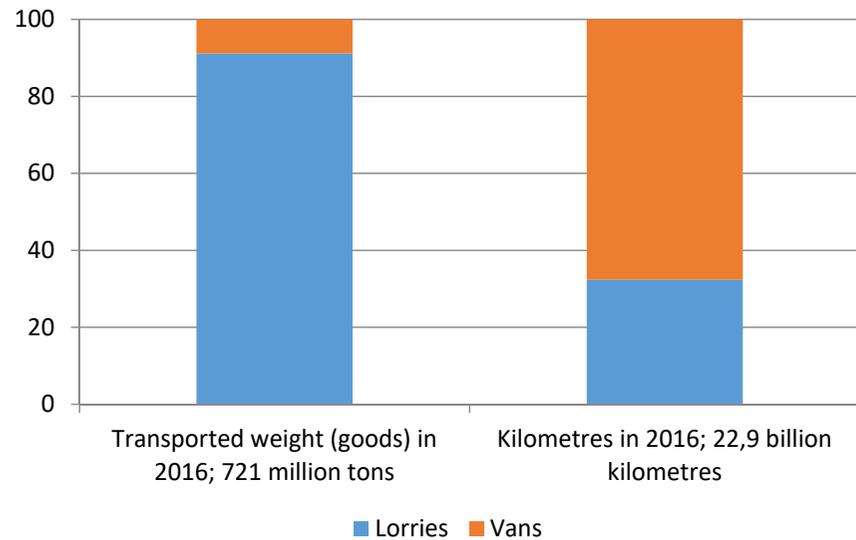


Goods, tonne-km modal split



Light goods vehicles (Vans)

- An important growth area (online deliveries, increased household services), yet little data is available as mandatory statistics collection legislation has a minimum vehicle weight (3500kg).
- Insignificant on a tonne/tonne-km basis, more so on a vehicle-km basis, even more so for local pollutants (and urban congestion, road safety, dangerous parking, emissions proximity to people, etc.)



Both graphs for the Netherlands, from a CBS Netherlands presentation



Transport Statistics Glossary: Common Definitions

- Existed as a joint UNECE/ITF/Eurostat publication since the early 1990s
- Covers ALL transport modes. Infrastructure, vehicles, traffic, transport measurement, safety.
- Allows transport statistics to be produced consistently across countries and modes
- Fifth edition currently being prepared, with new chapter **on environmental impact of transport. Input welcome.**

B.V-10 Road passenger trip

The combination between the place of embarkation and the place of disembarkation of passengers conveyed by a road vehicle.

A passenger transfer from one vehicle directly to another one of the same kind, regardless of the undertaking, shall not be regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a vehicle followed by a subsequent embarkation on another vehicle.

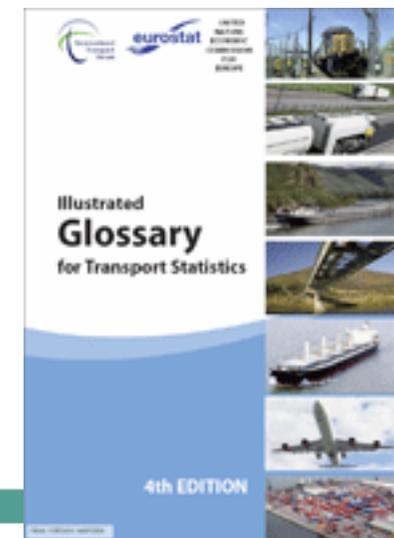
B.V-11 Public road transport

Public road transport covers passenger transport by bus or tram in scheduled service, whether operated by a public or private enterprise.

B.V-12 Road passenger trip on public road transport

The combination between the place of embarkation and the place of disembarkation of passengers conveyed by bus or tram.

A passenger transfer from one vehicle directly to another one of the same kind, regardless of the undertaking, shall not be regarded as disembarkation / embarkation. Whenever during the transfer another mode of transport is used, this is to be regarded as disembarkation from a vehicle followed by a subsequent embarkation on another vehicle.



E- Censuses

- Unique international traffic censuses, comparable data on traffic flows on main European roads (“E-roads”; AGR)
- E-Road: For 2015, data received from 21 countries
- Interactive map available unece.org/trans/main/wp6/e-roads_maps.html
- E-Rail: map to come



Data Collection Methods and Challenges

- UNECE data contacts are usually NSOs and MoTs, but can also be infrastructure agencies, national rail companies etc. A mix of sources means **national coordination** is important
 - **Admin data:** directly used for infrastructure information, vehicle registers etc.
 - **Surveys:** typically necessary for passenger-km and tonne-km, supported by admin data on e.g. fuel consumption and commuting patterns.
 - **Direct measurement:** road cameras and/or odometer readings, for AADT calculation and vehicle-km
- Common challenge: confusing domestic vehicles and foreign vehicles (residency versus territorial principle).
- New sources: mobile phone information for passenger movements. Slovenia use a mobile app for urban trip information.



WP.6 on SDGs

- Read our transport data SDG papers at

https://www.unece.org/trans/main/wp6/sdg_papers.html

- Workshops on improving data & sharing country practices to achieve the transport SDGs.

- Montenegro October 2017 (Western Balkans + Moldova)
- Kazakhstan October 2017 (SPECA)
- Slovenia November 2017 (Danube Region)
- Georgia February 2018 (Georgia and Albania)
- Greece May 2018 (Mediterranean countries)

Details at [unece.org/trans/transport-and-the-sustainable-development-goals.html](https://www.unece.org/trans/transport-and-the-sustainable-development-goals.html)

- Data production for SDG indicators, in particular 9.1.2.



Summary

- UNECE Transport Statistics provide important activity data for understanding environmental matters. **More cooperation is welcome.**
- All UNECE transport statistics are free to download and use <http://w3.unece.org/PXWeb/en>.
- See further details of our last meeting at <https://www.unece.org/index.php?id=46888>. Next meeting June 2019.

Thanks! Questions?

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