



# Use of innovative data for transport statistics

Item 7 – Innovation in Transport Data Collection and Measurement

European Commission - Eurostat

*9th ITF TRANSPORT STATISTICS MEETING*

*3-4 April 2023*

# European maritime statistics

- The EU legal act on maritime transport statistics requires dataset F2 (on vessels and port calls) to be provided annually at T+8 and data to be disseminated for the EU aggregates latest by T+16
- Data for other modes aviation, road freight, etc. are more timely, there is a need to improve timelines of maritime statistics to provide transport statistics of all modes earlier
- Scope for improving the timeliness of transport statistics by developing the use of new sources of data

# Using AIS data for maritime statistics

- Eurostat and the European Maritime Safety Agency (EMSA) compared aggregated AIS data to the data collected by the Regulation on maritime statistics and found that comparability depends on vessel types, type of services (scheduled/non-scheduled), port location, etc.,
- The comparison of ESS statistics and AIS data should be extended to more ports across the EU and complementary data (e.g. vessel data) to draw a reliable conclusion on usefulness of AIS data at EU level.
- Several Member States have worked with AIS data from the UN global platform, EMSA (ESSNET big data), or national AIS data and vessel from commercial databases developing successfully methods and producing maritime statistics from AIS.

# Early estimates of maritime traffic

- Eurostat produces early and quarterly emissions estimates, based on the most recent statistical data (e.g. annual statistics of the previous year) and proxies (economic activity, fuel deliveries, degree-days, etc.)
- A new joint Eurostat-EMSA project started in February 2023, on 'Early estimates of maritime traffic' using Eurostat (ESS) maritime statistics and as a proxy AIS data and vessel information provided by EMSA to estimate port traffic within a short delay.
- The methodology developed at national level will be the starting point to extend the comparison at EU level (IRL, DK, GR, NL)

# Eurostat and EMSA cooperation

A 'Memorandum of Understanding' was signed in December 2022 between Eurostat and EMSA to work together in developing short term estimates of maritime traffic

- EMSA has already started providing samples of aggregated data SafeSeaNet port calls, based on AIS and MARINFO vessel information data.

- EMSA will also provide clarifications and guidance on their data

- Eurostat provided the support of a contractor that is currently working on the analysis of the data.

# Study planned by Eurostat in 2023

The study is expected to last 8 months and the objective is to produce experimental statistics at EU and country level

More specifically, the study covers the following tasks:

- Comparing Eurostat (dataset F2) with EMSA data for several big EU ports (starting with IRL and NL ports) for the past 5 years to evaluate similarities in coverage and trends
- Developing a methodology (algorithm) at country level for making early estimates of port traffic based the most recent Eurostat data and the previous months' data from EMSA
- Documenting the approach and results of the produced estimates to go through the process of publishing, if possible, experimental transport statistics and also discuss them with the Member States

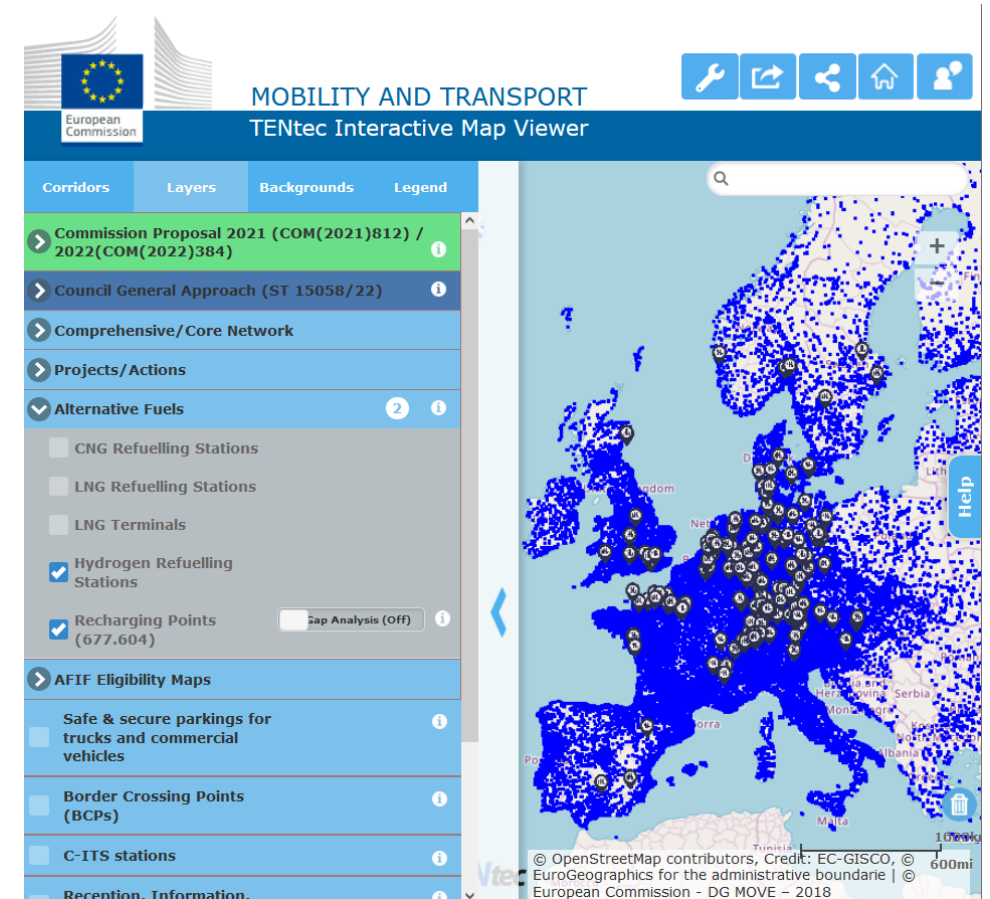
# Further activities

- Exploratory landscaping - study of new/innovative data sources for transport and mobility (concluded in 2022)
- Follow-up project '*Deployment of data lab for experimental statistics for mobility and transport based on new data sources*' (started in 2023)
  - Currently in the process of selection of use cases
  - Next step: evaluating feasibility regarding data sources, technical requirements and business feasibility
- Selection of use cases currently being considered:

# Charging infrastructure for alternative fuels

## *Possible experimental statistics:*

- Average distance between recharging points/ stations
- Unreachable NUTS 2 regions i.e., refuelling deserts of alternative fuels
- ...

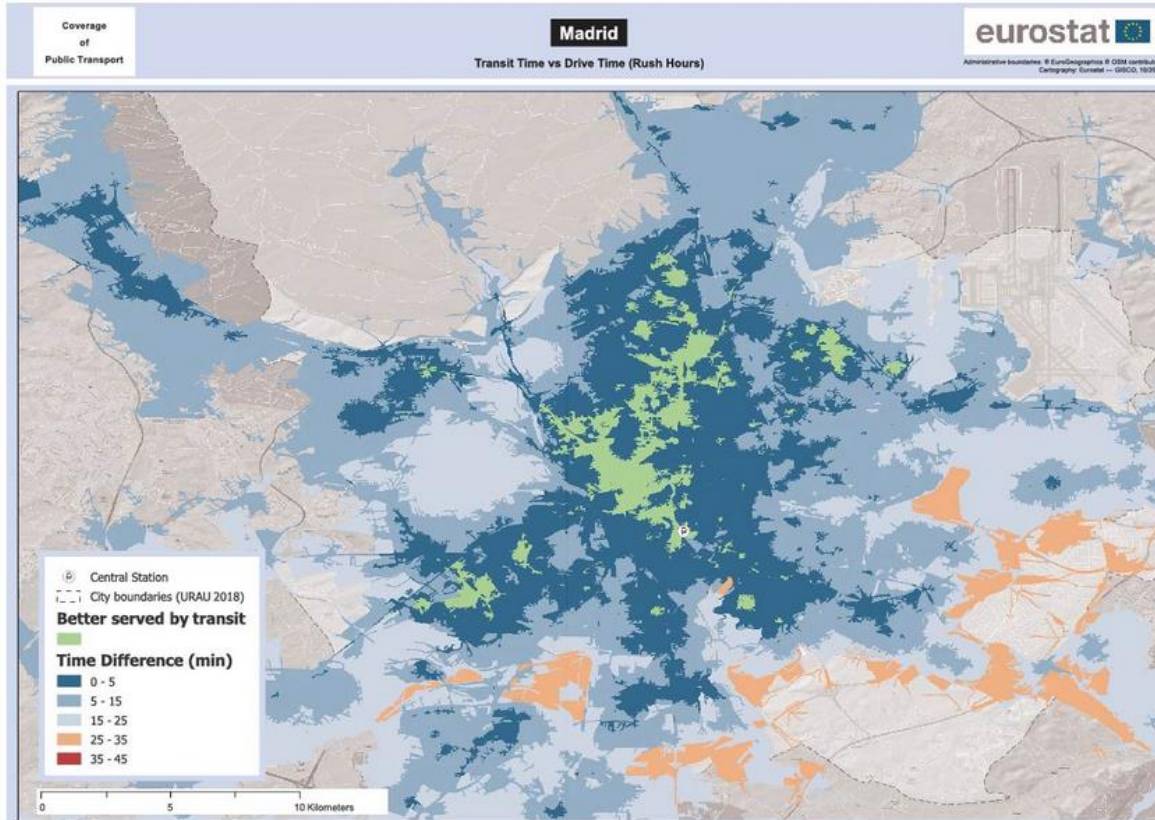


[TENtec Interactive Map Viewer](#)



# Urban transport

Comparative accessibility of Madrid Atocha train station by car and by public transport (transit)



Source: Eurostat analysis on behalf of ECA.

[Source: ECA Report \(2020\): Sustainable Urban Mobility in the EU](#)

## *Possible experimental statistics:*

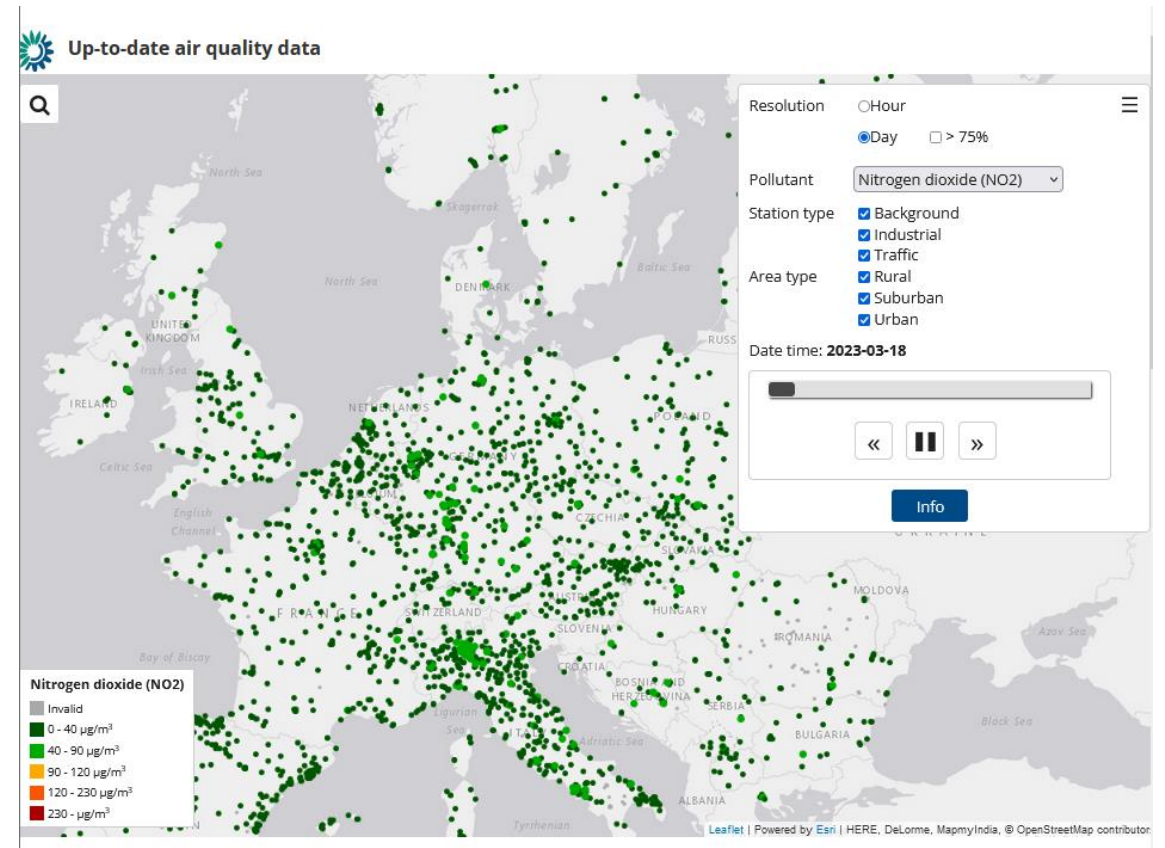
- Availability of public transport  
e.g. share of population with a public transport stop within 500m walking distance
- Share of population reachable within 30 minutes by mode of transport
- Accessibility of points of interest (e.g. hospitals, schools) by mode of transport

Potential modes: public transport, car, bike, by foot

# Traffic and Air Quality

## *Possible experimental statistics:*

- Overlay measurement stations' data on the concentration of air pollutant/s with traffic data of the surrounding area
- Depending on the available granularity of the data  
e.g. NO<sub>2</sub> concentration by traffic volumes



[Source: EEA's Up-to-date air quality data](#)

# Thank you for your attention