

Transport and climate change

Climate Change mitigation: United Nations Economic Commission for Europe For Future Inland Transport Systems tool.

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**(WP.5) Working Party on Transport Trends and Economics (35th session)
4-6 September 2023**



UNECE

ForFITS recent and forthcoming activities

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- Latest Application of ForFITS internally
 - ECE Environment Performance Review (EPR) of Azerbaijan
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 - Car Pooling / Car Sharing in Central Asia
- Transport Data Commons Initiative
 - Open data platform for transport, energy and GHG topics
 - UNECE as host of the prototype website
- Collaboration with MobilizeYourCity on emissions tools
- Conclusions / next steps

Internal application of ForFITS tool

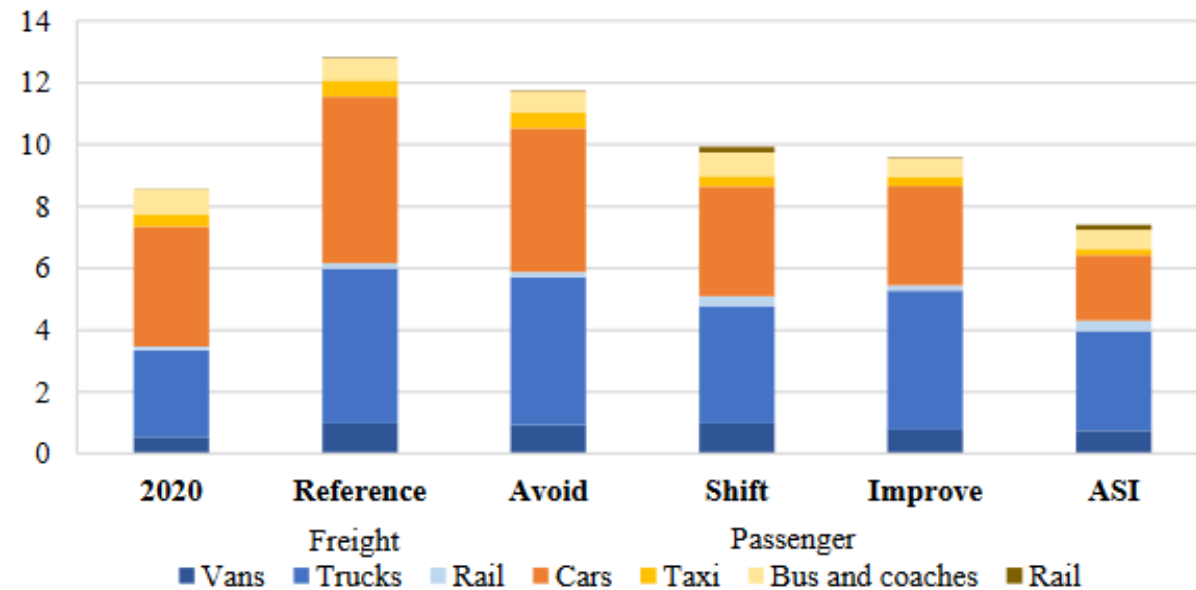
with the environment division of UNECE – Environment Performance Review in Azerbaijan



- In Azerbaijan, 2050 scenario would in the best case reduce GHG emissions by around 10 % from 2020, and more than 40% compared with reference scenario in 2050

- To achieve this, recommendations include:
 - link fuel prices with their carbon content
 - Further develop passenger mass transportation and active mobility networks
 - Dedicated provision on the import of low-CO2 used vehicles, based on ECE legal instruments

Well To Wheel CO₂ emissions by mode, all scenarios in 2050, MtCO₂



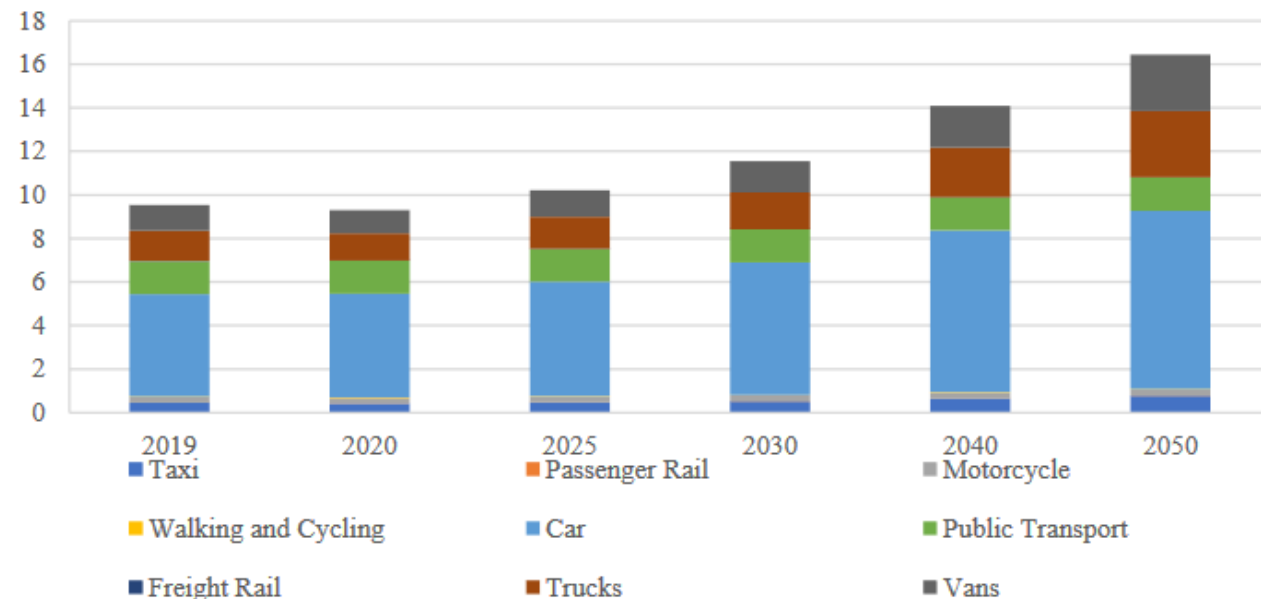
Internal application of ForFITS tool

with the environment division of UNECE – Environment Performance Review in Armenia



- In Armenia, historical data identification was challenging, little available evidence shows that :
 - Freight CO2 emissions increases faster than passenger in all scenarios
 - CO2 Emissions can be reduced by around 25% between 2020 and 2050 in the most ambitious scenario where all Avoid/Shift/Improve measures are implemented.
- To achieve this, recommendations include:
 - Consolidate public transport routes to allow shifting from minibuses towards larger buses or urban/regional rail
 - Shift from road freight to rail freight (esp. where electric lines are available)
 - Consider retrofit kits to improve energy efficiency with co-benefits on air quality

Traffic activity by mode under reference scenario, 2020–2050, Million vehicle.km/year

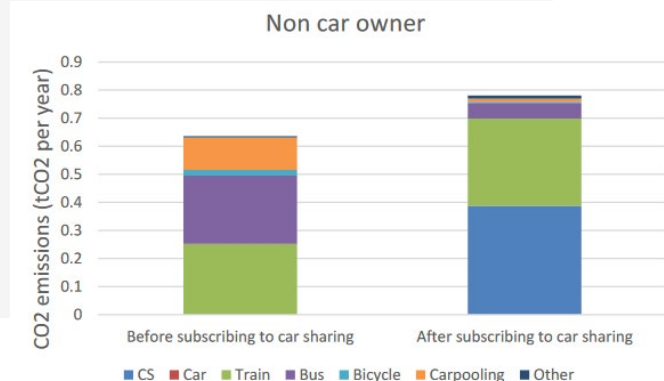
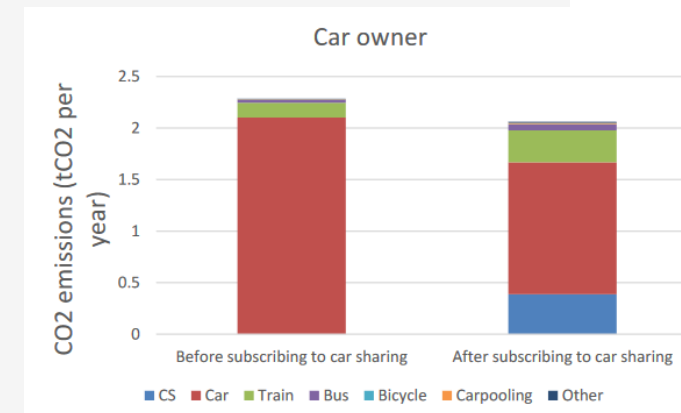


Internal application of ForFITS tool

Car Pooling / Car Sharing in Central Asia



- Looking at the CO2 emissions reduction potential in Kazakhstan, Kyrgyzstan and Tajikistan and for the cities of Bishkek, Nur-Sultan and Dushanbe
- Car Sharing schemes
 - Impact depends largely on average car ownership
 - For car-owning households, potential reduction of around 10% CO2 emission when subscribing to car sharing scheme
 - For non-car-owning households, might increase CO2 emissions by around 10% (with co-benefits on accessibility)
- Car Pooling schemes
 - Potential to reduce CO2 emissions by up to 30% for intercity trips
- To maximise emission reduction:
 - Car sharing schemes to target car owners living in cities
 - Car pooling to focus on intercity journeys, where detour and delays for additional passengers is minimal



ForFITS outreach

UNECE involved in the Transport Data Commons prototype



- Following decision 35 from the 84th session of ITC, which “...supported the proposed approach in order to further develop ForFITS, sustain its use internally, develop partnerships with other modelling groups...”
- Collaboration between many transport data users, data collectors and transport project implementers to have open transport data in a unique place: The Transport Data Commons
- Key features of the Transport Data Commons will include free, publicly available, centralized and transparent data access:
 - intuitive, state-of-the-art data visualization
 - data imports and export capabilities
- The initial focus will cover transport and climate change, but it may be expanded to air quality and road safety at a later stage
- Prototype website launched Q2 2023 to approach potential funders
 - UNECE hosting the prototype website
 - WP.6 secretariat also involved in the activities



ForFITS outreach

Transport Data Commons initiative

- 30 partners from Intl orgs, research, Aid/development institutions,...
- Funding to secure full fledge product still to be identified
- Aim to get secure funding before End 2023
- Institutional framework also to be decided by end 2023

Landing page website

www.transport-data.org



 **Transport Data Commons**

[Home](#) [About Us](#) [FAQ](#) [Contact Us](#)

[Join Community](#)

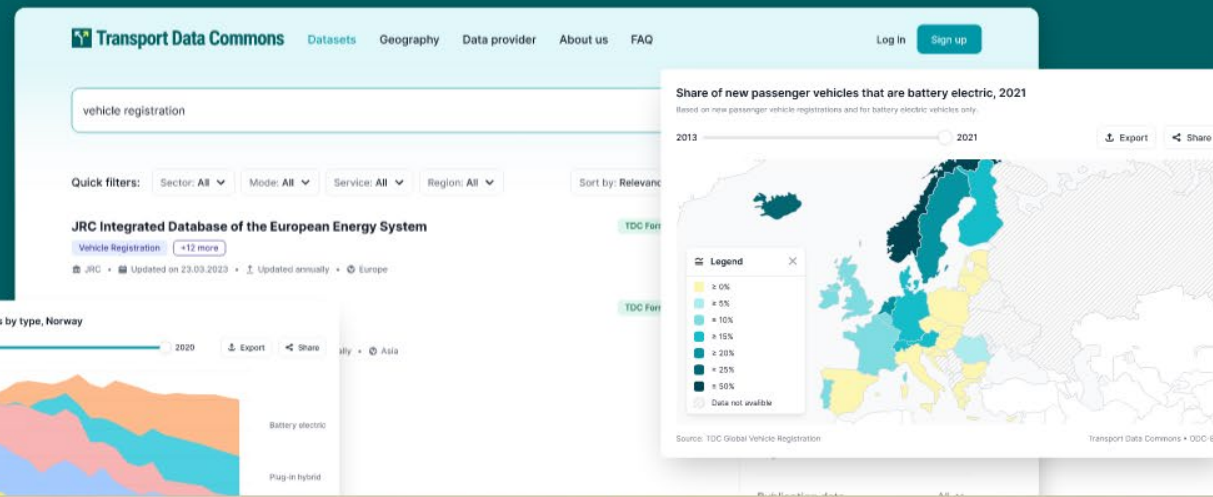
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Making high quality transport data **accessible**

Transport Data Commons aims to improve access, sharing and analysis of transportation data for a more sustainable future.

[Join Newsletter](#)

[Join Community](#)



Click dummy website

Not public, for demonstration purposes



TDC Road Passenger Transport Activity

TDC Harmonised

This dataset and documentation contains detailed information on passenger activity the world, a harmonised and up to date transport data set of historical values, 1990 - 2022.

TDC • Updated 23 March 2023 • 1700+ Downloads

Series: 2021 Hide empty set values



3,234 Records
No active filters

X Axis

Geography
30 values displayed

Series

Time
14 values displayed

Values

Mode of transport
Road

Vehicle category
Total

Recently added

Explore available datasets and gain valuable insights into the transportation trends globally

TDC Harmonised

TDC Global Vehicle Registration

Vehicle registration Transport data

This dataset and documentation contains detailed information on vehicle registration around the world, a harmonised and up to date transport data set of historical values, 1970 - 2022.

TDC • Updated on 23 March, 2023 • Worldwide

Show dataset →

TDC Formatted

JRC Integrated Database of the European Energy System

Transport data

The JRC "Integrated Database of the European Energy System" (JRC-IDEES) is a one-stop data-box that incorporates in a single database all information necessary for a deep understanding of the dynamics of the European energy system, so as to better analyse the past and to create a robust basis for future policy assessments.

EC-JRC • Updated on 23 March, 2023 • Europe

TDC Harmonised

TDC Global Passenger Activity

Passenger activity Transportation behaviour

This dataset contains survey data collected from residents of various urban areas, providing insights into transportation behaviors, preferences, and challenges. It can be used to inform the development of sustainable urban mobility solutions and policies.

TDC • Updated on 23 March, 2023 • Worldwide

Show dataset →

Intercity Travel Demand Data in North America

Intercity transport Travel demand Mode choice

This dataset contains information on intercity travel demand patterns, including data on mode choice, trip duration, and travel frequency. It can be used to inform the development of sustainable intercity transportation solutions and policies.

ITS-Davis • Updated quarterly • North America

TDC Formatted

ADB Asian Transport Outlook Database

Transport data Economic Impact of Transport

Asian Transport Outlook (ATO) is initiated by the Asian Development Bank (ADB) to strengthen the knowledge base on transport in the Asia-Pacific region. The ATO is developed in support of the planning and delivery of ADB Transport Sector Assistance. The ATO also supports Asian governments in transport policy development and delivery. ADB is working with other interested parties in developing the ATO as an instrument to track the implementation of the Sustainable Development Goals (SDG), the Paris Agreement and other relevant international agreements on sustainable development in the transport sector.

ADB • Updated on 23 March, 2023 • Asia & Pacific

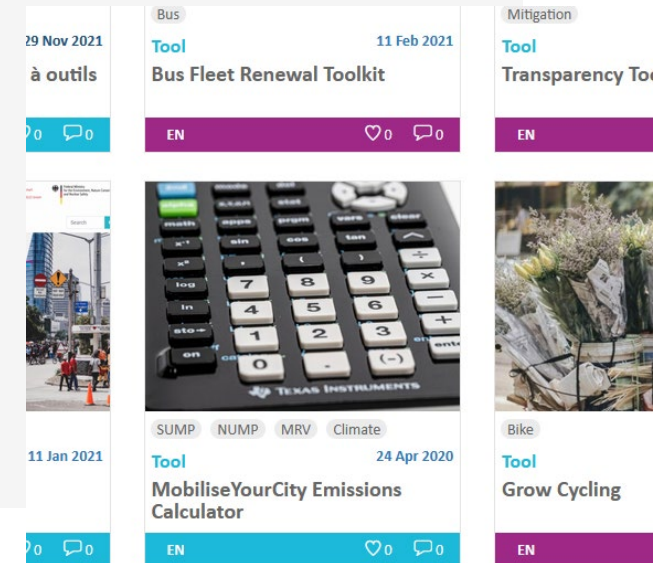
Show dataset →

ForFITS outreach

UNECE/ForFITS in discussion to become Knowledge Partners of the MobiliseYourCity Partnership



- The MobiliseYourCity Partnership aims to empowers 100 cities and 20 countries to improve urban mobility for their citizens and decarbonise transport to fight the global climate crisis.
- ForFITS invited to join the MobiliseYourCity Partnership as a knowledge partner
 - Existing knowledge partners include institutions such as UN Habitat or the Institute for Transportation and Development Policy (ITDP).
 - Internal process started to be able to sign MobilizeYourCity declaration
- Aim of the collaboration on joint resources for emissions calculation tool development and upgrades
- Capacity building and joint workshop when and where needed
- More info: <https://www.mobiliseyourcity.net/mobiliseyourcity-emissions-calculator>



Conclusions



- Use of ForFITS for internal purposes provides added value to support GHG mitigation strategy for ECE member countries
- Transport Data Commons initiative potentially supporting open data on transport energy and emissions, for harmonized, robust forward looking projections
- Collaboration with MobilizeYourCity partnership to help deliver on more user-friendly emissions calculation tools, synergies for further model developments



Thank you!

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