



TREND REPORT

ON THE TRANSPORT SECTOR



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Introduction

In 2021 the EU transport sector consisted of 1.3 million enterprises employing 10.2 million people¹. Transport not only provides connectivity, but also influences the competitive landscape of trade, as the availability, pricing, and quality of transport services affect production processes and the selection of trade partners, shaping supply chains. For the sustainable growth of the European economy it is crucial to secure transport **affordability, reliability, accessibility**, as well as **security** while addressing the challenges related to climate change (mitigation of sectoral impact on climate as well as sectoral resilience to the effects of climate change) and to disruptive crises.

Selected data on the EU transport sector performance

The sector of transport and storage services (including postal and courier activities) contributed 5% of GVA in the EU in 2022²

Freight transport

In 2022 the volume intra-EU **freight transport** reached 3471 billion tkm (tonne-kilometres), to which the particular modes contributed as follows: road 53.8% (with an increase from 50.5% in 2015), sea 28%, rail 11.9%, inland waterways 3.5%, and 2.7% oil pipelines.

Compared to 2015, all freight transport modes could boast higher volumes, except inland waterways and pipelines (see Table 1). The biggest volume increases were observed in road and sea transports (19% and 12% respectively), followed by air (8%). The COVID-19 pandemic affected all transport modes, particularly air (11% decline from 2019 to 2020) which however fully recovered by 2022 and so did rail, while road transport noted a 6% increase compared to the pre-pandemic 2019 volume level.

Table 1 Freight transport dynamics in EU-27 in the years 2015-2022

EU-27 performance by mode for freight transport (% increases in volumes measured in billion tonne-kilometres)						
Road	Rail	Inland Waterways	Pipe- lines	Sea	Air	Total

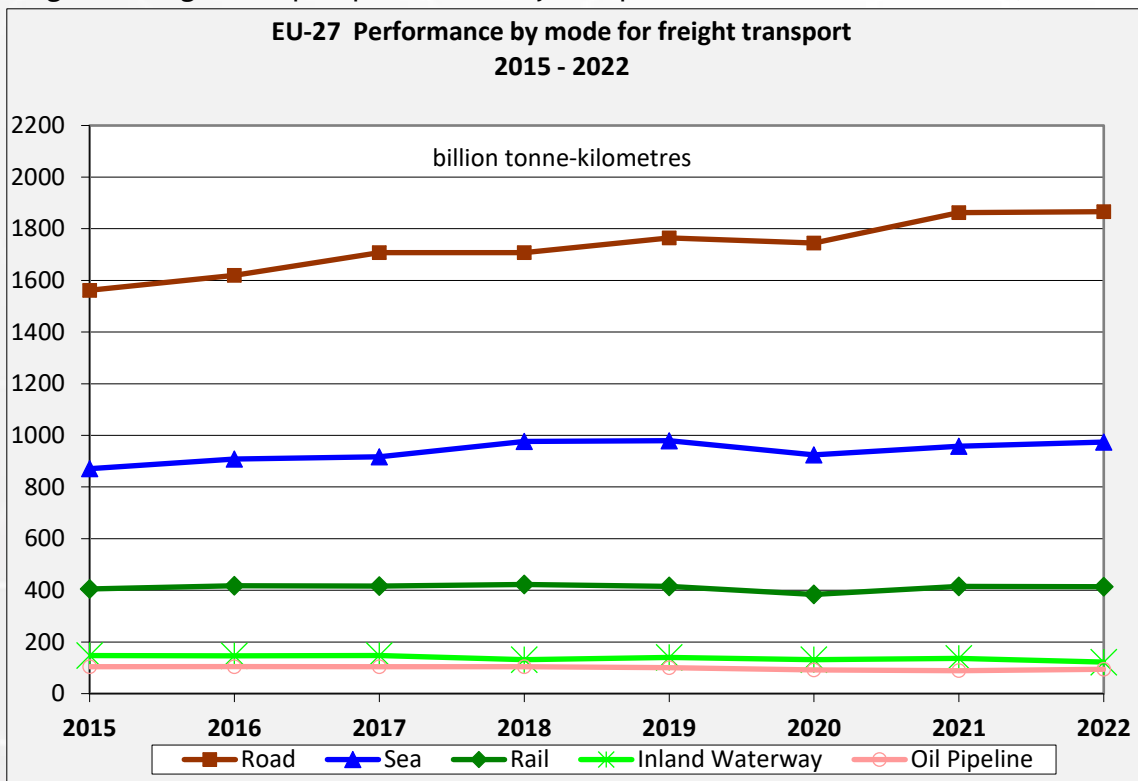
¹ https://transport.ec.europa.eu/news-events/news/new-eu-transport-report-current-trends-and-issues-2024-06-27_en; 10.5 million in 2022 see footnote below.

² The statistical data quoted in the report is based on [the EU Transport in Figures Statistical Pocket Book 2024](#), unless indicated otherwise.

2015 -2019	13%	2%	-5%	-3%	12%	8%	10%
2019-2020	-1%	-8%	-6%	-9%	-6%	-11%	-4%
2020 -2022	7%	8%	-7%	2%	5%	13%	6%
2015-2022	19%	2%	-17%	-10%	12%	8%	12%

Source: based on the data from [the EU Transport in Figures Statistical Pocket Book 2024](#).

Diagram 1 Freight transport performance by transport mode in the EU 27 from 2015 to 2022



Source: [the EU Transport in Figures Statistical Pocket Book 2024](#).

In 2022 the external trade (totalling 2413.8 billion EUR) in terms of value share was dominated by maritime transport (47.6%), followed by road (21.5%) and air (21.3%). The maritime transport also had the dominating share in freight volume (73.9% equivalent to 1612.8 million tonnes), with no other single transport mode exceeding 10%.

Passenger transport

In the intra-EU **passenger transport** cars prevailed, representing 73% of the total of 5617 billion pkm (passenger tonne-kilometres). The share of land collective transport (buses, coaches,

railways, tram and metro) was 15.6%, air 9.1%, and sea 0.3%. In the **land modal split**, passenger cars represented 82,4% of the total of 4099,6 billion pkm (powered two-wheelers not included). Transport volumes in all modes experienced a steep COVID-19 pandemic-related decline as indicated in Table 2 and by 2022, none reached the pre pandemic levels, with individual transport (cars, motorcycles) and rail performing best in closing the gap.

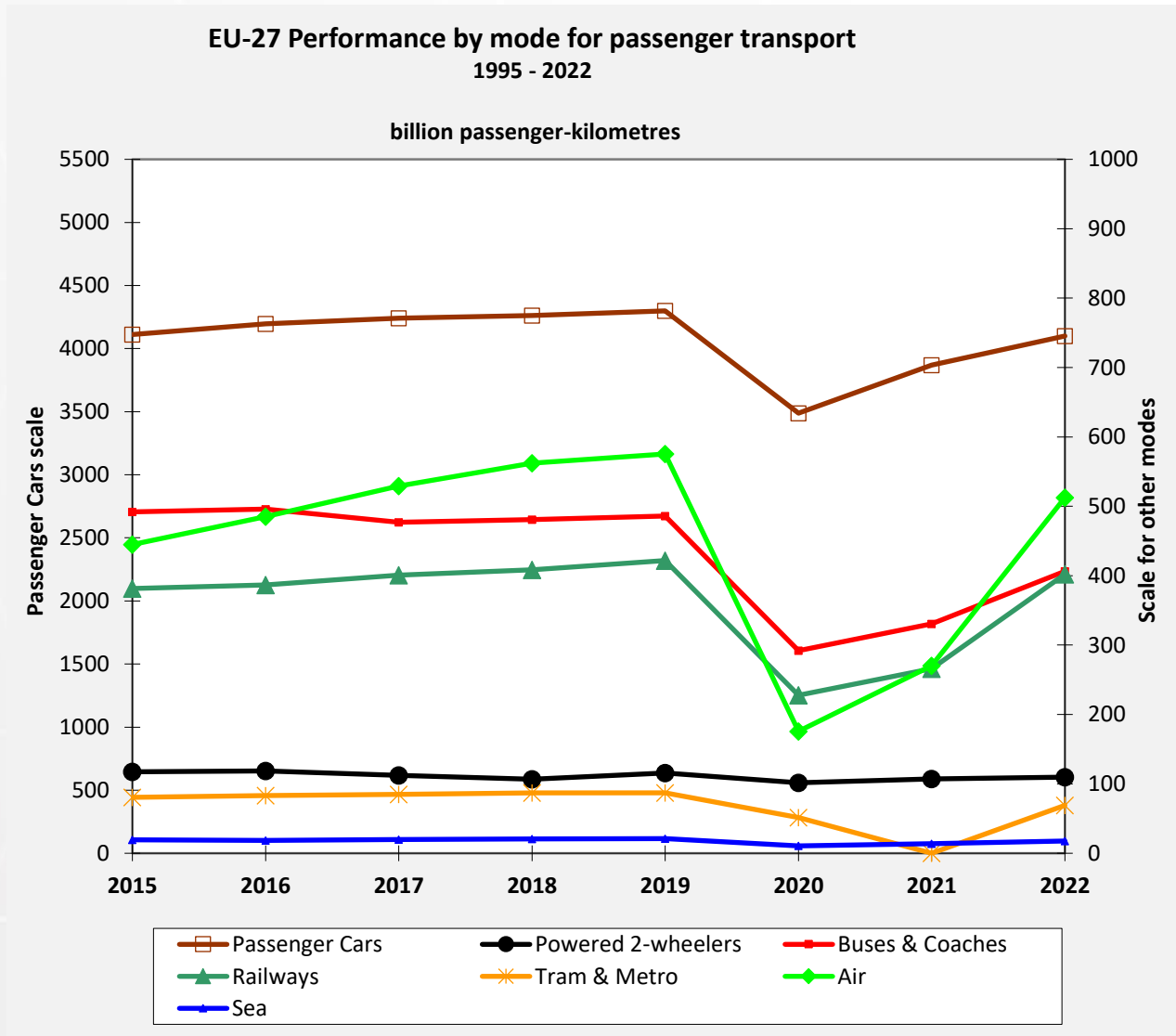
Table 2 Passenger transport dynamics in EU-27 in the years 2015-2022

EU-27 performance by mode for passenger transport* (% increases in volumes measured in passenger tonne-kilometres)								
	Cars	Powered two wheelers	Bus & coach	Rail	Tram & metro	Air	Sea	Total
2015 -2019	5%	-2%	-1%	11%	8%	29%	9%	6%
2019- 2020	-19%	-12%	-40%	-46%	-41%	-69%	-50%	-28%
2020 -2022	18%	8%	39%	77%	34%	191%	66%	29%
2015-2022	0%	-7%	-17%	5%	-14%	15%	-9%	-1%

Source: based on the data from [the EU Transport in Figures Statistical Pocket Book 2024](#)

* only domestic and intra-EU 27

Diagram 2 Passenger transport performance by transport mode in the EU 27 from 2015 to 2022

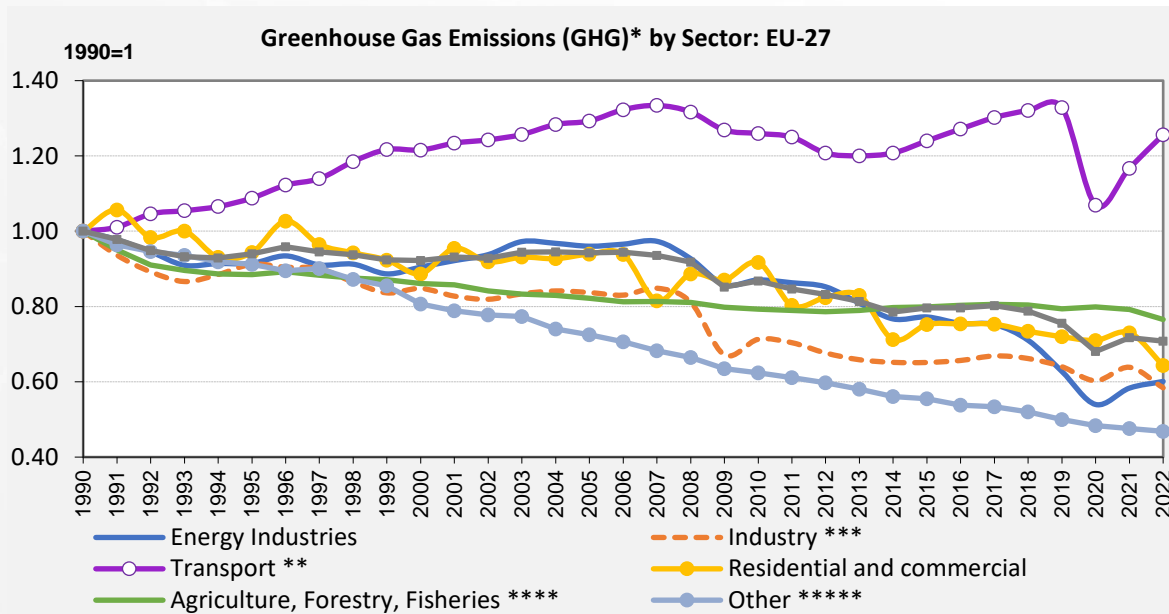


Source: [the EU Transport in Figures Statistical Pocket Book 2024](#).

Sustainability

In 2022 **the share of the transport sector** (excluding international aviation and maritime) in **the final energy consumption of the economy was 31%**, almost equalling the one of the road transport alone (29%). **The GHG emissions** from the transport sector (excluding international maritime transport, including international aviation) reached 913.0 Mtoe (million tonne CO₂ equivalent) - of which 763,7 Mtoe came from road transport alone - with a consistently upward trend since 2014, except the temporary sink caused by the activity downside due to COVID-19 pandemic, which makes it stand out among the other sectors. (See Diagram 3) This involved 26% increase from 1995 to 2022 (0,96% annually), 17,8% increase from 2020-2022 (9% annually), 8% increase from 2021 to 2022.

Diagram 3 Greenhouse gas emissions trends by sector from 1990 to 2022



Source: European Environment Agency, April 2024

NB: * Excluding LULUCF emissions and international maritime, including international aviation and indirect CO₂.

** Excluding international maritime (international traffic departing from the EU), including international aviation.

*** Emissions from Manufacturing and Construction, Industrial Processes and Product Use

**** Emissions from Fuel Combustion and other Emissions from Agriculture.

***** Emissions from Fuel Combustion in Other (Not elsewhere specified), Fugitive Emissions from Fuels, Waste, Indirect CO₂ and Other.

Among the sectors of the whole economy, **transport was responsible for the highest share of the GHG (and CO₂) emissions : 26.2% (31,6%),** in comparison the respective share of energy industries was 24,9%(30%) in 2022 (see** note in Diagram 3). **As much as 73,2% of GHG emissions in the sector came from road transport,** followed by navigation (including international bunkers) – 14.2%, civil aviation (including international) 11,8%. The railways share (excluding direct emissions from electricity consumption) was 0,3%. In 2022 aviation, road transport and navigation noted higher emission values than in 2015 (by 1%, 1% and 5%) respectively, contrary to the rest of the sector which noted reduced emissions.

The biggest contributor of GHG emissions in road transport at were passenger cars accounting for 59.1%, followed by heavy duty trucks and buses -27.6%. Light duty trucks emitted 12.1%, and motorcycles for 1.2% motorcycles (and almost the same split was observed for CO₂ emissions). In 2022 GHG emission value for road transport was 1% higher than in 2015 (for light duty trucks and heavy duty trucks and buses 9% higher, and for cars 3% lower).

The share of zero emission vehicles among passenger cars grew from 5.3% in 2020, to 12.1% in 2022, and 14.6% in 2023. Among newly registered light good (<3.3 t) vehicles represented 5.2%, and buses and coaches 12.6% in 2022.

The EU Policy framework

The EU transport policy, has played an important role in facilitating cross-border transport and enhancing access to international markets.³ It focuses on improving transport infrastructure, completing the Trans-European Transport Network (TEN-T) and developing interoperable infrastructure (through funding secured by the Connecting Europe Facility, the Cohesion policy, InvestEU, the Recovery and Resilience Facility) taking into account the needs of low-emission and smart mobility.

The European Green Deal set a bold target of **reducing transport emissions by 90% by 2050**, using 1990 levels as a baseline. This is to be achieved, according to the Sustainable and Smart Mobility Strategy through: (1) reducing dependence on fossil fuels by transitioning to low- and zero-emission vehicles and using renewable fuels, (2) increasing rail passengers and public transport use while boosting freight transport via rail and waterways, and (3) implementing the polluter pays and user pays principles through carbon pricing and infrastructure charges.

Under the new Urban Mobility Framework⁴ requires all major cities ("urban nodes") on TEN-T to develop a sustainable urban mobility plan by 2025. The framework outlines a common list of measures and initiatives for these cities, as well as the rest of the EU's cities, to meet the challenge of making their mobility patterns sustainable.

Under the 'Fit for 55' Package, the REPowerEU plan, and the resulting legislative package, which provides emission reduction targets for a wide range of sectors, the EU is to achieve 57% reduction of its net greenhouse gas emissions by 2030. All the proposals in the package have been adopted, except the revision of the Energy Taxation Directive, which is currently negotiated.

The Alternative Fuels Infrastructure Regulation (AFIR), which sets the binding targets for the deployment of electric charging and hydrogen refuelling publicly available infrastructure was complemented by requirements for charging infrastructure in residential and non-residential buildings (homes and offices) introduced with the revision of the Energy Performance of Buildings Directive (EPBD), adopted in April 2024.

In January 2024, revised CO₂ emission standards for heavy duty vehicles (HDVs) were agreed, setting the emission reduction targets for newly manufactured HDV at 45% for 2030-2034, 65% for 2035-2039 and 90% for 2040 compared to 2019 levels. It applies to almost all trucks, buses and trailers. For trailers and semi-trailers specific emission targets were set (7.5% and 10.5% respectively) from 2030. The manufacturers are free to choose whether they are going to meet the targets by producing more efficient internal combustion engine (ICE) trucks or sell more zero-emission vehicles.

³ Transport in the European Union. Current Trends and Issues 2024

⁴ https://urban-mobility-observatory.transport.ec.europa.eu/news-events/news/new-eu-urban-mobility-framework-roadmap-published-2021-04-27_en See also Climate Neutral and Smart Cities Mission.

In April 2024, **the Euro 7 regulation** established updated standards for the emissions from road vehicles, for the first time covering N₂O. It sets stricter limits for particle emissions from braking, and provides for stricter requirements regarding mileage and vehicle lifetime. It also introduces requirements for battery durability.

Challenges posed by decarbonisation

While, according to the EC recent assessment transport decarbonisation measures could reduce transport emissions by almost 80% by 20240 compared to 2015 levels, decarbonisation remains particularly challenging in the case of the aviation, maritime, and heavy duty vehicle segments of the sector, due to technological difficulties in some cases, as well as very high costs involved, as pointed out by the Draghi report⁵. There is a significant price gap between conventional fuels and their zero- and low-carbon alternatives which are crucial for achieving the planned GHG emission reduction. The high prices of electric tractors and electricity discourage the electrification of the SME dominated heavy duty vehicles segment, all the more so a dedicated charging infrastructure is practically non-existent. In the light duty vehicles segment, the limited charging infrastructure is holding back demand for EVs. The available alternatives to electrification, which are relevant for aviation and navigation, may also need to be considered for heavy duty transport. Building a supply chain for alternative fuels and increasing the production capacity could reduce their costs. Ultimately, the path to CO₂ reduction should be technology neutral, taking into account economic feasibility, along with social and environmental costs and benefits along the value chain.

Besides switching to sustainable fuels, the sector will make an increased use of automation, digitalisation and AI (e.g. autonomous functions, predictive maintenance, real-time traffic monitoring) as well as new business models and service patterns: such as last mile deliveries, shared mobility, intermodal services, or reverse distribution logistics driven by circular economy.

To be effective, decarbonisation policy measures need to be designed and applied considering the different transport (sub)sectors in a holistic, coordinated approach, recognising the interdependencies between its segments and modes and their possible contributions in supplying the transport needs in the most effective and sustainable way (so “each transport sub sector has its place in the transport system and is contributing to the green transformation”⁶), as well as taking into account interconnections with other sectors, notably energy (e.g. for supply of electricity and e-charging infrastructure), telecommunications, and industry (e.g. for supply of vehicles, rolling stock and vessels). However such an integrated approach in policy planning has been missing, as illustrated by prioritising road versus rail transport (particularly in the national level infrastructure investment policies) or by the missing update of the EU legal framework⁷ to incentives the development of intermodal transport for freight, as pointed out by the Draghi report.

⁵ [The future of European competitiveness: Report by Mario Draghi](#)

⁶ [ETF Vision for Sustainable Transport. Policy Position Paper.](#)

⁷ [Combined Transport Directive.](#)

Labour related challenges

Persons employed by the transport and storage sector totalling 10.2 million (as of 2021) represented 5.3% of the total EU workforce. More than a half (52%) worked in land transport, 3% in water transport (maritime and in-land), 3% in aviation, and 27% in warehousing and supporting activities, while 14% in postal and courier services.

On the one hand the sector has experienced employment growth across all transport modes, on the other hand, it has been suffering from persistent labour shortages⁸. The situation is aggravated by the higher average age of workers compared to the other sectors, and the simultaneous unattractiveness of jobs to young people and women. (Women represent only 22% of the sector workforce on average, but only 2% among heavy duty vehicle drivers). International freight (road and rail) and coach transport, as well as civil aviation have been particularly affected by the negative impacts of increased cost competition on labour costs and on regulating working conditions through social dialogue, as reported by Broughton et al in a recent study for the European Parliament⁹.

Labour demand in terms of occupational profiles and skill requirements are expected to change with the advances of decarbonisation, digitalisation and automation. While the latter two may open new opportunities for women (for instance in maritime transport), they will reduce demand for low skilled workers, and may mitigate some of labour shortages (e.g. due to deployment of automated transport). New skill demands will be related to information technology, data management, cybersecurity, a growing role of predictive monitoring, as well as safe handling of alternative fuels and operating hybrid and zero-emission equipment (for instance in the maritime sector).

New job opportunities are expected in services connected with urban mobility and interconnected mobility services, or related to vertical take-off and landing aircrafts (eVTOLs) and drones.

The authors of the study point out that with increased connectivity and integration of different transport modes driven by decarbonisation, intersectoral coordination of social dialogue will gain importance, especially that workers in the different transport sub sectors are going to face similar challenges, which require well planned anticipatory measures, for instance to provide for skills transition. Meanwhile, though, irrespective of the pace of green transition, there are a number of outstanding problems connected to working conditions which need to be addressed, such as atypical forms of work, or exploitative labour practices, as well as limited access to crucial

⁸ For instance the Draghi report reports 400,000 vacancies in the heavy duty vehicle sector as of 2024

⁹ Broughton, A. Tanis, J. and Brambilla M. (Ecorys), Voss, E. and Vitols K. (wmp consult) 2024, Research for TRAN Committee – Trends, challenges and opportunities in the EU transport labour market, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels

infrastructure for truck drivers (securing safe parking, rest and sanitation), as also reflected in the joint statement of IndustriAll Europe and the European Transport Workers' Federation¹⁰.

¹⁰ Joint Statement IndustriALL Europe – European Transport Worker's Federation (ETF) principles and demands for "Building a Just Transition towards A Smart and Sustainable Mobility".



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