



KEY FIGURES ON

EUROPEAN TRANSPORT

2023 EDITION





List of countries

BE Belgium
BG Bulgaria
CZ Czechia
DK Denmark
DE Germany
EE Estonia
IE Ireland
EL Greece

ES Spain
FR France
HR Croatia
IT Italy
CY Cyprus
LV Latvia
LT Lithuania
LU Luxembourg

HU Hungary
MT Malta
NL Netherlands
AT Austria
PL Poland
PT Portugal
RO Romania
SI Slovenia

SK Slovakia
FI Finland
SE Sweden
IS Iceland
LI Liechtenstein
NO Norway
CH Switzerland

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EUROPEAN TRANSPORT

2023 EDITION

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Foreword



I am pleased to present this second edition of *Key figures on European transport*. It provides a selection of key transport indicators for the European Union (EU), its individual Member States and European Free Trade Association (EFTA) countries, drawing from the rich collection of data available at Eurostat. Transport statistics can be used not only to describe the transport of people and goods, but also to provide information about issues such as transport equipment, safety, infrastructure and the economy, as well as transport's environmental impact.

Transport is critical to European businesses and global supply chains as well as to passengers. The transport sector contributes around 5 % to the EU's gross domestic product and employs more than 10 million people. However, transport emissions represent around 25 % of the EU's total greenhouse gas emissions. Transport's importance has placed it at the heart of the European Green Deal initiatives which strive for cleaner, greener and smarter mobility.

The COVID-19 pandemic and related restrictions affected the supply of and demand for many transport services within the EU. Most of the data in this publication are available up to 2021 or 2022 and show the impact of the pandemic in these years. The statistical indicators for 2022 reflect the early impact of the Russian military aggression against Ukraine and the cost-of-living crisis.

Key figures on European transport starts with two chapters presenting transport measurement, providing information on the movement of people and goods by land, water and air transport modes. The third chapter looks at transport safety, again presenting information for various transport modes. The fourth chapter combines information on transport, the environment and energy. The final chapter looks at a range of economic indicators, such as employment in the transport sector, transport prices, and expenditure on transport.

Eurostat's wide range of statistical information on transport can be accessed through our [website](#). The latest and most comprehensive data available on the EU, its Member States, the EFTA countries, as well as candidate countries and potential candidates are available through our online [database](#), while analysis is provided through a range of online articles in [Statistics Explained](#).

I hope that you find this publication interesting and useful.

Viveka Palm
Director of sectoral and regional statistics, Eurostat

Abstract

Key figures on European transport presents a selection of key transport indicators for the European Union (EU) and its individual Member States, as well as the EFTA countries. This publication may be viewed as an introduction to European transport statistics and provides a starting point for those who wish to explore the wide range of data that are freely available on [Eurostat's website](https://ec.europa.eu/eurostat) together with a range of online articles in *Statistics Explained*.

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For more information please consult

Eurostat's website: <https://ec.europa.eu/eurostat>
Statistics Explained: <https://ec.europa.eu/eurostat/statistics-explained>

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You can find this publication online by scanning the QR code below:



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Introduction

[Eurostat](#) is the statistical office of the [European Union \(EU\)](#) situated in Luxembourg. Its mission is to provide high quality statistics for Europe, which allow us to have key information on Europe's economy, society and environment that we need both as citizens and as decision makers.

Key figures on European transport describes the situation concerning the use of transport and several related subjects. Annual data are generally presented through to 2021 or 2022, depending on the [mode of transport](#) and the types of indicator.

Structure of the publication

Key figures on European transport provides users of official statistics with an overview of the wealth of information that is available on Eurostat's [website](#) and within its [online databases](#) concerning transport.

The publication starts with a presentation in the first two chapters of transport measurement, providing statistics on the movement of people and goods by land, water and air modes of transport. The third chapter looks at transport safety, again presenting information for various transport modes. The fourth chapter combines information on transport with information on the environment and energy. The final chapter looks at a range of economic indicators, such as [employment](#) in the transport sector, transport prices, and expenditure on transport.

Data extraction and coverage

Data extraction

The statistical data presented in this publication were extracted as and when data became available for a new reference year. Nearly all of the data in Chapters 4 and 5 were extracted in September 2023; most of the data for Chapters 1, 2 and 3 were extracted in October or November 2023. Eurostat's online database may contain revised data.

Spatial data coverage

This publication presents information for the EU (a sum/average covering the 27 Member States of the EU) as well as the individual [EU Member States](#) and [EFTA countries](#). The order of the countries in the figures usually reflects their ranking according to the values for (one of) the indicator(s) illustrated.

References in the publication to EU Member States being northern, eastern, southern or western Member States are based on groupings provided by [EU vocabularies](#).

The map on the inside cover page identifies the EU Member States and the EFTA countries, as well as pinpointing their capital cities.

Note that data related to rail transport are not available for Cyprus and Malta as these EU Member States do not have a rail network; the same is true for Iceland. Equally, data related to maritime transport are not available for Czechia, Luxembourg, Hungary, Austria and Slovakia, as these Member States are landlocked; the same is true for Liechtenstein and Switzerland.

Codes and names of EU Member States and EFTA countries

BE Belgium	HU Hungary
BG Bulgaria	MT Malta
CZ Czechia	NL Netherlands
DK Denmark	AT Austria
DE Germany	PL Poland
EE Estonia	PT Portugal
IE Ireland	RO Romania
EL Greece	SI Slovenia
ES Spain	SK Slovakia
FR France	FI Finland
HR Croatia	SE Sweden
IT Italy	
CY Cyprus	IS Iceland
LV Latvia	LI Liechtenstein
LT Lithuania	NO Norway
LU Luxembourg	CH Switzerland

World regions/continental aggregates

In the first two chapters, several maps are shown for the size of air and maritime transport with various regions of the world. The regions are defined within Eurostat's standard code list for partner countries.

Temporal data coverage

If data for a reference year (or [reference period](#)) are not available for a particular country, then efforts have been made to complete the coverage using data for recent previous reference years (these exceptions are footnoted).

Notes and flags

Notes and flags are means of explaining and defining specific characteristics of particular data. This publication includes only the main notes required for interpretation of the data and to highlight when a year has been replaced with another. Data that are not shown in individual figures may be simply not available or they may be confidential (in which case they are not published). A full set of notes and flags are available on [Eurostat's website](#) via online data codes (see below).

Accessing European statistics

The simplest way to obtain Eurostat's wide range of statistical information is through its [website](#). Eurostat provides users with free access to its databases and its publications in portable document format (PDF). The website is updated daily and presents the latest and most comprehensive statistical information available on the EU, its Member States, the EFTA countries, as well as [enlargement countries](#) and [potential candidates](#).

Eurostat online data codes, such as *tran_hv_psmo*, allow easy access to the most recent data on [Eurostat's website](#). In this publication these online data codes are given as part of the source below each figure.

Some of the indicators presented in this publication are relatively complex. Statistics Explained provides a comprehensive online [glossary](#) with definitions for a broad range of statistical indicators, concepts and terms; it is organised under [thematic headings](#).

Modes of transport

In several subchapters, the analysis of European transport statistics is presented by mode of transport. Some modes are common to passenger and freight transport, and some specific to each.

Passenger transport modes

1. Land transport
 - road transport, by
 - passenger cars ⁽¹⁾
 - motorcycles and mopeds
 - buses and coaches
 - rail transport, including high-speed and conventional railways ⁽²⁾
2. Water transport
 - maritime (sea transport)
 - inland waterways (such as rivers, canals and lakes)
3. Air transport

Freight transport modes

1. Land transport
 - road transport
 - rail transport
 - pipelines
2. Water transport
 - maritime (sea transport)
 - inland waterways
3. Air transport

(1) Includes road motor vehicles (other than motorcycles and mopeds) intended for the carriage of passengers and designed to seat no more than nine persons including the driver. Includes cars for own transport as well as for hire (such as taxis and rental cars). May include vans and special vehicles (such as ambulances and motor vehicles) designed and used primarily for the transport of passengers.

(2) Railway statistics exclude (sub)urban, light rail, metros/underground railways and trams.

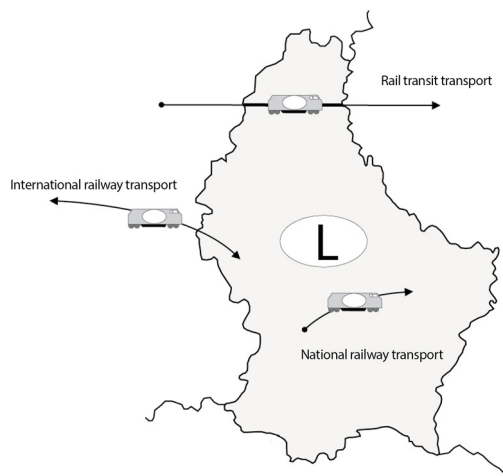
Territoriality and nationality principles

Territoriality principle

Most transport statistics related to the measurement of the transport of passengers or freight are based on the territoriality principle, in other words where the transport takes place. For example, information on rail transport in Luxembourg concerns transport on Luxembourg's [rail network](#). National transport for Luxembourg is transport between two places within Luxembourg, while international transport concerns goods and/or passengers:

- a) loaded/embarked in Luxembourg that are unloaded/disembarked outside of Luxembourg;
- b) loaded/embarked outside of Luxembourg that are unloaded/disembarked in Luxembourg; or
- c) transiting through Luxembourg.

For international transport, when measuring the distance that goods or passengers are transported under the territoriality principle, only the distance travelled within the national territory is included. For example, a journey between a place in Luxembourg and a place in Belgium would be split between the kilometres within Luxembourg and those within Belgium; only those in Luxembourg would be in the statistics reported for Luxembourg; those in Belgium would be in the statistics reported for Belgium.



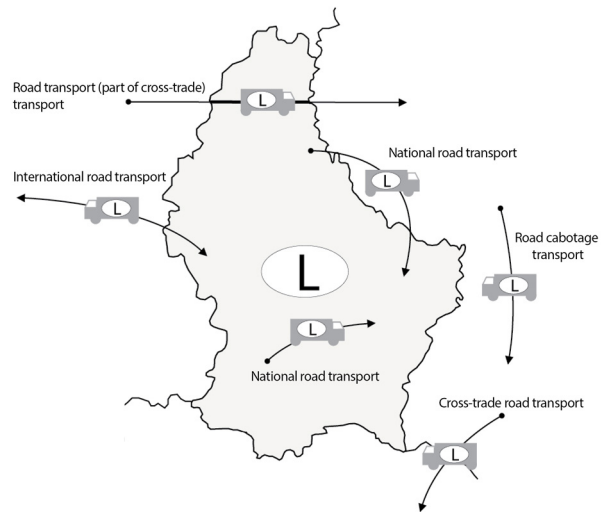
Nationality principle

Road freight transport statistics collected by Eurostat are an exception to the territoriality principle. They are based on the nationality principle, reflecting the nationality of the road vehicle performing the transport. For example, information on road freight transport for Luxembourg concerns transport by vehicles registered in Luxembourg. Another way to understand this is that these data concern transport by Luxembourg's road freight hauliers, regardless of where the goods are carried.

Under the nationality principle, while national transport for Luxembourg is still transport between two places within Luxembourg, it only concerns such transport performed by vehicles registered in Luxembourg. These statistics for Luxembourg do not include as national transport any transport between two places within Luxembourg by a vehicle registered in a different country; this is considered to be a type of international transport ([cabotage](#)) recorded in the statistics for the country whose vehicles performed this transport.

In a similar manner, international transport statistics reported by Luxembourg concern the transport of goods by road vehicles registered in Luxembourg under the following conditions:

- a) goods loaded in Luxembourg that are unloaded outside of Luxembourg;
- b) goods loaded outside of Luxembourg that are unloaded in Luxembourg; or
- c) goods both loaded and unloaded outside of Luxembourg, regardless of whether
 - c.1) they pass through Luxembourg (transit), or
 - c.2) they stay within the borders of a single country other than Luxembourg (cabotage), or
 - c.3) they cross at least one border, but none of Luxembourg's borders ([cross-trade](#)).



Note that Eurostat does produce and publish a limited amount of road freight transport statistics on the territoriality principle. These estimates are based on the data collected according to the nationality principle and adjusted for the routes taken for international transport with the help of a distance matrix.

Both approaches – territoriality and nationality principles – are used for road freight transport statistics that are presented in this publication:

- for the modal split of inland freight transport (see pages [26](#) and [27](#)), estimated data according to the territoriality principle are used;
- for the focus on road freight transport (see pages [28](#) to [30](#)), data are based on the nationality principle.

1

Passenger transport



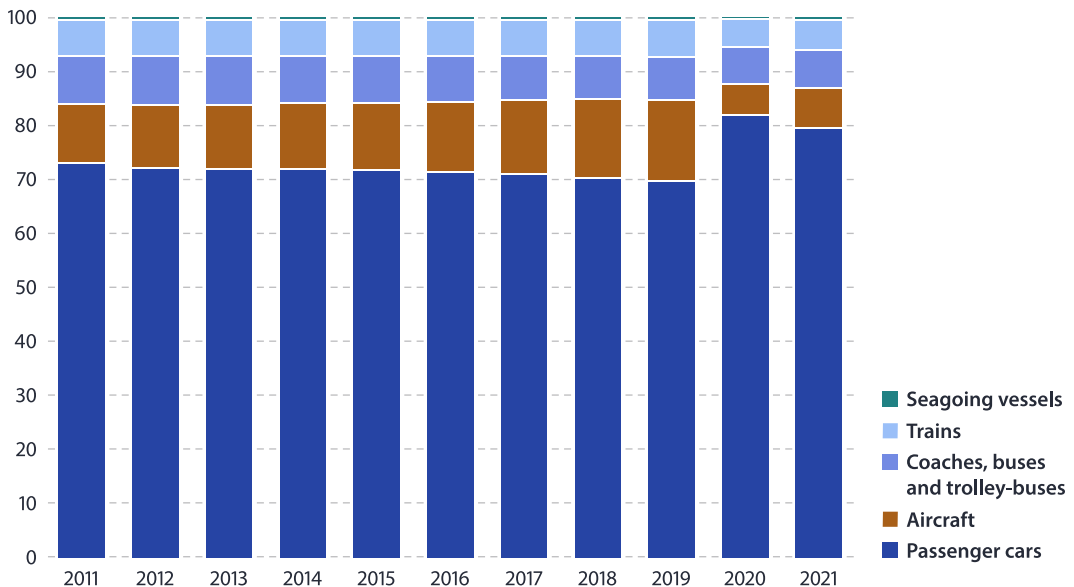
Modal split of passenger transport



The modal split describes the relative share of each type of transport in terms of the vehicles used, for example by car, plane, coaches or trains, in the total of the transport modes.

Development of modal split of passenger transport

(% based on passenger-kilometres, EU, 2011–2021)



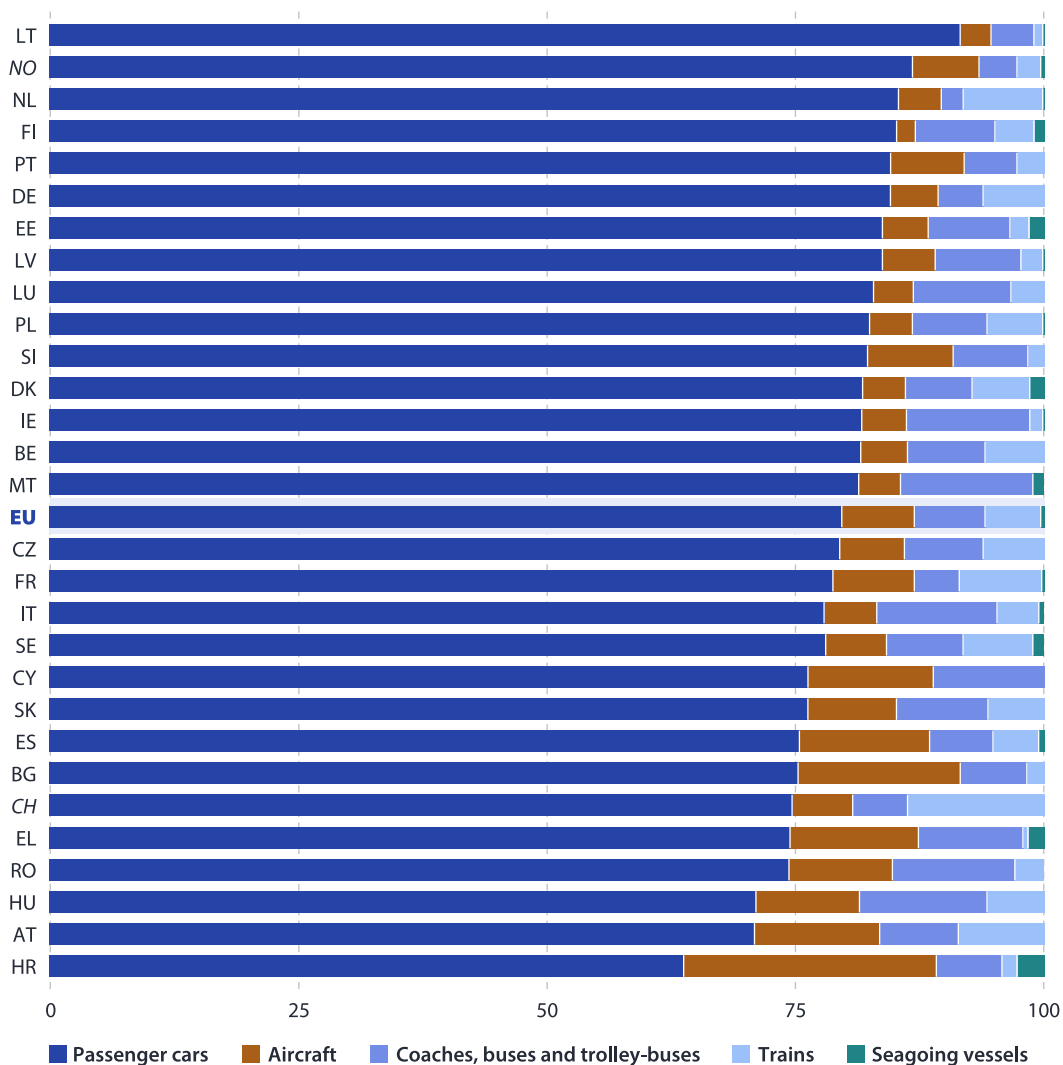
Source: Eurostat (online data code: [tran_hv_ms_psmo](#))

Between 2011 and 2019, passenger cars' share of passenger transport in the EU fell from 73.1 % to 69.8 %. This share increased to 81.9 % in 2020 and dropped back slightly in 2021 to 79.7 %. The share for aircraft increased from 10.9 % to 15.0 % between 2011 and 2019 but dropped to 5.7 % in 2020 and 7.3 % in 2021, respectively. All other modes of transport recorded similar patterns of a sharp drop

in 2020 followed by a partial recovery in 2021. The substantial changes in 2020 reflected the impact of the COVID-19 crisis on the overall use of transport and the use of private cars rather than public (and other forms of shared) transport, as well as the COVID-19-related restrictions imposed on certain modes of transport.

Modal split of passenger transport

(% based on passenger-kilometres, 2021)



Source: Eurostat (online data code: [tran_hv_ms_psmo](#))

Among the EU Member States, the highest share for passenger cars in 2021 was in Lithuania (91.7 %), while the lowest share was in Croatia (63.8 %). In turn, Croatia had by far the highest share for aircraft, 25.4 %, followed by Bulgaria with 16.3 %. In Malta, Hungary, Ireland, Romania and Italy, coaches, buses and trolley-

buses accounted for at least 12.0 % of passenger transport. The largest shares of passenger transport performed by train were recorded in Austria, France, the Netherlands and Sweden, all at least 7.0 %. The use of seagoing vessels was below 1.0 % in most Member States and peaked at 2.7 % in Croatia.

Road passenger transport

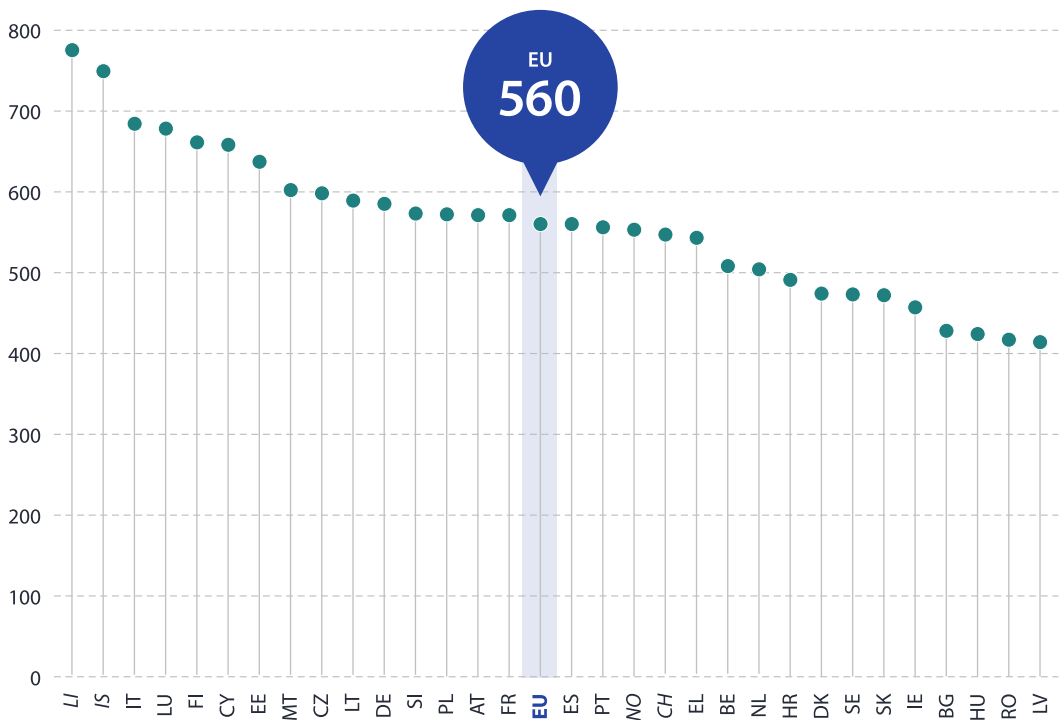
Motorisation rate: passenger cars relative to population size

(per 1 000 inhabitants, 2022)



Passenger car statistics include vehicles registered and licensed to use public roads. Included are vehicles owned by households, businesses and government (other than the military); rental vehicles are also included, as well as special purpose passenger vehicles.

The motorisation rate for road passenger vehicles is based on the number of passenger cars relative to the size of the population. In the EU, this averaged 560 passenger cars per 1 000 inhabitants in 2022. The highest passenger motorisation rates were in Italy (684 per 1 000 inhabitants) and Luxembourg (678 per 1 000 inhabitants). The lowest were in Bulgaria (428 per 1 000 inhabitants), Hungary (424 per 1 000 inhabitants), Romania (417 per 1 000 inhabitants) and Latvia (414 per 1 000 inhabitants).



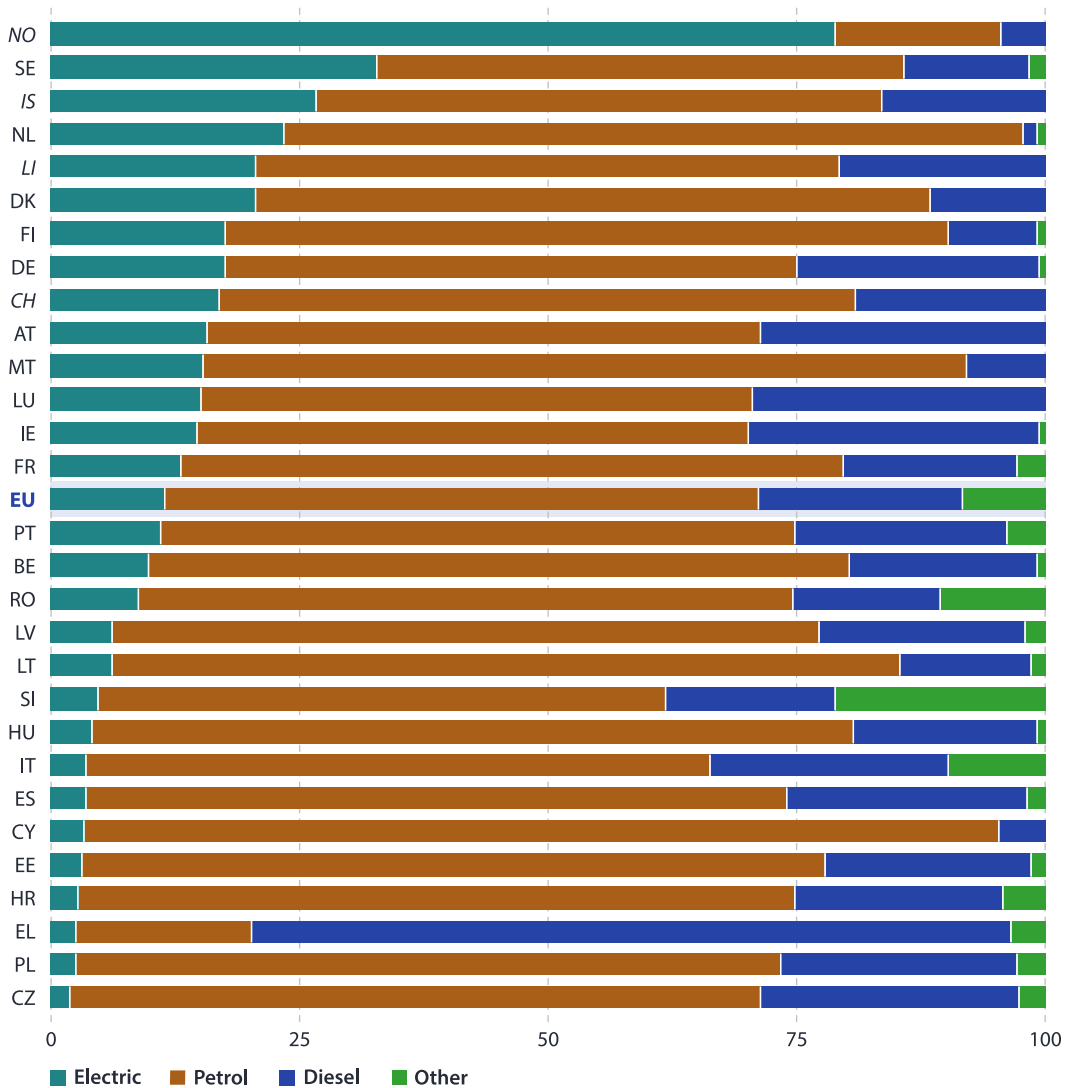
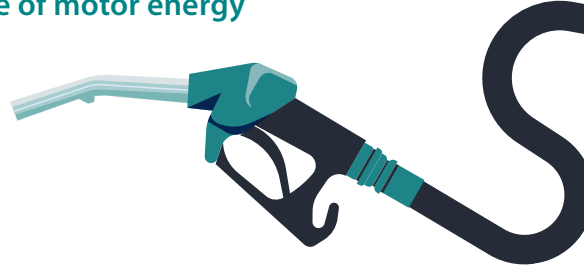
Note: EU, estimate made for the purpose of this publication.

Source: Eurostat (online data code: [road_eqs_carhab](#))

Registrations of new passenger cars, by type of motor energy

(%, 2022)

In 2022, electric-powered vehicles accounted for more than 15.0 % of all new passenger car registrations in Sweden, the Netherlands, Denmark, Finland, Germany, Austria, Malta and Luxembourg. By contrast, the share was below 3.0 % in Croatia, Greece, Poland and Czechia.

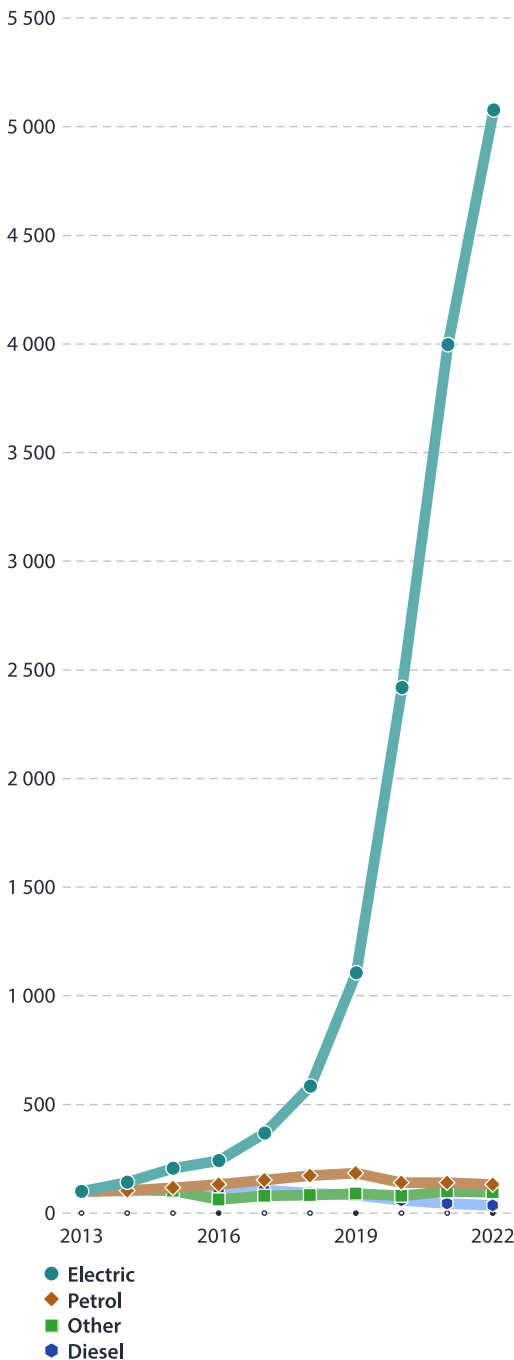


Note: ranked on the share for electric. BG and SK: not available. EU: excluding BG and SK. IS: 2021.

Source: Eurostat (online data codes: [road_eqr_zev](#) and [road_eqr_carpda](#))

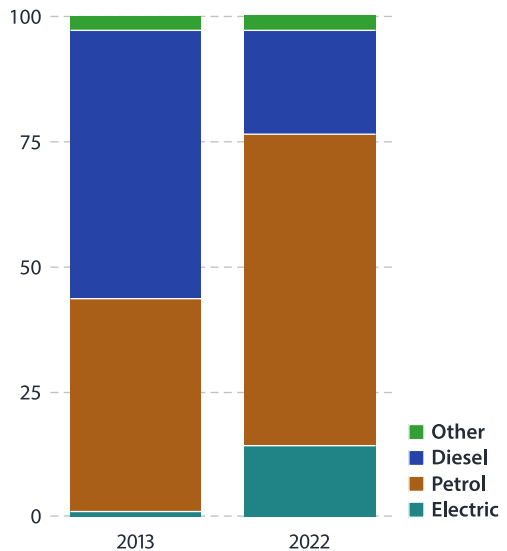
Index of registrations of new passenger cars, by type of motor energy

(2013 = 100, EU, 2013–2022)



Registrations of new passenger cars, by type of motor energy

(%, EU, 2013 and 2022)



A time series of data on the registrations of new passenger cars shows how the types of [motor energy](#) of new passenger cars changed. Between 2013 and 2022, based on data for 18 EU Member States which collectively accounted for 80 % of new passenger cars within the EU in 2022, there was a decrease of 65 % for diesel-powered vehicles (also including hybrids) and an increase of 31 % for petrol-powered vehicles in the EU (see the figures for coverage).

For alternative types of motor energy, there were 51 times as many registrations of new electric vehicles in 2022 as in 2013, while registrations of other new vehicles were 4 % lower. The share of electric vehicles among registrations of new passenger cars increased from 0.3 % in 2013 to 14.1 % in 2022. Based on a time series with a complete coverage of all 27 EU Member States, which is only available for electric vehicles, the share of electric vehicles among registrations of new passenger cars increased from 0.2 % in 2013 to 12.1 % in 2022.

Note: based on data for 18 EU Member States which collectively accounted for 80 % of new passenger cars within the EU in 2022.

Source: Eurostat (online data codes: [road_eqr_carpda](#), [road_eqr_zev](#) and [road_eqr_zevpc](#))

Rail passenger transport

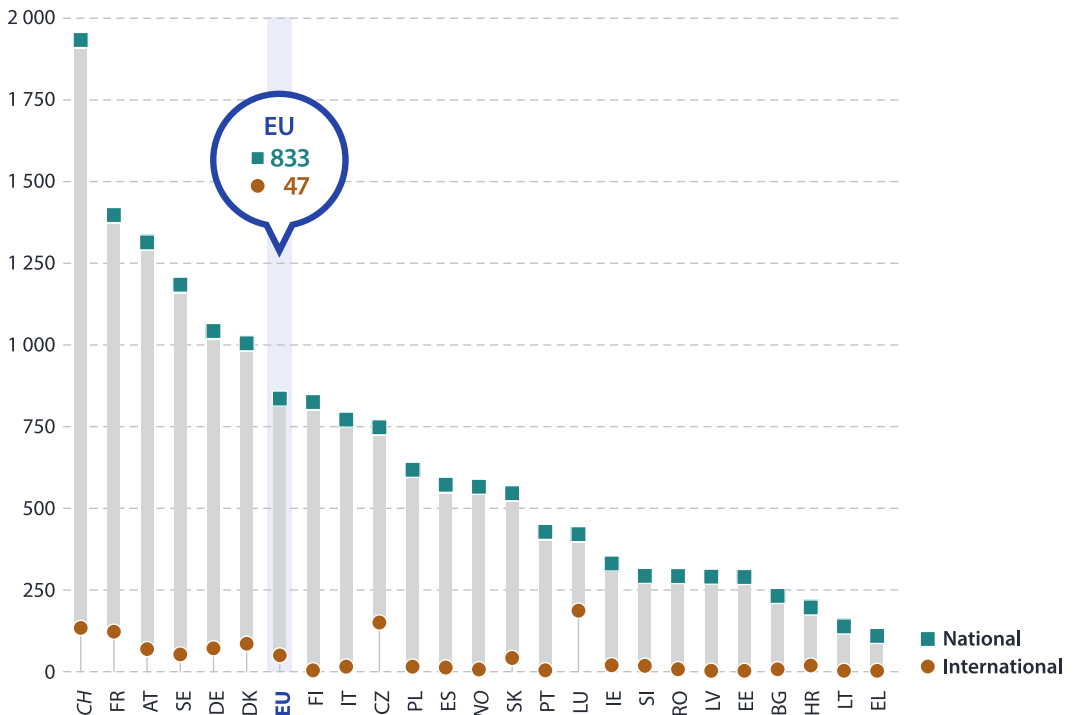
Rail passenger transport

(passenger-kilometres per inhabitant, 2022)

In 2022, 7.3 billion passengers made national journeys in the EU, travelling a total of 372 billion kilometres. In addition, passengers were carried 21 billion kilometres on international journeys. Relative to population size, this was an average of 833 kilometres per inhabitant on national journeys and 47 kilometres per inhabitant on international journeys. Rail passengers in France and Austria travelled the longest average distance on national journeys in 2022, 1 395 and 1 311 kilometres per inhabitant, respectively.



Rail passengers are persons who travel by rail; members of the train crew are excluded. Measurement may be the number of passengers carried or based on passenger-kilometres. For international journeys, the passenger-kilometre data only include the distance travelled on the national network, in other words the part of the journey within the national territory, not the distance of the whole journey.



Note: no railways in CY or MT. BE, HU and NL: not available.

Source: Eurostat (online data codes: [rail_pa_typepas](#) and [demo_pjan](#))

Maritime passenger transport

Top 10 passenger ports in terms of passengers embarked and disembarked

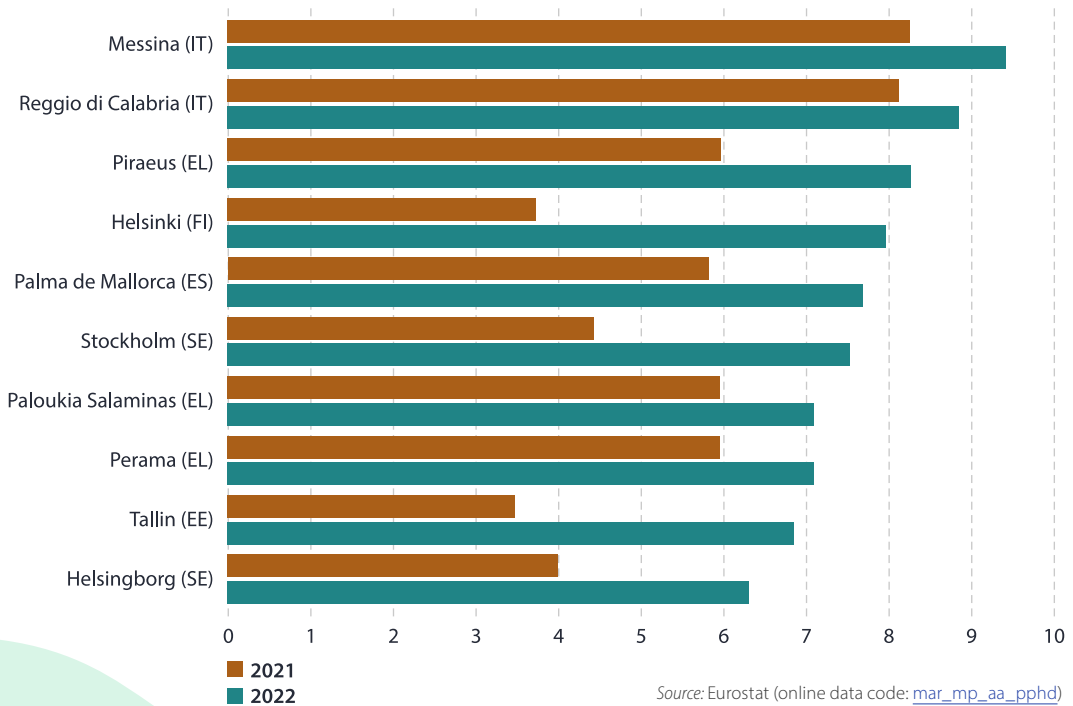
(millions, EU, 2021 and 2022)

The 10 busiest maritime passenger ports in the EU included three in Greece, two each in Italy and Sweden and one each in Finland, Spain and Estonia. Six of the top 10 ports in 2022 were Mediterranean and four Baltic. Collectively these 10 ports accounted for just over one fifth of all passengers embarking or disembarking in the EU.



Sea passengers are persons who make a sea journey on a merchant ship; excluded are service staff assigned to merchant ships, as well as infants in arms. Merchant ships are typically passenger ships (for more than 12 fare-paying passengers) including cruise ships, as well as roll-on-roll-off (Ro-Ro) vessels.

Sea passengers embarked and disembarked relate to the activity of boarding or leaving a ship. A transfer from one ship to another is a disembarkation followed by an embarkation. Excursions from cruise ships are not considered as a (dis)embarkation.

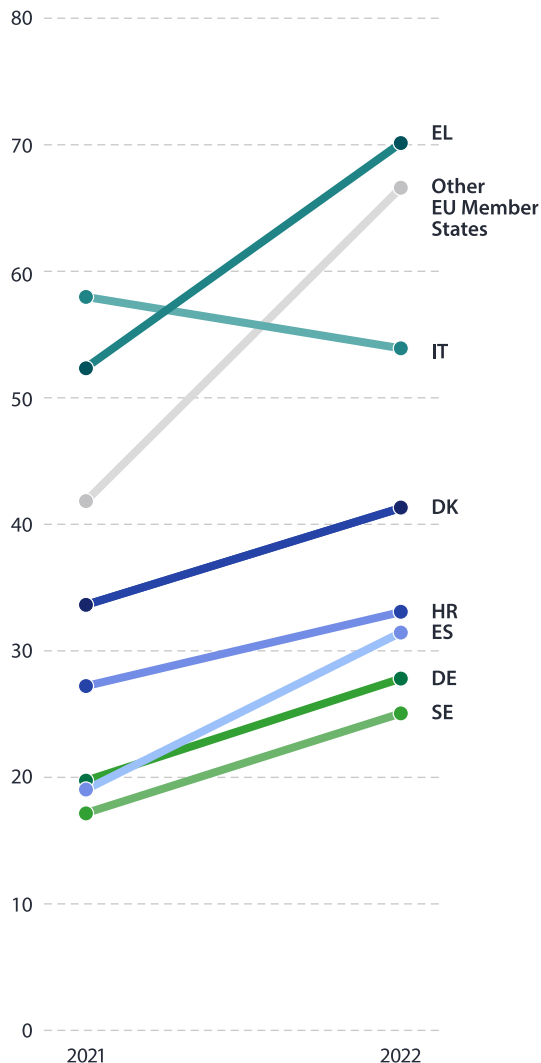


Source: Eurostat (online data code: [mar_mp_aa_pphd](#))



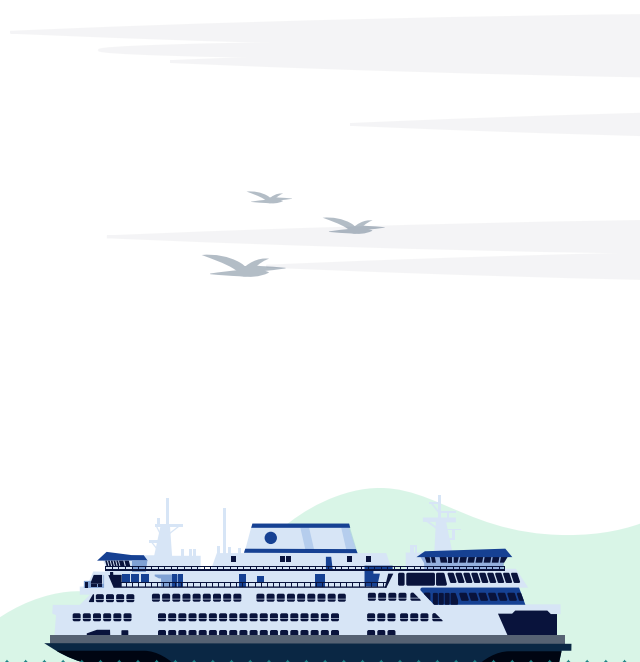
Passenger embarked and disembarked in all ports

(millions, 2021 and 2022)



In 2022, a total of 349 million passengers passed through ports in the 22 EU Member States with maritime transport (five Member States are landlocked). This was a 30.0 % increase compared with 2021, signifying a continuation of the recovery from the impact of the COVID-19 crisis. Greece (70.1 million), Italy (53.8 million) and Denmark (41.2 million) had the highest numbers of maritime passengers, accounting for 20.1 %, 15.5 % and 11.8 % of the EU total, respectively. Among the Member States with at least 20.0 million passengers in 2022, the strongest annual growth rates were recorded in Spain, Sweden and Germany, up 65.9 %, 46.7 % and 41.9 %, respectively.

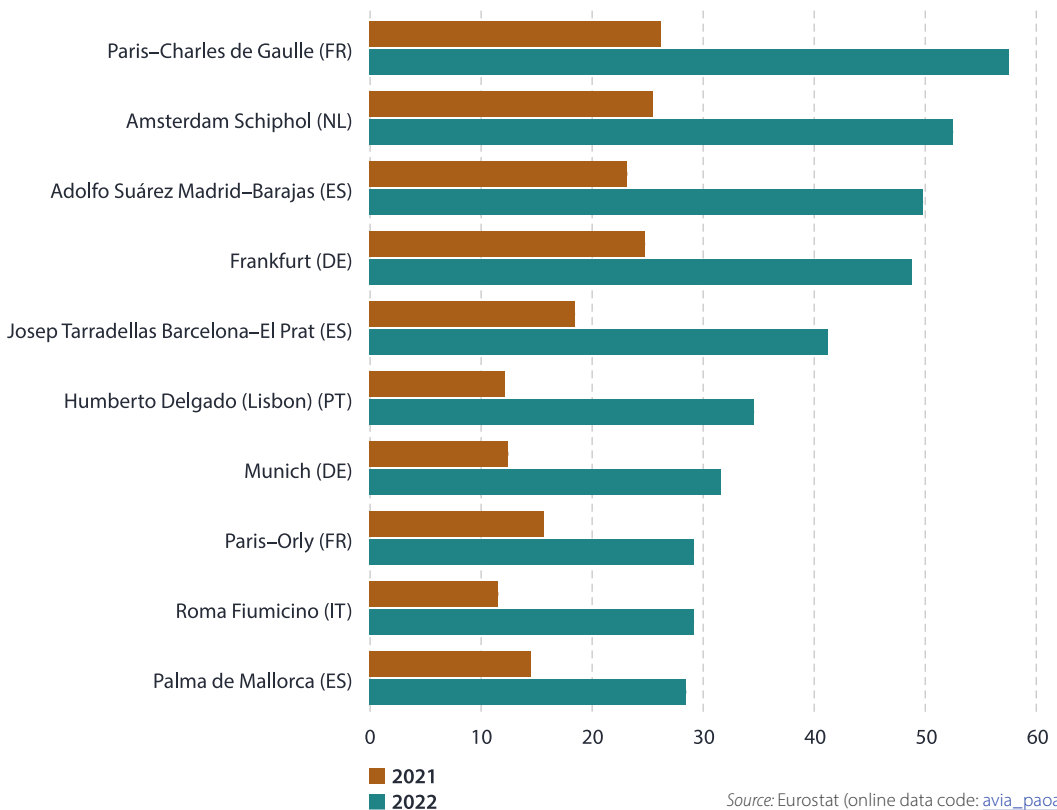
Source: Eurostat (online data code: [mar_mp_aa_cph](#))



Air passenger transport

Top 10 passenger airports in terms of passengers carried

(millions, EU, 2021 and 2022)



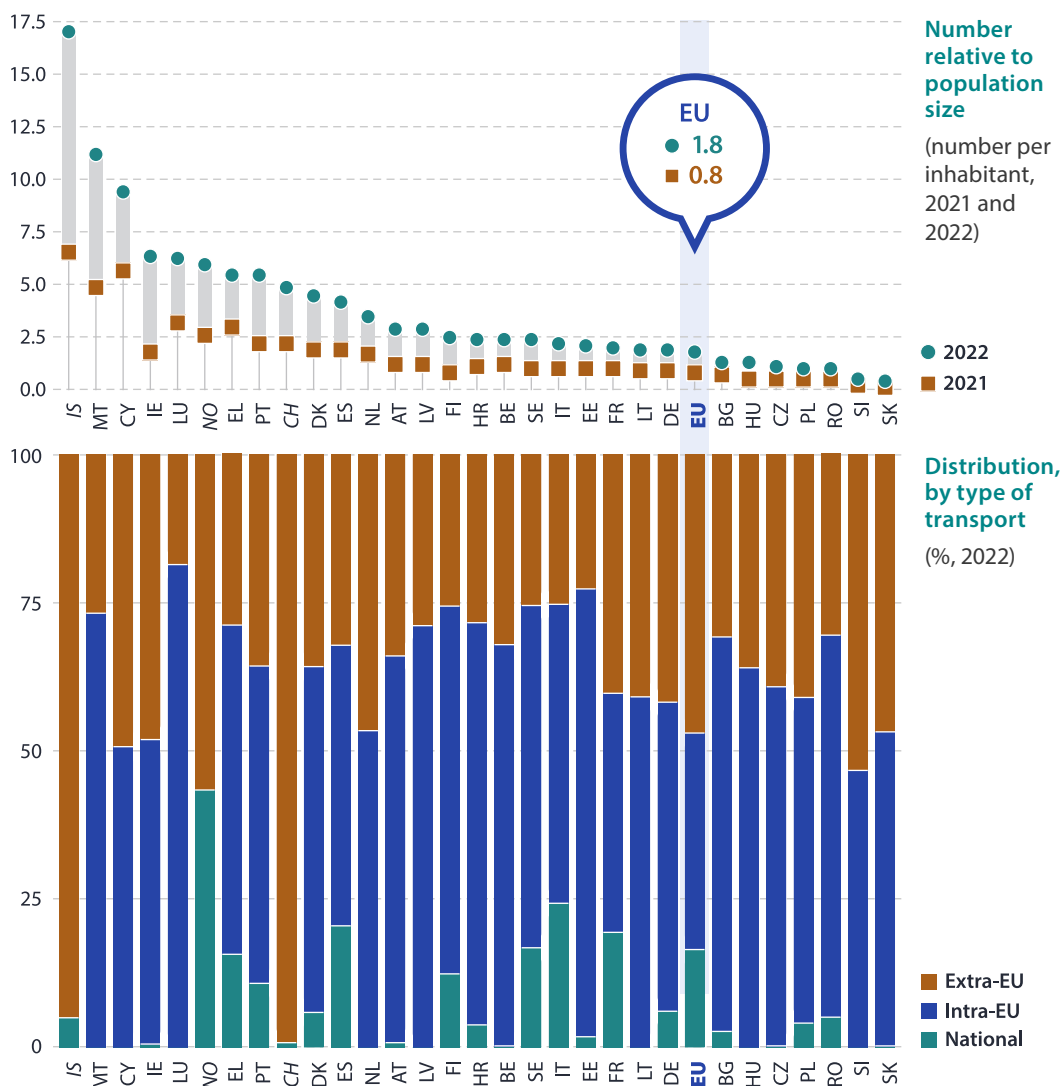
Air passengers are persons who make a journey by air; excluded are on-duty members of the flight and cabin crews while infants in arms are included. The number of passengers carried counts passengers whose air journey begins or ends at the reporting airport; direct transit passengers (on the same aircraft with the same flight number) are excluded.

In 2022, passenger numbers increased greatly compared with 2021 but remained somewhat below their pre-COVID-19 levels. The COVID-19 crisis had a particularly strong impact on international air passenger transport, while airports that had a relatively large share of domestic transport were somewhat less impacted. The list of the 10 busiest passenger airports in 2022 was similar to that in 2021, with Fiumicino airport in Rome returning to the top 10 (having dropped out in 2021) and the airport of Athens dropping out.

Air passengers carried

The number of air passengers carried on flights to and from each EU Member State can be compared with the resident population in order to give a measure of the intensity of passenger air transport. Several southern Member States that are major tourist destinations had a high ratio of air passengers to inhabitants in 2022, in particular the islands of Malta (11.3 per inhabitant) and Cyprus (9.5 per inhabitant).

Ireland and Luxembourg (6.4 and 6.3 per inhabitant, respectively) also had high ratios, reflecting high demand for air transport for business and tourist travellers. The seven lowest ratios were all observed for eastern Member States, all with ratios below 1.5 per inhabitant. The average for the EU (considering only data for departures for intra-EU transport to avoid double counting), was 1.8 per inhabitant.

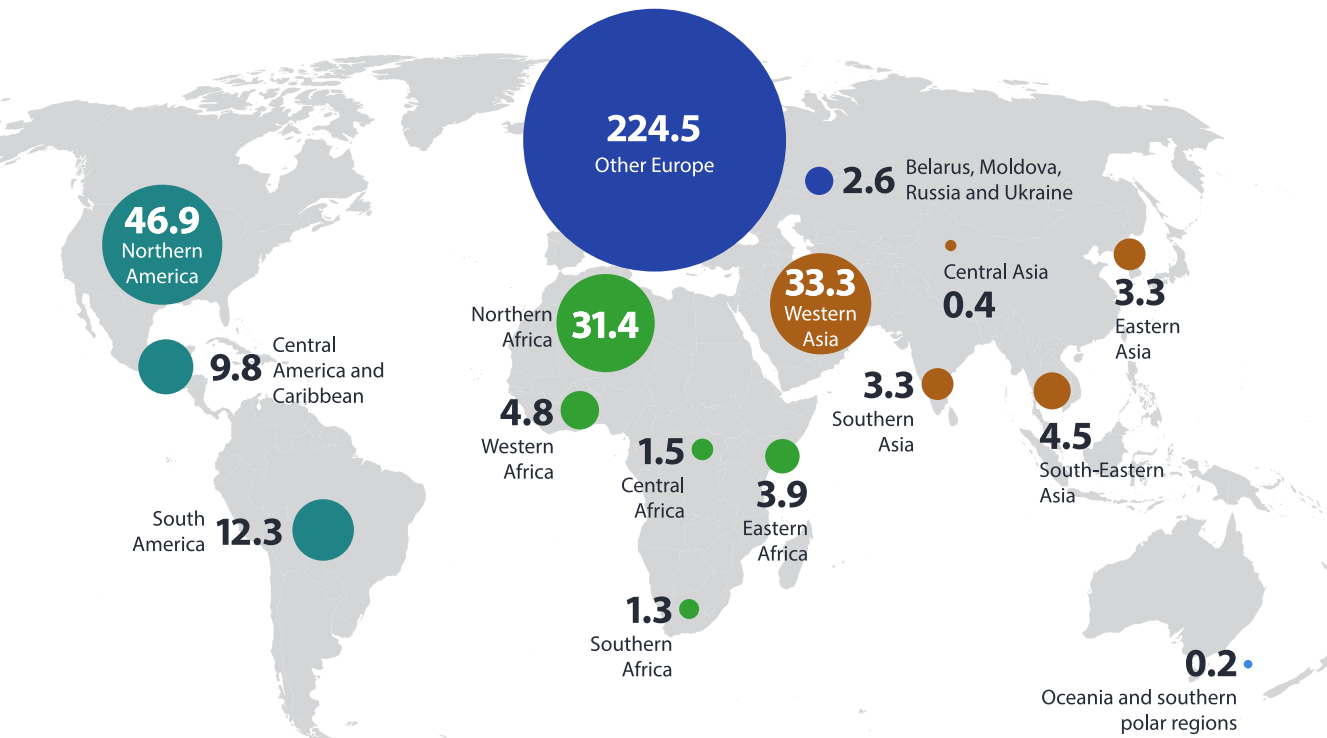


Note: ranked on the total number of air passengers carried relative to population size. For the EU, only data for departures are considered for intra-EU transport to avoid double counting.

Source: Eurostat (online data code: [avia_paoc](#))

Inward and outward extra-EU air passenger transport

(millions of passengers carried, EU, 2022)



Source: Eurostat (online data code: [avia_paexcc](#))

The rest of Europe was the main origin or destination of passengers travelling to or from the EU by air in 2022: 58.3 % of the extra-EU total was for flights to/from European countries other than Belarus, Moldova, Russia and Ukraine.

EU passenger air transport to/from non-EU countries more than doubled in 2022, up 163.2 % compared with 2021. This accelerated the recovery that had started in 2021 (up 18.4 %) from the impact of the COVID-19 crisis in 2020. Nevertheless, the number of passengers carried to/from non-EU countries in 2022 remained 25.9 % below the 2019 level.

At a more detailed level, passenger air transport fell in 2022 with respect to the market of Belarus, Moldova, Russia and Ukraine, reflecting at least in part the impact of the Russian military aggression against Ukraine. For all of the other markets, air passenger numbers in 2022 were higher than in 2021. The largest increase in relative terms concerned transport to and from South-Eastern Asia, for which passenger numbers were 7.1 times as high in 2022 as in 2021.



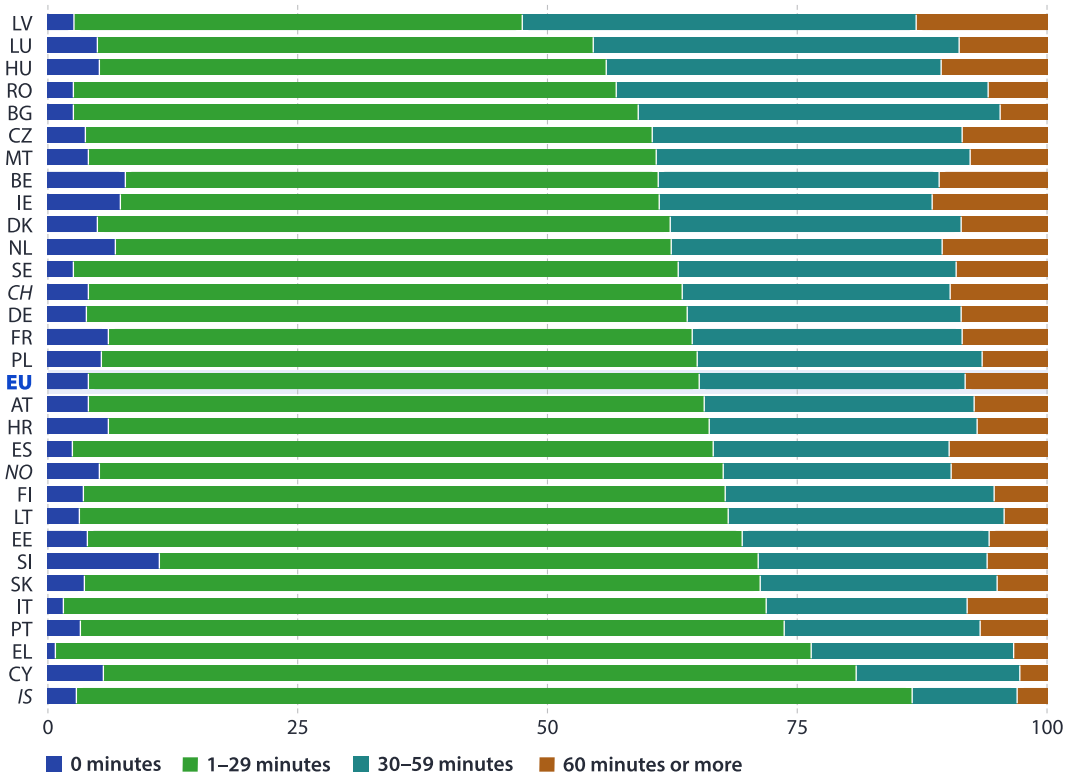
Commuting



Data on commuting time concern the time to get from home to the place of work; note that the time recorded is the time for travel in one direction. The time is based on the most frequently used mode of transport and normal weather conditions.

Employed persons aged 20–64 years, by commuting time

(%, one way from home to work, 2019)



Note: ranked on the share of employed persons commuting 30 minutes or more. Excluding non-response.

Source: Eurostat (online data code: [lfsa_19plwk28](#))

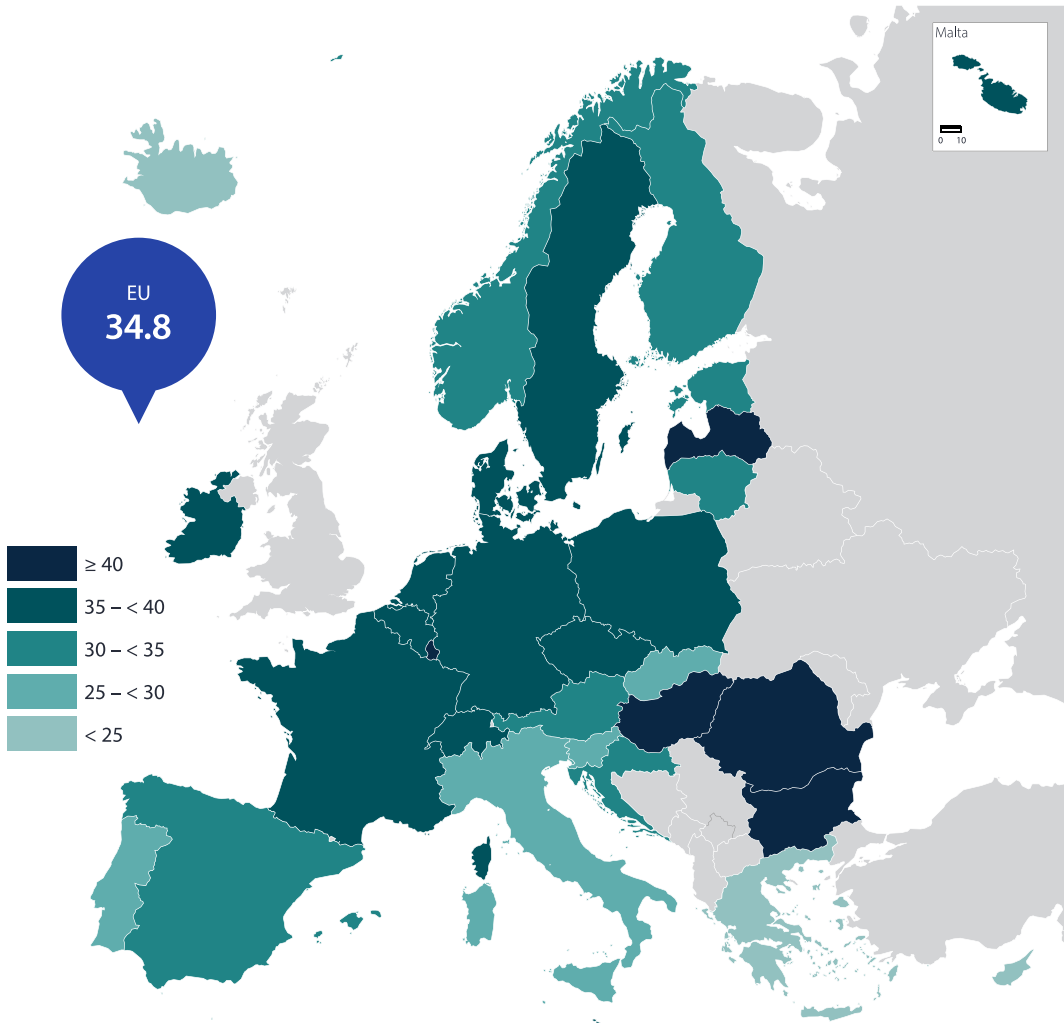
The data for commuting time for employed persons aged 20–64 years in the EU in 2019 show that 4.1 % did not commute, for example because they lived and worked at the same place, on a farm, above a shop or in a home office. Just over three fifths (61.1 %) travelled to work but took less than half an hour (1–29 minutes) to do so. Over a quarter (26.6 %) took between half and one hour (30–59 minutes) to travel to work, while the remaining 8.2 % took an hour or more (60 minutes or

more) to do so. Note that these data refer to 2019, in other words before the COVID-19 crisis.

Combining the last two durations, just over one third (34.8 %) of employed persons aged 20–64 years in the EU typically took 30 minutes or more to travel from home to work in 2019. Among the EU Member States, this share ranged from 19.1 % in Cyprus to 45.4 % in Luxembourg and 52.5 % in Latvia.

Share of people aged 20–64 years in employment commuting for 30 minutes or more

(%, one way from home to work, 2019)



Note: excluding non-response.

Source: Eurostat (online data code: [lfsa_19plwk28](#))

2

Freight transport



Modal split of freight transport

Development of modal split of freight transport

(% based on tonne-kilometres, EU, 2011–2021)

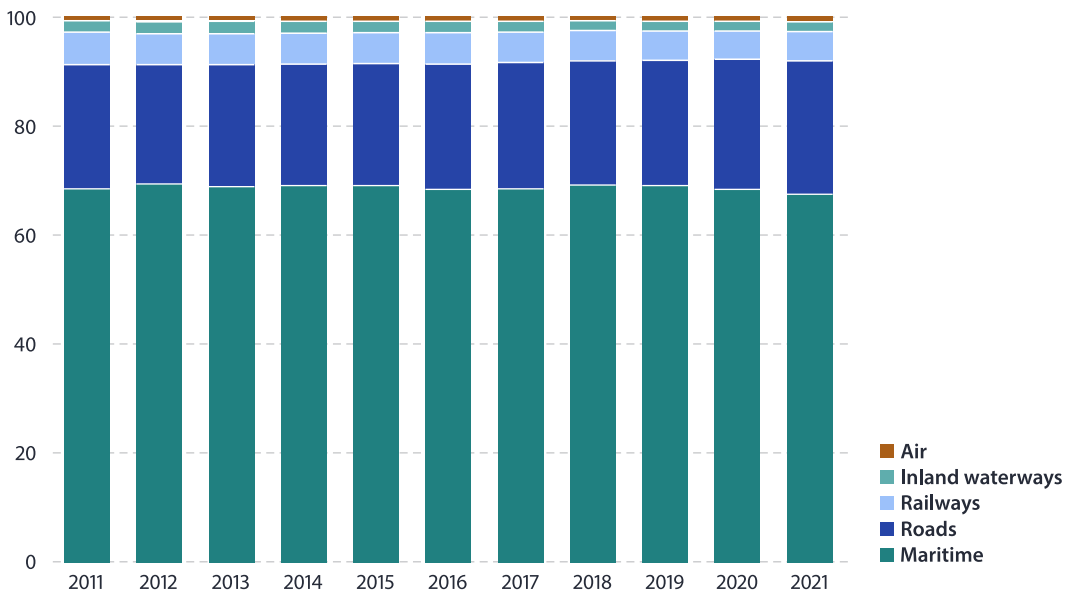
Just over two thirds (67.9 %) of freight transport, based on tonne-km, in the EU in 2021 was maritime transport. Most of the remainder (24.6 % of the total) was performed by road, with smaller shares along railways (5.4 %), along inland waterways (1.8 %) and by air (0.2 %).

Based on tonne-km, the share of maritime transport within all freight transport performance in the EU ranged between 68.8 % and 69.8 % between 2011 and 2020. After a small fall in 2019 and a larger one in 2020, this share fell to a new low of 67.9 % in 2021. The share of road transport increased most years between 2011 and 2021. By contrast, the share of rail in freight



The modal split describes the relative share of each mode of transport, for example by sea, road or rail, in the total of the transport modes. For freight, the shares are calculated for each mode in the total tonne-kilometres (tonne-km), following the territoriality principle (transport performed on the territory of a country); one tonne-km is one tonne of freight transported over one kilometre. The analysis of the modal split currently includes sea, road, rail, inland waterway and air transport.

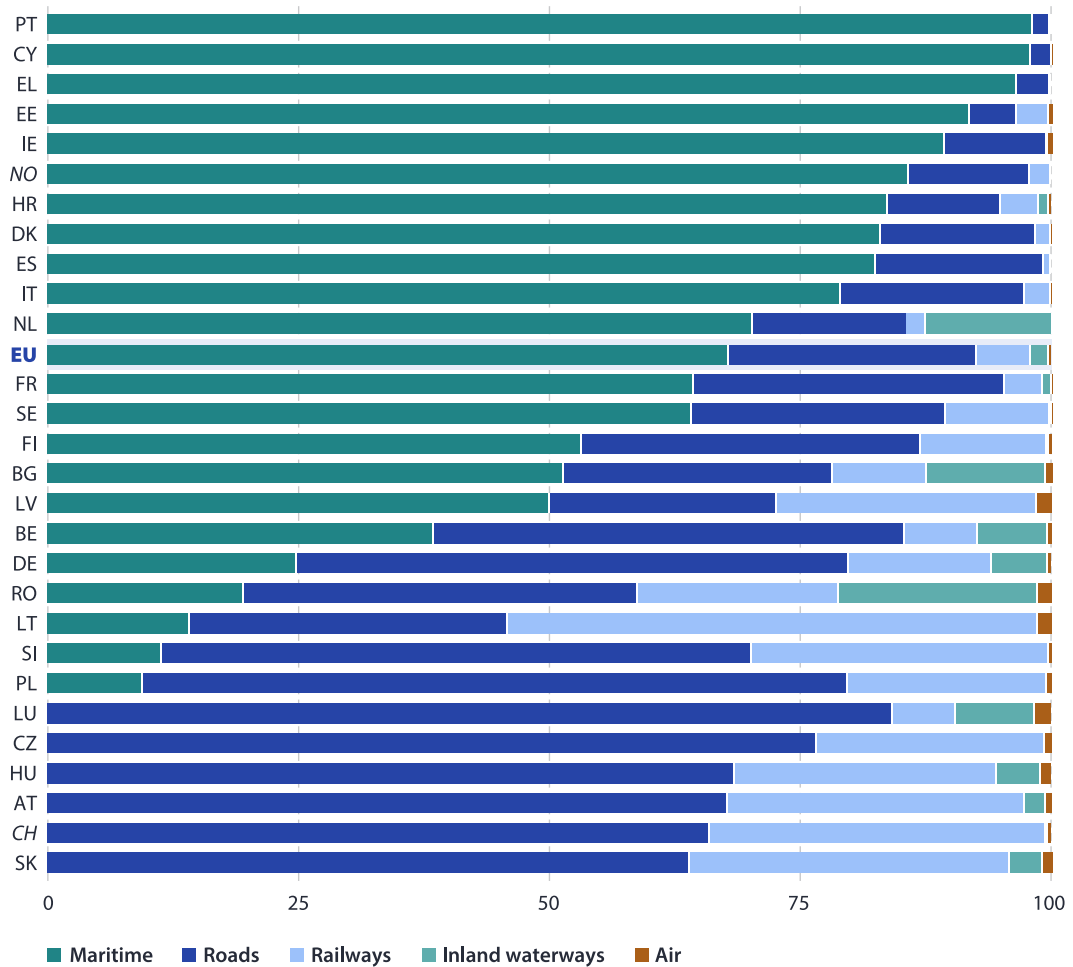
transport performance fell most years from 6.0 % in 2011 to a low of 5.2 % in 2020 before recovering in 2021 to 5.4 %. The share of inland waterways peaked at 2.3 % in 2013 and thereafter declined to 1.8 % in 2018 where it remained through until 2021. The share of air in freight transport performance remained at 0.2 % each year from 2011 to 2021.



Source: Eurostat (online data code: [tran_hv_ms_frmod](#))

Modal split of freight transport

(% based on tonne-kilometres, 2021)



Note: MT, not available.

Source: Eurostat (online data code: [tran_hv_ms_frm0d](#))

The five landlocked EU Member States – Luxembourg, Czechia, Hungary, Austria and Slovakia – had no maritime transport and in 2021 also recorded five of the six highest shares (all above 60.0 %) for road transport in all freight transport performance; Poland had the third highest share. The lowest shares for road transport were in Estonia, Greece, Cyprus and Portugal, all below 5.0 %. These four Member States recorded the highest shares for maritime transport, all in excess

of 90.0 %. In Lithuania, more than half (52.8 %) of freight transport was performed by rail, by far the highest share among the Member States. The largest share of freight transport performed along inland waterways was 19.8 % in Romania, with shares above 10.0 % also recorded in the Netherlands and Bulgaria. The highest shares of air transport within all freight transport performance were observed in Luxembourg, Latvia, Romania and Lithuania, in the range of 1.4 % to 1.6 %.

Road freight transport

Motorisation rate: heavy lorries and road tractors relative to population size

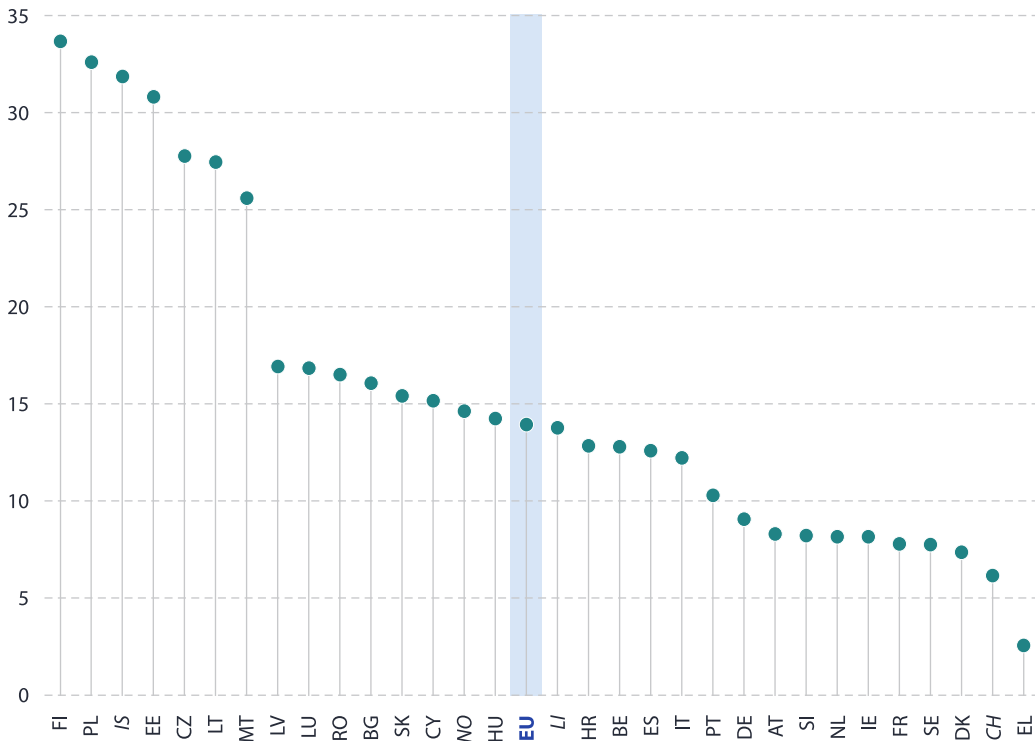
(per 1 000 inhabitants, 2021)

The motorisation rate for road freight vehicles is based on the number of heavy lorries (maximum permissible laden weight > 3.5 tonnes) and road tractors relative to the size of the [population](#). In the EU in 2021, this rate averaged 13.9 per 1 000 inhabitants. The highest freight motorisation rates among the EU Member States were in Finland, Poland and Estonia (all above 30.0 per 1 000 inhabitants), while the lowest was in Denmark (7.3 per 1 000 inhabitants).



Road freight motor vehicles include:

- single vehicles (such as a lorry) designed to carry goods;
- road tractors, also known as semi-trailer tractors or (the towing part of) articulated lorries, designed to pull vehicles that are not power-driven, typically semi-trailers.



Note: EU, excluding EL and SI. EL and SI: road tractors only. IS: heavy lorries only. SK: estimate made for the purpose of this publication

Source: Eurostat (online data codes: [road_eqs_lorria](#) and [demo_pjan](#))



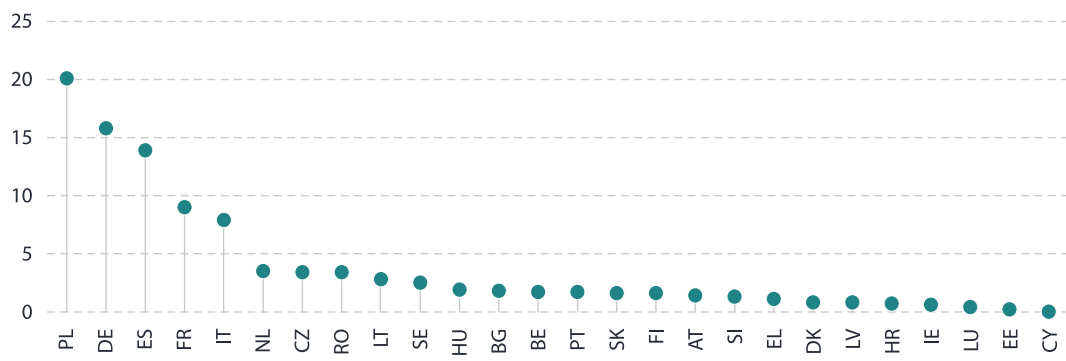
Road freight transport statistics published here relate to transport by heavy goods vehicles registered in the reporting countries. See the introduction to this publication for an explanation of the nationality principle used for road freight transport statistics.

may be based on the load capacity (maximum permissible weight of goods) or the legally permissible maximum weight (the vehicle, the load, the driver and other persons carried). Some reporting countries have a somewhat broader coverage as they apply lower inclusion thresholds.

Transport by light goods vehicles is excluded. The threshold for inclusion as a heavy goods vehicle

Share of EU road freight transport, by country of vehicle registration

(% based on tonne-kilometres, 2022)

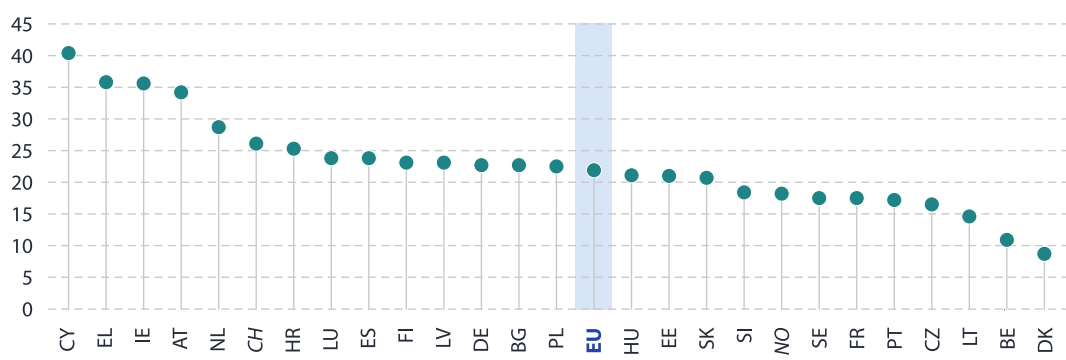


In 2022, one fifth (20.1 %) of road freight transport (in tonne kilometres) by vehicles registered in the EU was performed by Polish-registered vehicles. German (15.8 %) and Spanish (13.9 %) transporters also had shares above 10.0 %.

Note: MT, not available.
Source: Eurostat (online data code: [road_go_ta_tott](#))

Share of empty road journeys, by country of vehicle registration

(% based on vehicle-kilometres, 2022)

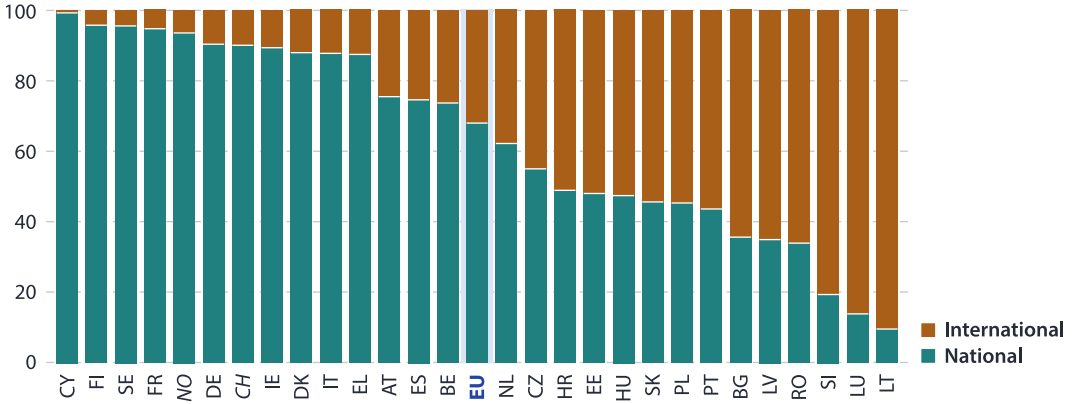


Road freight transporters aim to avoid empty (unladen) journeys, for obvious cost reasons. The overall share of vehicle-kilometres (the distance travelled by vehicles, regardless of the weight of any load carried) recorded for empty journeys in 2022 was 21.9 % for vehicles registered in the EU. Vehicles registered in Austria (34.2 %), Ireland (35.6 %), Greece (35.8 %) and particularly Cyprus (40.4 %) recorded the highest shares of empty journeys in 2022.

Note: EU, excluding IT, MT and RO. IT, MT and RO: not available.
Source: Eurostat (online data code: [road_go_ta_tott](#))

Distribution of road freight transport, by type of transport

(% based on vehicle-kilometres, 2022)



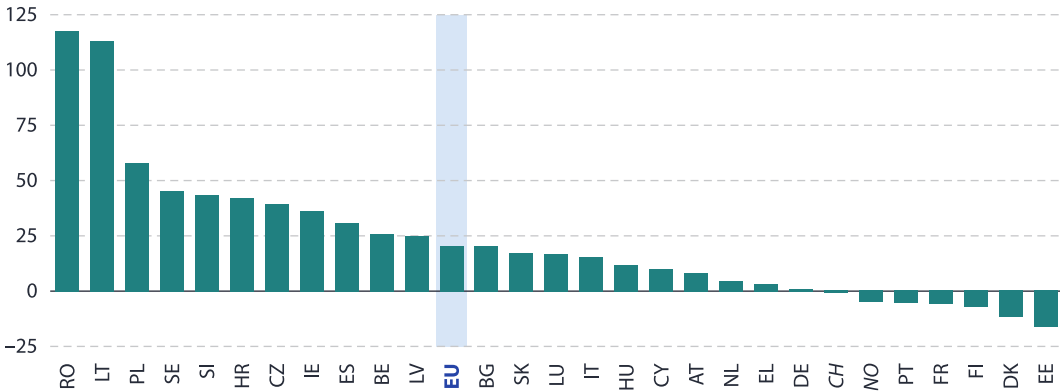
Just over two thirds (68.0 %) of the vehicle-kilometres travelled in 2022 by vehicles registered within the EU were for national transport (within the EU Member State where the vehicles were registered). This share peaked at 99.3 % in Cyprus but was as low as 9.5 % in Lithuania.

Note: EU, excluding MT and including only loaded transport for IT and RO. MT: not available. IT and RO: loaded only.

Source: Eurostat (online data code: [road_go_ta_tot](#))

Change in road freight transport

(% based on vehicle-kilometres, 2012–2022)



For vehicles registered within the EU as a whole, the number of vehicle-kilometres was 21 % higher in 2022 than in 2012. The performance by Romanian-registered vehicles (data only concern laden vehicles) was 118 % higher in 2022 than in 2012, while performance by Lithuanian-registered vehicles also more than doubled (up 113 %). The performance of vehicles registered in five of the EU Member States – Portugal, France, Finland, Denmark and Estonia – was lower in 2022 than 10 years earlier.

Note: MT: not available. IT and RO: loaded only.

Source: Eurostat (online data code: [road_go_ta_tot](#))

Rail freight transport

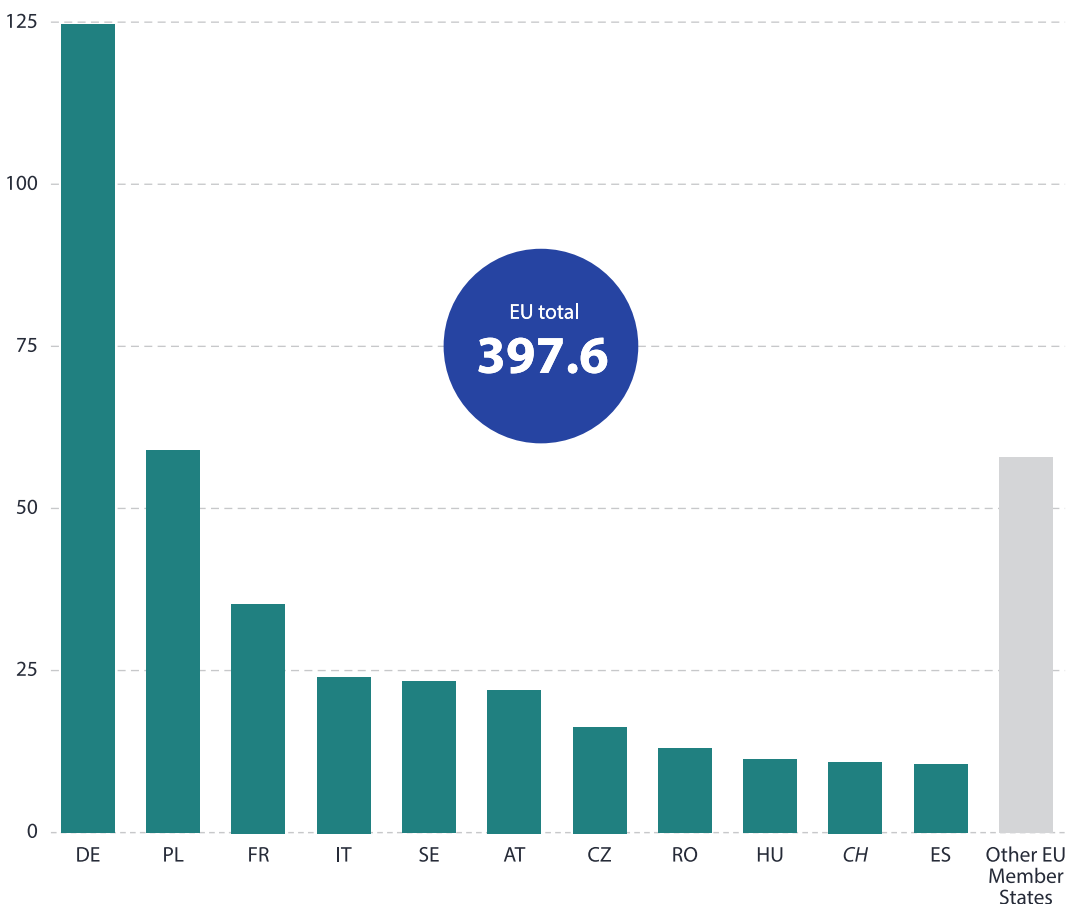
Rail freight transport

(billion tonne-kilometres, 2022)

Germany was by far the largest contributor to rail freight transport performance in the EU, with 125 billion tonne-km in 2022, representing 31.3 % of the EU total (excluding Belgium). Poland (14.8 % of the total) and France (8.9 %) had the next highest levels of rail freight transport performance.



Rail freight transport concerns the movement of goods using a railway vehicle on a railway network. Measurement is based on tonne-km. For international journeys – whether just loaded or just unloaded in a country, or simply transiting through it – the tonne-km data reported for a country only include the distance travelled on the national network, in other words the part of the journey within the national territory.

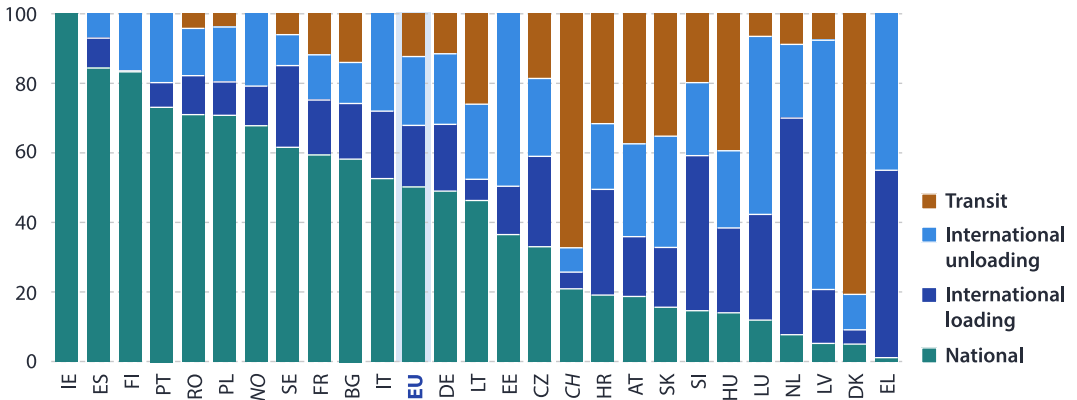


Note: no railways in CY and MT. BE: not available.

Source: Eurostat (online data code: [rail_go_typepas](#))

Distribution of rail freight transport, by type of transport

(% based on tonne-kilometres, 2022)



Note: no railways in CY or MT. BE: not available. EU: excluding BE.

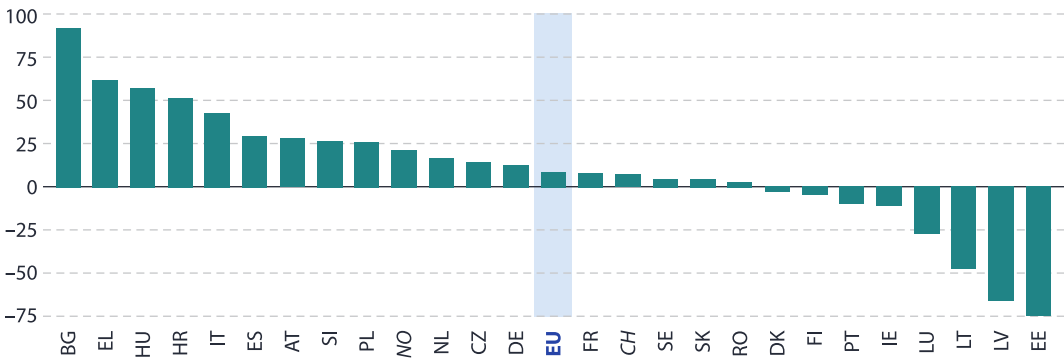
Source: Eurostat (online data code: [rail_go_typepas](#))

All of the rail freight transport performed in 2022 in Ireland was composed of national transport. At the other extreme, national transport accounted for 1.1 % of rail freight transport (in tonne-km) performed in Greece. Among the EU Member States, the highest shares for international rail transport were 62.3 % for freight loaded in the Netherlands and 71.7 % for freight unloaded in Latvia.

Concerning the share of transit within rail freight transport, Denmark ranked first with a share of just over four fifths (80.7 %), more than double the next highest share (39.3 % in Hungary).

Change in rail freight transport

(% based on tonne-kilometres, 2012–2022)



Note: no railways in CY or MT. BE: not available. EU: excluding BE.

Source: Eurostat (online data code: [rail_go_typepas](#))

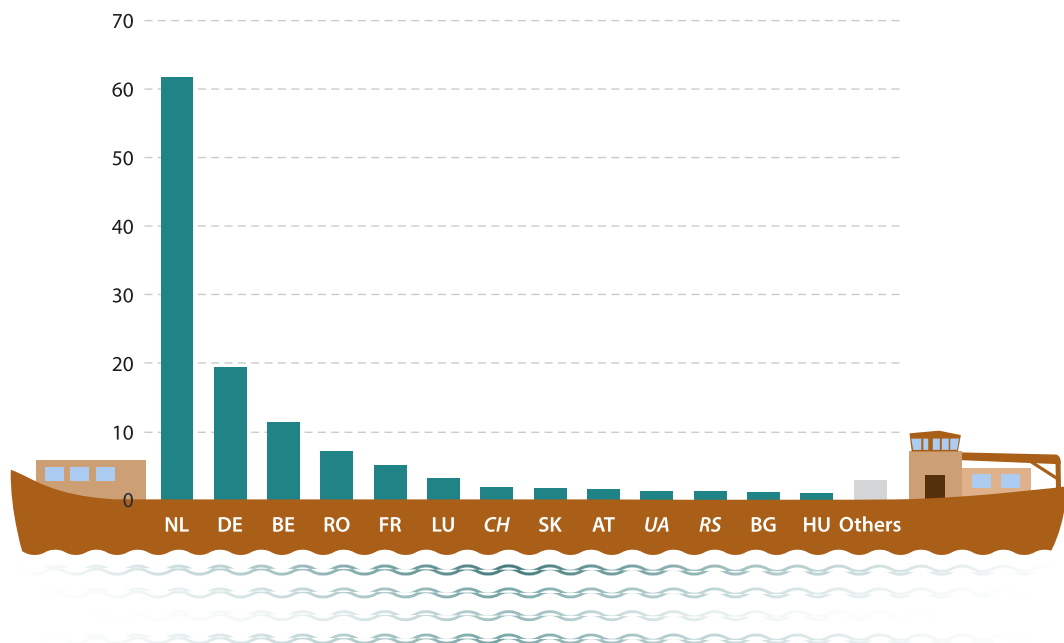
The performance of rail freight transport in Bulgaria increased 91.7 % between 2012 and 2022, the fastest relative increase among the EU Member States. Eight Member States reported less rail freight transport in

2022 than 10 years earlier. The largest decreases were in the **Baltic** Member States: Estonia (down 74.9 %), Latvia (down 66.1 %) and Lithuania (down 48.0 %).

Inland waterway freight transport

Inland waterway freight transport, by nationality of vessel

(billion tonne-kilometres, EU, 2022)



Note: RS = Serbia; UA = Ukraine

Source: Eurostat (online data code: [iww_go_anave](#))

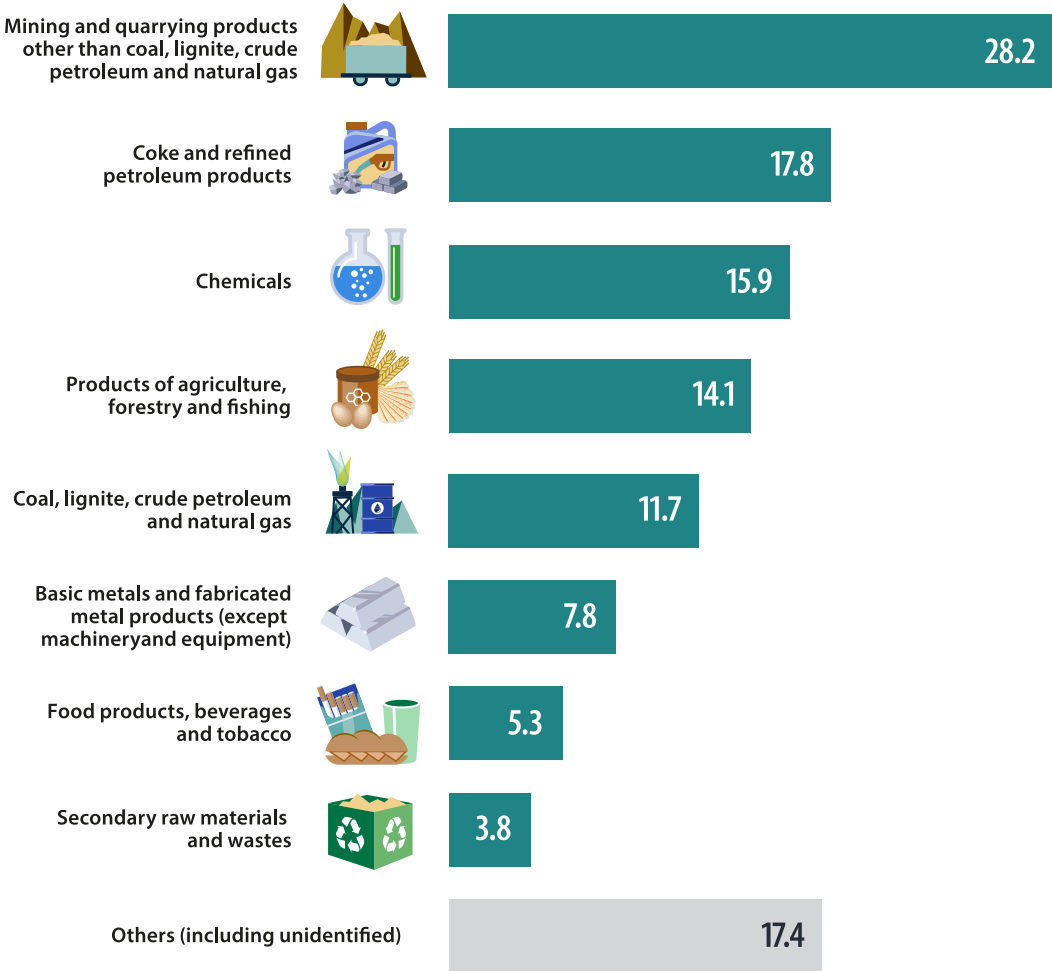


Inland waterway freight transport concerns the movement of goods using an inland waterway transport vessel, wholly or partly on navigable inland waterways. Measurement is based on tonne-km.

In 2022, 122 billion tonne-km of freight were transported by inland waterways in the EU. Vessels registered in the Netherlands dominated this mode of transport, as they accounted for 50.7 % of inland waterway freight transport in the EU. The next largest shares were 15.9 % by German-registered vessels and 9.4 % by Belgian-registered vessels, emphasising the concentration of this mode around the Moselle and Rhine rivers, as well as the Elbe. The fourth largest share (6.0 %) was for Romanian-registered vessels.

Inland waterway freight transport, by type of goods transported

(billion tonne-kilometres, EU, 2022)



Source: Eurostat (online data code: [iww_go_atygo](#))

Four types of goods dominated the freight transported along the EU's inland waterways in 2022:

- mining and quarrying products other than coal, lignite, crude petroleum and natural gas, mainly metal ores or stone, sand, gravel and similar (a 23.1 % share of the total),
- coke and refined petroleum products, mainly liquid refined petroleum products (14.6 %),
- chemicals, mainly nitrogen compounds and fertilisers as well as basic organic or mineral chemicals (13.0 %),
- products of agriculture, forestry and fishing, mainly cereals (11.5 %).

Collectively, these four largest categories accounted for 62.3 % of all goods transported on the EU's inland waterways in 2022.

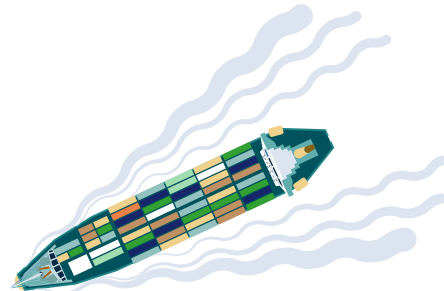
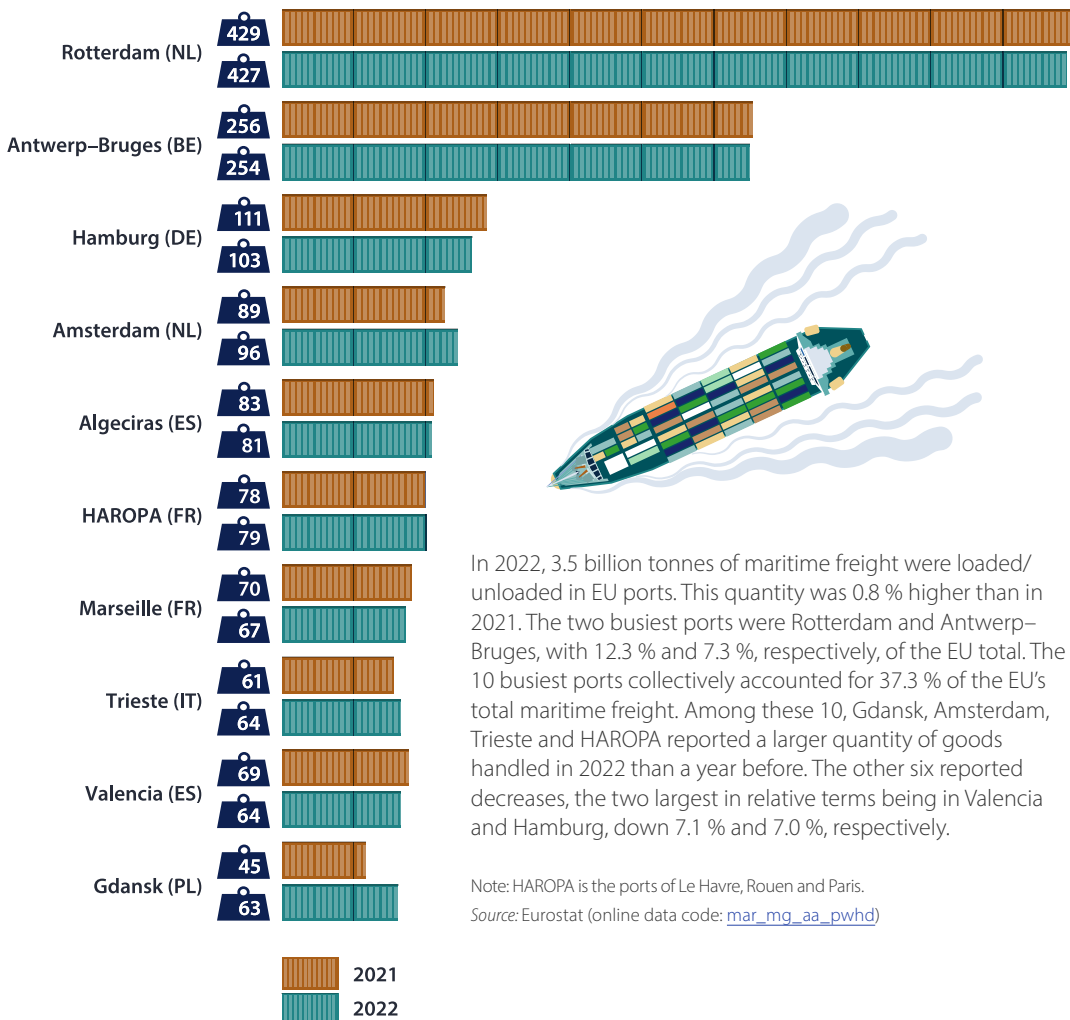
Maritime freight transport



Sea freight transport is the movement of goods using merchant ships on journeys that are undertaken wholly or partly at sea. Transport is measured in terms of tonnes handled in ports, in other words loaded or unloaded to a merchant ship. The transport of goods to offshore installations, for dumping at sea, or reclaimed from the seabed is included, as is transshipment from one ship to another. Bunkers and stores supplied to vessels for their own use are excluded.

Top 10 cargo ports in terms of gross weight of goods handled

(million tonnes, EU, 2021 and 2022)



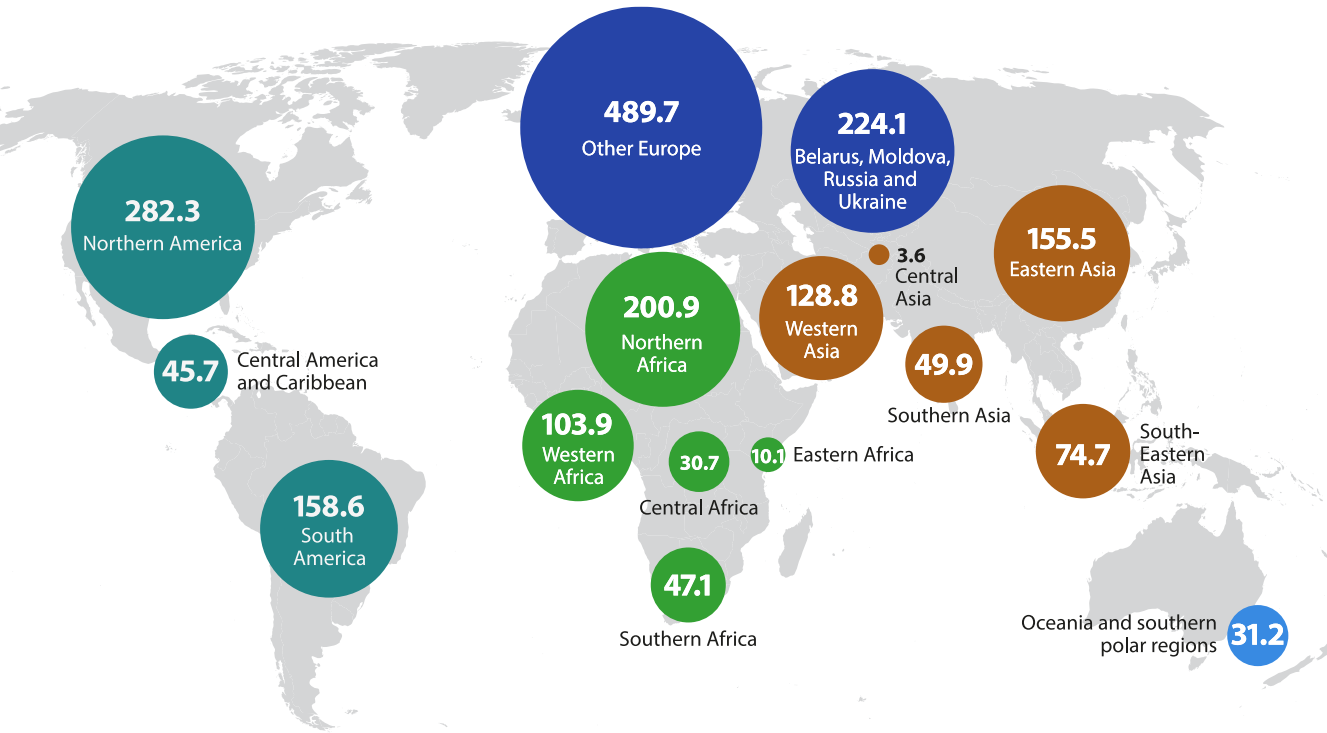
In 2022, 3.5 billion tonnes of maritime freight were loaded/unloaded in EU ports. This quantity was 0.8 % higher than in 2021. The two busiest ports were Rotterdam and Antwerp-Bruges, with 12.3 % and 7.3 %, respectively, of the EU total. The 10 busiest ports collectively accounted for 37.3 % of the EU's total maritime freight. Among these 10, Gdansk, Amsterdam, Trieste and HAROPA reported a larger quantity of goods handled in 2022 than a year before. The other six reported decreases, the two largest in relative terms being in Valencia and Hamburg, down 7.1 % and 7.0 %, respectively.

Note: HAROPA is the ports of Le Havre, Rouen and Paris.

Source: Eurostat (online data code: [mar_mg_aa_pwhd](#))

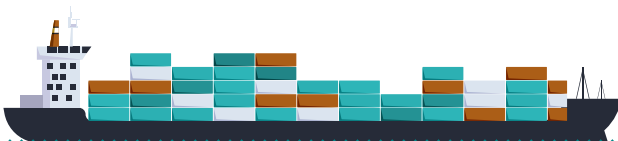
Inward and outward extra-EU maritime freight transport

(million tonnes weight transported, EU, 2022)



Source: Eurostat (online data codes: [mar_go_am_be](#) to [mar_go_am_se](#))

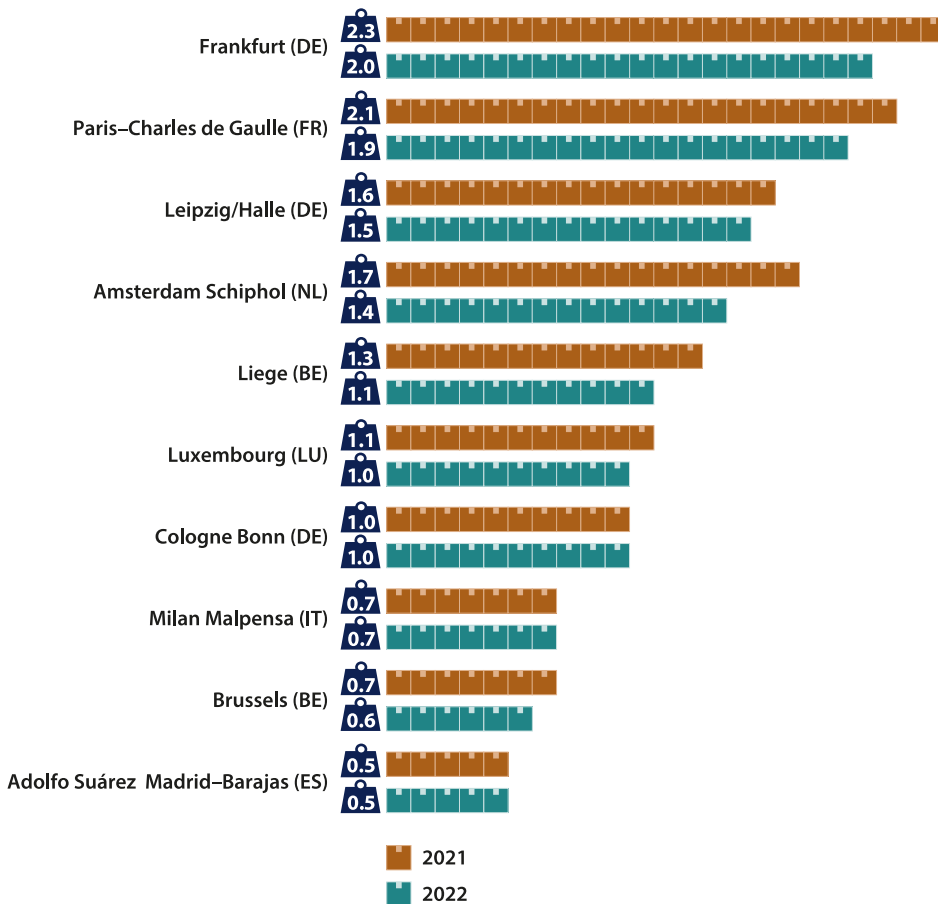
Of the 3.5 billion tonnes of maritime freight loaded/unloaded in EU ports in 2022, 2.1 billion tonnes were for transport to or from non-EU countries. This quantity was 1.9 % higher than in 2021. The largest partners in 2022 were elsewhere in Europe, with Belarus, Moldova, Russia and Ukraine collectively accounting for 10.4 % of the total and the rest of Europe for 22.8 %. Outside of Europe, the largest partners were Northern America (13.1 % of the total), Northern Africa (9.4 %), South America (7.4 %) and Eastern Asia (7.2 %). Among these six largest partners, maritime freight transport increased in 2022 (compared with 2021) for Northern America (up 12.4 %) and South America (up 1.8 %). The largest decrease, in relative terms, was for Belarus, Moldova, Russia and Ukraine, down 27.9 %).



Air freight transport

Top 10 main cargo airports in terms of goods loaded and unloaded

(million tonnes, EU, 2021 and 2022)



Source: Eurostat (online data code: [avia_gooa](#))

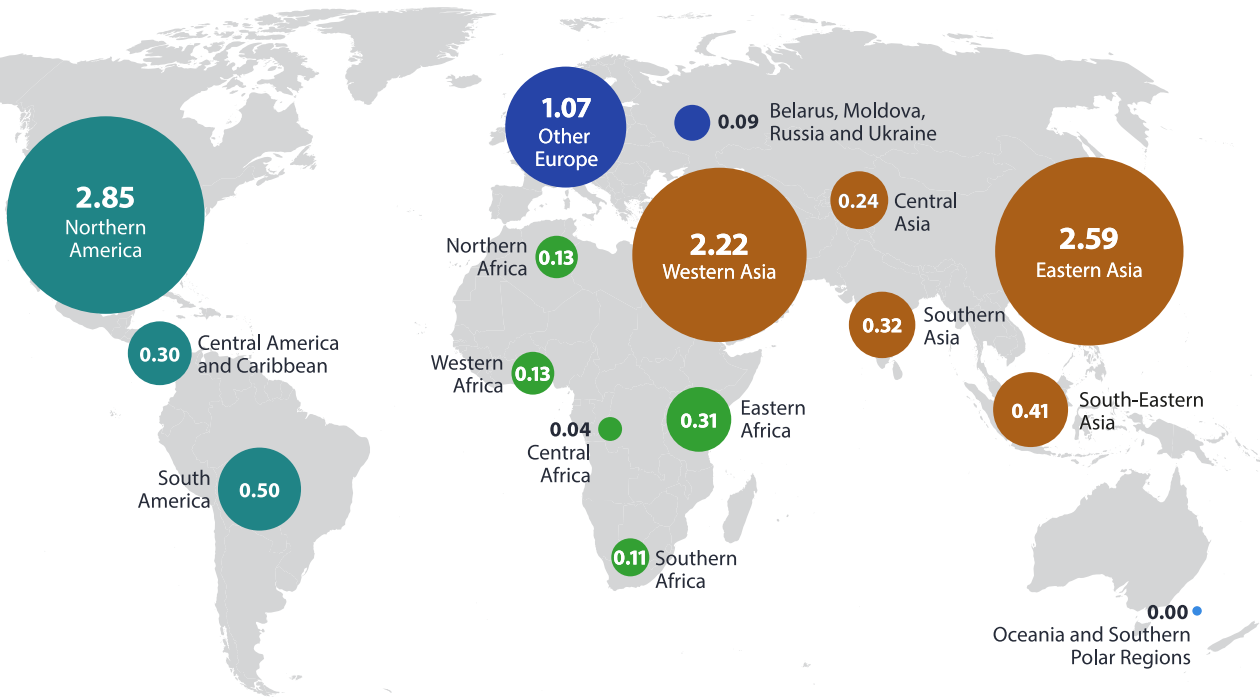


Air freight and mail transport is the movement of goods on an aircraft. The statistics published here are measured in terms of tonnes loaded or unloaded from aircraft at airports.

The COVID-19 crisis had a much smaller impact on air freight transport than on air passenger transport. The list of the EU's 10 busiest freight airports in 2022 was the same as in each of the three previous years, with only a few changes in the order of the ranking. In 2022, Leipzig/Halle overtook Amsterdam Schiphol as the EU's third busiest freight airport. Frankfurt and Paris-Charles de Gaulle maintained first and second positions.

Inward and outward extra-EU air freight transport

(million tonnes loaded and unloaded, EU, 2022)



Source: Eurostat (online data code: [avia_goexcc](#))

Unlike for air passenger transport, the main origins or destinations of goods freighted to or from the EU by air in 2022 was quite varied, with relatively low shares for other European countries. The largest share was for freight to or from Northern America, with just over a quarter (25.1 %) of the total. Eastern Asia (22.8 %) and Western Asia (19.6 %) were the next largest markets. These three largest markets collectively accounted for just over two thirds (67.5 %) of the extra-EU total for air freight transport.

EU air freight transport to/from non-EU countries decreased 7.9 % in 2022. Air freight transport fell strongly in 2022 with respect to the relatively small market of Belarus, Moldova, Russia and Ukraine, impacted at least in part by the Russian military aggression against Ukraine. The largest increases in relative terms concerned transport to and from Central Africa and Central Asia, which increased 14.6 % and 33.2 %, respectively.

3

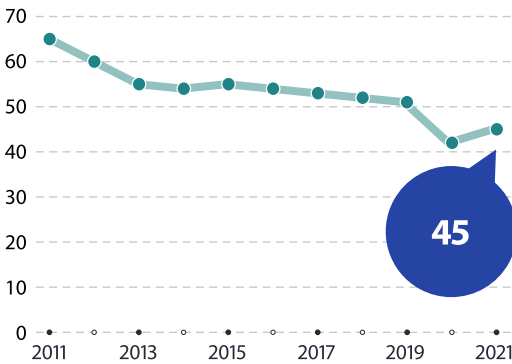
Transport safety



Road transport safety

Development of persons killed in road transport accidents

(per million inhabitants, EU, 2011–2021)



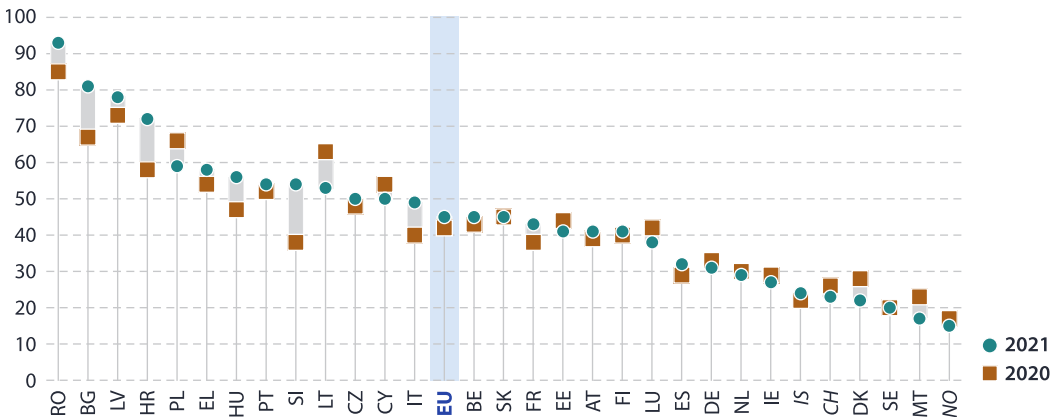
A fatal road transport accident is one involving at least one road vehicle in motion on a public road (or a private road to which the public have right of access), resulting in at least one killed person.

Between 2011 and 2020, the number of people killed in road accidents in the EU fell from 28 700 to 18 800 or from 65 per million inhabitants to 42 per million inhabitants. During this period, the ratio was stable or fell each year except for 2015. In 2021, the numbers rebounded somewhat (from the COVID-19-related fall in 2020), to 19 900 persons killed in road transport accidents or 45 fatalities per million inhabitants.

Source: Eurostat (online data code: [tran_sf_roadse](#)) from CARE

Persons killed in road transport accidents

(per million inhabitants, 2020 and 2021)



Note: the data for the Netherlands are believed to be under-reported.

Source: Eurostat (online data code: [tran_sf_roadse](#)) from CARE

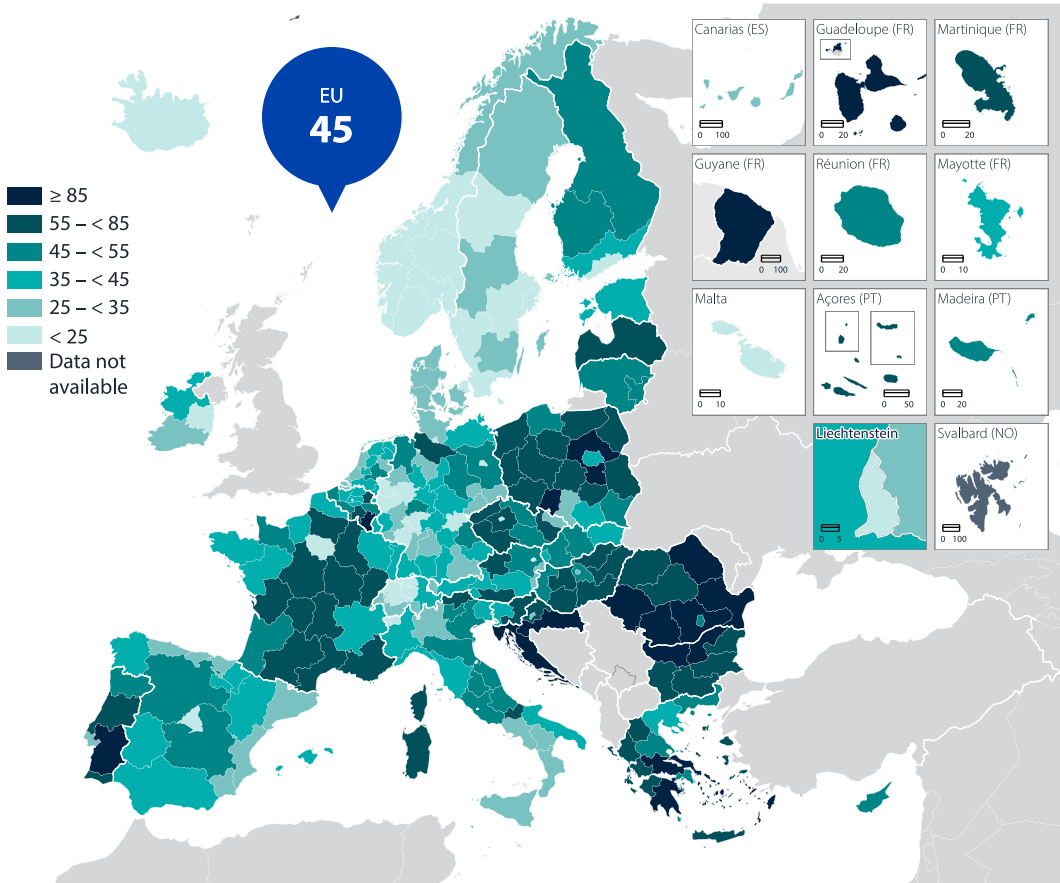
In 2021, the highest incidence among the EU Member States of fatalities through road accidents was in Romania, with 93 deaths per million inhabitants. The lowest incidences were in Sweden (20 deaths per million inhabitants) and Malta (17 deaths per million inhabitants).

in 2021 than in 2020. The largest increase in absolute terms was in Slovenia, up from 38 to 54 deaths per million inhabitants. The largest decrease was in Lithuania, down from 63 to 53 deaths per million inhabitants. It should be noted that the development of the number of road accidents with fatalities may be quite volatile, particularly for smaller countries.

A small majority of EU Member States recorded a higher incidence of fatalities through road accidents

Persons killed in road transport accidents in regions

(per million inhabitants, NUTS level 2 regions, 2021)



Regional data for road accidents are provided by statistical authorities (rather than from the CARE database). These data indicate that there were 12 regions in the EU where there were more than 100 fatalities per million inhabitants in 2021: four in Romania, two each in Bulgaria, Greece and France, and one each in Poland and Portugal. The highest ratio was 159 fatalities per million inhabitants in the French overseas region of Guadeloupe. In 2021, there were no road accident fatalities in the Spanish autonomous Ciudad de Ceuta nor in Valle d'Aosta/ Vallée d'Aoste in north-western Italy (2020 data).

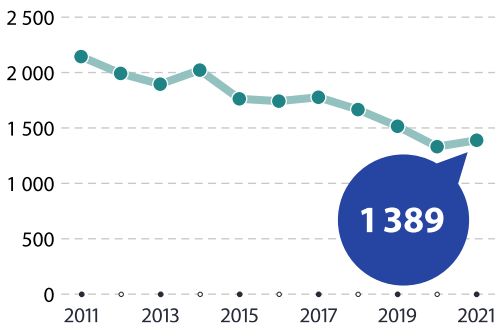
Note: IT, 2020.

Source: Eurostat (online data code: [tran_r_acci](#))

Rail transport safety

Development of railway transport accidents

(number, EU, 2011–2021)



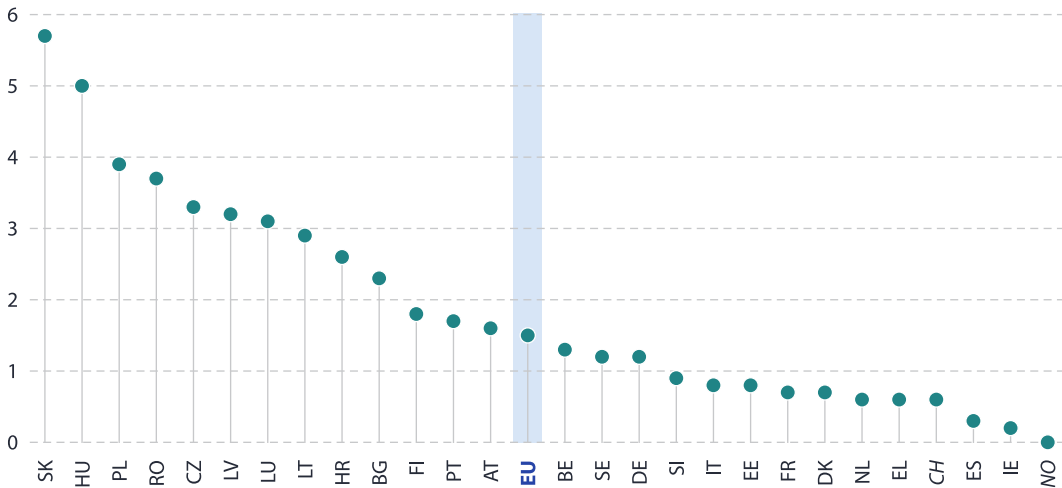
A rail transport accident may be a rail injury accident – with an injury or a fatality – or an accident with damage to railway stock, track, other installations or the environment.

The number of significant railway transport accidents in the EU fell from 2 144 in 2011 to 1 389 in 2021; overall, this was a decrease of 35.2 %. In most of the intervening years, there was a fall in the number of rail accidents, with annual increases observed only in 2014, 2017 and 2021. The decrease of 12.1 % in 2020 and rebound of 4.4 % in 2021 may reflect, to some extent, the impact of the COVID-19 crisis.

Source: Eurostat (online data code: [tran_sf_railac](#))

Persons killed in railway transport accidents

(per million inhabitants, 2021)



A total of 683 people died in railway transport accidents in the EU in 2021, equivalent to 1.5 deaths per million inhabitants. Among the EU Member States, this ratio ranged from 0.2 deaths per million inhabitants in Ireland and 0.3 deaths per million inhabitants in Spain to 5.0 deaths per million inhabitants in Hungary and 5.7 deaths per million inhabitants in Slovakia.

Note: no railways in Cyprus or Malta.

Source: Eurostat (online data codes: [tran_sf_railvi](#) and [demo_pjan](#))

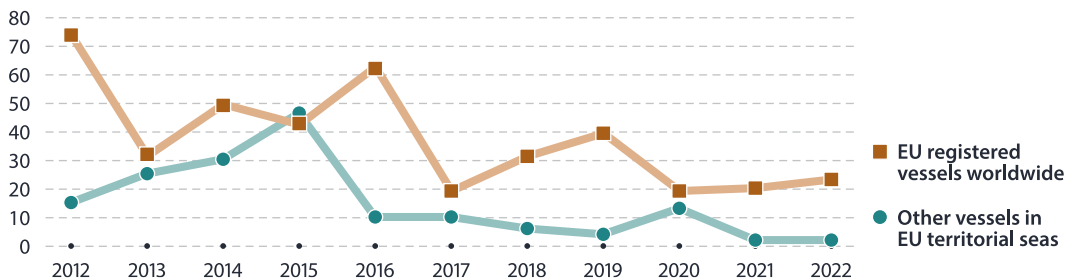
Maritime transport safety

Development of persons killed in maritime transport accidents

(number, EU, 2012–2022)



A fatal marine accident is one involving at least one marine vessel in motion resulting in at least one killed person.



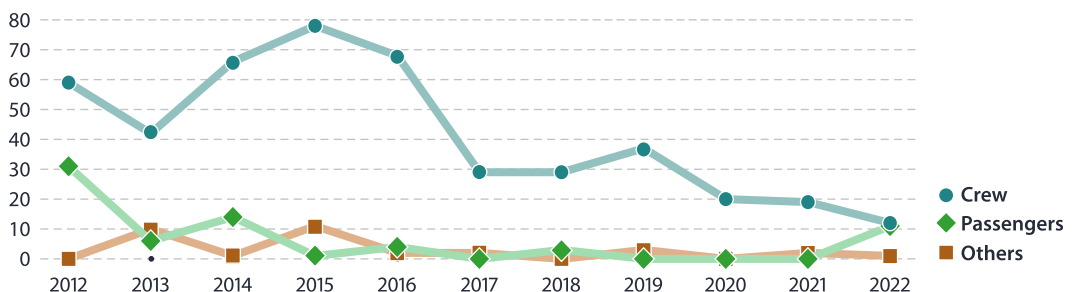
Source: Eurostat (online data code: [tran_sf_marvper](#))

Between 2012 and 2022, the number of people killed in maritime transport accidents in the EU's waters or involving EU-registered vessels elsewhere in the world ranged between 24 and 90. The three lowest numbers were recorded in recent years, 30 deaths in

2020, 27 deaths in 2021 and 24 deaths in 2022. A large majority of the EU's maritime transport fatalities in 2022 concerned EU registered vehicles (24 fatalities), while the others (three fatalities) were related to other vessels in the EU's territorial seas.

Development of persons killed in maritime transport accidents, by type of victim

(number, EU, 2012–2022)



Source: Eurostat (online data code: [tran_sf_marvper](#))

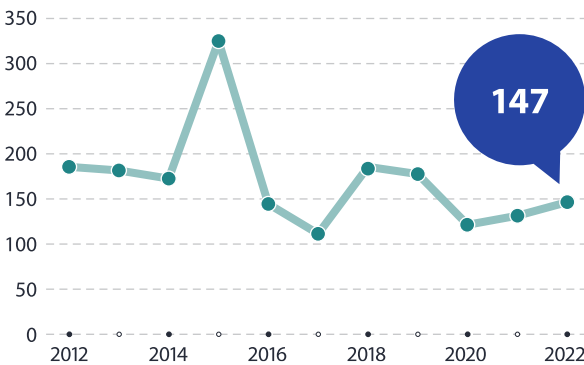
In 2022, 12 of the 24 fatalities in EU maritime transport accidents were crew members, while 11 were passengers. One fatality was classified as other, a category which includes, for example, service personnel, dock workers, pilots and inspectors. As

such, 2022 was the first year since 2018 in which passengers were killed in maritime transport accidents in the EU's waters or involving EU-registered vessels elsewhere.

Air transport safety

Development of persons killed in air transport accidents

(number, EU, 2012–2022)



Persons killed due to the operation of an aircraft may be in the aircraft, in direct contact with any part of the aircraft, or directly exposed to jet blast.

Between 2012 and 2022, the number of people killed in air transport accidents in the EU (or involving EU-registered aircraft) generally ranged between 112 and 186. A higher number of deaths was recorded in 2015 (325). A crash of a single commercial airliner, as was the case in 2015, can lead to notably larger figures for a particular year.

Source: Eurostat (online data codes: [tran_sf_aviaca](#), [tran_sf_aviagah](#), [tran_sf_aviagal](#) and [tran_sf_aviaaw](#))

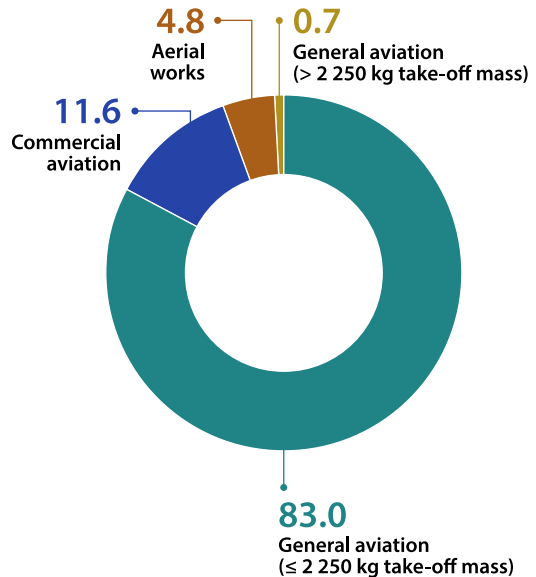
Persons killed in air transport accidents

(%, EU, 2022)

The overall number of people killed in air transport accidents in the EU (or involving EU-registered aircraft) in 2022 was 147. This number reflects the absence of major accidents within commercial aviation.

In 2022, there were 122 deaths (83.0 % of the total) within general aviation involving aircraft with a take-off mass equal to or below 2 250 kg; this includes not only small aeroplanes and helicopters but also other craft such as motor-glanders, microlights and hot air balloons. The number of fatalities for other categories were much lower: there were 17 deaths in commercial aviation, seven in aerial works (where an aircraft is used for specialised services such as for agriculture, construction, photography, or search and rescue) and one death in general aviation involving aircraft with a take-off mass above 2 250 kg.

Source: Eurostat (online data codes: [tran_sf_aviaca](#), [tran_sf_aviagah](#), [tran_sf_aviagal](#) and [tran_sf_aviaaw](#))



4

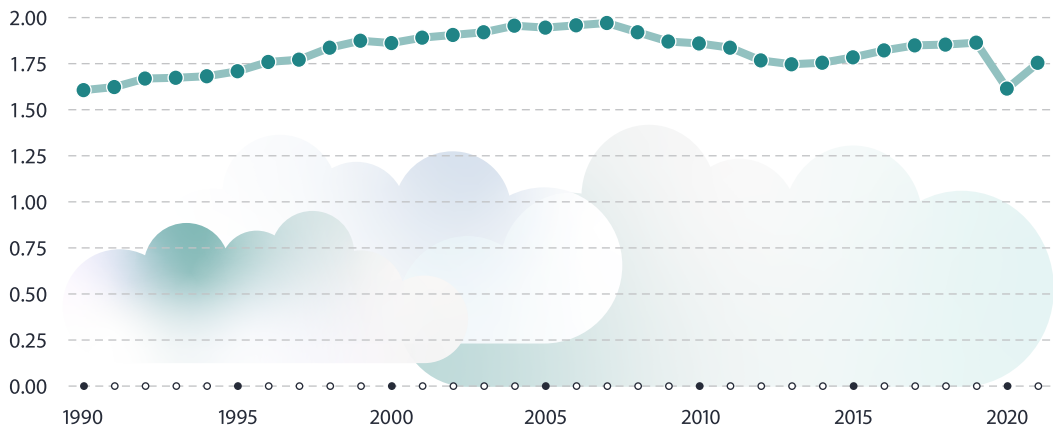
Transport, the environment and energy



Emissions

Development of greenhouse gas emissions from fuel combustion in transport

(tonnes of CO₂ equivalents per inhabitant, EU, 1990–2021)



Source: Eurostat (online data codes: [env_air_gge](#) and [demo_pjan](#)) and European Environment Agency (EEA)



The emissions presented in this publication use a territoriality principle, with emissions assigned to where gases are emitted rather than the residence of the emitter. To combine emissions of the various greenhouse gases, which each have different global-warming potential, CO₂-equivalents are used. These convert quantities of emissions of other gases into the equivalent quantity of carbon dioxide which would have the same global-warming potential.

Between 1990 and 2019, total emissions of greenhouse gases in the EU through fuel combustion in transport increased 23.8 %, or 160 million tonnes of CO₂-equivalent; note that these values do not include international aviation or international navigation (shipping). Transport was the only fuel combustion source sector which recorded an increase during this period. In 2020, as the COVID-19 crisis impacted on transport, these emissions decreased 13.5 % compared with 2019. In 2021, there was a partial

rebound, as emissions of greenhouse gases in the EU through fuel combustion in transport increased 8.6 %.

When adjusted for changes in the population, emissions from fuel combustion in transport increased most years from 1990 to 2007, decreased through to 2013 (during which time economic activity was relatively restrained due to the global financial and economic crisis), and increased thereafter up to 2019. Overall, fuel combustion in transport per inhabitant was 16.1 % higher in 2019 than it had been in 1990. This suggests that the average use of powered transport per inhabitant in the EU increased at a faster pace than any improvements achieved in terms of fuel efficiency. As for the overall level of emissions from fuel combustion in transport, when adjusted for changes in population the ratio of emissions per inhabitant decreased strongly in 2020 compared with 2019 (down 13.5 %) and partially rebounded in 2021 (up 8.7 %).

Taxes



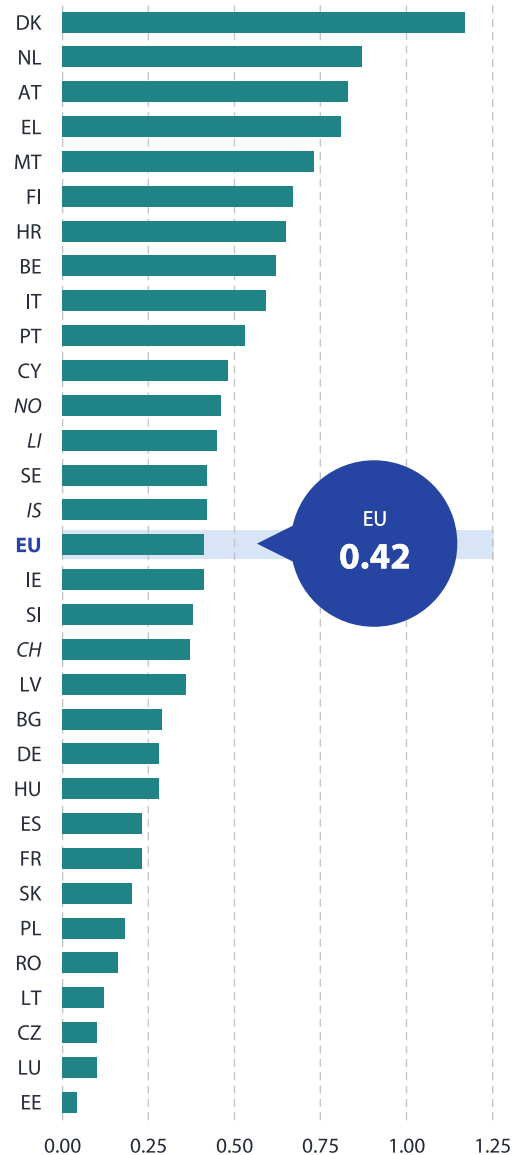
Environmental taxes can be classified as taxes on energy, transport, pollution or resources. Note that environmental taxes on transport fuels are classified as energy taxes, not transport taxes.

Environmental taxes on transport

(% of GDP, 2021)

In 2021, €326 billion of environmental tax revenue was collected in the EU, equivalent to 2.24 % of gross domestic product (GDP). Environmental transport taxes were valued at €59 billion, 18.1 % of all environmental taxes, equivalent to 0.41 % of GDP.

Among the EU Member States, environmental transport taxes ranged from 0.04 % of GDP in Estonia to 0.81 % in Greece, 0.83 % in Austria, 0.87 % in the Netherlands and 1.17 % in Denmark.



Note: LI, 2019.

Source: Eurostat (online data code: [env_ac_tax](#))

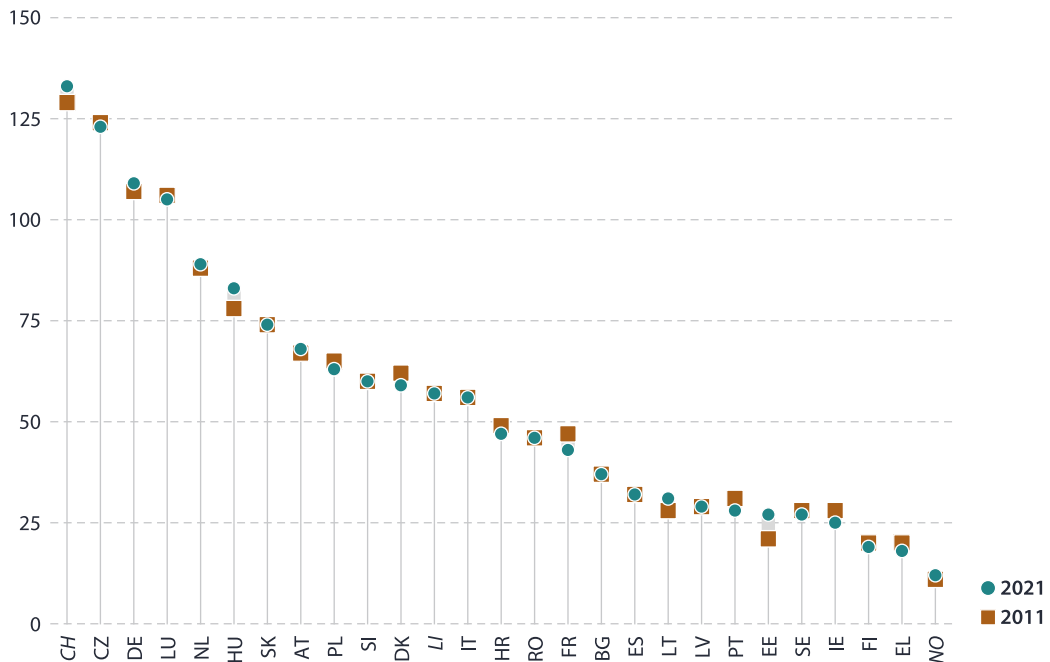
Networks



The rail network includes high-speed and conventional lines. It excludes the networks of light rail and metros, as well as trams.

Density of railway lines

(km per 1 000 km² of land area, 2011 and 2021)



Note: no railways in CY, MT or IS. BE: no recent data available. IT and CH: 2020 instead of 2021. DE: 2019 instead of 2021. CH: 2010 instead of 2011. PL: break in series.

Source: Eurostat (online data code: [tran_r_net](#))

Among other factors, rail network density is influenced by demand for rail passenger and freight services. The former is focused in, around and between urban areas, and the latter is often related to the presence of heavy industries as well as other transport infrastructure, such as [ports](#).

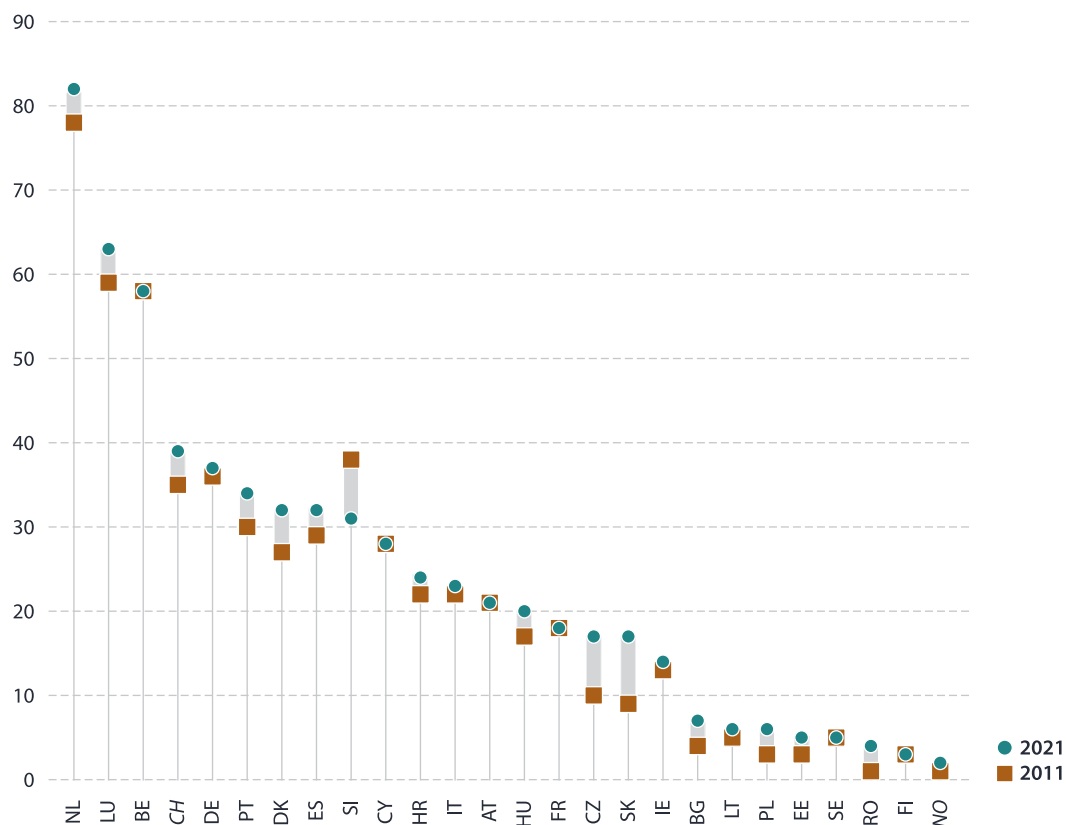
Among the EU Member States, the density of railway lines was highest in Czechia, Germany (2019 data) and Luxembourg, all with more than 100 kilometres (km) of lines per 1 000 square kilometres (km²) of land area in 2021. By contrast, in Finland and Greece the density

was less than 20 km per 1 000 km². Note that there is no rail network in Cyprus or Malta.

Between 2011 and 2021, the density of rail networks increased in absolute terms most notably in Estonia and Hungary, up 6 km and 5 km per 1 000 km² of land area, respectively; more modest increases were observed in Lithuania, Germany (2011–2019), Austria and the Netherlands. The density of the rail network declined most strongly in France, a decrease of 4 km per 1 000 km² of land area.

Density of motorways

(km per 1 000 km² of land area, 2011 and 2021)



Note: no motorways in LV, MT, IS or LI. EL, not available. DK: 2020 instead of 2021. IT: 2019 instead of 2021. EE and SI: break in series.

Source: Eurostat (online data code: [tran_r_net](#))



The **motorway network** includes roads specially designed and built for motor traffic which do not serve properties bordering on them and which are provided with separate carriageways for traffic in two directions, have no crossings at the same level and are sign-posted as motorways.

Among the EU Member States, the highest motorway density in 2021 was centred across the **Benelux** countries – Belgium, the Netherlands and Luxembourg – followed at some distance by Germany. This reflects their high **population density**, the industrial and logistics specialisation of some of these Member States, as well as connections into

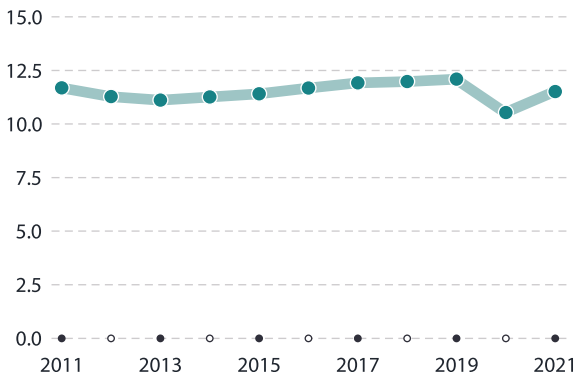
mainland Europe from the EU's largest maritime freight ports: Rotterdam and Amsterdam in the Netherlands, Antwerp in Belgium, and Hamburg in Germany. There were no motorways in Latvia or Malta. Elsewhere, the lowest motorway density was in Finland, reflecting its low population density.

The most substantial motorway expansions between 2011 and 2021 were observed in Slovakia and Czechia, increases of 8 km and 7 km per 1 000 km² of land area, respectively.

Energy

Development of final energy consumption in the transport sector

(million terajoules, EU, 2011–2021)



Note: excluding fuel deliveries to aviation and maritime international bunkers.

Source: Eurostat (online data code: nrg_bal_s)

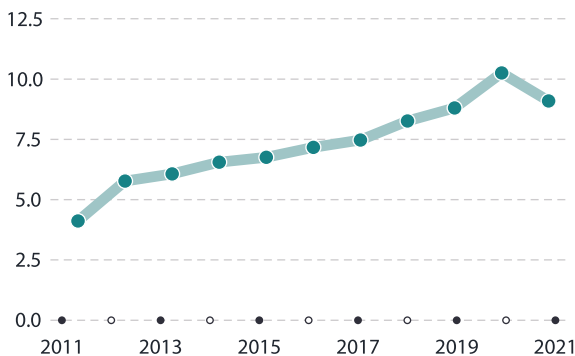


Data for various types of energy are combined using conversion factors and the result expressed in terajoules (TJ). One TJ is 1×10^{12} joules.

Final energy consumption of the transport sector in the EU was 11.5 million TJ in 2021, down 1.5 % compared with 2011. However, this overall development results from an initial decrease of 4.8 % between 2011 and 2013 followed by a sustained increase of 8.8 % between 2013 and 2019. The COVID-19 crisis strongly impacted final energy consumption in the next two years, with a fall of 12.9 % in 2020 and a partial rebound in 2021, up 9.3 %. Note that the data for final energy consumption of the transport sector excludes fuel deliveries to aviation and maritime international bunkers.

Development of the share of energy from renewable sources in transport

(%, EU, 2011–2021)



The share of energy from renewable sources in transport is calculated based on specific accounting rules related to the promotion of energy from renewable sources. Renewable energy sources relevant for transport include mostly liquid or gaseous biofuels and electricity from renewable sources. All modes of transport are included except for international navigation (shipping).

Across the EU, the share of energy from renewable sources in transport rose from 4.1 % in 2011 to 10.3 % by 2020, increasing each year. The largest increases were in 2012 and 2020, with gains of 1.7 and 1.4 percentage points, respectively. Most of the increase recorded in 2020 was reversed in 2021, as the share fell 1.2 points to 9.1 %.

Source: Eurostat (online data code: nrg_ind_ren)

5

Transport and the economy



Employment

Number of persons employed in the transport sector

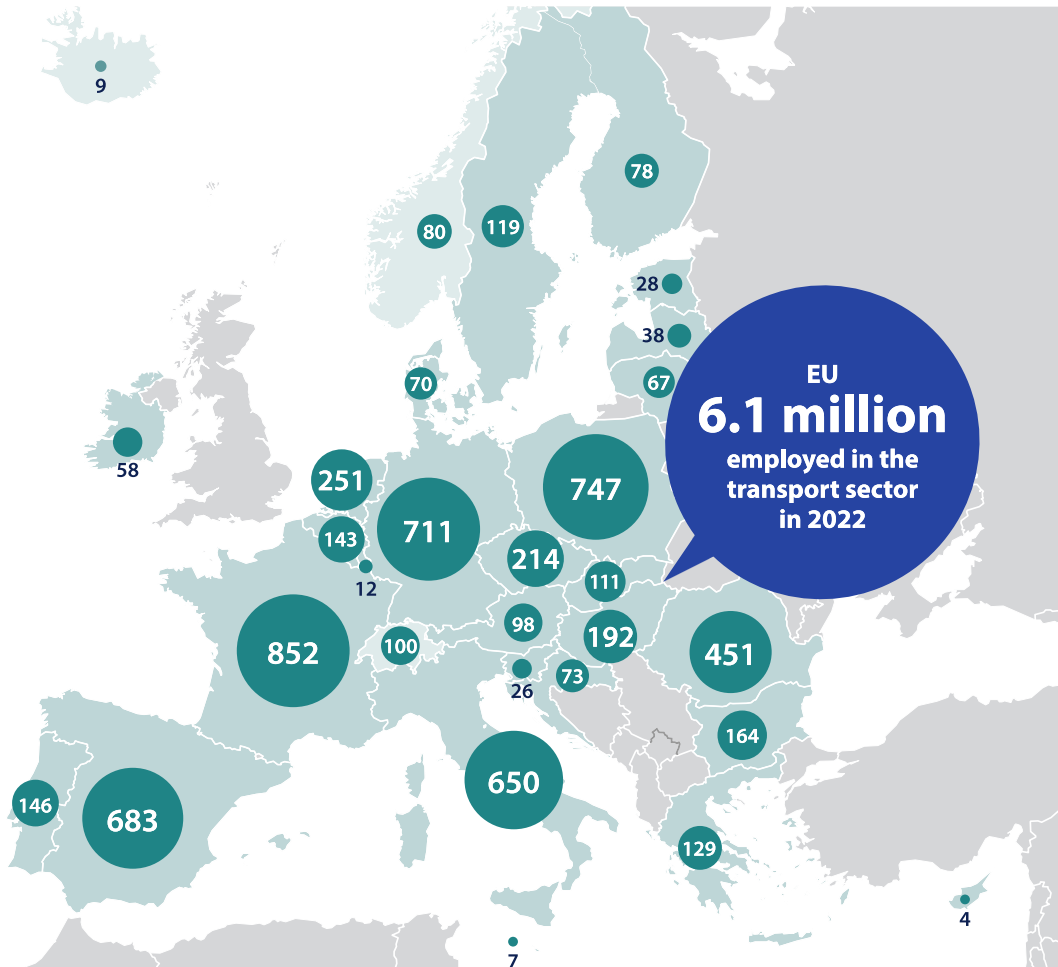
(1 000, 2022)

In 2022, 6.1 million people in the EU worked in the transport sector. Nine in every ten (89.6 %) persons employed in transport worked in land transport (such as road or rail), 5.6 % in air transport and 4.8 % in water transport (inland waterways or maritime) – see the facing page.



The statistics presented here concern persons aged 15–64 years employed in the land, water or air transport subsectors.

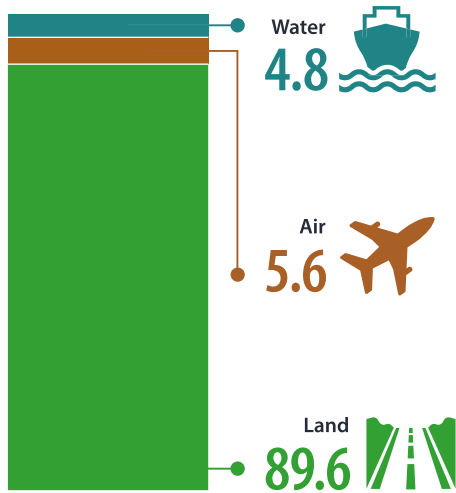
Among the EU Member States, the largest levels of employment in transport in 2022 were in France (852 000, 13.9 % of the EU total), Poland (12.2 %), Germany (11.6 %), Spain (11.1 %) and Italy (10.6 %). The lowest levels of employment were in Malta and Cyprus (both 0.1 % of the EU total).



Source: Eurostat (online data codes: [lfsa_egan22d](#) and [lfsa_egan2](#))

Distribution of employment, by transport subsector

(%, EU, 2022)



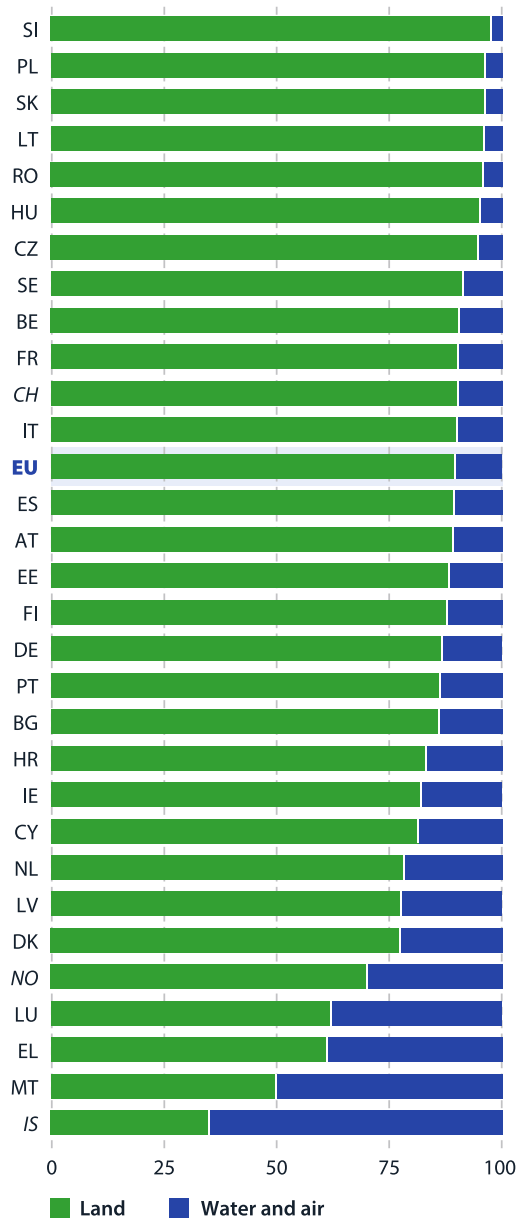
Source: Eurostat (online data code: [lfsa_egan22d](#))

Land transport dominated employment within transport in 2022 in the EU Member States, accounting for a majority of transport workers in all but one of them. The share of land transport generally ranged from 61.2 % in Greece to 97.7 % in Slovenia. Malta was the exception, as its land transport share was 50.0 %.

The combined share of water and air transport was particularly high in Malta and Luxembourg (mainly due to air transport) as well as in Greece (mainly due to water transport).

Distribution of employment, by transport subsector

(%, 2022)

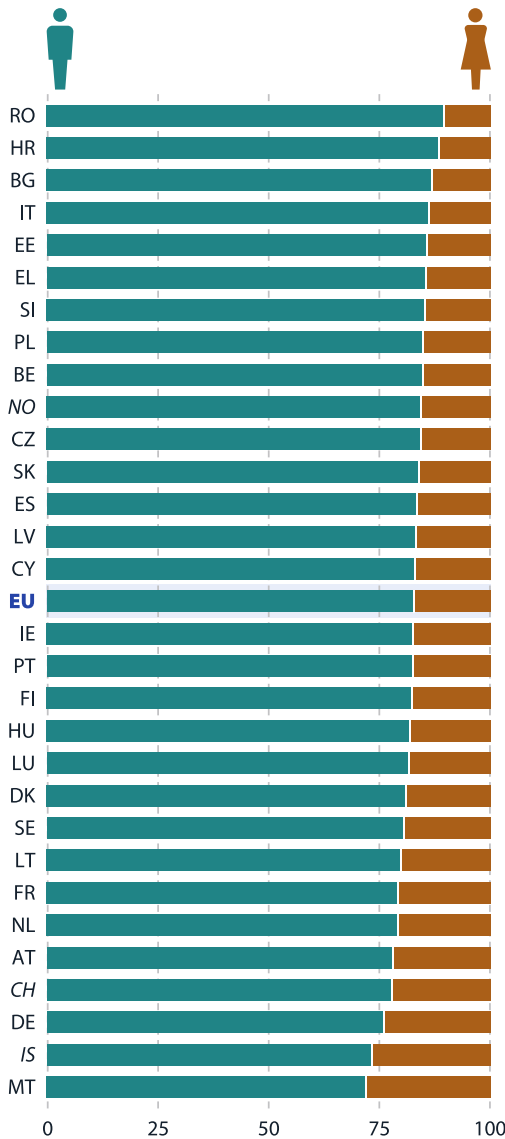


Source: Eurostat (online data codes: [lfsa_egan22d](#) and [lfsa_egan2](#))

Distribution of employment in the transport sector, by sex

(%, 2022)

In 2022, males accounted for a large majority of employment in the transport sector in all EU Member States. The highest share of females was recorded in Malta at 27.9 % and the lowest share was recorded at 10.3 % in Romania; the EU average was 17.2 %.

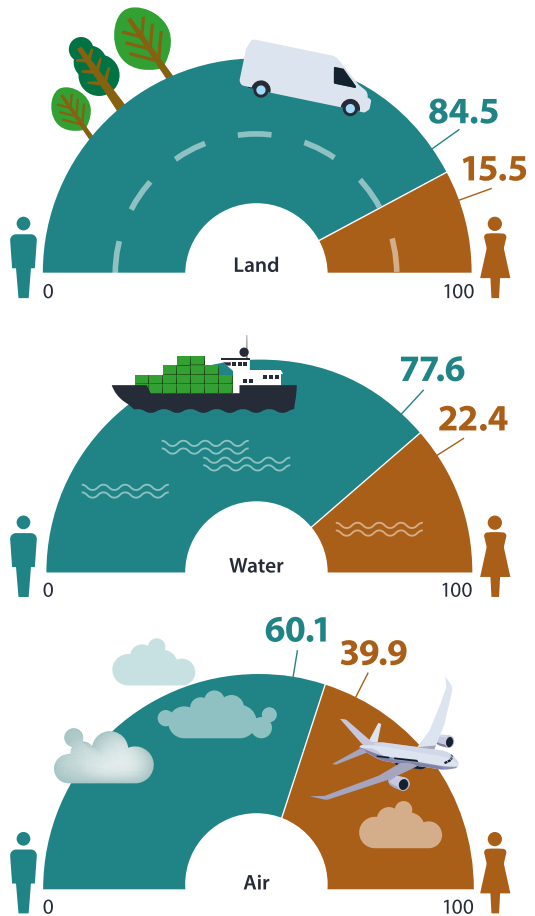


Note: HR, CY and SI, females, low reliability.

Source: Eurostat (Labour force survey)

Distribution of employment in the transport subsectors, by sex

(%, EU, 2022)

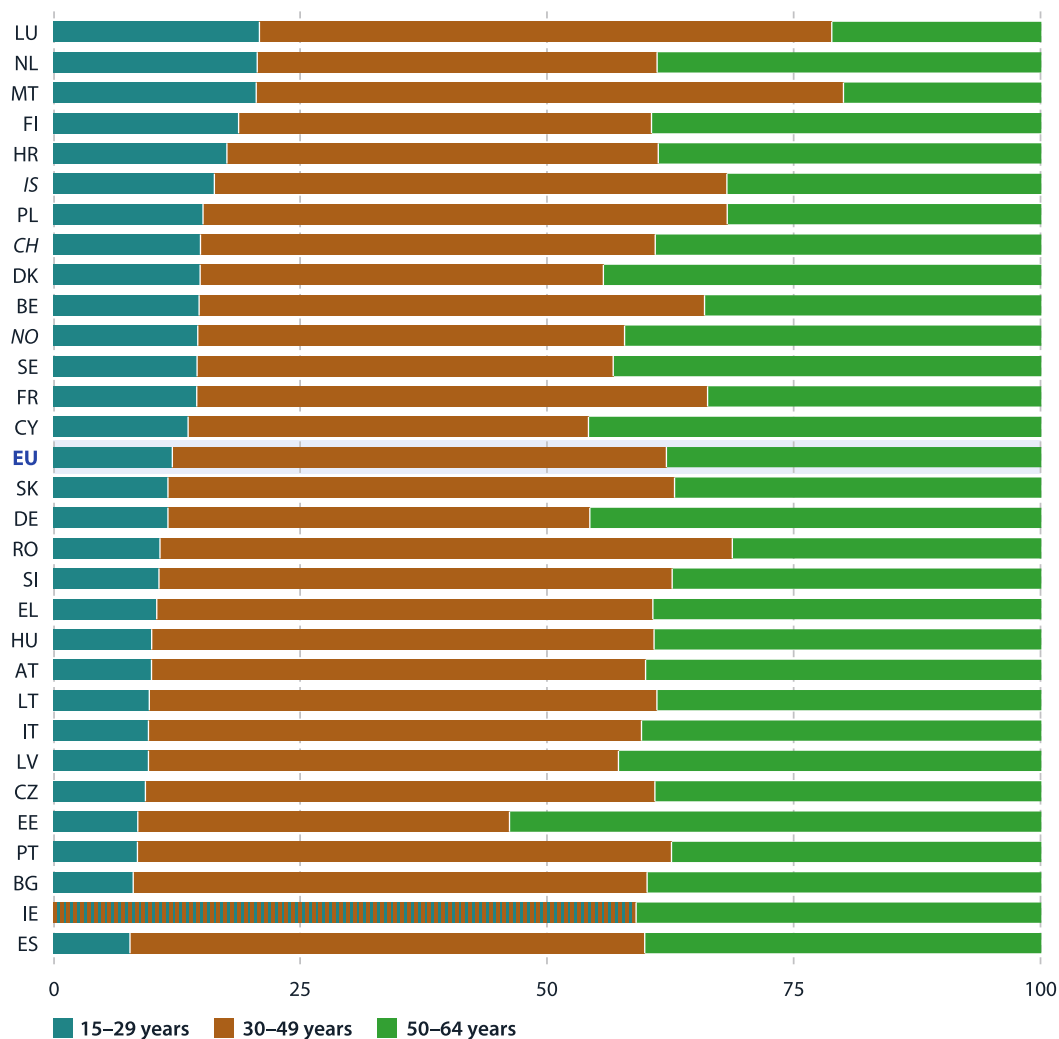


Source: Eurostat (online data code: [lfsa_egan22d](#))

There are clear differences between the shares of male/female workers in each transport subsector. For the EU as a whole, 39.9 % of people working in air transport in 2022 were females, compared with 22.4 % for water transport and 15.5 % for land transport.

Distribution of employment in the transport sector, by age

(%, 2022)



Note: CY and SI, 15-29 years, low reliability.
 IE: 15-29 and 30-49 years combined.
 Source: Eurostat ([Labour force survey](#))

Looking at the age of persons employed in the EU's transport sector in 2022, it can be seen that half (50.0 %) were aged 30-49 years, 37.9 % were older (aged 50-64 years) and 12.1 % were younger (aged 15-29 years). The share of persons aged 30-49 years was similar to that for whole economy. However, in the transport sector the share of older workers was higher and the share of younger workers was lower.

The transport sectors of Luxembourg, the Netherlands and Malta had the highest shares of younger persons, each with slightly above one fifth. Luxembourg and Malta also had by far the lowest shares of older workers, around one fifth. By contrast, more than half of the persons employed in the transport sector were aged 50-64 years in Estonia, while shares of at least 40.0 % were recorded for the same age group in nine other EU Member States.

Prices

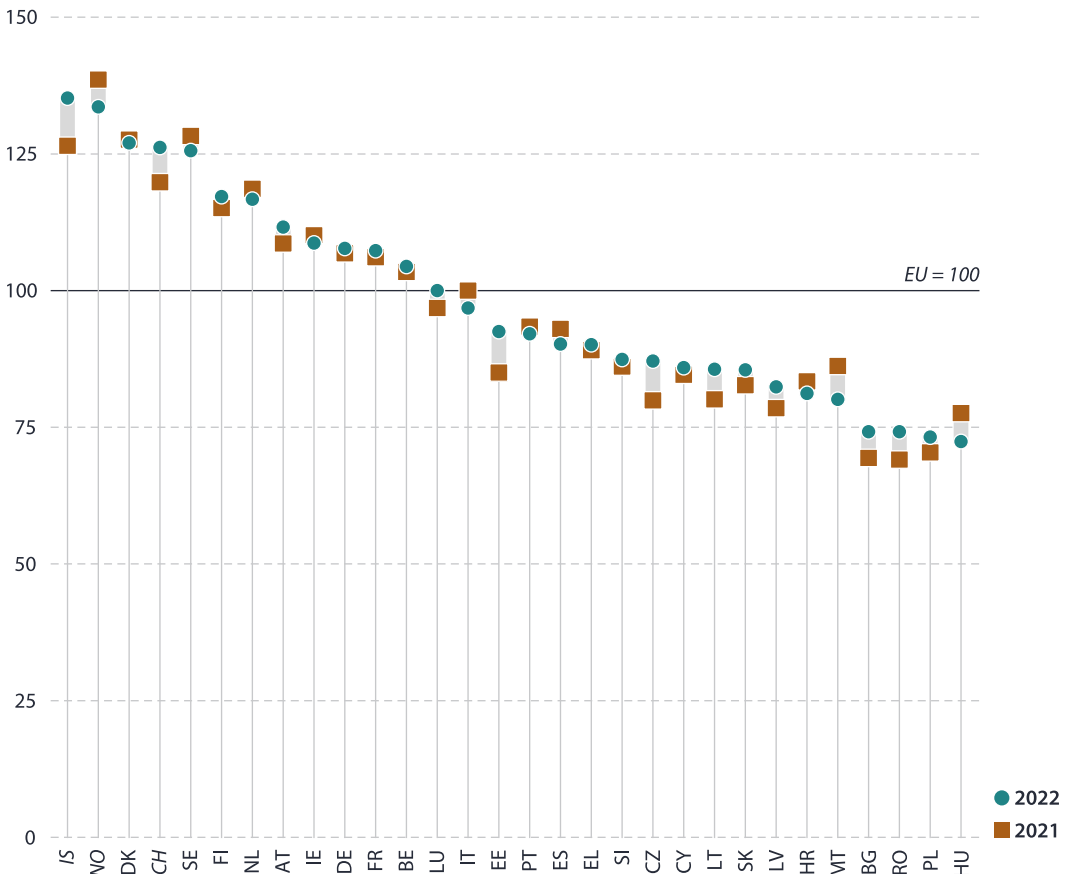
Price level index for transport

(EU = 100, 2021 and 2022)

In 2022, the price level for transport was equal to or above the EU average in all of the [Nordic](#) and western EU Member States. In all [Baltic](#), eastern and southern Member States, the price level for transport was below the EU average. The highest price levels were in Denmark and Sweden and the lowest in Bulgaria, Romania, Poland and Hungary.



Price levels vary between countries and these differences can be expressed using a [price level index](#). The data presented here are based on an index where the average price for the EU as a whole is set at 100. If the price level index in a country is higher than 100, the country concerned is relatively expensive compared with the EU average; if the index is lower than 100 then the country is relatively cheap compared with the EU average. The price level index for transport covers prices for equipment (such as vehicles), the operation of equipment (such as fuel, parts, and repairs) as well as for services (such as transport tickets).



Source: Eurostat (online data code: [prc_ppp_ind](#))

Annual price change for transport and for transport fuels and lubricants

(%, 2022)

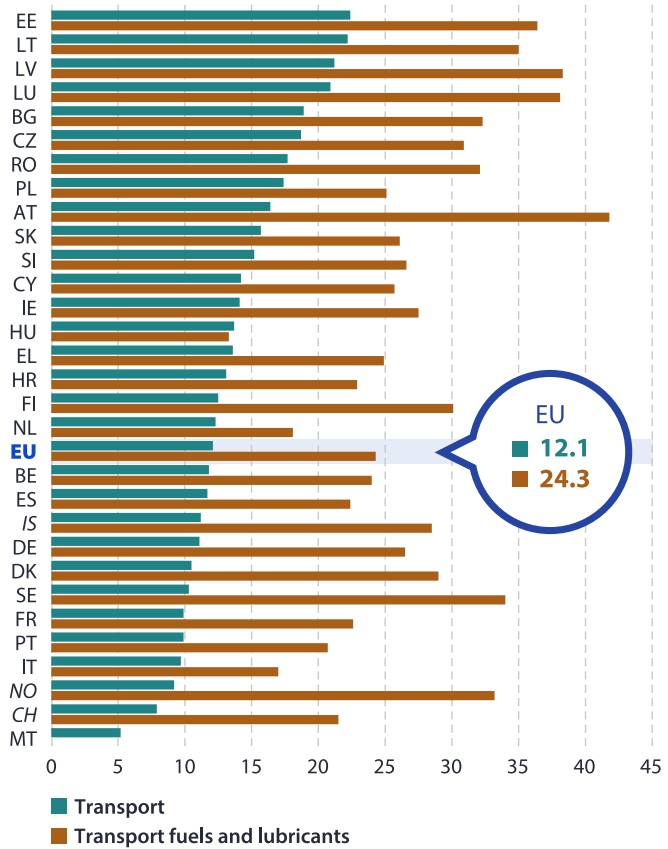
Restrictions in the supply of energy products linked to the Russian military aggression against Ukraine were in part responsible for a 24.3 % rise in consumer prices for transport fuels and lubricants in the EU in 2022. This in turn contributed to a 12.1 % rise in consumer prices for transport in general; this covers the purchase, maintenance, repair and operation of vehicles and the purchase of transport services.

Every EU Member State recorded a rise in consumer prices for transport in 2022, ranging from 5.2 % in Malta to more than 20.0 % in Luxembourg and the Baltic Member States. The relatively small increase in Malta reflected its stability in prices for transport fuels and lubricants (which are regulated) compared with increases elsewhere in the EU which ranged from 13.3 % in Hungary to 41.8 % in Austria.

Source: Eurostat (online data code: [prc_hicp_aind](#))

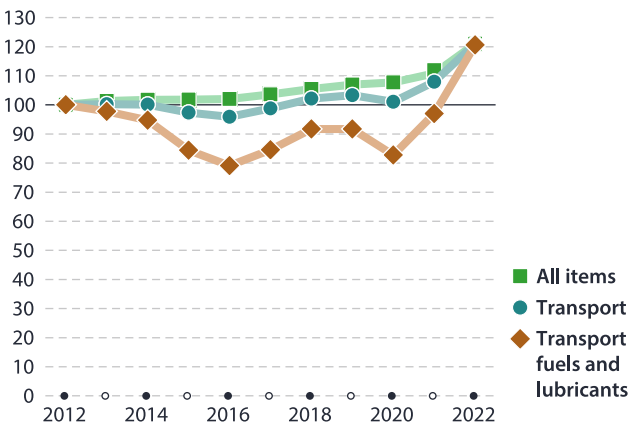


Changes over time in consumer prices (deflation or inflation) are also reflected in an index: in the EU, this is the harmonised index of consumer prices.



Annual price index for all items, transport and transport fuels and lubricants

(2012 = 100, EU, 2012–2022)



Looking over the period from 2012 to 2022, the EU's annual harmonised consumer price index for transport fuels and lubricants was relatively volatile, reflecting changes in the underlying oil price. This price index fell from a high in 2012 to a low in 2016 before increasing in 2017 and 2018. A fall in 2020 and rebound in 2021 were followed by high inflation in 2022. The broader index for the whole of transport was less volatile but followed a similar pattern.

Note: index rescaled from 2015 = 100.

Source: Eurostat (online data code: [prc_hicp_aind](#))

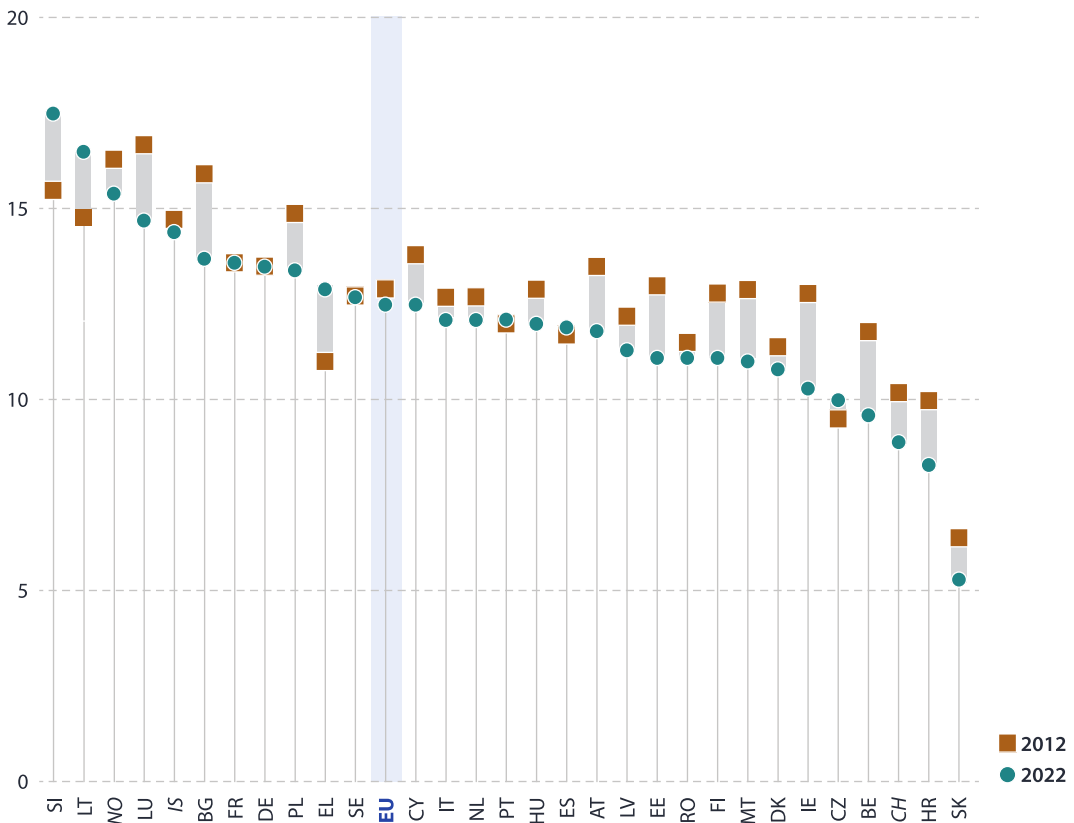
Expenditure

Share of household consumption expenditure on transport

(%, 2012 and 2022)



Household consumption expenditure on transport covers the purchase and operation of transport equipment, as well as payments for transport services.



Note: CH, 2021 instead of 2022.

Source: Eurostat (online data code: [nama_10_co3_p3](#))

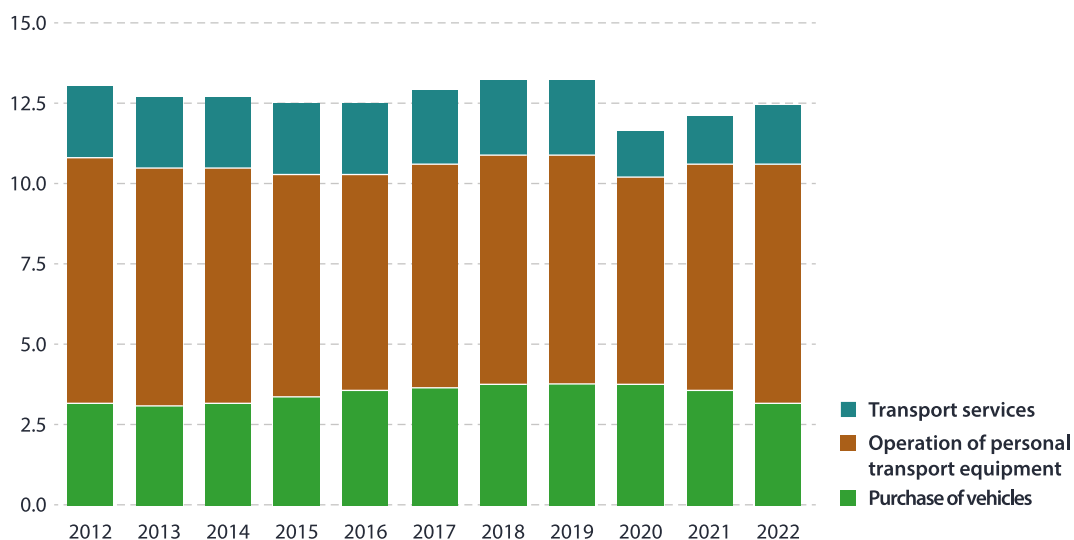
In 2022, 12.5 % of total household consumption expenditure in the EU was for transport, down slightly from 12.9 % in 2012. Focusing on the most recent years, the transport share of household consumption expenditure in the EU fell in 2020 but increased in 2021 and 2022. Most EU Member States (20 out of 27) reported a lower share of household consumption expenditure used for transport in 2022 than in 2012. The largest falls, in [percentage point](#) terms, were

observed in Ireland, Belgium and Bulgaria, while the largest increases were in Slovenia, Greece and Lithuania.

In 2022, Slovenia reported the largest share of household consumption expenditure used for transport (17.5 %), while Slovakia had the lowest share (5.3 %).

Development of the share of household consumption expenditure on transport

(%, EU, 2012–2022)



In the EU, the share of household consumption expenditure used for the purchase of vehicles was the same in 2022 as it had been in 2012. By contrast, the shares for the operation of personal transport equipment and for transport services were lower. In 2022, the shares for the operation of personal transport equipment and for transport services increased for the second year, after relatively large falls in 2020. By contrast, the share for the purchase of vehicles decreased for the second consecutive year in 2022, having remained stable in 2020.

Source: Eurostat (online data code: [nama_10_co3_p3](#))

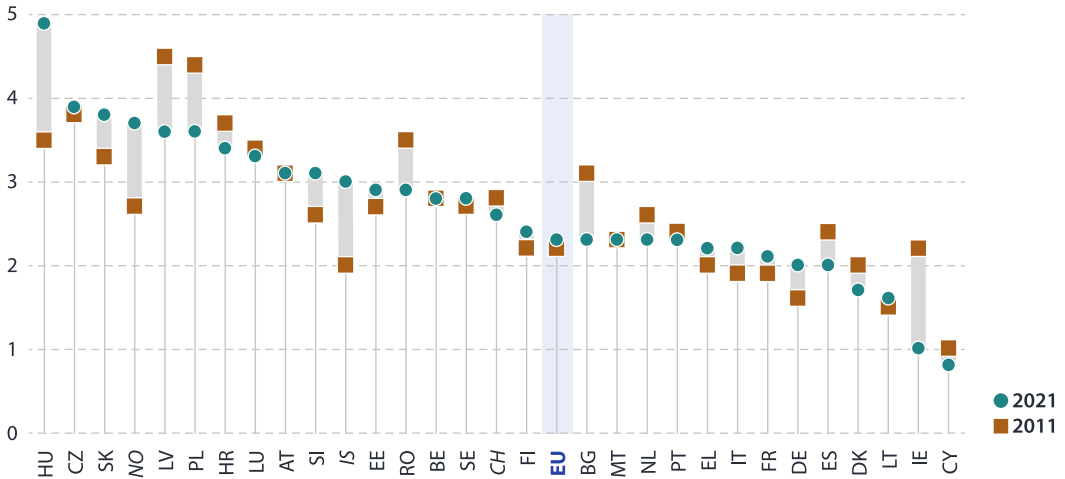




General government total expenditure on transport concerns expenditure on the administration of affairs and services concerning the operation, use, construction and maintenance of transport systems, as well as the supervision and regulation of users.

General government total expenditure on transport

(% of GDP, 2011 and 2021)



Source: Eurostat (online data code: [gov_10a_exp](#))

In 2021, general government total expenditure in the EU on transport was equivalent to 2.3 % of [gross domestic product \(GDP\)](#), slightly above the 2.2 % ratio observed in 2011. Among the EU Member States, 12 recorded a lower ratio of general government total expenditure on transport to GDP in 2021 than in 2011, while 12 recorded a higher ratio; in three Member States the ratio was the same in

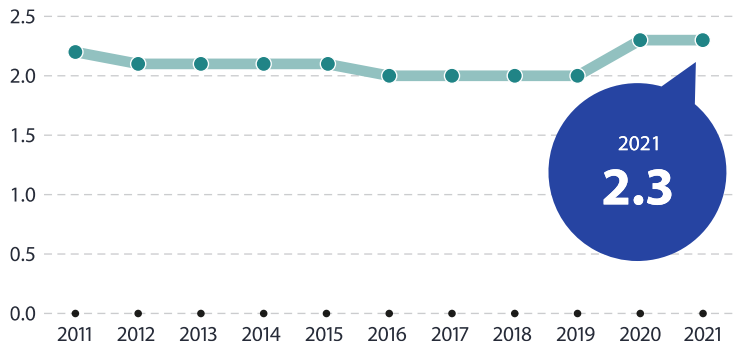
both years. The largest increase in percentage points when comparing 2011 and 2021 was observed in Hungary, while the largest decrease was in Ireland.

In 2021, Hungary reported the highest level of general government total expenditure on transport as a percentage of GDP (4.9 %), while Cyprus (0.8 %) and Ireland (1.0 %) had the lowest ratios.

Development of general government total expenditure on transport

(% of GDP, EU, 2011–2021)

In the EU, general government total expenditure on transport as a ratio of GDP fell from 2.2 % in 2011 to 2.0 % in 2019 and then increased to 2.3 % in 2020. It remained at 2.3 % in 2021, reflecting increased expenditure to support transport operators alongside an increase in nominal GDP.



Source: Eurostat (online data code: [gov_10a_exp](#))

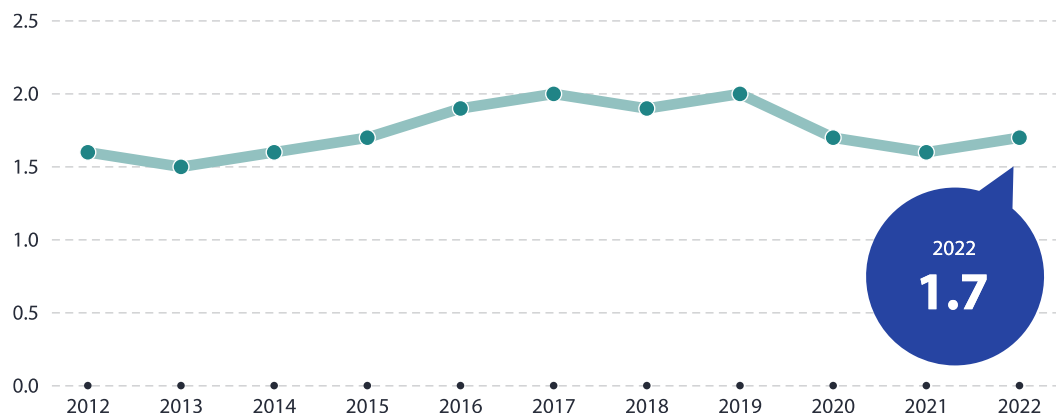
Investment

Development of investment in transport equipment

(% of GDP, EU, 2012–2022)



Gross fixed capital formation is more commonly referred to as investment in fixed assets.



Investment in transport equipment in the EU ranged from 1.5 % to 2.0 % of GDP between 2011 and 2021. Investment fell between 2012 and 2013 during the extended recovery from the global financial and economic crisis. Thereafter, investment in transport equipment relative to GDP increased through to a peak of 2.0 % from 2017 to 2019. The impact of the COVID-19 crisis on such investment can be clearly seen, with this ratio dropping to 1.7 % in 2020 and to 1.6 % in 2021 before a rise back to 1.7 % in 2022.

Source: Eurostat
(online data code: [nama_10_an6](#))



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KEY FIGURES ON EUROPEAN TRANSPORT 2023 EDITION

Key figures on European transport presents a selection of key transport indicators for the European Union (EU) and its individual Member States, as well as the EFTA countries. This publication may be viewed as an introduction to European transport statistics and provides a starting point for those who wish to explore the wide range of data that are freely available on Eurostat's website at <https://ec.europa.eu/eurostat/> together with a range of online articles in *Statistics Explained*.



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