

Factsheet with key findings and Greenpeace demands

This Greenpeace factsheet is based on an analysis by Wuppertal Institut and T3 Transportation Think Tank titled “Development of Transport Infrastructure in Europe: Exploring the shrinking and expansion of railways, motorways and airports.”, commissioned by Greenpeace Central and Eastern Europe.



MORE TRAINS

LESS CARS

#MobilityForAll

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Greenpeace Central and Eastern Europe
Wiedner Hauptstraße 120-124
1050 Vienna, Austria
Phone: +43 1 545 4580
Email: office@greenpeace.at
September 2023

Cover photo: Mitja Kobal/Greenpeace

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Overview

A new major study by the Wuppertal Institut and T3 Transportation Think Tank, commissioned by Greenpeace Central and Eastern Europe and published on 19 September 2023, has analysed the shrinking and expansion of transport infrastructure (railways, roads, airports) in Europe (the EU27 countries, the UK, Norway and Switzerland) since 1995. The research shows that Europe's rail system, including railway lines, train stations and stops, has been systematically underfunded and shrinking over the last three decades, while fossil fuel infrastructure such as motorways and airports was expanded, leading to an increased demand in private motorised transport that causes the large share of European transport emissions.

Transport remains the [only sector](#) in the EU that has not contributed to reducing greenhouse gas emissions. In contrast to other sectors, greenhouse gas emissions from transport have actually increased [by 15%](#) in the period from 1995 to 2019, mainly due to oil-burning vehicles. At the same time, an average train journey in Europe produces [77%](#) less greenhouse gas emissions than a car trip per passenger kilometre. Data shows that a dense and well-developed rail network is key to making public transport accessible and attractive to people, which will in turn lead to cutting greenhouse gas emissions.

→ Find the **full analysis** by Wuppertal Institute and T3 Transportation Think Tank commissioned by Greenpeace Central and Eastern Europe [here](#).

Disclaimer: All data and facts in the following summary are directly taken from the report or calculated from data included in the report, unless otherwise stated. Opinions and demands expressed in this document are those of Greenpeace.

The researchers examined data on the funding (public, and partly private) of roads (all roads, including urban roads in some countries), railway lines (conventional, high-speed, and in some countries urban metro/tramways) and airports (with a volume of over 150,000 passengers/year), and the expansion/closure of motorways (roads with at least two lanes in each direction and a barrier between the two directions¹), railways (conventional and high-speed) and airports (with a volume of over 150,000 passengers/year) in the EU27 countries, the United Kingdom, Norway and Switzerland since 1995, the first year for which data are available for all the countries analysed. The analysis does not take into account, if transport infrastructure shrank and expanded before 1995.

The data are mainly derived from public sources, including Eurostat, ITF-OECD, Worldbank and the European Commission's Statistical Pocketbook, as well as railway companies. The report always takes into account the latest available data that allows for European comparisons. Current data on the investments (in Euro) in transport infrastructure are available for all but three European countries up to and including 2018, and for two thirds of the countries for up to 2021, as indicated in this factsheet. Data on the expansion and closure of transport infrastructure are available for most countries until 2022, or in some cases even 2023.

¹ A motorway is a road with at least two lanes per direction with a barrier between the two directions (except in tunnels or special sections) and which is restricted for certain vehicles (such as bikes, tractors). Motorways comprise the highest categories of roads in the respective countries

Summary of key results

- EU-27, Norway, Switzerland and the UK spent €1.5 trillion between 1995 and 2018 to extend their roads, and only €930 billion on rail infrastructure. This equals **66 % more of their budget spendings to extend roads than to extend railways.**²
- Between 2018 and 2021, the average **funding gap between road and rail in Europe has narrowed from 66% to 34% more investment in road than rail.**³ However, despite the additional investment in rail, many European countries continued to close further railway lines and stations, and to plan and build new motorways and airport extensions.
- Since 1995, the **length of motorways in the 30 European countries analysed has grown by 60%**, from 51,494 km to 82,493 km. Growth rates were highest in Ireland, Romania and Poland. Growth rates were lowest in Lithuania, Latvia and Belgium. In 15 out of the 30 countries analysed, the motorway length more than doubled, including Spain, Norway and Greece.
- The expansion of road infrastructure created an additional demand for individual motorised transport in Europe. **Between 1995 and 2019 (just before the COVID pandemic), overall demand increased by 29 %.** Demand for rail transport grew as well and can be attributed to the extension of high-speed rail sections.
- The **length of the total European railway network decreased by 6.5% (15,650 km)** between 1995 and 2020, in some countries such as France or Germany even by more than 10%.
- At least **13,717 km of regional passenger rail lines in Europe have been temporarily or permanently closed** since 1995. More than half of them, an estimated 7,300 km, could be re-opened relatively easily.
- A total of at **least 2,582 train stations in Europe have been (temporarily or permanently) closed** since 1995. These closures have disproportionately affected rural communities and often cut them off from access to public transport.
- For **every kilometre removed from Europe's rail network between 1995 and 2020, two kilometres⁴ of new motorways were built.**
- Since 1995, **twelve new airports have been opened** for civil aviation in Europe, each with a volume of at least 150,000 passengers per year. In addition, ten new runways have been inaugurated.
- In total, the 30 countries analysed have **spent around €130 billion for airport infrastructure** from 1995 to 2018. The total spendings for new roads and airport infrastructure were around 80% higher than investments in rail in this period.

² For the sake of clarity, we have rounded the totals here. If we compare the unrounded totals (see table 2-1, p.10 in the report), we find that €1,545.86 billion was invested in roads and €931.41 billion in railways. This corresponds to €614.45 billion or 66% more invested in roads than in railways.

³ Data on investments in roads and railways after 2018 are not available for all countries in Europe, which makes general statements for this period less reliable.

⁴ The rail network shrank by 15,650 kilometres, while the total motorway network grew by 30,998 kilometres.

Country data

Top 10 countries in Europe that have invested relatively more in roads than in railways (1995-2018; expressed as investment ratio)⁵

Country	Road to rail investment ratio (the figure shows the road investment as a multiple of the rail investment) ⁶	Percentage (how much more the country invested in roads than in railways)
Romania	12.19 times as much for road as for rail	1,119%
Croatia	6.86 times as much for road as for rail	586%
Poland	6.57 times as much for road as for rail	557%
Ireland	6.44 times as much for road as for rail	544%
Estonia	4.53 times as much for road as for rail	353%
Bulgaria	4.39 times as much for road as for rail	339%
Slovenia	3.95 times as much for road as for rail	295%
Norway	3.74 times as much for road as for rail	274%
Greece	3.13 times as much for road as for rail	213%
Portugal	3.06 times as much for road as for rail	206%

⁵ The investment ratio shows how much more each country has invested in total (in its national currency) in roads than in railways. For example, "Romania 12.19" means that Romania has invested 12.19 times as much in roads as in railways in this period.

⁶ For example, Romania has invested a bit more than twelve times as much in roads as in railways. Expressed in percentage, Romania has invested 1,119% more in roads than in railways. For example, Portugal has invested a bit more than three times as much in roads as in railways. Expressed in percentage, Portugal has invested 206% more in roads than in railways.

3 countries in Europe that have invested relatively more in railways than roads (1995-2018; expressed in investment ratio)⁷

Country	Road to rail investment ratio (the lower the ratio the more the country invested in rail)	Percentage (how much more the country invested in railways than in roads)
Belgium	0.32	210%
Austria	0.38	162%
United Kingdom	0.84	19%

Top 10 countries in Europe with the largest total increase in new motorway kilometres (1995-2020)⁸:

Country	New kilometres
Spain	8,623 km
France	3,385 km
Portugal	2,378 km
Germany	2,002 km
Greece	1,724 km
Poland	1,466 km
Hungary	1,439 km
Croatia	1,008 km
Ireland	925 km
Sweden	917 km

⁷ The investment ratio shows here how much less each country has invested in total (in its national currency) in roads than in railways. For example, “Belgium 0.32” means that Belgium has invested 68% (100-32) less in roads than in railways.

⁸ The total growth of kilometres refers only to how many new kilometres of motorways have been built in total by each country, whereas the table below on “relative growth rate” refers to the difference between the motorway length before 1995 compared to 2020 in a respective country.

Top 10 countries in Europe with highest relative growth rate of motorway network (% , 1995-2020):⁹

Country	Growth rate
Ireland	1,321%
Romania	714%
Poland	596%
Norway	442%
Hungary	430%
Greece	410%
Portugal	346%
Croatia	334%
Czech Republic	214%
Estonia	206%

Countries ranked by per capita investment in railways (EUR, cumulated for 1995-2018):¹⁰

Country	Euros invested per capita
Switzerland	€6,798.67
Luxembourg	€5,114.80
Austria	€3,723.35
Denmark	€2,912.42
Sweden	€2,743.84
United Kingdom	€2,664.20
Norway	€2,481.94
France	€2,012.51
Belgium	€2,003.20
Italy	€1,990.03

⁹ The “relative growth rate” in motorway kilometres implies by how much the length of motorways in the respective country has increased until 2020 compared to 1995. For example, in Ireland the motorway network grew by 1,321% between 1995 and 2020. Ireland is the country in Europe with the highest national growth rate in new motorway kilometres.

¹⁰ Cyprus and Malta are not included in this table since they do not have railways.

Spain	€1,977.18
Germany	€1,583.89
Finland	€1,517.34
Netherlands	€1,263.31
Greece	€1,188.09
Czech Republic	€1,145.49
Slovenia	€910.63
Slovakia	€809.53
Ireland	€800.16
Hungary	€794.04
Portugal	€743.43
Lithuania	€653.11
Latvia	€613.69
Croatia	€431.02
Estonia	€413.94
Bulgaria	€277.38
Poland	€235.72
Romania	€182.63

Countries ranked by their per capita investment in roads (EUR, cumulated for 1995-2018):¹¹

Country	Per capita investment (cumulated)
Norway	€9,287.40
Switzerland	€8,560.18
Luxembourg	€6,444.34
Ireland	€5,151.88
France	€4,304.26
Greece	€3,718.40
Slovenia	€3,600.06

¹¹ Cyprus is not included because there is no data available.

Sweden	€3,500.49
Finland	€3,498.92
Germany	€3,337.67
Denmark	€3,283.09
Croatia	€2,955.57
Spain	€2,940.81
Netherlands	€2,676.88
Italy	€2,546.07
Portugal	€2,275.00
United Kingdom	€2,232.87
Romania	€2,225.72
Czech Republic	€2,072.16
Lithuania	€1,883.98
Estonia	€1,874.01
Slovakia	€1,837.50
Hungary	€1,743.60
Poland	€1,548.77
Latvia	€1,515.54
Austria	€1,423.43
Bulgaria	€1,218.44
Malta	€809.97
Belgium	€645.05

Top 10 countries in Europe with most railway lines closed for passenger transport (km, since 1995)

Country	Total kilometres closed
Germany	2,700 km
Poland	2,330 km
Italy	1,831 km
Spain	949 km
Hungary	919 km

Austria	655 km
Latvia	499 km
Portugal	460 km
Greece	389 km
Estonia	367 km

Top 10 countries with most railway lines closed for passenger transport per 100,000 inhabitants (km, since 1995):

Country	Kilometres closed per 100,000 people
Estonia	27.6 km
Latvia	26.6 km
Lithuania	10.7 km
Hungary	9.5 km
Austria	7.3 km
Poland	6.1 km
Bulgaria	5.1 km
Finland	4.9 km
Portugal	4.5 km
Greece	3.7 km
Average of all countries analysed	2.6 km

Countries by length of the total rail network (passenger & cargo) in 2020 compared to 1995 in %:

Country	Size of the rail network in 2020 compared to its size in 1995 (in percentage)¹²	Percentage of the decline/growth of the railway system (+ indicates growth; - indicates decline)
Latvia	77.0%	-23.0%
Poland	81.0%	-19.0%
Portugal	82.4%	-17.6%

¹² Explanation: For example, the 77% in Latvia means that the length of the total railway network in 2020 is only 77% of the length in 1995. Or in other words: the total railway network shrank by 23% in Latvia. The 114.4% in Spain means that the total railway network in Spain has grown by 14.4% since 1995.

Germany	85.1%	-14.9%
France	87.1%	-12.9%
Austria	87.6%	-12.4%
All countries, average	93.5%	-6.5%
Denmark	93.7%	-6.3%
Bulgaria	93.8%	-6.2%
Romania	94.7%	-5.3%
Greece	94.8%	-5.2%
Hungary	95.0%	-5.0%
Lithuania	95.5%	-4.5%
Croatia	96.0%	-4.0%
United Kingdom	96.1%	-3.9%
Norway	96.6%	-3.4%
Luxembourg	98.5%	-1.5%
Slovakia	98.9%	-1.1%
Czech Republic	99.4%	-0.6%
Sweden	99.9%	-0.1%
Finland	100.6%	+0.6%
Slovenia	100.7%	+0.7%
Estonia	101.2%	+1.2%
Ireland	104.7%	+4.7%
Italy	105.0%	+5.0%
Switzerland	105.1%	+5.1%
Belgium	107.3%	+7.3%
Netherlands	112.4%	+12.4%
Spain	114.4%	+14.4%

Austria

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Austria invested €12.7 billion in roads and €33.2 billion in railways. That is equal to 62% less investments in roads than in railways, making it one of only three countries out of the 30 analysed to have invested more in railways than in roads between 1995 and 2018.
- Between 2018 and 2021, the ratio of road to rail investments increased even further, with 73% less invested in roads than in railways. In every single year analysed, Austria spent more on rail than on road. Investments for the Brenner base rail tunnel project, linking Germany with Italy via Austria, are not included in the data reported, therefore the share of rail expenditure would be even higher.
- Austria ranks third in terms of per capita investment in railways among the 30 countries analysed (period 1995–2018), behind only Switzerland and Luxembourg. Most of the investment money is spent on high-speed rail, investment along main routes and some investment in suburban rail.
- Despite high rail investments, 31 railway lines with a total length of 655 kilometres have been closed for passenger transport in Austria since 1995. 230 railway stations have been closed along these lines. Despite the relatively small size of the country, the absolute loss of passenger railway lines is the sixth largest of all 30 countries analysed. The loss of railway stations is even the fifth largest.
- Of all railway lines that were closed, every second one was located in the federal state of Lower Austria in the North-East part of the country and surrounding Vienna. Styria and Carinthia each closed six lines. None of the three westernmost federal states, Vorarlberg, Tyrol and Salzburg, closed any railway lines.
- The longest railway line to be closed was the Ybbstalbahn with a length of 50 kilometres. It was mostly dismantled, except for a short local service, and a museum train section.
- The town with the most inhabitants affected by the closure of a railway station is Zwettl (district capital with about [11,000](#) inhabitants). The train line to Zwettl was closed in 2010. It is still used for cargo and could therefore easily be reactivated.
- Only about 56% of the closed Austrian railway lines could be reopened relatively easily. This is below the European average (63%). The total length of Austria's rail track network shrank by 12% from 5,672 kilometres to 4,962 kilometres since 1995. This is the sixth highest decline of all countries analysed.
- Between 1995 and 2021 – the full period for which national data are available – Austria invested around €14.3 billion in roads and €39.2 billion in railways. Although Austria invested less in roads than in the railways, the Austrian railways would have needed the money spent on roads more urgently, for example to reopen closed railway lines. Under the current Austrian government, which includes a transport minister from the Green Party, many motorway projects have been halted. However, there is a risk that after the next national elections in 2024, which could lead to a change of government, many motorway projects could be back on the agenda.

- Since 1995, Austria's motorway network has grown by 356 kilometres, or 19%. The relative growth rate of motorways in Austria during this period is higher than in Germany and Italy.
- More than 90% of the high-speed rail network in Austria was built after 1995, and reached a total length of 254 kilometres in 2020. Despite its mountainous geography, this is more than in flat countries such as Belgium and the Netherlands.
- No new airport with a volume of at least 150,000 passengers per year has opened and no new runway has been built since 1995. However, many smaller investments have been made at [Vienna Airport](#) including the extension of a terminal. The planned construction of a new runway at Vienna Airport is currently on hold, but may resume if the current increase in flights cannot be stopped. A new terminal was built at the [Salzburg Airport](#) to increase the capacity during the winter tourist season. All money invested in the Austrian airports would have been better spent on the railways, especially to maintain and reopen closed lines in rural areas.

Belgium

- Belgium is one of only three countries out of the 30 analysed to have invested more in railways than in roads between 1995 and 2018 – the period for which Europe-wide comparable data are available. Between 1995 and 2018, Belgium invested €23.3 billion in railways and €7.4 billion in roads. That equals 68% less investments in roads than in railways. However, between 2018 and 2021, the ratio of road to rail investments worsened, with only 16% less invested in roads than in railways. 2021, the year with the latest available national data, was the year of all years in which Belgium spent the most on roads, and also the only and first year in all 27 years analysed in which road expenditure was higher than rail expenditure.
- Despite the rail-friendly ratio of rail and road investments, Belgium ranks only 9th in per capita investment in rail among the 30 countries analysed (period 1995-2018), behind France which invested more than twice as much in roads than in rail over the same period.
- Since 1995, 17 railway lines with a total length of 187.6 kilometres have been closed for passenger transport in Belgium. At least 62 railway stations have been closed along these lines. The loss of railway stations corresponds to one station per 187,000 inhabitants, which is below the European average.
- 75% of the closed railway lines have been dismantled. The potential of reuse of old railway lines is therefore much lower in Belgium than the European average (53% reuse potential). The longest line that could be reopened relatively easily is the Eksel – Neerpelt line.
- The entire high-speed rail network in Belgium was built after 1995, and reached a total length of 209 kilometres in 2020. The total length of the railway network has therefore remained stable over the last three decades.
- Between 1995 and 2021 – the full period for which national data are available – Belgium invested around €10.1 billion in roads and €26.3 billion in railways. Although Belgium invested less in roads than railways, the Belgian railways would have needed this amount more urgently, for example to reintroduce more night trains to and from Belgium, or to continue the maintenance or reopening of closed railway lines.

- Since 1995, Belgium’s motorway network has grown by 97 kilometres or 6%.
- No new airport with a volume of at least 150,000 passengers per year has opened and no new runway has been built since 1995.

Bulgaria

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Bulgaria invested more than four times as much in roads as in railways: €8.4 billion in roads and €1.94 billion in rail. In the last four years for which data are available, the ratio of investment in roads to railways decreased slightly, from 4.39 to 3.74. 2022 was the first and only year in which Bulgaria spent more on railways than on roads. However, it is not possible to judge from one year whether this is already a positive trend.
- Between 1995 and 2021 – the full period for which national data are available – Bulgaria invested around €9.6 billion in roads and only €2.4 billion in railways.¹³ This equals four times as much investments in roads as than in rail.
- Since 1995, Bulgaria’s motorway network has grown by 157%, from 314 to 806 kilometres, while the length of the total railway network shrank by 263 kilometres, or by 6%.
- The lack of investment in the Bulgarian railway system has gone hand in hand with the destruction of the regional railway network. Since 1995, 13 regional railway lines with a total length of 348 kilometres have been closed to passenger transport, cutting off thousands of people from access to railways. Unfortunately, all of the closed lines have been dismantled or are in such a state that they cannot be reopened without major investment.
- Bulgaria has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995. However, significant investment has been made in [Sofia](#) Airport, with a new terminal opened in 2006, and another one planned for 2030. This money would have been better spent on the railways, for example to introduce more and quicker train connections to neighbouring countries such as Romania, Serbia and Greece.

Croatia

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Croatia invested almost seven times as much in roads as in railways - €12 billion in roads and €1.7 billion in rail. This is the second highest ratio of road to rail investment of all countries analysed, only Romania had a worse ratio.
- Between 1995 and 2021, the full period where national data are available, Croatia invested around €13.3 billion in roads and only €2.1 billion in railways. This equals about 6 times as much investments in roads as in rail.

¹³ While railway investment data for Bulgaria are available from 1995 on, road investments are only available from 2005 on. The researchers therefore have extrapolated historic road investment data for Bulgaria.

- In the more recent period, where national data are available, between 2018 and 2021, the ratio of road to rail investments halved to 3.27, meaning that Croatia has still invested significantly more in roads than in railways, with a ratio that is 2.4 times as high as the European average. Historically, the worst road to rail investment ratios occurred between 1995 and 2013, when investments in roads were always at least six times as high as in railways. Since 2014, the annual ratio of investments in roads to railways have always been between 2.1 and 4.4.
- The per capita investments in railways in Croatia are the fifth lowest of all countries analysed, and are only 24% of the average European per capita investments in railways.
- Since 1995, Croatia's motorway network has grown by 334% or 1,008 kilometres – from 302 km in 1995 to 1,310 kilometres in 2020. This is the eighth highest growth rate of all countries analysed, which is remarkable given that only eight of the countries analysed are smaller than Croatia.
- Since 1995, five railway lines with a total length of 118 kilometres have been closed to passenger transport. 28 railway stations were closed, cutting off thousands of people from access to railways. All five lines were only “suspended”, meaning that they could easily be reopened with the necessary public funding.
- Since 1996, the length of the total railway network in Croatia shrank by 4%.¹⁴
- Croatia has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995. A new terminal was opened at the Zagreb Airport in 2017. This money would have been better spent on the railways, for example to increase the speed of some lines or to introduce more and quicker train connections to neighbouring countries such as Slovenia.

Czech Republic

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – the Czech Republic invested €21,8 billion in roads and €12 billion in railways. This equals about twice as much investments in roads as in rail.
- Between 1995 and 2021 – the full period for which national data are available – the Czech Republic invested around €26.6 billion in roads and only €15.4 billion in railways. This equals about twice as much investments in roads as in rail.
- In the more recent period, between 2018 and 2021, the ratio of road to rail investments slightly declined, with the Czech Republic spending 44% more on roads than on railways.
- Since 1995, the Czech motorway network has grown by 884 kilometres, or by 214%.
- Since 1995, the Czech Republic has experienced a significant decline in passenger rail transport. 33 railway lines with a total length of 329 kilometres were closed to passenger transport. 104 railway stations were closed, cutting off tens of thousands of people from access to railways.

¹⁴ The table in the report on page 45 also includes the figure reported for Croatia for 1995. The 1995 figure is significantly lower, due to the historical fact that a part of Croatia (parts of Slavonia) was still under Serbian control in that year.

- Around 80% of the closed railway lines in the Czech Republic have not yet been dismantled and could be reopened with the necessary public funding.
- Since 1996, the length of the total railway network in the Czech Republic has remained stable, while the European rail network has shrunk by 6.5% on average.
- Unlike its neighbouring countries Poland, Austria and Germany, the Czech Republic has no high-speed rail network yet. Planning for a quick train connection on the [Berlin–Prague–Vienna](#) route has only recently begun.
- The Czech Republic has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995.

Denmark

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Denmark invested almost 13% more in roads than in railways, €19.2 billion in roads and €17 billion in railways.
- Historically, the ratio of road to rail investments in Denmark has shown strong ups and downs. From 1995 to 2002, the investment policy clearly favoured rail over road, while between 2003 and 2013, investments in roads significantly exceeded investments in rail up to a ratio of 6.7. Since 2014, investments in rail have again continuously been slightly higher than for roads. Therefore, the data for Denmark do not show a clear trend, and the rail-friendly ratio of recent years may have to be seen in this light.
- Per capita, Denmark has the fourth highest investment in railways after Switzerland, Luxembourg and Austria. Per capita investments in roads are about 10% above the European average.
- Since 1995, the motorway network in Denmark has increased by 70%, from 558 to 796 kilometres. This is a higher growth rate than on the European average (60%).
- The total length of the Danish railway network shrank by 8% (by 230 kilometres) since 1995, which is higher than the European average (6.5%) and also worse than the other three Nordic countries. As only one passenger line was closed, the reduction was mainly on former cargo lines.
- Only one single railway line has been closed in Denmark for passenger transport since 1995. The “Gedserbanen” was in operation until 2010. It was a connection between Nykøbing F and Gedser and was 22.9 km long. The line was dismantled.
- Denmark’s high-speed rail network is relatively short at 56 kilometres, which is unusual for a rich and flat country. The complete high-speed rail network was not built until after 2015.
- No new airport with a volume of at least 150,000 passengers per year has opened in Denmark since 1995, and also no new runways have been built in Denmark. However, there have been other [major investments](#) in Copenhagen Airport, such as the construction of Pier D. This money would have been better spent on the railways, for example to introduce night trains. There are no night trains in Denmark, apart from the Stockholm–Berlin route operated by Swedish rail companies.

Estonia

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Estonia has invested more than four times as much in roads as in railways, with a ratio of road to rail investments of 4.53. During this observation period Estonia invested €2.5 billion in roads and €548.5 million in railways. In the last four years for which national data are available (2018-2021), the ratio of investment in roads to railways has even worsened, against the European trend, with investment in roads being more than six times as high as in railways.
- Between 1995 and 2021 – the full period for which national data are available – Estonia invested €3.2 billion in roads and only €670 million in railways. This equals almost five times as much investment in roads as in rail. Estonia is the only country analysed that did not invest at all in railways in two years since 1995.
- Estonia has the fourth lowest investments in railways per capita of all countries analysed, only Romania, Bulgaria and Poland have invested less in railways per capita than Estonia (1995-2018).
- Since 1995, five railway lines with a total length of 367 kilometres have been closed to passenger transport in Estonia. This is the highest per capita loss of all the countries analysed. 43 railway stations have been closed along those closed lines. Just over 70% of the closed railway lines could be reopened with the necessary public funding. Estonia has also increased distances between stops along existing lines. However, the number of closed stations along existing lines is unknown.
- Despite the apparent underfunding of the Estonian railways, the total length of the Estonian railway network remained stable between 1995 and 2020, while the European rail network shrank by 6.5% on average.
- Since 1995, the length of the Estonian motorway network has more than doubled.
- Estonia has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995.
- On a positive note, the three Baltic countries have agreed to improve their railway connections. The “Via Baltica” will link Tallinn, Riga, Vilnius and Warsaw by rail. Currently, there are no direct cross-border train connections between the Baltic countries, and also not to Poland.

Finland

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Finland has invested more than twice as much in roads as in railways¹⁵. The exact ratio of road to rail investment is 2.31. During this observation period Finland invested €19.4 billion in roads and €8,4 billion in railways.
- Between 1995 and 2021 – the full period for which national data are available – Finland invested €23.7 billion in roads and only €10.1 billion in railways. This equals more than twice as much investment in roads as in rail.

¹⁵ Data include investment in urban and suburban railways.

- In the last four years for which data are available, the ratio of investment in roads to railways has even worsened, against the European trend, with a ratio of road to rail investment of 2.62.
- In no year analysed, was the road to rail ratio in Finland lower than 1.74, which means that since at least 1995 investments in roads have always been significantly higher than in railways.
- Since 1995, the motorway network in Finland has increased significantly by 539 kilometres, or by 137%. This growth rate is more than double the European average (60%).
- The total length of the Finnish railway network has grown by 1% since 1995, while the European rail network has shrunk by 6.5% on average.
- Only one Finnish railway line in Finland has been completely closed for passenger transport since 1995: the 157 km long Kontiomäki–Taivalkoski route. It was not dismantled and could be reopened.
- The Finnish high-speed rail network is considerably long at 1,120 kilometres, with 86% of which was built after 1995. Today, Finland has the fourth-longest high-speed rail network in Europe after Spain, France and Germany, and ahead of Italy and Sweden.
- In 2002, an additional runway was built at the Helsinki Airport. This money would have been better spent on the railways, for example to create an active rail link with Sweden.

France

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – France has invested more than twice as much in roads than in railways, with an exact road/rail investment ratio of 2.14. This ratio is higher than that of all six neighbouring countries analysed. During this observation period France invested €277.8 billion in roads and €129.9 billion in railways including urban and provincial public transport, subways and tramways.
- Per capita investment in roads in France is the fifth highest of all countries analysed, and by far the highest of the five largest countries analysed (compared to the UK, Germany, Italy, and Spain, period 1995-2018).
- Between 1995 and 2021 – the full period for which national data are available, France invested €308 billion in roads and only €164 billion in railways. This equals almost twice as much investment in roads as in rail.
- Since 1995, the French motorway network has grown by 3,385 kilometres, or 40%. In absolute terms, this is the second largest increase of all the countries analysed, behind Spain.
- Between 1995 and 2020, the total French railway network shrank by 12.9%, from around 32,000 km to 28,000 km, which is a quarter of the total European shrinkage.
- Since 1995, a total length of at least 339 kilometres of railway lines have been closed to passenger transport in France. The main wave of passenger train closings took place before 1995. Since 1995, mainly freight train sections have been closed. That is, on

many sections passenger trains were closed first, and the termination of freight train services followed years later.

- In the more recent period between 2018 and 2021, France has invested slightly more in railways than in roads (9.9% more). 2017 was the first year analysed, in which France has invested slightly more in railways than in roads. Greenpeace cannot assess whether this is a sustainable trend in French spending on transport infrastructure, especially as the country is still planning new motorways such as the A69 in the Tarn region, the A113–134 Rouen road bypass or the Machilly–Thonon highway. In addition, Greenpeace doubts that the investment will be enough to make up for years of underinvestment in the rail network and the high age of the French rail tracks ([29 years on average in 2020](#)).
- In 1995, half of Europe's high-speed rail network was in France. Since then, the French high-speed rail network has more than doubled to a total of 2,734 kilometres in 2020, although Spain overtook France as Europe's number one in terms of high-speed rail length about 15 years ago.
- No new airport with a volume of at least 150,000 passengers per year has opened and no new runway has been built since 1995. However, substantial other investments have been made in French airports, with around [ten ongoing airport extensions](#) on French territory.

Germany

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Germany has invested more than twice as much in roads as in railways, with a road/rail investment ratio of 2.11. During this observation period Germany invested €278.4 billion in roads and €132 billion in railways.
- In the more recent period between 2018 and 2021, Germany has also invested significantly more in roads than in railways, with a road/rail investment ratio of 1.84. This decline in the ratio is much lower than the European average (1.66 to 1.34), and shows that German policy is still fully focused on cars.
- Since 1995, there has not been a single year in which Germany has invested more in railways than in roads. The three lowest shares were recorded in 1999, 2002 and 2003, and even in these three years, roads received around 50% more funding than railways. The highest share was recorded in 2009, when German roads received 3.7 times as much investment as railways.
- Between 1995 and 2021 – the full period for which national data are available – Germany invested €329 billion in roads and only €160 billion in railways. This equals more than twice as much investment in roads as in rail.
- No other country analysed has invested more in roads than Germany, while the UK has invested 36% more in railways than Germany (1995-2018).
- Germany had planned to privatise the railway network in 1994. As a consequence, a total length of 5,148 kilometres of publicly owned network was completely closed to rail transport in the period 1994 to 2018. Fortunately, the privatisation did not happen. Some of the closed sections were reopened.

- The stakeholder organisation “Allianz pro Schiene” estimates that on balance passenger service has been cancelled on lines with a total length of 2,700 km as of 2023. This calculation takes into account 3,600 km of closings and 900 km of reopenings since 1995. The network operator Deutsche Bahn (DB Netz) has announced that they will not put any section out of operation anymore. A number of local initiatives contribute to accelerating the reopening of certain sections.
- Allianz pro Schiene¹⁶ has drafted a list of proposals for reopenings of freight and passenger lines. The list includes lines with a total length of 4,573 km, many of which were closed already before 1995. In Western Germany, the main wave of closings took place before the reunification. Since reunification, the bulk of closings took place in Eastern Germany.
- Despite the positive news, no other country analysed closed more railway lines with more kilometres for passenger traffic than Germany since 1995. 20% of all railway tracks closed for passenger traffic in Europe are in Germany.
- The longest closed railway line in Germany is Salzwedel–Oebisfelde with a length of 59 kilometres. It was closed in 2004. A regional company undertook efforts to maintain the train path, but ultimately the line could not be reopened.
- The list of proposals for reopenings includes 332 cities and municipalities that could be reconnected to the rail network as a result of the proposed reactivation. A total of 3.4 million inhabitants would be affected.
- 73% of the high-speed rail network in Germany was built after 1995, and reached a total length of 1,571 kilometres in 2020. This gives Germany the third largest high-speed rail network in Europe, after Spain and France.
- Between 1995 and 2020, Germany’s total railway network shrank by 15%, from around 45,100 km to 38,400 km. No other country had a greater loss of railway tracks, and this loss accounts for around 40% of all railway lines closed in Europe.
- Since 1995, the German motorway network has grown by 2,002 kilometres or 18%. In absolute terms, this is the largest increase after Spain, France and Portugal.
- Germany is the country in Europe where the most new airports with a volume of at least 150,000 passengers per year have been opened since 1995, with Memmingen, Karlsruhe/Baden-Baden and Weeze all being converted from former military airports to international civil airports. In addition, a new runway was built in Frankfurt. All this money for airports would have been better spent on the German railways, for example to increase capacity on some routes or to reopen closed railway lines in rural areas.

Greece

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Greece has invested more than three times as much in motorways as in railways, with an exact ratio of road to rail investments of 3.13. During this observation period Greece invested €38.8 billion in roads and €12.4 billion in railways.

¹⁶ In cooperation with the Association of German Transport Companies (VDV)

- Between 1995 and 2021 – the full period for which national data are available – Greece invested €41.1 billion in roads and only €12.6 billion in railways.¹⁷ This equals more than three times as much investment in roads as in rail. The poor state of the Greek railway system today does not come as a surprise with this rail-unfriendly ratio of investments.
- In the last four years for which data are available (2018-2021), the ratio of investment in roads to investment in railways in Greece has even worsened clearly, against the European trend, with investments in roads being more than twelve times as much as in railways. This is the second worst ratio of road to rail investments of all countries analysed, behind only Ireland. The very negative trend has already started in 2014, when Greece spent 14 times as much on road as on rail, followed by the negative record year of 2015, when Greece spent even 26 times as much on road as on rail.
- Historically, 2003 and 2004 were the only years in which Greece has invested more in railways than in roads.
- Since 1995, the Greek motorway network has grown by 1,724 kilometres, or 410%, which is the fifth largest absolute increase in motorway length of all the countries analysed. Portugal is the only country of comparable size to Greece with a larger increase in its motorway network.
- The lack of investments in the Greek railway system has gone hand in hand with the destruction of the regional rail network. Since 1995, four long railway lines with a total length of 389 kilometres have been temporarily or permanently closed to passenger transport. 97 railway stations were closed, cutting off thousands of people from access to railways. However, all these lines have not been dismantled yet and could be reopened.
- The total length of the rail network in Greece decreased by 5% between 1995 and 2020.
- Major investments have also been made in Greek airports. A brand new airport was opened in Athens in 2011, replacing the smaller former airport. This investment alone amounted to around [€2.1 billion](#). The Patrai Araxos Airport received major investment and got new permits in 2007. A new terminal was built at the [Thessaloniki Airport](#). All this money would have been better spent on the railways, especially on maintaining and reopening closed regional railway lines, and on (re)introducing or starting day and night trains to Bulgaria, Turkey, North Macedonia, Serbia, Romania and other countries.

Hungary

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Hungary invested more than twice as much in roads as in railways – €7.7 billion in railways and €16.9 billion in roads.
- Between 1995 and 2021 – the full period for which national data are available, Hungary invested €22.9 billion in roads and only €9.95 billion in railways. This equals more than twice as much investment in roads as in rail.
- In the last four years for which national data are available (2018-2021), the ratio of investment in roads to railways has even worsened, against the European trend, with road investments being 2.56 times as much as railway investments. This negative trend

¹⁷ Investment data for the period 1995 to 1999 are not available for Greece, and were extrapolated by the researchers.

has already started in 2014, after three years of significantly higher investments in railways than in roads in the period from 2011 to 2013.

- Since 1995, Hungary's motorway network has more than quadrupled from 335 to 1774 kilometres. Despite its relatively small size, Hungary ranks 7th out of the 30 countries analysed in terms of the number of new motorways built. The motorway growth rate of 430% is even the fifth highest in Europe.
- Since 1995, the total railway network in Hungary shrank by 5% from 7,988 km in 1995 to 7,588 km in 2020.
- In 2007 and 2009, 28 railway lines with a total length of 919 kilometres have been closed to passenger transport. Hungary is the 5th worst country in Europe in terms of the length of railway lines closed to passenger transport. Only Germany, Poland, Italy and Spain had more kilometres of railway lines closed.
- However, all these lines have not been dismantled yet and could be reopened despite being in a poor shape. On a positive note, 10 rural railway lines have already been reopened since 2010.
- Since 1995, 259 Hungarian railway stations have been closed, cutting off hundreds of thousands¹⁸ of people from rail access.
- Hungary has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995. However, the airport in [Budapest](#) got a new terminal in 1997 with a capacity of 3.5 million passengers a year. This money would have been better spent on the railways.

Ireland

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Ireland invested more than six times as much in roads as in railways, with an exact ratio of road to railway investments of 6.44. This is the fourth worst ratio of all countries analysed. During this observation period Ireland invested €25.7 billion in roads and only €4 billion in railways. The data even indicate a negative trend since 2013 with an increasing ratio of road to railway investments.
- Between 1995 and 2019 – the full period for which national data are available – Ireland invested around €26.5 billion in roads and only €4.1 billion in railways. This equals more than six times as much investment in roads as in rail.
- Per capita investments in roads in Ireland are the fourth highest of all countries analysed, with only Norway, Switzerland and Luxembourg spending more over the period 1995-2018.
- Ireland is the country in Europe with the highest growth rate in new motorway kilometres between 1995 and 2020. Since 1995, Ireland's motorway network has grown by a record 1,321%, from 70 km in 1995 to 995 km in 2020.

¹⁸ With an estimated 1,000 people living next to one of them, at least 250,000 people were cut off from access to railways.

- The only train line that was closed for passenger transport since 1995 in Ireland is the line from Waterford to Rosslare Strand, which was closed in 2010 along with four stations along the route. Its total length was approximately 50 kilometres.
- On a positive note, the length of the total rail network has increased by 4.7% since 1995, while the European rail network has shrunk by an average of 6.5%.
- A new runway was added to Dublin Airport in 2022. [€320](#) million has been invested in this project. This is the same amount invested in the Irish railways over a 5-year period, 2016-2020.

Italy

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Italy has invested 28% more in roads than in railways – €150.9 billion in roads and only €117.9 billion in railways.
- Between 1995 and 2020 – the full period for which national data are available, Italy invested €159.5 billion in roads and only €131.9 billion in railways. This equals about 21% more investment in roads than in rail.
- Over the last four years for which data are available, Italy spent on average slightly more on railways than on roads (10%). However, this railway-friendly average is only due to very high investments in railways in 2020, with 9.8 billion for railways and 4.4 billion for roads respectively. In all other recent years, investment in roads has been slightly higher than in rail. It can therefore be assumed that there is no sustained trend in Italy to shift investment from road to rail.
- The highest investments in Italian railways were made in the period from 2003 – 2008, with annual investments of more than €7 billion in each year. With the exception of 2020, railway investments in all subsequent years were below €6 billion.
- Since 1995, the Italian motorway network has grown by 542 kilometres, or 8.4%. This is the fourth lowest growth rate of a national motorway network of all the countries analysed.
- More than 75% of the high-speed rail network in Italy was built after 1995, and reached a total length of 921 kilometres in 2020.
- The expansion of high-speed rail in Italy has gone hand in hand with the destruction of the regional rail network. Since 1995, 40 railway lines with a total length of 1,831 kilometres have been closed to passenger transport. However, more than 90% of these lines have not yet been dismantled yet and could be reopened.
- Since 1995, 384 railway stations have been closed in Italy, cutting off hundreds of thousands¹⁹ of people from rail access.
- The longest railway line closed was a line on the island of Sardinia, from Mandas to Arbatax, with a length of 159 km.

¹⁹ With an estimated 1,000 people living next to one of them, at least 384,000 people were cut off from access to the railways.

- The total length of the rail network in Italy increased by 5% between 1995 and 2021, while the European rail network shrank by 6.5% on average. This growth is mainly due to the building of new high-speed tracks, and the low rate of dismantling of closed lines.
- In 1999, an additional runway was added to the Rome-Fiumicino Airport. In 2007, a new airport was opened in Comiso, Sicily, converted from a former military airport. All the money invested in airport expansion would have been better spent on the railways, especially on maintaining and reopening closed regional railway lines, and on reintroducing or starting night trains to France, Spain and other countries.

Latvia

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Latvia has invested more than twice as much in roads as in railways, with an exact ratio of road to rail investments of 2.47 – €2.8 billion in roads and €1.1 billion in railways. In the last four years for which data are available, the ratio of investment in roads to railways has even worsened, contrary to the European trend, with road investment being almost five times as high as in railways. This negative trend already started in 2016.
- Between 1995 and 2018, Latvia invested €3.5 billion in roads and only €1.3 billion in railways.
- Historically, Latvia invested significantly more in its railways than in its roads in every year from 1995 to 2000. After that, only in 2015 did Latvia invest slightly more in railways than in roads.
- Since 1995, Latvia has been significantly cutting back its passenger railway network: Six railway lines with a total length of 499 kilometres have been closed to passenger traffic. This is the second largest loss per capita of all countries analysed, behind Estonia. Even in absolute terms, the loss of passenger railway lines is the seventh largest in Europe, despite the small size of the country. 81 railway stations have been closed, putting Latvia in the undesirable first place in Europe for closed railway stations per capita.
- Only about half of the closed railway lines were not dismantled, and could be reopened with the necessary public funding.
- Latvia's railway network has shrunk the most of all the countries analysed. Since 1995, 23% of the railway tracks have disappeared.
- Latvia has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995.
- On a positive note, the three Baltic countries have agreed to improve their railway connections. The "Via Baltica" will link Tallinn, Riga, Vilnius and Warsaw by rail. Currently, there are no direct cross-border train connections between the Baltic countries, and also not to Poland.

Lithuania

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Lithuania has invested almost three times as much in roads as in railways, with an exact ratio of road to rail investments of 2.88 – €5.2 billion in roads and €1.8 billion in railways. In the last four years for which data are available, the ratio of investment in roads to railways has even worsened, against the European trend, with a ratio of road to rail investment of 3.63. This negative trend already started in 2016.
- Since 1995, Lithuania has been cutting back its passenger rail network. Five railway lines with a total length of 298 kilometres have been closed to passenger traffic. This is the third largest loss per capita of all countries analysed, behind Estonia and Latvia.
- Only about half of the closed railway lines were not dismantled, and could be reopened with the necessary public funding.
- Since 1995, the Lithuanian railway network has shrunk by 4.5%, which is slightly less than the European average (6.5%).
- Lithuania has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995.
- On a positive note, the three Baltic countries have agreed to improve their railway connections. The “Via Baltica” will link Tallinn, Riga, Vilnius and Warsaw by rail. Currently, there are no direct cross-border train connections between the Baltic countries, and also not to Poland.

Luxembourg

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Luxembourg has invested 26% more in roads than in railways – about €4.1 billion in roads and €3.3 billion in railways.
- Between 1995 and 2020 – the full period for which national data are available – Luxembourg invested €4.6 billion in roads and only €3.8 billion in railways. This equals about 21% more investments in roads than rail.
- Luxembourg has the highest density of motorways in Europe, with more than 80 km per 1000 km².
- Per capita, Luxembourg has the third highest investment in roads behind Norway and Switzerland.
- Since 1995, the motorway network in Luxembourg has increased significantly from 115 to 165 kilometres, or by 44%. This is a higher growth rate than in the other BENELUX countries, as well as in Germany and France.
- Luxembourg is one of only seven countries analysed where investments in railways are slightly higher than investments in roads between 2018 and 2021. Over this period, the investment in roads is 9% lower than in railways. The ratio of road to rail investment changed significantly each year since 1995, for example it was 4.9 in 1995, 0.64 in 1996 and 3.53 in 1997. Therefore, the data for Luxembourg do not show a clear trend, and the rail-friendly ratio of recent years may have to be seen in this light.

- Luxembourg, together with Slovenia, is the only country analysed where neither a railway station nor a railway line was closed for passenger transport. Contrary to the European trend, the total length of the railway network in Luxembourg remained stable.
- No new airport with a volume of at least 150,000 passengers per year has opened in Luxembourg since 1995, and Luxembourg's only airport, at Findel, has not opened or built a new runway since then. However, there have been other [major investments](#) in the airport, such as the reconstruction of Terminal A and the construction of Terminal B. This money would have been better spent on the railways, for example to introduce night trains. To this day, there is no night train running to or through Luxembourg.

Netherlands

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – the Netherlands have invested more than twice as much in roads as in railways, with a ratio of road to rail investments of 2.12. This ratio is higher than in Germany and Belgium. During this observation period the country invested €46.9 billion in roads and €22.1 billion in railways. More recent data for the Netherlands are not available.
- Since 1995, the Dutch motorway network has grown by 501 kilometres or 26%. Today, the Netherlands is the European country with the highest motorway density besides Luxembourg, with more than 80 km per 1000 km² in most parts of the country.
- Since 1995, three railway lines with a total length of 34 kilometres have been closed to passenger transport in the Netherlands. 17 railway stations have been closed. Two out of these three lines were not dismantled and could be reopened relatively easily. The closure of passenger rail lines and stations is well below the European average, but in view of the climate crisis, no one should have been cut off from access to the railways in recent decades.
- The entire high-speed rail network in the Netherlands was built after 2000, and reached a total length of 90 kilometres in 2020. This is relatively low compared to other countries of similar size, such as Belgium or Austria.
- The total length of the railway network in the Netherlands increased by 12% between 1995 and 2020, while the European rail network shrank by 6.5% on average. The growth of the railway network in the Netherlands was only slightly higher in Spain and Croatia, at 14% each.
- In 2003, an additional runway was added to Amsterdam's Schiphol Airport. This investment cost [€340](#) million. This money would have been better spent on the railways, for example to increase the speed of some lines, or introduce night trains. To this day, the state-owned Dutch railway company NS does not operate a night train to and from the Netherlands.

Norway

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Norway has invested almost four times as much in roads as in railways, with a road to rail investment ratio of 3.74. During the observation period Norway invested €50.2 billion in roads and €13.4 billion in railways. This makes Norway the country in Europe with the highest per capita expenses for roads (calculated for the period 1995-2018).
- Between 1995 and 2020 – the full period for which national data are available, Norway invested €57.5 billion in roads and only €16.4 billion in railways. That equals about 3.5 times more investment in roads than railways.
- In the more recent period between 2018 and 2020, Norway has also invested more than twice as much in roads as in railways, with a road/rail investment ratio of 2.63. In the period between 2001 and 2011, Norway invested huge amounts in roads while neglecting the railways: in each of these 11 years, Norway invested five to 7.5 times as much in roads as in railways, and since 2014 the ratio has been at least below 3.2.
- Since 1995, the Norwegian motorway network has grown by 473 kilometres, or by 440%. Norway ranks fourth in a ranking of relative growth rates in the length of the motorway network in Europe. The growth rate was only higher in Ireland, Romania and Poland.
- Norway's total railway system shrunk by 3.4% since 1995.
- On a positive note, Norway is only one of four countries in Europe which has not closed any railway line to passenger transport since 1995. Nine railway stations have been closed during this period. The rate of station closures is well below the European average, but in view of the climate crisis, no one should have been cut off from access to the railways in recent decades.
- Norway is the only Nordic country without a high-speed rail network.
- No new airport with a volume of at least 150,000 passengers per year has been opened in Norway since 1995, nor have any new runways been added to existing airports. However, some other airport capacity expansions were implemented, such as the [North Pier](#) of the Oslo Airport. This money would have been better spent on the railways, for example to increase the speed of some lines, or to improve railway connections to Denmark and Germany.

Poland

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Poland invested more than six times as much in roads as in railways, with an exact ratio of 6.57. This is the third worst ratio of all countries analysed, behind Romania and Croatia. During the observation period Poland invested €59.3 billion in roads and only €9 billion in railways.
- Between 1995 and 2021 – the full period for which national data are available, Poland invested around €68 billion in roads and only €11 billion in railways. That equals more than six times as much investment in roads as in rails.

- Even in the more recent period between 2018 and 2021, Poland has invested significantly more in roads than in railways, with a road/rail investment ratio of 4.72.
- Historically, since 1995, the annual ratio of road to railway investments in Poland has gone up and down several times. 1996-1998 were the only three years in which rail investments have been higher than road investments. The highest annual ratio of road to railway investment was recorded in 2014, when road investments were 32 times higher than railway investments. Historical data do not allow us to interpret a trend.
- Poland's per capita investments in railways in Poland are the second lowest of all countries analysed, and are only 13% of the average European per capita investments in railways. Only Romania invested even less in its railways.
- Since 1995, the Polish motorway network has grown by 1,466 kilometres, or by 596%. This is the third highest relative growth rate, behind Ireland and Romania. In absolute length, it is the sixth highest amount of all countries analysed.
- Since 1995, the length of the total railway network has shrunk by 19% (by 4,660 km). In absolute terms, this is the largest loss of any of the countries analysed. Also in relative terms, only Latvia lost a higher proportion of its railway network than Poland.
- Despite considerable efforts by the researchers, detailed information on closed railway lines and their reopening potential is not available for Poland. The numbers listed in the report are conservative assumptions: If one half of the closed railway network was only dedicated to freight transport (which would be a high share), then 2,330 km of passenger train lines have been closed since 1995. Assuming one station per 10 kilometres, this would equal 233 closed stations.
- Poland is the only country in CEE, apart from Austria, with a high-speed rail network. Since 2010, 224 kilometres of high-speed lines have been built.
- Since 1995, Poland has opened a new airport with a volume of at least 150,000 passengers per year in Bydgoszcz. Currently, a new mega airport is being planned in the wider Warsaw area, with a capacity of [35 million](#) passengers by 2035. This money would have been better spent on the railways, for example to reopen closed railway lines, or to improve rail connections to the Baltic countries.

Portugal

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Portugal invested more than three times as much in roads as in railways – €23.4 billion in roads and only €7.7 billion in railways. Road Investment data for Portugal are not available for after 2018, so it is not possible to interpret a trend.
- Since 1995, Portugal's motorway network has grown by 2,378 kilometres, or by 346%. In absolute terms, this is the third largest growth of motorway length in Europe behind Spain and France.
- Over the same period, the Portuguese rail network shrank by 18%. This is the third largest decline of all countries analysed, only behind Latvia and Poland. In 2022, the total railway network was as long as 3,622 km, but only 70% are currently used (2,527 km). That is, 1,095 km could be re-opened.

- Since 1995, there has been a massive reduction in the passenger rail services in Portugal. Eight lines with a total length of 460 km have been temporarily set out of operation, including 101 stations along these lines. With an estimated 1,000 people living near a station, around 100,000 people lost access to the railways.
- On a positive note, six out of the eight closed lines could be reopened relatively easily. The total length of railway lines that could be reactivated for passenger transport is 379 kilometres.
- As recently as [August 2023](#), Portugal introduced a kind of climate ticket for its railways. A monthly ticket now costs €49 for all trains. Greenpeace hopes that this is the beginning of a renaissance for trains in Portugal, and is calling on the Portuguese government to also provide the necessary funding to reopen railway lines in Portugal, including more and better connections to Spain.
- Portugal has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway with an annual capacity of more than 150,000 passengers since 1995. However, [in 2022](#), the Portuguese government announced plans to build a new airport for Lisbon, due to open in 2035. In the face of the climate crisis, no country should be making such plans. Greenpeace is therefore calling on the Portuguese government to cancel this plan and instead invest in reopening domestic train routes and in introducing international rail services that can replace all flights at least to Spain and southern France.

Romania

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Romania invested more than twelve times as much in roads as in railways, with an exact ratio of 12.19 – around €43 billion in roads and only €3.5 billion in railways.
- No other country analysed had a higher ratio of road to rail investments. The country with the second highest ratio in this period was Croatia, but the ratio of road to rail investment there is at 6.86, substantially lower than in Romania.
- Romania's per capita investments in railways are the lowest of all the countries analysed, and are only 10% of the average European per capita investments in railways.
- Since 1995, Romania's motorway network has grown by 714%, from 113 to 920 kilometres. This is the second highest relative growth rate behind Ireland.
- Since 1995, the length of the total railway network in Romania shrank by 607 kilometres, or by 5%. In a telephone call, the Romanian railway reform authority estimated that 300 km of railway lines were closed to passenger transport. Only 100 kilometres of these closed lines were not dismantled and could be reopened (as roughly estimated in the telephone call).²⁰
- Romania opened a new airport with a volume of at least 150,000 passengers per year in [Brasov](#) in June 2023.²¹ In addition, massive investments have been made at the Bucharest-Otopeni Airport since 1995, including the reconstruction of the main

²⁰ Despite massive efforts of the researchers of this analysis to obtain additional data on Romania's railway network, more detailed information on closed railway lines is not available.

²¹ This airport is not included in the report, since it was still under construction when the report was written.

terminal. This money would have been better spent on the railways, for example to introduce more and quicker train connections to neighbouring countries such as Hungary, Bulgaria and Serbia.

Slovakia

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Slovakia has invested more than twice as much in roads as in railways. The ratio of road to rail investment was 2.27 over this period. During this observation period Slovakia invested €10 billion in roads and €4.4 billion in railways.
- Between 1995 and 2021 – the full period for which national data are available except for 2019 – Slovakia invested €11.9 billion in roads and only €4.8 billion in railways. That equals almost 2.5 times more investments in roads than railways.
- In the last four years for which data are available, the ratio of investment in roads to investment in railways has even worsened, contrary to the European trend, with road investment being almost four times as much as the railway investments. This negative trend has already started in 2014. The only two years in which Slovakia invested more in railways than in roads were 1995 and 1996.
- Since 1995, the Slovak motorway network has grown from 198 to 521 kilometres, an increase of 163%.
- Since 1995, two railway lines with a total length of 37 kilometres have been closed to passenger transport. Both lines have been dismantled. This length of closed railway lines is relatively low compared to most countries. However, 222 railway stations have been closed in Slovakia, most of them on lines still operational. This loss of railway stations is the second highest per capita of all the countries analysed. One station was closed for every 24,500 inhabitants in Slovakia.
- The two railway lines that were dismantled in Slovakia are Jazero–Stupava and Rimavská Sobota–Poltár.
- The total length of the rail network in Slovakia remained almost stable between 1995 and 2020, while the European rail network shrank by 6.5% on average.
- Slovakia has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995. However, large investments have been made in the terminals at Bratislava Airport. One terminal, built in 2006, is currently even out of service. This money would have been better spent on the railways.

Slovenia

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Slovenia invested almost four times as much in roads as in railways²² – about €7.5 billion in roads and €1.9 billion in railways.

²² Investment data for the period 1995 to 1999 are not available for Slovenia, and were extrapolated by the researchers.

- Between 1995 and 2020 – the full period for which national data are available – Slovenia invested €8.5 billion in roads and only €2.7 billion in railways. That equals more than three times more investment in roads than railways.
- In the last four years for which data are available, Slovenia invested 26% more in roads than in railways. The ratio of road to rail investments has changed significantly every year since 1995. The highest ratio was recorded in 2006. In that year, Slovenia invested 44 times more in roads than in railways. On the other hand, in 2015, Slovenia invested three times as much in rail as in road. The available data do not allow for trends to be interpreted.
- Slovenia is the country in Central & Eastern Europe with the highest roads investments per capita (1995-2018). Out of all countries analysed, Slovenia ranks 7th. Per capita investments in Slovene roads are 20% higher than in Croatia, and more than double compared to Hungary.
- Slovenia, together with Luxembourg, is the only country analysed where neither a railway station nor a railway line was closed for passenger transport in the analysed period. Contrary to the European trend, the total length of the railway network in Slovenia remained stable.
- Since 1995, Slovenia's motorway network has more than doubled from 277 to 616 kilometres (+122%).
- Slovenia has not opened a new airport with a volume of at least 150,000 passengers per year or built a new runway since 1995.

Spain

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Spain has invested almost 50% more in roads than in railways. During the observation period Spain invested about €139.7 billion in roads and €93.9 billion in railways.
- Between 1995 and 2021 – the full period for which national data are available – Spain invested €151 billion in roads and only €101 billion in railways. That equals about 50% more investments in roads than railways.
- In the last four years for which data are available, the ratio of investment in roads to railways investment has even worsened, against the European trend, with road investment being 60% higher than in railways. This negative trend has already started in 2013, after slightly higher investments in railways than in roads in the period from 2007 - 2012.
- Since 1995, the Spanish motorway network has grown by 8,623 kilometres, or 124%, which is the largest absolute increase in motorway length of all the countries analysed. 28% of all new motorways in Europe have been built in Spain.
- More than 85% of the high-speed rail network in Spain was built after 1995, and reached a total length of 3,487 kilometres in 2020. Since 2010, Spain has been the European country with the largest high-speed rail network. Before 2010, France was number 1 in high-speed rail.

- The expansion of high-speed rail in Spain has gone hand in hand with the destruction of the regional rail network. Since 1995, 22 railway lines with a total length of 949 kilometres have been closed to passenger transport. However, two-thirds of these lines have not been dismantled yet and could be reopened.
- The longest railway line closed was the line from Soto del Real to Burgos with a length of 246 km.
- The Soria–Castejón line is one of the largest lines (103 km) in Spain that was closed in 1996. In 2022, a study has been commissioned on its possible reopening. This is in response to the demands of several town councils, particularly in Soria, who have been mobilising to [request the reopening](#) of this route.
- The total length of the rail network in Spain increased by 14% between 1995 and 2020. Spain is the country with the highest growth of the railway network of all countries analysed. This growth is mainly due to new high-speed tracks. The flipside of this growth is the closure and partial dismantling of rural railways, cutting off hundreds of thousands²³ of people from rail access.
- Spain is the country with the most new runways built at airports. In fact, Madrid Airport has received three new runways since 1998, making it the only airport in the 30 countries analysed with more than one new runway during this period. An additional runway was also built in Barcelona. A new airport with a volume of over 150,000 passengers per year has also been built in Murcia.²⁴ All this money would have been better spent on the railways, especially on maintaining and reopening closed regional railway lines, and on reintroducing or starting night trains to Portugal, France, Italy and other countries.

Sweden

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Sweden has invested 28% more in roads than in railways. During the observation period Sweden invested €36.6 billion in roads and €28.7 billion in railways.
- Between 1995 and 2021 – the full period for which national data are available – Sweden invested €45 billion in roads and €34.8 billion in railways. That equals almost 30% more investment in roads than in railways.
- In the last four years for which data are available (2018-2021), the ratio of investment in roads to railways has even worsened, contrary to the European trend, with investments in roads being 45% higher than in railways. This negative trend has already started in 2012.
- Historically since 1995, Sweden has only invested slightly more in railways than in roads in four years. All those years were before 2008 (1995, 1996, 2005, 2007).

²³ An estimated 95 railway stations were closed in Spain. With an estimated 2,000 people living next to one of them, at least 200,000 people were cut off from access to railways.

²⁴ The research only analysed airports with an annual volume of over 150,000 passengers. In Spain, also a number of smaller airports have been opened since 1995 (This high number of new airports which are rarely frequented only exists in Spain.), among them La Gomera (1999), Madrid–Torrejon (1996), Helipuerto de Ceuta (2004), Helipuerto de Algeciras (2010), , Burgos 2008, Huesca Pirineos 2007, Ciudad Real 2008 (closed in 2012 due to lack of demand, now open for freight), Lleida (2010), Castellon (2014), Terual 2013 (used as parking for planes).

- In terms of per capita investments in railways (1995-2018), Sweden ranks fifth in Europe, behind Switzerland, Luxembourg, Austria and Denmark, which have invested more.
- Since 1995, the Swedish motorway network has grown by 917 kilometres, or 73%.
- The entire high-speed rail network in Sweden was built after 1995, and reached a total length of 860 kilometres in 2020. This gives Sweden the sixth-largest high-speed rail network in Europe, behind Spain, France, Germany, Finland and Italy.
- Since 1995, four railway lines in Sweden with a total length of 234 kilometres have been closed to passenger transport. However, more than 80% of these lines have not yet been dismantled and could be reopened. The longest closed line was the Repbäcken–Malung line at 123 kilometres.
- The total length of the rail network in Sweden remained stable between 1995 and 2020, while the European rail network shrank by 6.5% on average.
- The Stockholm Arlanda Airport received a new runway in 2003. The money spent on aviation infrastructure would have been better spent on the railways, especially on maintaining and reopening closed regional railway lines, and on reintroducing or starting more night trains.

Switzerland

- Between 1995 and 2018 – the period for which Europe-wide comparable data are available – Switzerland has invested about 26% more in roads than in railways. During this observation period Switzerland invested about €74.4 billion in roads and €59.1 billion in railways. Even in the more recent period between 2018 and 2020, the ratio of road to rail investment has dropped only slightly to 24% more investment in roads than in railways.
- Since 1995, there has not been a single year in which Switzerland has spent more on railways than on roads. However, there has been a slight, but steady decrease in the road to rail investment ratio over this period. In 1995 and 1996, the ratio was above 2, meaning Switzerland has invested twice as much in roads as in railways. From 1997 to 2001 the ratio dropped to between 1.5 and 2, and after that it has always been between 1.01 and 1.41.
- Between 1995 and 2020 – the full period for which national data are available – Switzerland has invested huge amounts in both roads and railways, namely €83.4 billion in roads and €66.3 billion in railways. That equals about 26% or more investment in roads than railways.
- On a per capita basis, between 1995 and 2018, Switzerland had the highest per capita investments in railways of all the countries analysed, and the second highest per capita investments in roads, only behind Norway.
- Since 1995, the Swiss motorway network has grown by 347 kilometres, or by 29%. This is a much higher relative growth than in Germany, Italy or Austria. Of Switzerland's neighbours, only France has experienced higher growth.

- Despite the huge investments in railways and the [good](#) reputation of the Swiss railways, since 1995, five train lines with a total length of 38 kilometres and 13 railway stations have been closed to passenger transport. The longest line closed was Sumiswald–Grünen–Huttwil with a length of 19.5 kilometres and seven stations. None of the closed lines was dismantled, and could therefore be reopened for passenger service relatively easily.
- Although high speed trains from other countries enter Switzerland, there is no high-speed network in Switzerland where these trains can travel at more than [200 km/h](#).
- No new airport with a volume of at least 150,000 passengers per year has opened in Switzerland since 1995, nor have any new runways been added to existing airports. However, other types of massive investments in airports have been made, such as [€2.4](#) billion for a new terminal at Zurich Airport, which was completed in 2004. This money would have been better spent on the railways, for example to increase the speed of some lines.

United Kingdom

- Between 1995 and 2020, the UK's motorway network has grown by 458 kilometres or 13.6%.
- The total length of the UK rail network shrank by 4% between 1995 and 2021, from 16,542 km to 15,935 km.
- The shrinking of the UK rail network is mainly due to the closure of lines formerly used for freight only. The [modal share](#) of rail in the UK is very low at 9.4%, which is half of the EU average (18.7%).
- 71 railway stations have been closed in the UK since 1995 while all passenger lines were kept operational in this period. On the other hand, 116 new railway stations have opened in the UK over the same period.
- Between 1995 and 2019 – the full period for which national data are available – the UK invested around €160 billion in roads. This is the third highest amount of all countries analysed over this period, behind France and Germany, and more than Italy and Spain. Although this was less than what had been invested into railways and urban railbound transport such as Metros – €192.5 billion – the UK's railways would have needed this amount more urgently, for example to introduce more domestic night trains and start night trains to other European countries, or to increase the modal share of rail freight.
- The entire high-speed rail network in the UK was built between 2000 and 2010 and reached a total length of 113 kilometres. In a ranking of countries according to the high-speed rail network, the UK only ranks 9th. Even much smaller countries such as Belgium or countries with a much lower GDP per capita such as Poland have high-speed rail networks twice as large as the British one.
- On a positive note, the UK is one of only three countries out of the 30 analysed to have invested more in railways than in roads between 1995 and 2021. Between 1995 and 2018, the UK invested 16% less in roads than in railways. In the last four years for which data are available, the UK invested 33% less in roads than in railways. It can be assumed that much of the investment since 1995 was necessary to make up for the lack of investment in earlier years.

- The positive trend towards increased investment in railways in the UK began around 2000.
- Two new airports with a volume of at least 150,000 passengers per year have been opened in the UK since 1995 by transforming former military airports into civilian airports, Cornwall Newquay and Doncaster Sheffield. The last one was recently [shut down](#). The construction of a new and third runway at the London-Heathrow Airport was delayed several times but is still part of the current airport expansion [plan](#).

Greenpeace demands

Transport remains the [only sector](#) in the EU that has not contributed to reducing greenhouse gas emissions. In contrast to other sectors, greenhouse gas emissions from transport have actually increased [by 15%](#) in the period from 1995 to 2019, mainly due to oil-burning vehicles. At the same time, an average train journey in Europe produces [77%](#) less greenhouse gas emissions than a car trip per passenger kilometre. Data shows that a dense and well-developed rail network is key to making public transport accessible and attractive to people, which will in turn lead to cutting greenhouse gas emissions.

Investments and infrastructure policy should aim at reducing transport needs, while shifting mobility patterns to more climate friendly modes – like cycling, walking, public transport, and trains. Greenpeace calls on European governments and the EU to:

- **Shift money flows from road and air to rail, public transport and non-motorized modes.**
 - Increase regional, national and EU public funding for truly sustainable transport solutions and build a dense public transport network that leaves no one behind. Future debates over the EU budget must lead to massive investments in the upgrade and modernisation of the existing rail infrastructure to make rail an accessible option for people, including in rural and peripheral areas and to additional sources of funding to close missing links and remove bottlenecks for cross-border traffic across the EU.
 - Public funds (incl. EU cohesion funds, Connecting Europe Facility, European Investment Bank's loans, national budgets) must not be wasted in the expansion of motorways and airport capacity in order to avoid further lock-in of carbon intensive transport modes. Taxpayers money should be exclusively directed to transitioning away from a car-centered transport system to a fair and sustainable mobility system.
 - Stop all fossil fuel subsidies to the transport sector, except for those which directly benefit disadvantaged people (e.g. car commuter allowance for people without access to public transport). Tax exemptions benefitting to air transport alone represent a gap of €34 billion in Europe every year. Phasing fossil fuel subsidies would generate new revenues to invest in solutions such as rail.

- **Make the transport infrastructure fit for environmental and climate challenges**
 - Stop all new motorway projects in Europe (issue a moratorium) and extension of existing motorways. Road investments must be strictly limited to necessary refurbishments and safety improvements and not lead to a higher capacity.
 - Redesign selected urban motorways into multimodal infrastructure and public car-free and green spaces to help people shift to cleaner transport modes and protect them from the consequences of the climate crisis (eg. heatwave).
 - Stop all new airport projects and all airport expansions. Airport investments must be strictly limited to necessary refurbishments and safety improvements and not lead to a higher capacity.
 - Stop the closure of railway lines and train stations, and reopen as many as possible, while offering intermodal services and infrastructure.