

Energy and transport statistics for the enlargement countries 2018 edition



The enlargement process in the EU

The Treaty on European Union (Article 49) states that any European country may apply for membership of the European Union (EU) if it respects a range of democratic values — human dignity, freedom, democracy, equality, the rule of law and human rights — and is committed to promoting them.

As of September 2014, the EU had granted the perspective of membership to seven enlargement countries, five of which have candidate country status: Montenegro, the former Yugoslav Republic of Macedonia, Albania, Serbia and Turkey. Bosnia and Herzegovina and Kosovo ⁽¹⁾ are potential candidates.

Eurostat monitors the progress of enlargement countries in complying with the EU acquis (the body of EU law) in the field of statistics, collecting a wide range of data from each country, either through an annual questionnaire or integrated in the regular collection of data from EU Member States and EFTA countries, as is the case for the trade data presented in this compact guide. In return, Eurostat provides technical assistance and support to each national statistical authority.

The EU's energy and transport policies

The key objectives of the EU's energy policy may be grouped together under three main headings:

- to secure energy supplies, ensuring the reliable provision of energy;
- to ensure that that energy providers operate in a competitive environment;
- to promote sustainable energy consumption, through the lowering of greenhouse gas emissions, pollution, and fossil fuel dependence.

The EU's policies related to transport aim to foster clean, safe and efficient travel throughout Europe, underpinning the internal market for goods and the right of citizens to travel freely throughout the EU.

⁽¹⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Table 1: Main indicators for energy
(thousand toe)

	Primary energy production		Energy exports		Energy imports	
	2011	2016	2011	2016	2011	2016
EU-28	803 269	757 318	494 293	578 408	1 439 361	1 481 553
Montenegro	722	660	76	125	486	467
The former Yugoslav Republic of Macedonia	1 756	1 114	395	187	1 771	1 764
Albania	1 434	1 936	766	890	1 600	1 375
Serbia	11 139	10 762	920	1 430	5 850	5 900
Turkey	30 863	35 519	8 469	7 392	89 184	112 679
Bosnia and Herzegovina	:	4 742	:	1 301	:	3 399
Kosovo ⁽¹⁾	1 795	2 016	237	104	937	742

⁽¹⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: [nrg_100a](#))

Main statistical findings

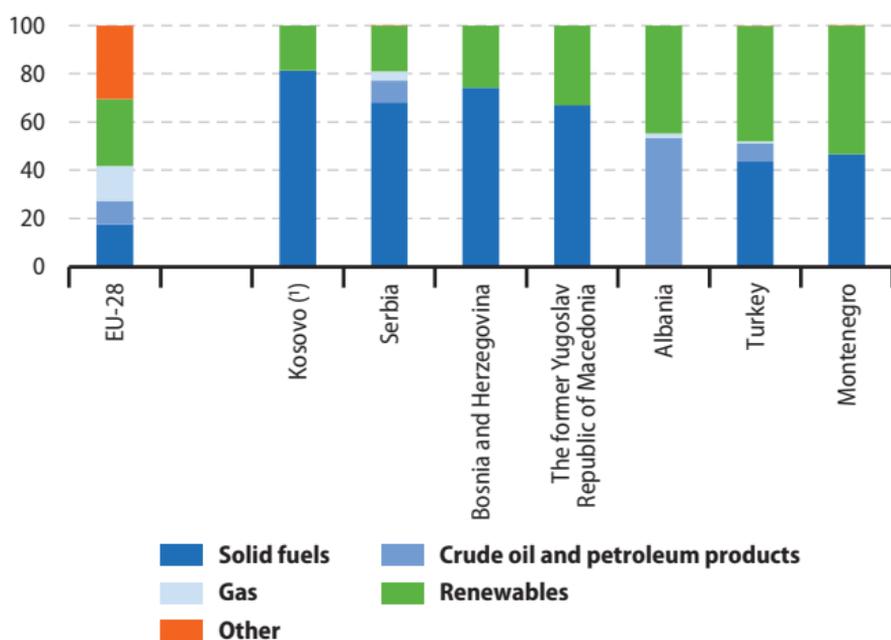
In 2016, the primary energy production of the EU-28 was 757 million tonnes of oil equivalent (toe; a normalised unit of energy, equivalent to the approximate amount of energy that can be extracted from one tonne of crude oil) — see Table 1. Primary energy production in Turkey was 35.5 million toe in 2016, by far the largest value recorded amongst the enlargement countries, ahead of the 10.8 million toe of energy production in Serbia. In contrast to the situation in the EU-28, primary energy production increased between 2011 and 2016 in Albania, Turkey and Kosovo. In the former Yugoslav Republic of Macedonia primary energy production was 37 % lower at the end of the period under consideration than at the beginning, while the decreases were more moderate in Montenegro (-9 %) and Serbia (-3 %).

The structure of primary energy production is largely determined by a territory's natural resources and also by its strategic policy decisions which affect, in particular, the development of nuclear energy and renewable energy sources. In 2016, nuclear sources (the main source under 'Other' in Figure 1) made up 30.5 % of the energy production in the EU-28, followed by 27.8 % from renewable sources. By contrast, 81.4 % of Kosovo's energy production was from solid fuels and this was also the main source of primary energy production — accounting for more than half of all primary production — in a majority of the enlargement countries. The main exception was Albania where petroleum products were the largest source of primary energy production, with a share of 53.3 %. In Montenegro and Turkey the share of solid fuels was just under half and slightly lower than the shares accounted for by renewables.

The EU-28 is a net importer of energy, as its energy imports in 2016 totalled 1.48 billion toe, compared with exports of 578.4 million toe. Among the enlargement

Figure 1: Primary production of energy, by product, 2016

(% of total)



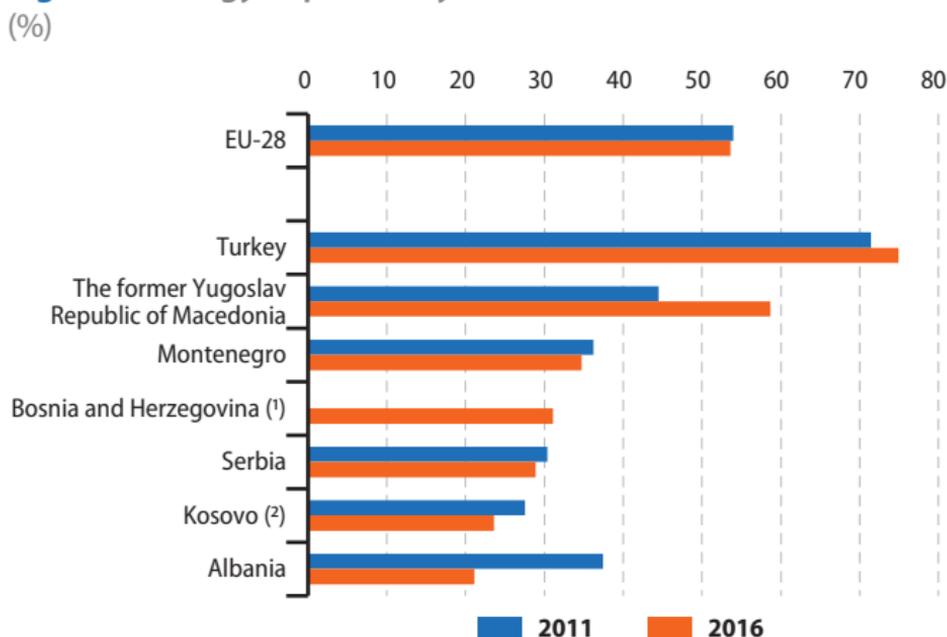
Note: ranked according to the combined share of solid fuels, crude oil and petroleum products, and gas.

(*) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: [nrg_100a](#))

countries, by far the largest net importer of energy products was Turkey (105 million toe). Relative to their overall energy needs, Turkey and the former Yugoslav Republic of Macedonia had the highest energy dependency, as net imports made up 75 % and 59 % respectively of gross inland energy consumption in 2016. The other enlargement countries reported energy dependencies below that of the EU-28 (54 %), with the energy dependency ratio in Kosovo and Albania less than half that in the EU-28.

Figure 2: Energy dependency



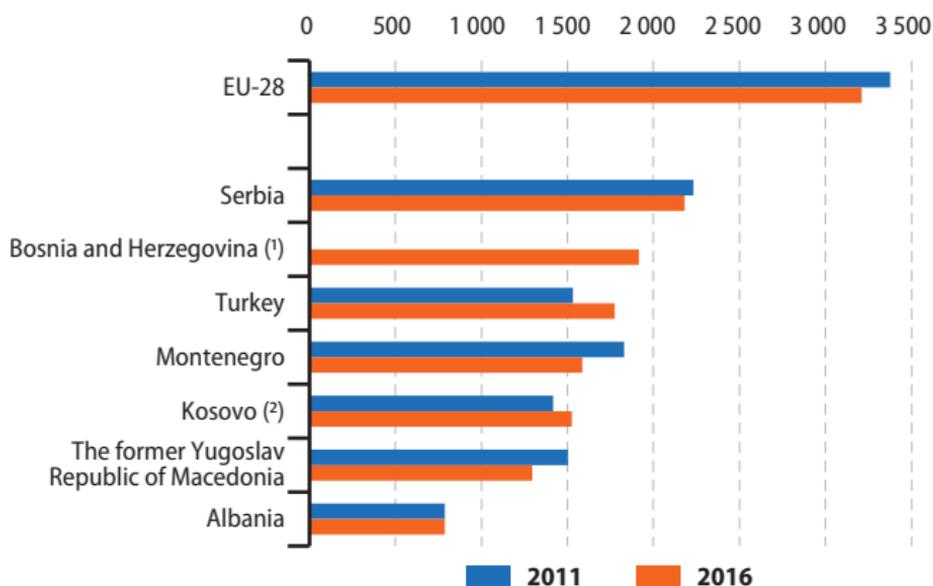
Note: calculated as net imports divided by the sum of gross inland energy consumption plus international marine bunkers.

(1) 2011: not available.

(2) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: [tsdcc310](#))

Figure 3: Gross inland consumption of energy relative to population size
(kgoe per inhabitant)



(1) 2011: not available.

(2) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

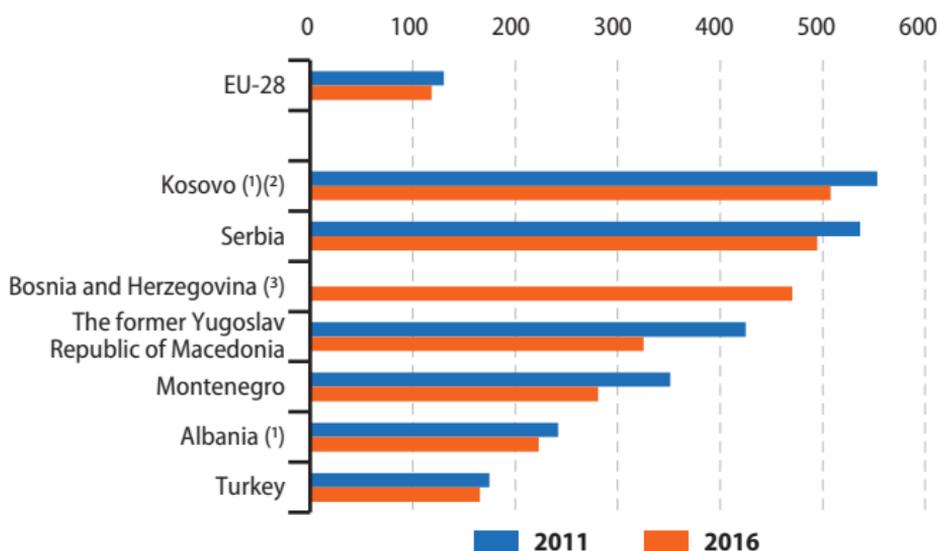
Source: Eurostat (online data codes: [nrg_100a](#) and [demo_gind](#))

In 2016, gross inland energy consumption in the EU-28 averaged 3 211 kgoe per inhabitant (see Figure 3). All of the enlargement countries recorded gross inland energy consumption per inhabitant below the level registered in the EU-28, with the lowest level in Albania.

Energy intensity is a measure of the efficiency with which an economy consumes energy to produce output, with gross domestic product (GDP) used as the measure of overall output, the latter adjusted to remove the effects of inflation. As well as reflecting the efficiency of transforming energy sources (for example to electricity) or converting energy to

Figure 4: Energy intensity

(kg of oil equivalent per 1 000 EUR of GDP)



(1) Provisional.

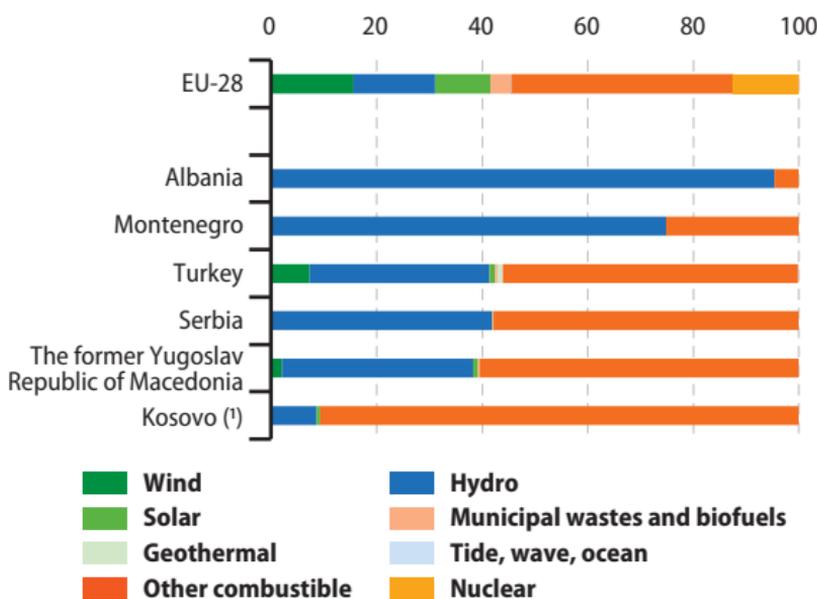
(2) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

(3) 2011: not available.

Source: Eurostat (online data code: [tsdec360](#))

Figure 5: Electricity — maximum net generating capacity, 2016

(%)



Note: Bosnia and Herzegovina, not available. Ranked on the share of renewables (therefore excluding other combustibles, nuclear and other sources).

(1) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: [nrg_113a](#)) and the International Energy Agency

heat, motion, light and other uses, this measure also depends on a range of factors, such as the economic structure of a country and the climate. The energy intensity of the EU-28 and the enlargement countries (for which data are available) decreased between 2011 and 2016 (see Figure 4). In 2016, 119 kilogrammes of oil equivalent (kgoe) were needed in the EU-28 to generate EUR 1 000 of GDP (at 2010 prices). In Turkey, the enlargement country with the lowest energy intensity, the equivalent level of consumption was 39 % higher than in the EU-28, while in Albania it was 88 % higher. Elsewhere among the enlargement countries, energy intensity was at least double that in the EU-28, reaching nearly four times as high in Bosnia and Herzegovina and exceeding four times as high in Serbia and in Kosovo.

More than two fifths (42 %) of the installed electricity generating capacity in the EU-28 in 2016 was for non-renewable combustibles, for example, coal, oil, gas and non-renewable waste, while between 10 % and 16 % was for each of wind, hydro, nuclear and solar sources (see Figure 5). An analysis of the overall generating capacity by type of source for the enlargement countries generally shows a greater dependence on just one or two sources: hydro power and non-renewable combustibles together accounted for at least 90 % of capacity in each of the enlargement countries for which data are available. In Albania, 95 % of generating capacity was for hydroelectricity and in Montenegro this share reached 75 %. The share of non-renewable combustibles in the total generating capacity was over 50 % in all of the other enlargement countries, and peaked at 91 % in Kosovo.

Total electricity generation in the EU-28 in 2016 was 3.3 petawatt hours (PWh) (or 3.3 million gigawatt hours (GWh)), around 12 times as high as in Turkey (274 thousand GWh), which had by far the highest level of generation among the enlargement countries. The EU-28 had a relatively balanced level of exports and imports of electricity (including trade between EU Member States). Bosnia and Herzegovina, Serbia, Kosovo and Albania were net exporters of electricity while the remaining enlargement countries were net importers. Net imports were a relatively small share of domestic supply in Turkey (2 %) and Montenegro (9 %), while in the former Yugoslav Republic of Macedonia (27 %) they accounted for a more substantial share.

Table 2: Main indicators for electricity, 2016
(GWh)

	Gross generation	Exports	Imports	Domestic supply
EU-28	3 255 050	364 031	382 221	3 273 240
Montenegro	3 141	906	1 210	3 445
The former Yugoslav Republic of Macedonia	5 629	160	2 191	7 660
Albania	7 782	42	0	7 740
Serbia	39 342	6 990	5 068	37 420
Turkey	274 408	1 452	6 330	279 286
Bosnia and Herzegovina ⁽¹⁾	15 629	6 007	3 872	13 494
Kosovo ⁽²⁾	5 981	1 064	557	5 474

⁽¹⁾ 2015.

⁽²⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data code: [nrg_105a](#))

The enlargement countries had a combined road network that was approximately 8 % of the length of the EU-28 network while the combined length of motorways in the enlargement countries was equivalent to 5 % of the length of the EU-28 motorway network. Between 2006 and 2016 the road and motorway networks expanded in all enlargement countries; note that there is a break in series for Turkey for roads.

Among the enlargement countries, car ownership is usually less commonplace than in the EU and cars tend to account for a lower share of the total number of road motor vehicles (see Table 4). Turkey had the highest total number of passenger cars, at 11.3 million in 2016, followed by Serbia (1.9 million) and Bosnia and Herzegovina (0.8 million) in 2016.

Table 3: Length of road network
(km)

	Roads (including motorways)		Motorways	
	2006	2016	2006	2016
EU-28 ⁽¹⁾	<i>3 700 000</i>	<i>4 000 000</i>	<i>65 673</i>	<i>75 000</i>
Montenegro	7 368	8 625	0	0
The former Yugoslav Republic of Macedonia	13 736	14 426	216	259
Albania ⁽²⁾	2 650	4 090	:	:
Serbia	38 799	46 366	374	741
Turkey ⁽³⁾	349 304	242 590	1 908	2 542
Bosnia and Herzegovina ⁽⁴⁾	17 020	:	20	128
Kosovo ⁽⁵⁾	1 660	2 092	0	98

(1) Roads and motorways 2016: rounded estimates based on the closest reference period available for each EU Member State. Roads: excluding Germany and Greece. Motorways: excluding Greece.

(2) Roads: excluding motorways.

(3) Excludes urban municipality roads. 2016: also excludes rural roads in the cities of metropolitan municipalities.

(4) Roads: excluding local roads of the Federation of Bosnia and Herzegovina. Motorways: 2015 instead of 2016.

(5) Roads: 2015 instead of 2016. This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data codes: [road_if_roadsc](#) and [road_if_motorwa](#))

Table 4: Road equipment
(thousands)

	Total number of road motor vehicles		Passenger cars	Lorries
	2006	2016	2016	2016
EU-28 ⁽¹⁾	<i>271 000</i>	<i>300 000</i>	<i>258 000</i>	<i>34 000</i>
Montenegro	167	209	185	13
The former Yugoslav Republic of Macedonia ⁽²⁾	274	450	395	35
Albania ⁽³⁾	314	554	436	75
Serbia	:	:	1 888	
Turkey	10 902	19 274	11 318	600
Bosnia and Herzegovina	:	951	828	7
Kosovo ⁽⁴⁾	:	:	342	:

(1) Rounded estimates based on the closest reference period available for each EU Member State. Total number of road motor vehicles: excluding motorcycles.

(2) Excluding trolley buses and mopeds.

(3) Excluding motor coaches, trolley buses and mopeds. 2016: also excluding road tractors.

(4) 2015. This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

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

The information on road passenger and freight transport presented in Table 5 concern transport on the national territory, in other words the transport of incoming or outgoing international transport and international transit, as well as transport that starts and finishes within the country. The quantity of freight in the former Yugoslav Republic of Macedonia was substantially higher than in either Serbia or Montenegro.

Figure 6 presents information on the number of persons killed in road accidents relative to the size of the population. None of the enlargement countries (for which data are available) recorded lower ratios than the EU-28. By contrast, the number of people killed in road accidents was more than twice the EU-28 average in Montenegro.

Table 5: Passenger and freight road transport

	Road passengers (thousands)		Road freight (thousand tonnes)	
	2006	2016	2006	2016
Montenegro (1)	4 825	7 544	1 961	852
The former Yugoslav Republic of Macedonia (2)	75 549	83 523	31 083	51 308
Serbia	:	:	3 709	9 897

Note: Albania, Turkey, Bosnia and Herzegovina and Kosovo (3), not available. All transport on the national territory.

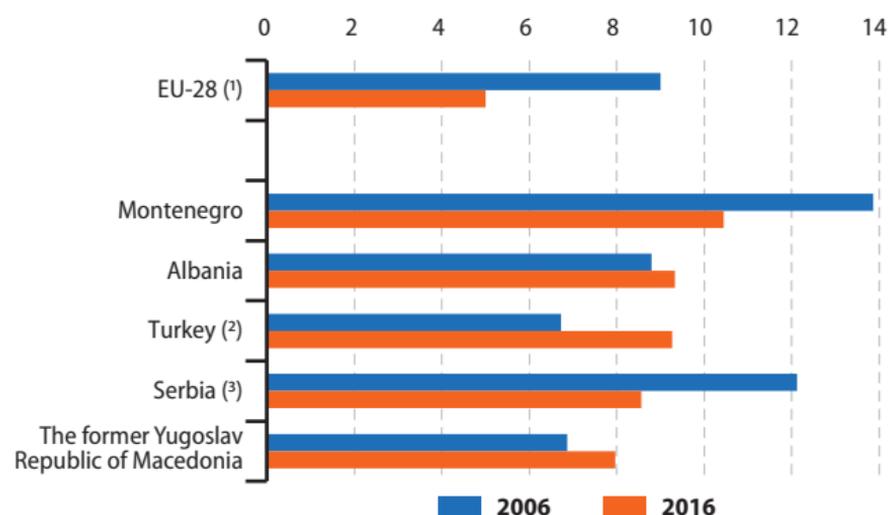
(1) Passengers: only includes transport by motor coaches and buses.

(2) Passengers: break in series.

(3) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat

Figure 6: Persons killed in road accidents
(per 100 000 inhabitants)



Note: Bosnia and Herzegovina and Kosovo (4), not available.

(1) Rounded estimates based on the closest reference period available for each EU Member State. 2015 instead of 2016.

(2) 2006: includes only persons killed at the scene of an accident.

(3) Break in series.

(4) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data codes: tran_sf_roadse and demo_gind)

There were 218 thousand km of railway lines in the EU-28 in 2016, down 1 % compared with 2006. The combined length of railway lines in the enlargement countries was 16.6 thousand km, equivalent to 7.6 % of the EU-28 network. The length of railway lines was unchanged in Montenegro between 2006 and 2016, while there were slight contractions in Serbia and the former Yugoslav Republic of Macedonia and a larger contraction (in relative terms) in Albania. The length of the rail network in Bosnia and Herzegovina grew by 8.6 % between 2006 and 2016 while in Turkey growth of 16.5 % was observed, representing an extra 1 434 km of rail in total during this period (note that the data for Turkey only cover main lines). There were just under 100 million passengers carried on the rail networks of the enlargement countries in 2016 (see Table 7; no data available for Kosovo). Between 2006 and 2016 the number of rail passengers increased in Turkey but fell elsewhere, most notably in Albania. In a similar manner, the quantity

Table 6: Length of rail network
(km)

	2006	2011	2016
EU-28 (¹)	220 500	219 500	218 400
Montenegro	250	250	250
The former Yugoslav Republic of Macedonia	699	699	683
Albania	430	399	334
Serbia	3 809	3 819	3 766
Turkey (²)	8 697	9 642	10 131
Bosnia and Herzegovina	1 030	1 027	1 119
Kosovo (³)	:	333	333

(¹) Rounded estimates based on the closest reference period available for each EU Member State.

(²) Main lines only.

(³) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

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

Table 7: Passenger and freight rail transport

	Rail passengers (thousands)		Rail freight (thousand tonnes)	
	2006	2016	2006	2016
EU-28 (¹)	7 612 795	9 620 292	1 766 527	1 594 305
Montenegro	1 067	1 049	2 494	0
The former Yugoslav Republic of Macedonia	1 011	663	3 800	1 358
Albania	1 659	89	450	76
Serbia	:	5 771	:	3 635
Turkey	77 232	88 870	17 182	24 055
Bosnia and Herzegovina	:	409	:	13 156

Note: Kosovo (²), not available. All transport on the national territory.

(¹) Passengers 2016: rounded estimate based on the closest reference period available for each EU Member State. Freight: 2015 instead of 2016; excluding Belgium.

(²) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

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

of rail freight fell in the majority of enlargement countries between 2006 and 2016, with only Turkey (among those for which data are available) recording an expansion.

Table 8 shows rail passenger transport in terms of the number of passenger-kilometres travelled; this has been divided by the number of inhabitants in order to make comparisons between countries easier. Relative to population size, the longest distance travelled by rail passengers was in Kosovo and Montenegro, whereas the shortest was in Bosnia and Herzegovina and Albania.

Table 8: Rail passenger transport relative to population size (number of passenger-km per inhabitant)

	2006	2008	2010	2012	2014	2016
EU-28 ⁽¹⁾	770.0	810.0	800.0	840.0	850.0	880.0
Montenegro	214.5	203.1	146.5	100.6	94.9	95.6
The former Yugoslav Republic of Macedonia	51.5	72.4	75.5	48.1	38.7	40.1
Albania	25.4	12.9	:	:	2.8	1.0
Serbia	:	:	:	46.1	53.8	52.3
Turkey ⁽²⁾	75.5	70.8	75.7	61.5	57.3	54.2
Bosnia and Herzegovina	17.2	20.3	15.1	14.9	9.0	6.7
Kosovo ⁽³⁾	191.0	157.4	170.7	204.0	203.8	158.4

⁽¹⁾ Rounded estimates based on the closest reference period available for each EU Member State.

⁽²⁾ Main lines only.

⁽³⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data codes: [rail_pa_typepkm](#) and [demo_gind](#))

For the three enlargement countries for which data are available, there was rapid growth between 2006 and 2016 in air passenger numbers, more than doubling in Albania and Turkey and trebling in the former Yugoslav Republic of Macedonia; a similar rate of growth between these years was recorded by Turkey for air freight (see Table 9).

Table 9: Main indicators for air transport

	Passengers arrivals (thousands)		Air freight and mail arrivals (thousand tonnes)	
	2006	2016	2006	2016
EU-28 ⁽¹⁾	593 000	770 940	7 100	8 240
Montenegro	:	931	:	1
The former Yugoslav Republic of Macedonia	300	900	1	2
Albania	442	1 076	2	2
Serbia	:	:	:	:
Turkey	29 400	86 800	172	488
Bosnia and Herzegovina	:	600	:	:

Note: Kosovo ⁽²⁾, not available.

⁽¹⁾ 2006: rounded estimates based on the closest reference period available for each EU Member State.

⁽²⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data codes: [avia_paoc](#) and [avia_gooc](#))

After accounting for the size of the population, the total number of air passengers carried (arrivals and departures) was greater in Montenegro (2 966 passengers carried per 1 000 inhabitants) and Turkey (2 206 per 1 000 inhabitants) than in the EU-28 (1 906 per 1 000 inhabitants) in 2016. The lowest passenger numbers were observed in Serbia and Bosnia and Herzegovina. During the period shown in Table 10 passenger numbers relative to population size increased in the EU-28 and throughout the enlargement region.

Table 10: Air passenger transport relative to population size
(number of passengers carried per 1 000 inhabitants)

	2006	2008	2010	2012	2014	2016
EU-28	:	1 599.2	1 542.3	1 636.3	1 729.7	1 906.2
Montenegro	1 359.8	1 801.8	1 947.6	2 188.5	2 593.8	2 965.9
The former Yugoslav Republic of Macedonia	290.4	339.3	368.3	443.2	629.3	869.0
Albania	287.7	397.2	:	:	625.0	741.2
Serbia	:	:	150.5	194.0	321.8	381.6
Turkey	853.9	1 061.1	1 416.7	1 743.7	2 161.3	2 206.0
Bosnia and Herzegovina	:	:	:	:	249.8	341.3
Kosovo ⁽¹⁾	420.5	525.3	591.5	849.0	771.7	984.4

⁽¹⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data codes: [avia_paoc](#) and [demo_gind](#))

The highest numbers of maritime passengers disembarked in the enlargement countries in 2016 were recorded in Turkey and Albania: note that the former Yugoslav Republic of Macedonia, Serbia and Kosovo are landlocked. Montenegro recorded a fall in maritime passenger and freight transport between 2006 and 2016 while Turkey recorded increases in both cases.

Table 11: Main indicators for maritime transport

	Passengers disembarked (thousands)		Freight handled — inward (thousand tonnes)	
	2006	2016	2006	2016
EU-28 ⁽¹⁾	215 444	198 233	2 451 778	2 279 042
Montenegro	74	58	1 036	808
The former Yugoslav Republic of Macedonia	–	–	–	–
Albania	486	634	:	:
Serbia	–	–	–	–
Turkey ⁽²⁾	723	1151	142 213	182 491
Bosnia and Herzegovina	:	:	:	:
Kosovo ⁽³⁾	–	–	–	–

⁽¹⁾ 2015 instead of 2016.

⁽²⁾ 2008 instead of 2006. Passengers: 2015 instead of 2016.

⁽³⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Source: Eurostat (online data codes: [mar_mp_aa_cphd](#) and [mar_mg_aa_cwhd](#))

Further information

Eurostat's website

Eurostat's website (<http://ec.europa.eu/eurostat>) provides free access to its statistics; it is available in German, English and French. Eurostat online data codes, which are given in the source under each table or figure, provide users with a quick and efficient way to access the most up-to-date statistics. When entered in the 'search' facility on Eurostat's website, these codes provide users with the freshest data and longer time series.

Statistics Explained

Statistics Explained (<http://ec.europa.eu/eurostat/statistics-explained/index.php>) is Eurostat's wiki-based system that presents statistical topics in an easy to understand way.

Statistical articles on enlargement countries:

http://ec.europa.eu/eurostat/statistics-explained/index.php/Enlargement_countries_-_statistical_overview

Background information on the enlargement countries:

http://ec.europa.eu/eurostat/statistics-explained/index.php/Enlargement_policy_and_statistical_cooperation

National statistical authorities of the enlargement countries

Montenegro

<http://monstat.org/eng/index.php>

The former Yugoslav Republic of Macedonia

http://www.stat.gov.mk/Default_en.aspx

Albania

<http://www.instat.gov.al/en/Home.aspx>

Serbia

<http://webrzs.stat.gov.rs/WebSite>

Turkey

<http://www.turkstat.gov.tr>

Bosnia and Herzegovina

<http://bhas.ba/index.php?lang=en>

Kosovo

<http://ask.rks-gov.net/eng>

Data were extracted on 22 March 2018.

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Printed by Drukarnia Interak Spolka Z Ogranicz in Poland

Luxembourg: Publications Office of the European Union, 2018

