Statistics report

Coal Information

Overview

2020

IEA

Highlights

Coal production increased by 1.5% worldwide in 2019

- Asia produced what Europe and US did not. The extra Chinese production equalled the drop in EU+US production.
- **China**, the world's biggest producer, remains at 4% annual growth rate.
- **Indonesia** continues ramping up its production, +12.4% growth.
- **India** reduces production for the first time this century and only for the second in history, -0.9%.
- **EU** and **US** witnessed their lowest annual productions.

Exports increased by 1.3% in 2019

- **Indonesia**, **Australia** and **Russia** account for 2/3 of the global coal exports, all three exporting more than in 2018.
- The **United States** and **Colombia** had double-digit negative year-on-year change on their exports.
- **China** and **India** remain the biggest importers, both increasing from 2018.
- **Viet Nam** doubled its imports and the **European Union** cut its by 1/5th.

Coal consumption decreased by 1.2% worldwide in 2019

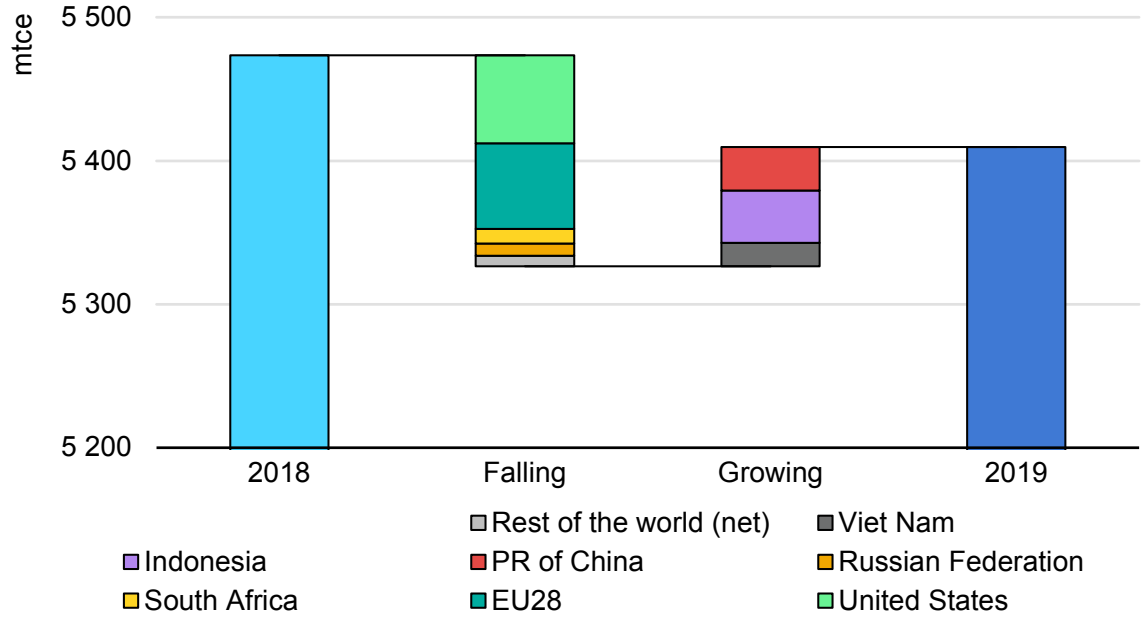
- The drop in consumption seen in the **United States** and **Europe** overcame the higher demand from many Asian economies e.g. **China**, **Indonesia** and **Viet Nam**.
- **India** slightly decreased its coal consumption for the first time in 3 decades.

Introduction

Coal puts the brakes on and moves from west to east

With the global economy slowing down and the widespread objective of having less carbon-intensive power generation in the face of pollution and environmental concerns, coal consumption fell in 2019. The depth and combination of those dynamics in the many economies of the world were different and consequently the coal market reacted differently: major Asian economies such as China and Indonesia increased their coal consumption whilst the United States, the European Union and India decreased it.

World coal consumption variation, 2018-19



Data for South Africa are provided on fiscal year basis.
Source: IEA/OECD World Energy Balances

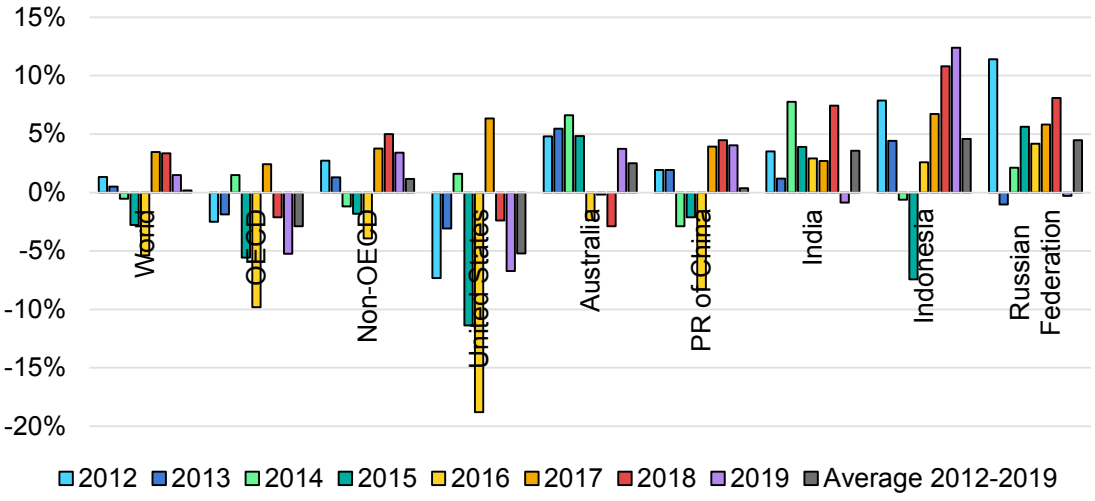
In terms of production, growth continues but at a slower rate: 2019 had a year-on-year increase that was less than half of those in 2018 and 2017. The main players are the same as for consumption: China and Indonesia went and the United States and the European Union had reduced their output.

Production

Total world coal production increased by 1.5% in 2019, half the growth rate of the previous years. China is the major driver, with +144 Mt production, followed by Indonesia and its +66 Mt. India saw its first production decrease this century and only the second in history. The Unites States cut production by 46 Mt, and the EU by 68 Mt, of which half came from Germany.

Worldwide coal production almost recovered from the 2014-2016 dip, reaching 7,921 Mt in 2019, near the historical maximum of 2013. After 2016, production increased by 253 Mt each year in 2017 and 2018. In 2019 production increased at a slower rate, with 116 Mt added, reflecting a slowdown in this extractive industry. The growth was 1.5%, less than half of those seen in the two previous years, 3.4% and 3.5%.

Coal production year-on-year growth rate for selected economies and years

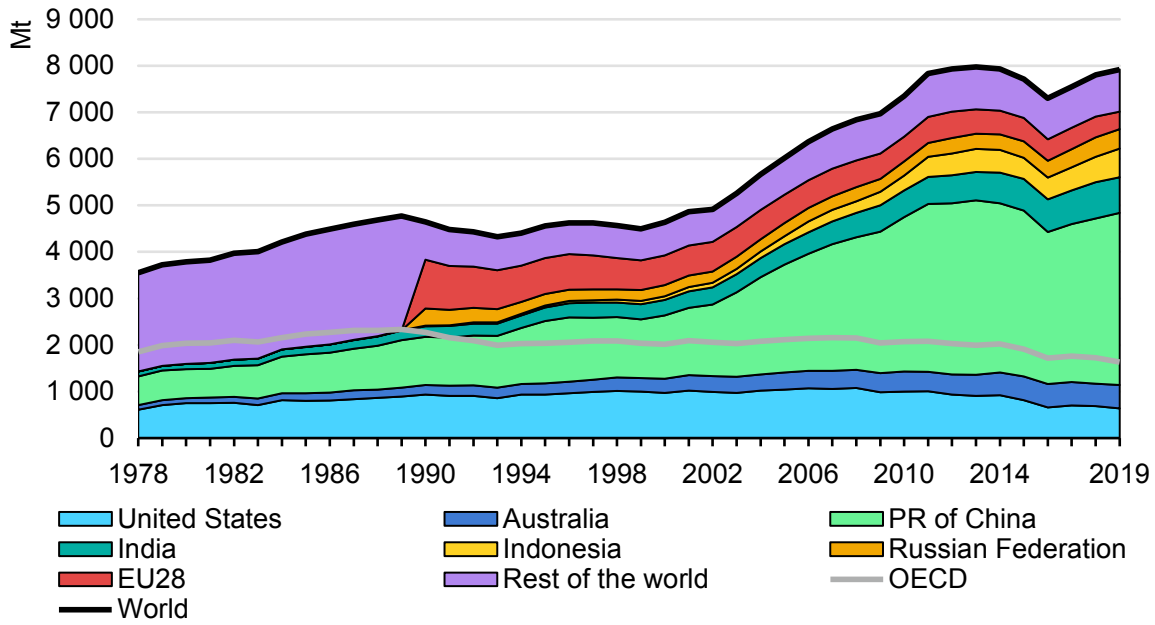


Data for Australia and India are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

By region

Asia produced what the EU and USA did not. The extra Chinese production equalled the drop EU+US

Wold total coal production, 1978-2019



Data for the European Union and the Russian Federation start in 1990. Prior to that, the amounts corresponding to those regions are included under "rest of the world" in this chart.

Data for Australia and India are provided on fiscal year basis.

Source: IEA/OECD World Energy Statistics

The People's Republic of China remained the world's leading coal producer, as it has been since 1985, with 3,693 Mt in 2019 representing 46.6% of global production. The Chinese production has seen growth rates around 4% since 2017 (4.1% in 2019), with 114 Mt more than in 2018.

India saw the first drop in production in two decades, and only the second time ever. In 2019, production in India amounted to 769 Mt, 0.9% less than in the previous year, due mainly to a decrease in coal-fired power generation impacted by higher hydro generation. Given this situation, coal stocks at power stations ended the year at historical maximums and for the first time in years with none of them at 'critical' levels.

The United States continues the falling production trend that started at the beginning of the century, reaching 640 Mt in 2019, the lowest level seen in four decades.

The European Union saw its deepest decrease in coal production ever in 2019, down by 68 Mt or 15.4%. The main actors of this trend are Germany, Poland and Greece, with year on year falls of -38, -10 and -9 Mt respectively. Furthermore, Spain stopped its coal production in 2019. Many countries have announced coal phase-out plans, hence this decreasing trend is expected to continue and accelerate.

Coal production in Indonesia increased by 12.4% (+68 Mt) in 2019; this is the highest growth rate since 2016, when it returned to positive year on year changes, and the biggest percentage increase among the main coal producers.

After three years of decline, Australia increased coal production in 2019 by 3.7% (18 Mt) surpassing the 500 Mt threshold lost in 2017.

After a few years of significant growth Russia had a similar production level in 2019 as in 2018, falling by only -0.3% (-1 Mt).

Colombia continued its downward trend (-2.6% in 2019) and was surpassed by Turkey as the 11th major coal producer.

Production by major coal producers (Mt)

	2017	2018	2019	Change 2018/19		Share 2019
PR of China	3,397	3,549	3,693	144	4.1%	46.6%
India	722	776	769	-7	-0.9%	9.7%
United States	703	686	640	-46	-6.7%	8.1%
Indonesia	495	548	616	68	12.4%	7.8%
Australia	499	485	503	18	3.7%	6.4%
Russian Federation	388	419	418	-1	-0.3%	5.3%
South Africa	257	256	254	-2	-0.8%	3.2%
Germany	175	169	131	-38	-22.3%	1.7%
Poland	127	122	112	-10	-8.2%	1.4%
Kazakhstan	101	108	105	-3	-2.7%	1.3%
Turkey	74.1	83.9	90.0	6.1	7.2%	1.1%
Colombia	90.5	84.3	82.1	-2.2	-2.6%	1.0%
Rest of the world	522	518	508	-10	-2.0%	6.4%
Total EU28	*464*	*444*	*375*	*-68*	*-15.4%*	*4.7%*
Total OECD	1,762	1,725	1,635	-90	-5.2%	20.6%
Total non-OECD	5,789	6,079	6,286	207	3.4%	79.4%
World	**7,551**	**7,805**	**7,921**	**116**	**1.5%**	**100 %**

Production includes recovered slurries and production from other sources.
Data for Australia, India and South Africa are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

By product

More steam and coking coal while lignite continues downward

78.0% of all coal produced in 2019 is classified as **steam coal**, reaching 6,175 Mt, 2.5% more than in 2018. All three products included in this category had positive growth rates, the largest being 14.0% for **anthracite**. In absolute value, the largest growth was **other bituminous coal**, accounting for 118 Mt of the 149 Mt steam coal increase.

The **coking coal** production also saw grew strongly, back again above one million tonnes annually, at 1,007 Mt thanks to a 3.0% increase after a drop in 2018. On the other hand, **lignite** continued decreasing, with 62 Mt less than in the previous year.

Total world coal production (Mt)

	2017	2018	2019	Change 2018/19		Share 2019
Steam coal	**5,726**	**6,025**	**6,175**	**149**	**2.5%**	**78.0%**
Anthracite	81	85	97	12	14.0%	1.2%
Sub-bituminous coal	778	845	865	19	2.3%	10.9%
Other bituminous coal	4,866	5,095	5,213	118	2.3%	65.8%
Coking coal	**1,000**	**978**	**1,007**	**29**	**3.0%**	**12.7%**
Lignite	**826**	**801**	**739**	**-62**	**-7.7%**	**9.3%**
Total coal	7,551	7,805	7,921	116	1.5%	100.0%
Peat	11	16	11	-5	-32.5%	-
Oil shale/sands	22	22	16	-6	-27.6%	-

Total coal comprises steam coal, coking coal and lignite, so excludes peat, and oil shale and oil sands even though they are shown here for completeness.

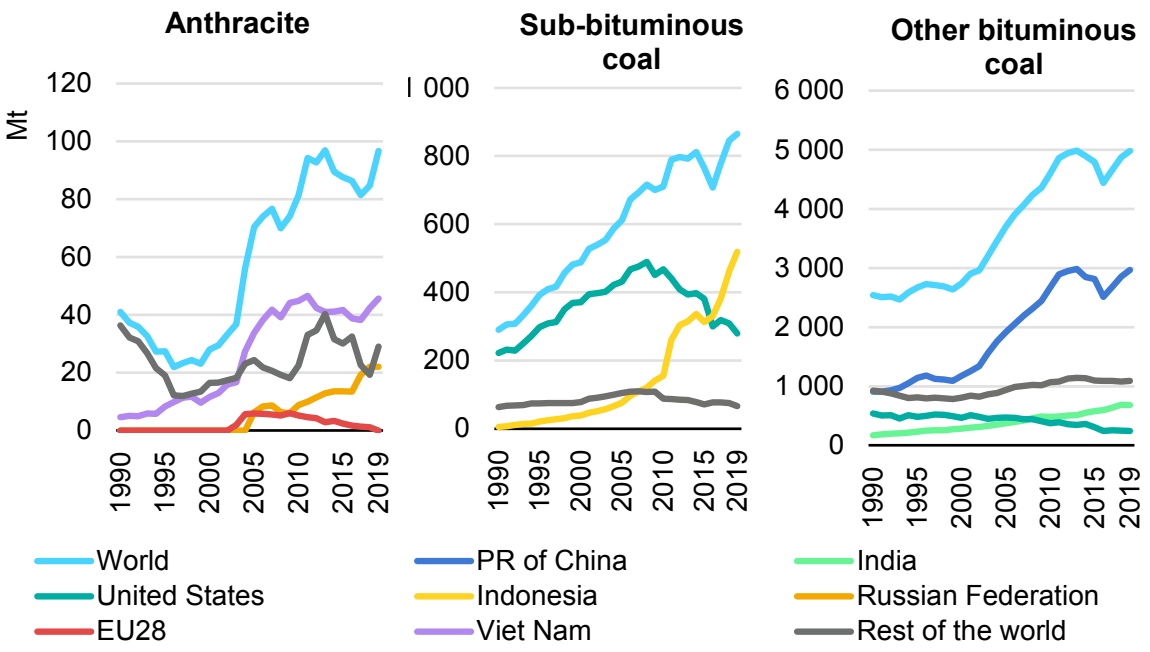
Source: IEA/OECD World Energy Statistics

The main producer of anthracite is Viet Nam, with 46 Mt and almost half of the world production, followed by Russia. Although them two account for 70% of the world production, they comprised just over one quarter of the growth between 2018 and 2019, +3 Mt.

Indonesia reached again a historical maximum in sub-bituminous coal production in 2019 at 519 Mt, +12.4% from the previous year. The United States is the second largest producer; however its output reduced by 9.6% in line with the decreasing trend seen for over a decade.

China led the jump in production of other bituminous coal, returning to a level previously seen in 2013, its historical peak. Indonesia and Australia together produced 24 Mt more than in 2019, which balanced the decrease of 22 Mt in the United States, Russia and India.

Anthracite, sub-bituminous coal and other bituminous coal production, 1990-2019

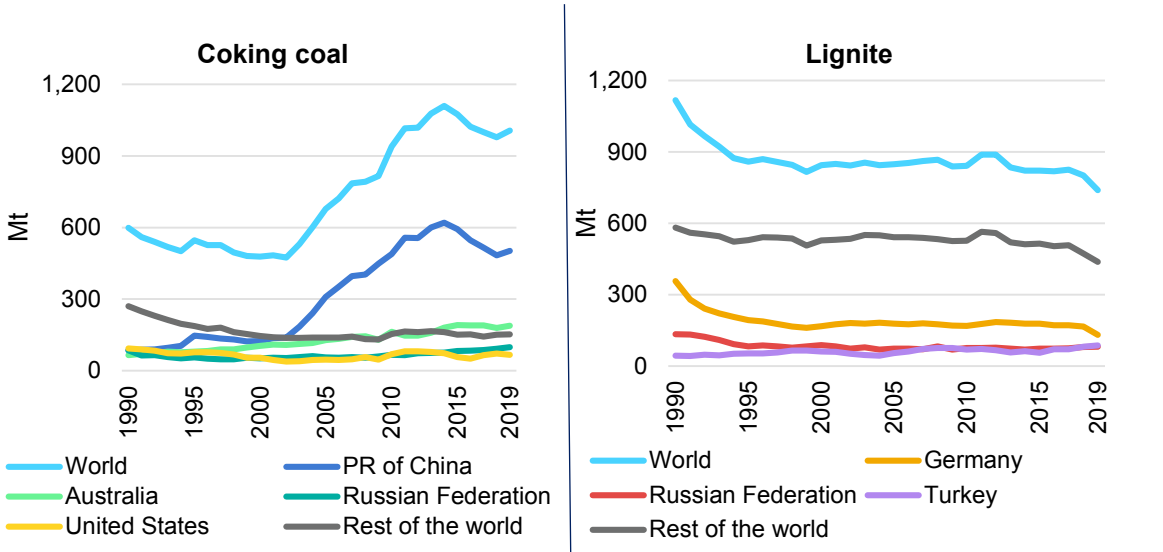


Data for India are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

Regarding the other two types of primary coal, coking coal recovered from the decline in 2018 and was back over one thousand million tonnes, with 1,007 Mt. China and Australia, who were the drivers of that decrease, increased their production by 19 and 9 Mt respectively. Russia continues with its upward trend, reaching a new historical maximum at 99 Mt.

Lignite is the only type of primary coal that saw a decrease in production in 2019, -7.7%. The reduction compared to 2018 totalled 62 Mt, of which 60 Mt came from the European Union, the major producer of this type of coal – 42% share in 2019. The countries with the biggest cuts in production were Germany (-35 Mt, -21.0%), Greece (-9 Mt, -25.8%) and Poland (-8 Mt, -14.1%).

Coking coal and lignite production, 1990-2019

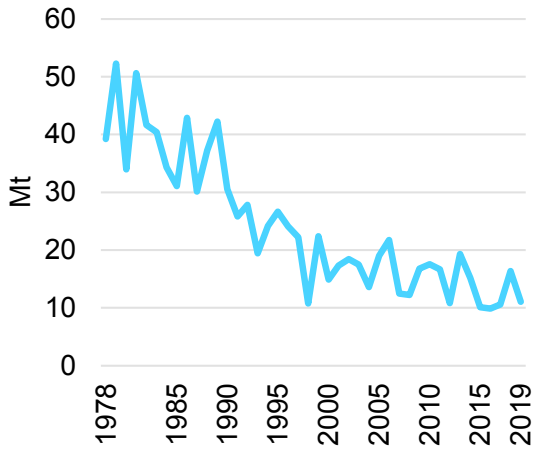


Data for Australia are provided on fiscal year basis.

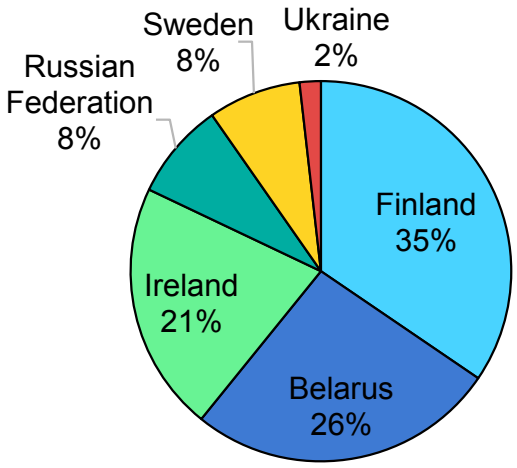
Source: IEA/OECD World Energy Statistics

Productions (or harvests) of peat can be highly variable and are weather dependent for both access to the peat bogs and for outdoor drying. Disruptions in 2012 for Ireland and Finland were prominent, with Ireland's production of 1.5 Mt being the lowest since IEA records began in 1960, while peat production in Finland in 1998 dropped to 1.7 Mt from 10.4 Mt in 1997, before returning to 8.1 Mt in 1999. In 2019 the production decreased by one third compared to 2018.

Peat production, 1990-2019 (left)



Peat production share, 2019 (right)



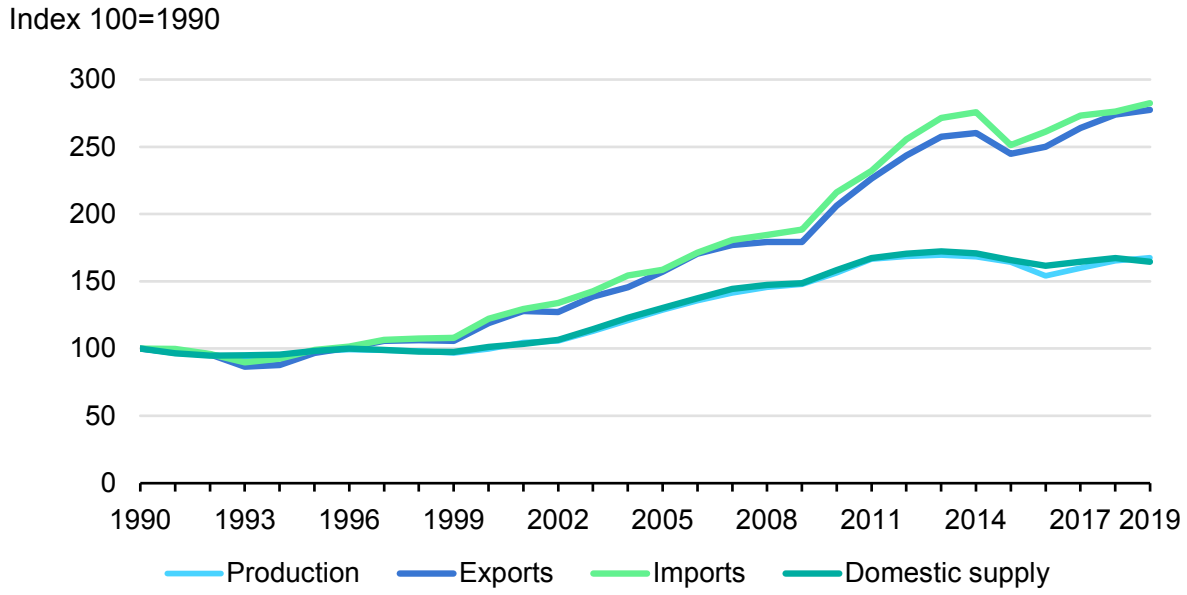
Source: IEA/OECD World Energy Statistics

Trade

Exports grew by 1.3% in 2019. Indonesia, Australia and Russia are still the main providers of coal worldwide; the United States and Colombia have negative double-digit year-on-year rates. The destination of most of the imports is Asia i.e. China, India, Japan and Korea; imports into Viet Nam doubled from the previous year and EU imports decreased by one-fifth.

Exports of all types of coal increased by 1.3% in 2019 to 278 Mt. This is the smallest growth rate since 2016. Globally, coal trade continues growing as per the bigger gap between where the production and consumption are located worldwide.

World coal production, supply and trade trends, 1990-2019



The difference between total coal imports and total coal exports is primarily due to the different coal classification methodologies used by the importing and exporting countries, which does not hold on a global basis. It also occurs because of coal in-transit, coal that is unaccounted for, and reporting discrepancies by importing and exporting countries.

Source: IEA/OECD World Energy Statistics

The most traded type of coal in 2019 continued to be steam coal, accounting for three quarters of the global trade on a tonnage basis. One-fifth of the coal traded in 2019 was coking coal. Lignite made the smaller share of world exports (and imports).

World coal trade by product (Mt)

Imports	2017	2018	2019	Change 2018/19		Share 2019
Steam coal	**1072**	**1086**	**1106**	**21**	**1.9%**	**77.7%**
Anthracite	39	39	49	10	24.7%	3.4%
Sub-bituminous coal	123	150	159	9	5.9%	11.2%
Other bituminous coal	910	896	898	2	0.2%	63.1%
Coking coal	**299**	**301**	**312**	**10**	**3.5%**	**21.9%**
Lignite	**6**	**5**	**6**	**0**	**8.2%**	**0.4%**
Total coal	**1377**	**1392**	**1424**	**32**	**2.3%**	**100.0%**
Exports	**2017**	**2018**	**2019**	**Change 2018/19**		**Share 2019**
Steam coal	**1024**	**1057**	**1082**	**25**	**2.4%**	**75.4%**
Anthracite	26	30	28	-2	-6.2%	**1.9%**
Sub-bituminous coal	295	362	386	24	6.7%	**26.9%**
Other bituminous coal	703	666	668	3	0.4%	**46.5%**
Coking coal	**327**	**344**	**337**	**-7**	**-1.9%**	**23.5%**
Lignite	**14**	**17**	**17**	**0**	**0.0%**	**1.2%**
Total coal	**1366**	**1418**	**1436**	**19**	**1.3%**	**100.0%**
Balancing item	*-11*	*25*	*12*	-	-	-

The balancing item is the difference between total coal imports and total coal exports. This is primarily due to the different coal classification methodologies used by the importing and exporting countries, which does not hold on a global basis. It also occurs because of coal in-transit, coal that is unaccounted for, and reporting discrepancies by importing and exporting countries.

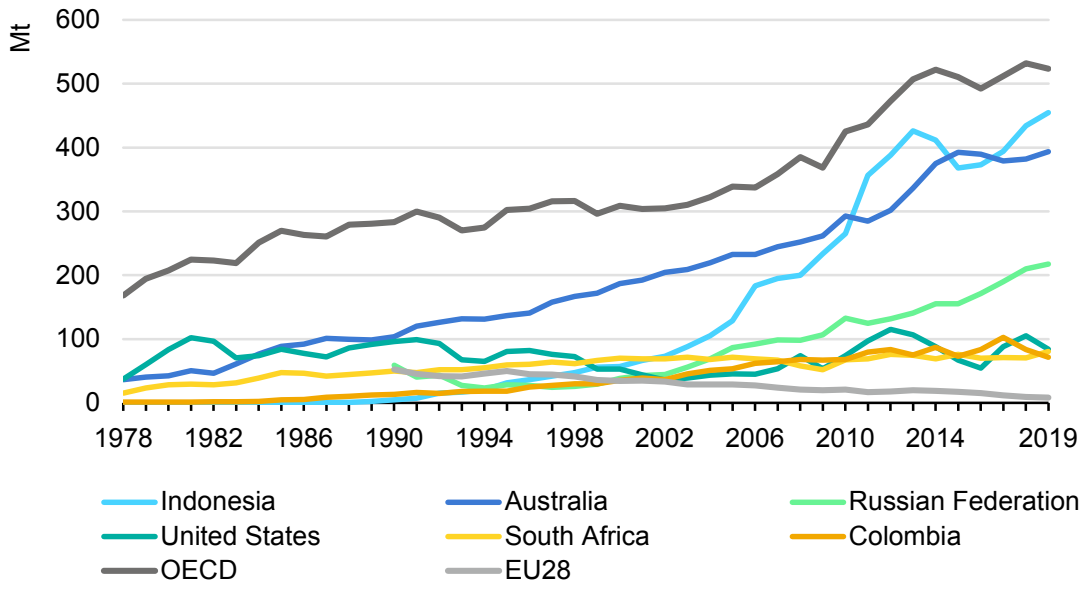
Source: IEA/OECD World Energy Statistics

Exports

Indonesia and Australia remained the world's largest coal exporters in 2019, with 31.7% and 27.4% shares respectively. These two, together with Russia the third largest exporter, account for three quarters of the total coal exports worldwide.

Indonesia exported the most, and also showed the highest growth, adding 21 Mt to the previous year figure. Other countries with big increases in exports were Australia, South Africa and Philippines, this last one making three times the exports in 2018. Conversely, the United States saw the largest decrease in exports, with one fifth less than in the previous year, -21 Mt. Due a drop in extraction in one of the main mines and droughts that cut operations Colombia continued reducing exports, 12 Mt less in 2019 compared to 2018, -14.4%.

Total exports by major exporters, 1978-2019



Data for the European Union and Russian Federation starts in 1990.
Data for Australia and South Africa are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

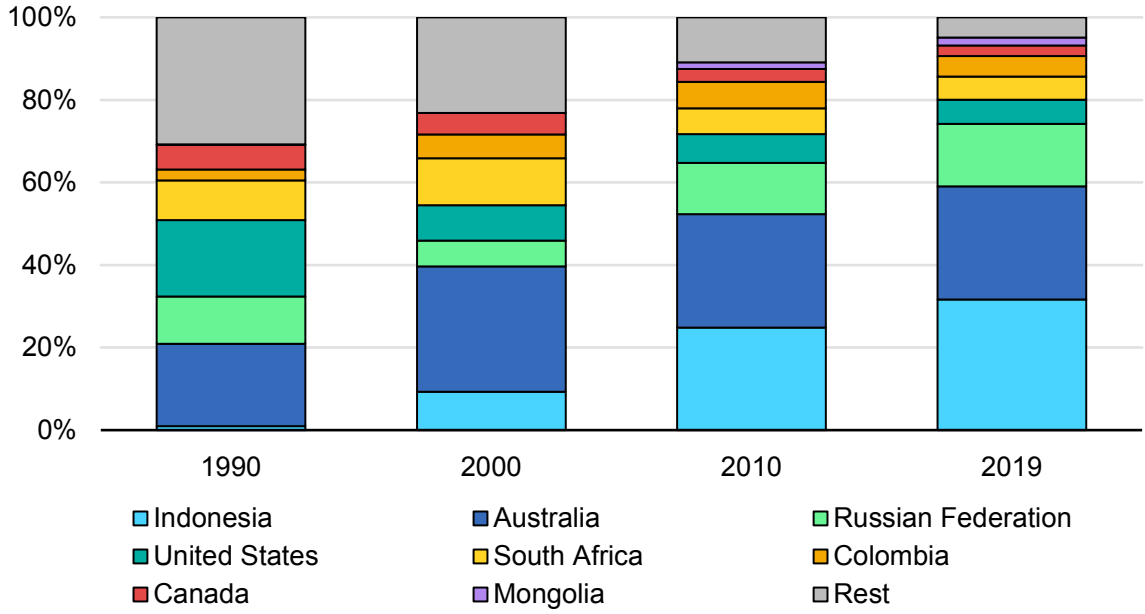
Major coal exporters (Mt)

	2017	2018	2019	Change 2018/19		Share 2019
Indonesia	394	434	455	21	4.8%	31.7%
Australia	379	382	393	11	3.0%	27.4%
Russian Federation	190	210	217	7	3.5%	15.1%
United States	88	105	84	-21	-19.7%	5.9%
South Africa	71	70	81	10	14.5%	5.6%
Colombia	103	84	72	-12	-14.4%	5.0%
Canada	31	34	36	2	7.1%	2.5%
Mongolia	29	32	28	-4	-12.2%	2.0%
Kazakhstan	29	27	25	-1	-5.0%	1.8%
Philippines	6	5	14	9	178.8%	1.0%
Rest of the world	46	35	31	-10	-2.0%	2.1%
Total EU28	*12*	*9*	*8*	*-1*	*-7.9%*	*0.6%*
Total OECD	512	532	524	-8	-1.5%	36.5%
Total non-OECD	854	886	913	27	3.0%	63.5%
World	1,366	1,418	1,436	19	1.3%	100.0%

Data for Australia and South Africa are on a fiscal year basis.
Source: IEA/OECD World Energy Statistics

In recent years, Indonesia and Australia supplied more than half of the global exports, with the proportion growing to two thirds if Russia is included, but these proportions have not always been the same. In 1990 Australia and the United States were the main exporters with around one-fifth each, but since then the share originating in the United States has significantly decreased, to less than 6%. Russia increased its share after 2000, and new countries such as Mongolia and Colombia became more significant. However, the strongest growth over the past 30 years has come from Indonesia, which now accounts for almost one-third of the global coal exports market.

Share of coal exporters for selected years

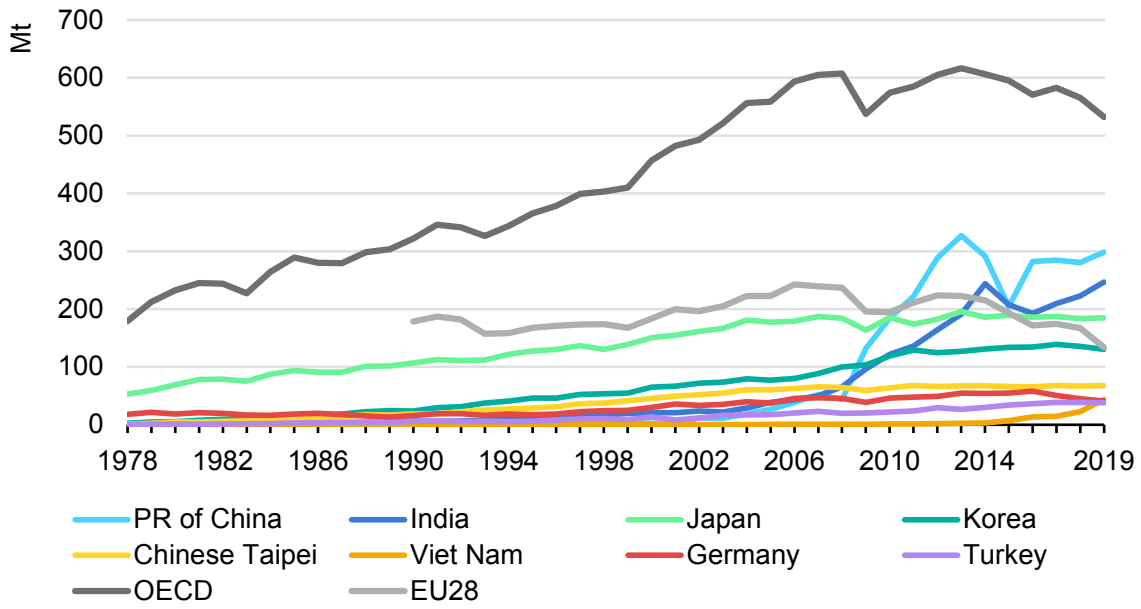


The shares are calculated on a tonnage basis.
Data for Australia and South Africa are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

Imports

In 2019 China and India were again the two main coal importers, with 298 and 247 Mt respectively; both with higher quantities than in the previous year, +6.3% and +11.0% respectively. The largest growth in imports happened in Viet Nam, with the country almost doubling the volume of coal imported, now at 44 Mt (+21 Mt, +94.8%). Far from Asia, the European Union reduced coal imports by one-fifth, down 33 Mt to134 Mt, reaching a historical minimum.

Total imports by major importers



Data for the European Union start in 1990.
Data for India and Japan are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

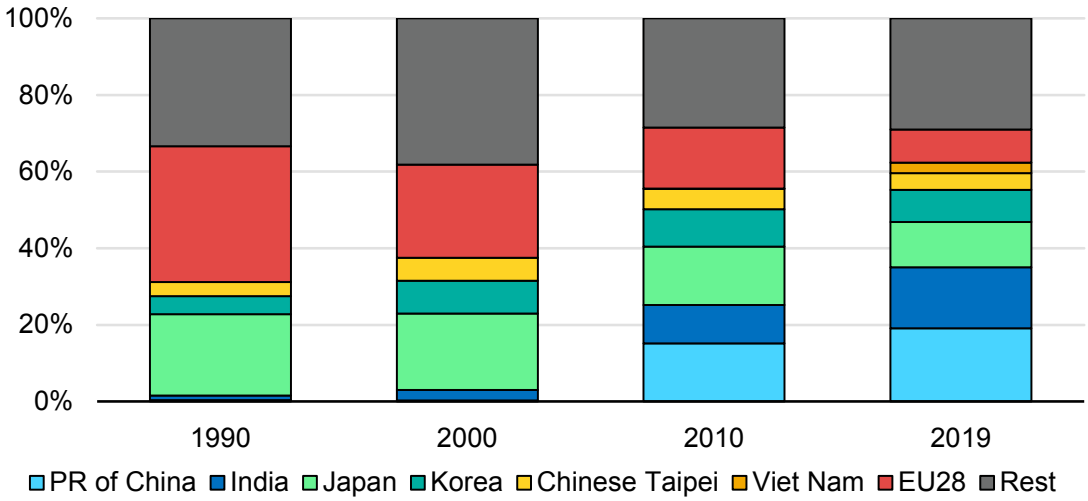
Imports by major coal importers, Mt

	2017	2018	2019	Change 2018/19		Share 2019
China	284	281	298	18	6.3%	21.0%
India	210	223	247	24	11.0%	17.3%
Japan	187	184	185	1	0.7%	13.0%
Korea	139	136	130	-5	-4.0%	9.1%
Chinese Taipei	68	67	67	1	1.5%	4.7%
Viet Nam	14	23	44	21	94.8%	3.1%
Germany	51	45	41	-4	-8.5%	2.9%
Turkey	38	38	38	0	-0.5%	2.7%
Rest of the world	387	397	373	-10	-2.0%	26.2%
Total EU28	*175*	*167*	*134*	*-33*	*-19.9%*	*9.4%*
Total OECD	583	566	532	-34	-5.9%	37.4%
Total non-OECD	794	827	892	65	7.9%	62.6%
World	**1377**	**1392**	**1424**	**32**	**2.3%**	**100.0%**

Data for India and Japan are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

The main coal trading countries have changed over the last three decades, for both exports and imports. Currently China buys one-fifth of the coal put on the international market, but back in 2000 its presence was negligible. On the contrary, the European Union was the major importer in 1990 and has been reducing its coal imports consistently since then, from holding 35.4% of the global share to less than 10% currently. Viet Nam was the big surprise of the decade, turning from exporter to importer in 2005 and increasing demand over the years since then.

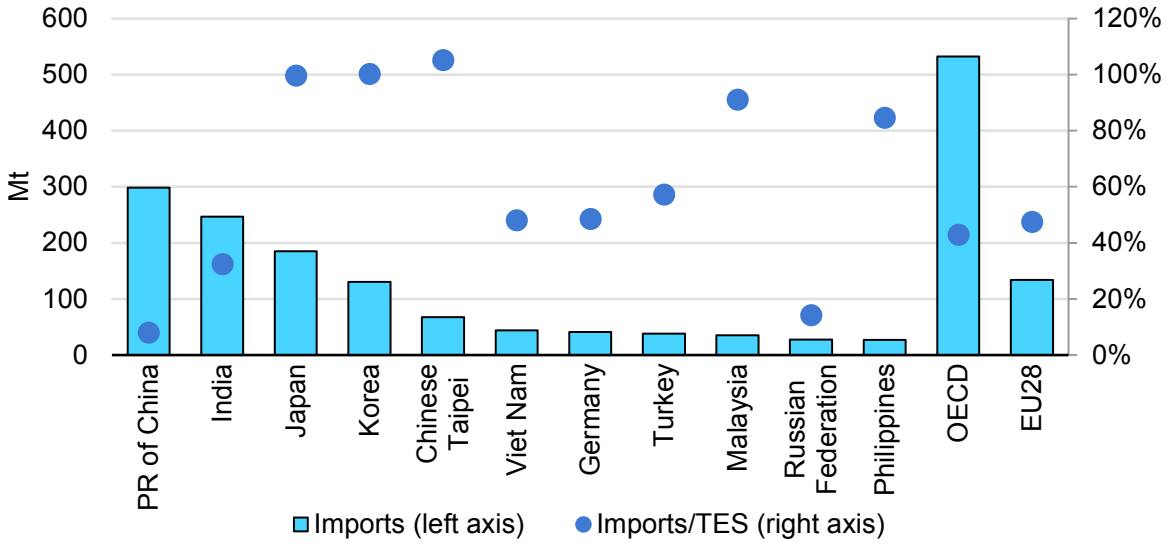
Share of coal imports for selected years



The shares are calculated on a tonnage basis.
Data for India and Japan are provided on fiscal year basis. Source: IEA/OECD World Energy Statistics

China is the country with the highest imports in absolute terms, 298 Mt, but this only accounts for 8% of its national coal supply. Other countries importing smaller quantities have much higher dependency rates, such as Malaysia and Philippines, which both have dependency rates above 80%. The OECD and European Union have similar coal import dependency rates, 42.8% and 47.5% respectively of their coal supply is imported.

Share of imports on coal supply, 2019



The ratio Imports/TES is calculated on energy basis.
Ratios higher than 100% may be result of trade transit not cleared.
Data for India and Japan are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics and IEA/OECD World Energy Balances

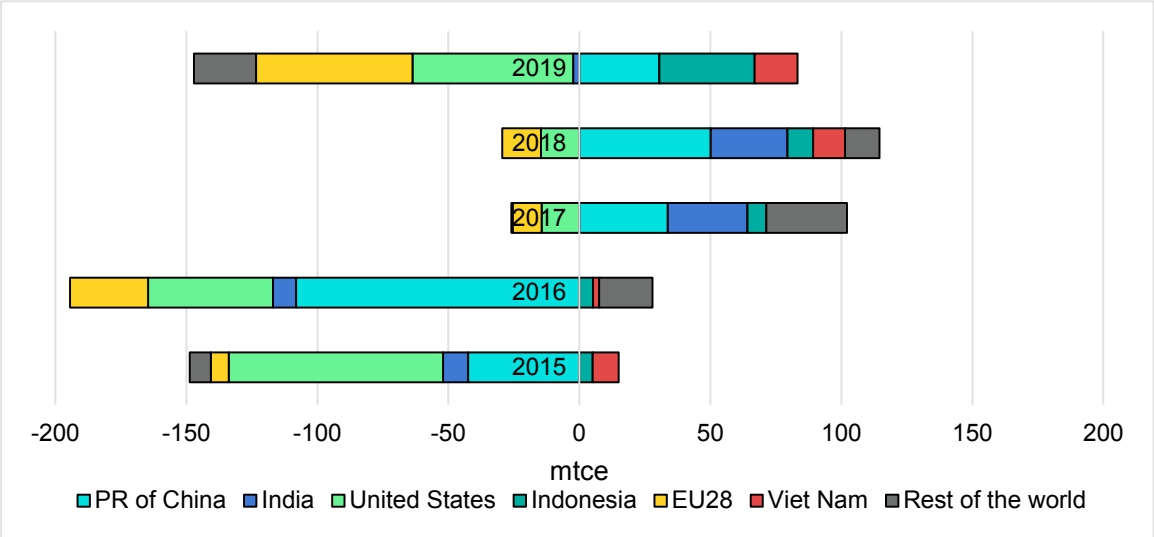
Consumption

Coal consumption decreased by 1.2% worldwide in 2019. The EU and US made the major year-on-year change, which offset the growth in China and Indonesia. India slightly decreased the coal consumption.

After two years of growth, global coal consumption decreased in 2019 by 1.2% or 64 mtce.

In recent years, it was China together with other major Asian economies who had the largest impact on changes in global coal consumption figures, but that was not the case anymore in 2019. In Asia, Indonesia was the country that increased its coal consumption the most over the previous year; China also consumed more coal although with a smaller increase; and India experienced a negative year-on-year coal consumption rate for the first time in this century. On the other hand, the United States and Europe boosted their plans to reduce coal consumption and dependency, mainly in the area of power generation by switching to a combination of gas and renewables, depending on the country. China and Indonesia together increased their consumption by 66 mtce, but the United States and the European Union decreased theirs by 61 and 60 mtce respectively.

Year-on-year consumption change in selected economies



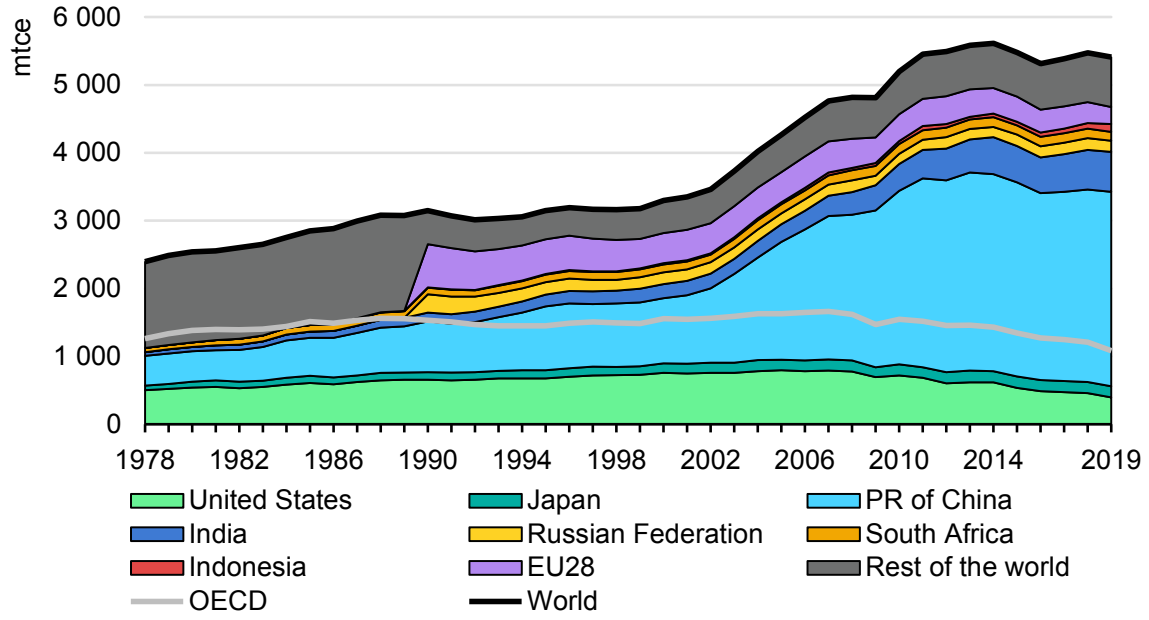
Data for India are provided on fiscal year basis.
Source: IEA/OECD World Energy Balances

By region

China still consumes half of the world's coal

China continues to be the major consumer of coal worldwide, with its 2,866 mtce comprising 53.0% of the global share. India follows in second place with 585 mtce, 0.4% less than last year. The United States and the European Union are the leaders of the coal phase-out; they both set historical minimum consumption in 2019 but are still the 3rd and 4th global coal consumers in the world, with 397 mtce and 253 mtce, respectively. These four markets account for three quarters of the global coal consumption. Indonesia's coal consumption hit a historical maximum in 2019 at 115 mtce.

World coal consumption, 1978-2019



Data for the European Union and the Russian Federation start in 1990. Prior to that, the amounts corresponding to those regions are included under "rest of the world" in this chart.

Data for India, Japan and South Africa are provided on fiscal year basis.

Source: IEA/OECD World Energy Balances

By product

Coking coal increases, lignite and steam coal drop.

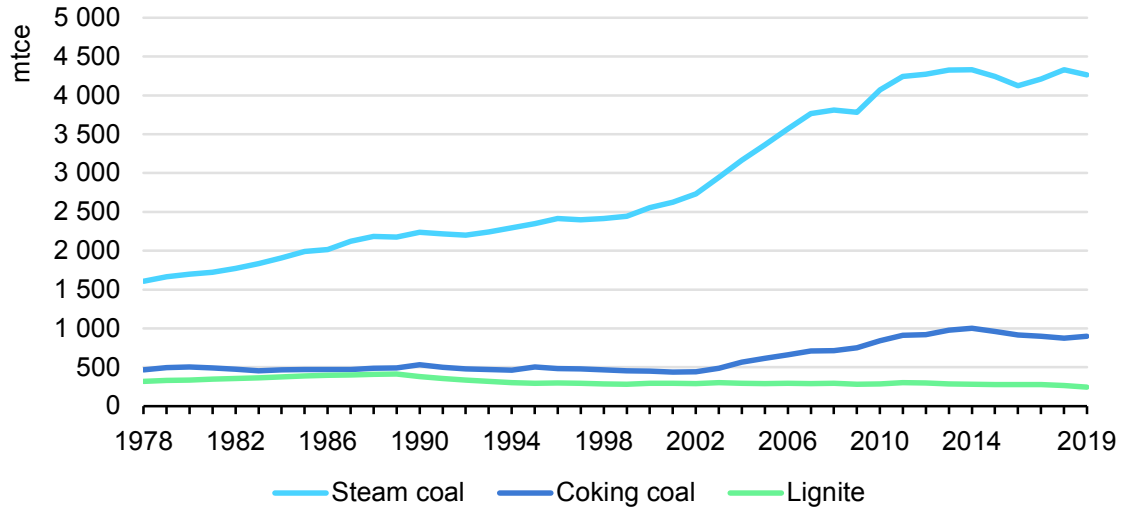
Almost four fifths of the coal consumed globally is classified as steam coal. The drop of 67 mtce of this coal aggregate reduced total coal consumption by -1.2% in 2019. Lignite, decreased sharply with -8.1% rate. However, the consumption of coking coal increased in 2019, by 25 mtce.

Total world coal consumption (mtce)

	2017	2018	2019	Change 2018/19		Share 2019
Steam coal	**4,213**	**4,332**	**4,265**	**-67**	**-1.5%**	**78.8%**
Anthracite	78	82	97	15	18.5%	1.8%
Sub-bituminous coal	395	418	407	-11	-2.7%	7.5%
Other bituminous coal	3,740	3,833	3,762	-71	-1.9%	69.5%
Coking coal	**899**	**875**	**900**	**25**	**2.8%**	**16.6%**
Lignite	**277**	**266**	**244**	**-21**	**-8.1%**	**4.5%**
Total coal	**5,389**	**5,474**	**5,410**	**-64**	**-1.2%**	**100.0%**

Source: IEA/OECD World Energy Balances

Steam coal, coking coal and lignite consumption, 1978-2019



Source: IEA/OECD World Energy Balances

Coking coal is the only type of coal that saw an increase of consumption in 2019, up to 900 mtce, +2.8%, aligned with the increase of 3.0% in world crude steel production. The majority of the increase was located in China, which increased its coking coal consumption by 5.2%, recovering from a drop 2018. Other areas generally accounted for very small decreases, with the exception of the European Union decreasing by 9.8% led by Germany (-3.9 mtce).

The consumption of lignite had the biggest decrease, down by 8.1% to 244 mtce. Of the 21 mtce reduction, 18 mtce were in the European Union, within which the main

cuts happened in Germany (-11 mtce, -21.5%), Poland (-2 Mt, -14.0%) and Greece (-2 Mt, -30.5%). Another major decrease was seen in the United States, down by 3 mtce. The EU accounted for 36.9% of the global lignite consumption.

The global consumption of steam coal in 2019 decreased by 1.5% as a result of less coal-fired power generation worldwide. Opposite trends can be observed along the globe: while the United States and the European Union drop their consumption by 81 and 44 Mt respectively, Indonesia and Viet Nam increase theirs by 47 and 21 Mt. The two main consumers, China and India had smaller changes with +0.2% for the first one and -1.2% for the second. This is the first year-on-year fall observed in India.

Steam coal major consumers (Mt)

	2017	2018	2019	Change 2018/19		Share 2019	Of which anthracite	Of which other bituminous coal	Of which sub-bitumi-nous coal
PR of China	3,128	3,235	3,243	8	0.2%	54.5%	7	3,236	0
India	808	862	847	-16	-1.8%	14.2%	0	743	103
United States	562	549	469	-81	-14.7%	7.9%	2	203	264
South Africa	183	182	172	-11	-5.8%	2.9%	2	169	0
Japan	141	138	139	1	0.6%	2.3%	6	133	0
Indonesia	101	114	161	47	41.1%	2.7%	0	8	153
Korea	104	101	94	-7	-7.0%	1.6%	5	87	2
Russian Federation	84	92	76	-16	-17.4%	1.3%	1	76	0
Kazakhstan	67	75	74	-1	-1.3%	1.2%	0	74	0
Viet Nam	51	67	88	21	31.2%	1.5%	63	12	13
Poland	61	62	57	-5	-8.9%	1.0%	0	56	0
Chinese Taipei	60	61	58	-3	-5.0%	1.0%	0	46	11
Rest of the world	1,065	1,047	941	-106	-10.2%	15.8%	30	368	74
Total EU28	*191*	*179*	*136*	*-44*	*-24.3%*	*2.3%*	*3*	*131*	*2*
Total OECD	1,148	1,114	983	-131	-11.8%	16.5%	16	647	319
Total non-OECD	4,706	4,923	4,965	43	0.9%	83.5%	100	4,564	301
World	**5,853**	**6,036**	**5,948**	**-88**	**-1.5%**	**100.0%**	**117**	**5,211**	**621**

Data for India, Japan and South Africa are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

By activity[1]

More input to electricity and heat generation, less to all the rest

The input of coal for electricity and heat generation increased in 2018 compared to 2017 by 3.3% or 166 Mt. In contrast, the overall industrial sector, and namely the iron & steel industry, consumed less coal than in the previous year. Regarding the residential, commercial and public services sector, its share on the total consumption remained minor, 2.5%.

World coal consumption by activity (Mt)

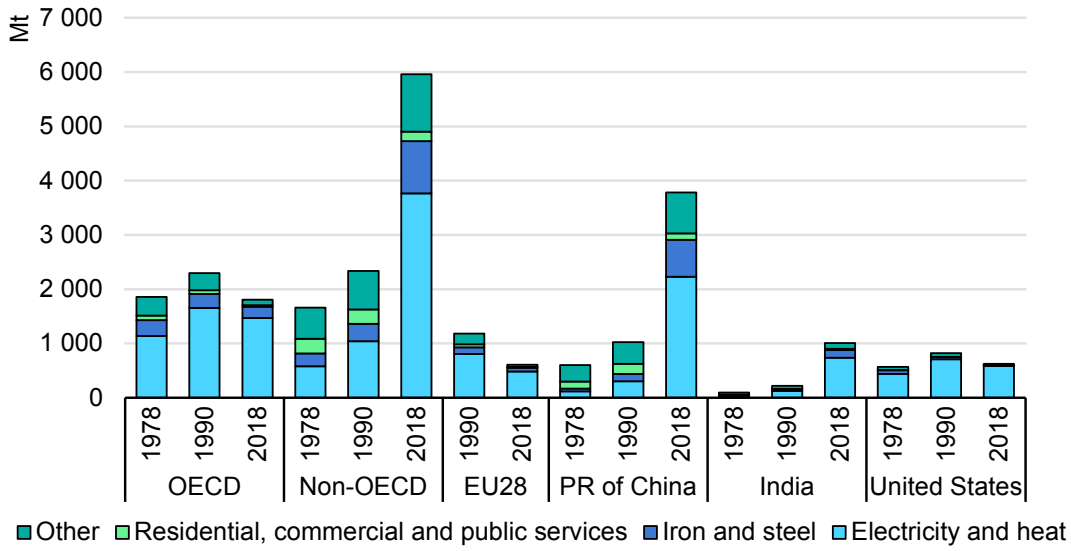
	2016	2017	2018	Change 2017/18		Share 2018
Electricity and heat	**4,905**	**5,069**	**5,235**	**166**	**3.3%**	**67.4%**
Iron and steel	**993**	**982**	**957**	**-25**	**-2.5%**	**12.3%**
Residential, commercial and public services	**203**	**206**	**196**	**-9**	**-4.5%**	**2.5%**
Other	1,469	1,418	**1,377**	-41	-2.9%	17.7%
Total	**7,570**	**7,674**	**7,766**	**92**	**1.2%**	**100.0%**

Source: IEA/OECD World Energy Statistics

The generation of electricity and commercial heat continues to be the main use of primary coal, with over two-thirds of it (67.4%) being used for this purpose globally in 2018. This share increased by 20% from 1978 until 2018, 10% in the first decade of this period and the other 10% between 1900 and 2018. In the case of OECD, the percentage of coal used in electricity and heat generation reached 81.5% in 2018, while for the Non-OECD aggregate it was 63.2%.

[1] End-use data are only available until 2018

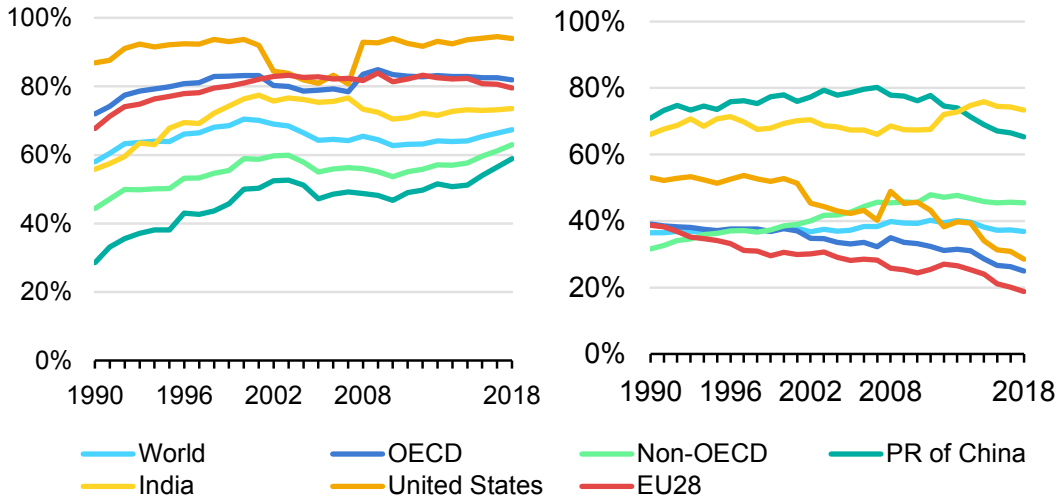
Primary coal consumption by activity for selected economies and years



Data for India are provided on fiscal year basis.
Source: IEA/OECD World Energy Statistics

Despite more coal being used in the electricity and heat generation sector in absolute terms, the share of coal-fired generation in the power mix is decreasing in several economies, namely in the United States and most of the European countries, but also in China.

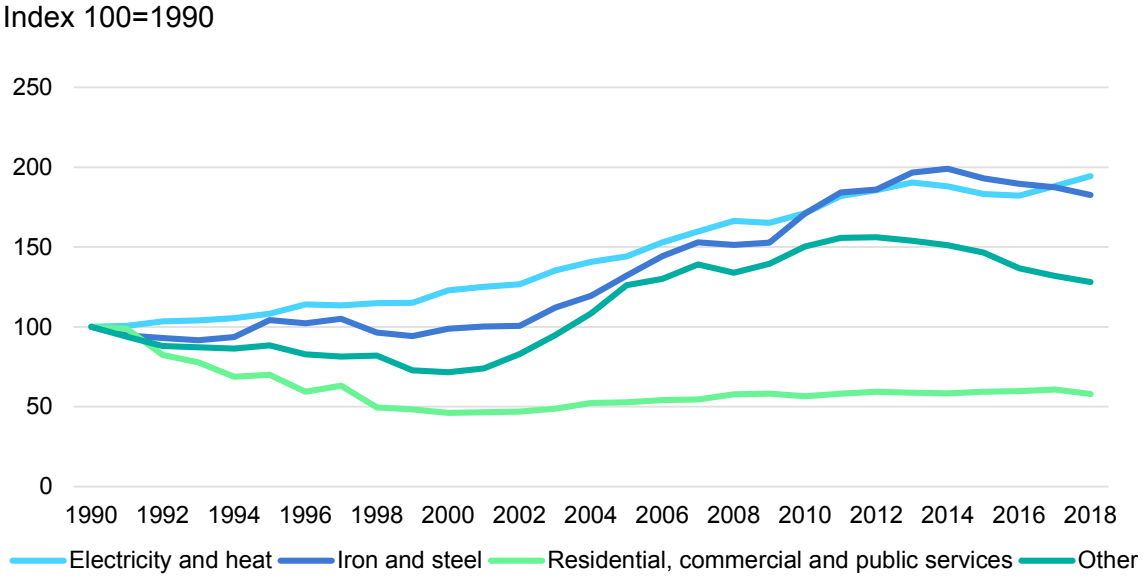
Percentage of coal used for electricity and commercial heat generation, 1990-2018 (left)
Percentage of electricity and commercial heat generation from coal, 1990-2018 (right)



Data for India are provided on fiscal year basis.
Source: IEA/OECD World Energy Balances and IEA/OECD World Energy Statistics

Coal is also essential for the iron and steel industry and its use has increased substantially during the last 30 years, driven primarily by increased production in China, although a slight decline can be observed starting in 2013.

Trend of the use of coal by activity, 1990-2018



Source: IEA/OECD World Energy Statistics

The latest available data for 2018 shows that total Pulverised Coal Injection (PCI) decreased by 2.0%. This drop was mainly driven by Japan, -5.5%; France, the United Kingdom and Austria decreased theirs PCI consumption by between 100 and 150 kt each. Russia made the most remarkable growth with a jump of 6.7%.

The top four PCI consumers in OECD (Japan, Korea, Russia and Germany) accounted for 70.9% of the total consumption in this group.

PCI used in blast furnaces in OECD countries (kt)

	2016	2017	2018	Change 2017/18		Share 2018
Japan	14,043	14,376	13,590	-786	-5.5%	28.4%
Korea	8,266	8,539	8,548	9	0.1%	17.9%
Russian Federation	6,264	6,376	6,802	426	6.7%	14.2%
Germany	4,841	4,933	5,029	96	1.9%	10.5%
France	2,359	2,873	2,742	-130	-4.5%	5.7%
Netherlands	1,459	1,641	1,543	-98	-6.0%	3.2%
Belgium	1,495	1,495	1,482	-14	-0.9%	3.1%

	2016	2017	2018	Change 2017/18		Share 2018
Turkey	660	1,394	1,388	-6	-0.5%	2.9%
United states	1,462	1,376	1,346	-30	-2.2%	2.8%
UK	1,364	1,301	1,156	-145	-11.1%	2.4%
Spain	819	909	911	2	0.2%	1.9%
Austria	806	838	676	-162	-19.3%	1.4%
Slovak	586	668	632	-36	-5.4%	1.3%
Italy	855	483	428	-55	-11.4%	0.9%
Sweden	441	406	385	-21	-5.2%	0.8%
Poland	283	366	304	-63	-17.1%	0.6%
Finland	304	329	350	21	6.4%	0.7%
Czech Republic	319	278	285	7	2.5%	0.6%
Norway	55	101	114	13	13.3%	0.2%
Serbia	74	82	95	13	15.8%	0.2%
Australia	73	73	73	0	0.0%	0.2%
Total OECD	**46,828**	**48,837**	**47,878**	**-958**	**-2.0%**	**100.0%**

Data for Australia and Japan are provided on a fiscal year basis.

Data for OECD countries are shown here as submitted, and this may differ from consumption data available elsewhere where portions may have been moved from blast furnace transformation to consumption in the iron and steel industry as part of the IEA blast furnace model.

Source: IEA/OECD Coal Information

Notes

- Data for 2019 are provisional

- Colombia joined the OECD in April 2020. However, data for Colombia are not included in the OECD aggregates in this edition. OECD includes Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.
- European Union refers to EU28, which includes Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.
- China refers to People's Republic of China unless otherwise specified.

- Primary coal includes anthracite, coking coal, lignite, sub-bituminous coal and other bituminous coal.
- Steam coal includes anthracite, sub-bituminous coal and other bituminous coal.
- TES stands for Total Energy Supply, named Total Primary Energy Supply (TPES) in previous editions and publications

Overall resonsability:

Julian Prime

Statistics:

Laura Marí Martínez

Contacts:

Energy Data Center

9, rue de la Féderation

75739 Paris Cedex

Tel: +33 (0) 1 40 57 65 88

coalaq@iea.org

Media inquiries:

Tel: +33 (0) 1 40 57 65 54

ieapressofice@iea.org

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