

Forestry Statistics 2023

Chapter 9: International Forestry

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The Research Agency of the
Forestry Commission

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Introduction

This chapter contains information about world forestry, presenting global figures by region alongside data for the UK and the EU. Topics covered include woodland area, carbon stocks, wood removals, production and apparent consumption of wood products and international trade in forest products.

The data are produced by the United Nations Food and Agriculture Organisation (FAO). Further information on the data sources and methodology used to compile the figures is provided in the Sources chapter.

All of the statistics presented in this chapter have been previously released by the FAO. For further details on revisions, see the International Forestry section of the Sources chapter.

Data for the European Union (EU) relate to all 27 current EU members, excluding the UK, for all the years shown. Data for Europe cover 26 of the EU members (excluding Cyprus), Russia and a number of other European countries, including Norway, Switzerland, Serbia and Ukraine. Cyprus is included in the EU total, but is part of FAO's Asia region and is thus not included in the Europe total.

A copy of all International Forestry tables can be accessed in spreadsheet format from the [Data Downloads](#) page.

Key findings

The main findings are:

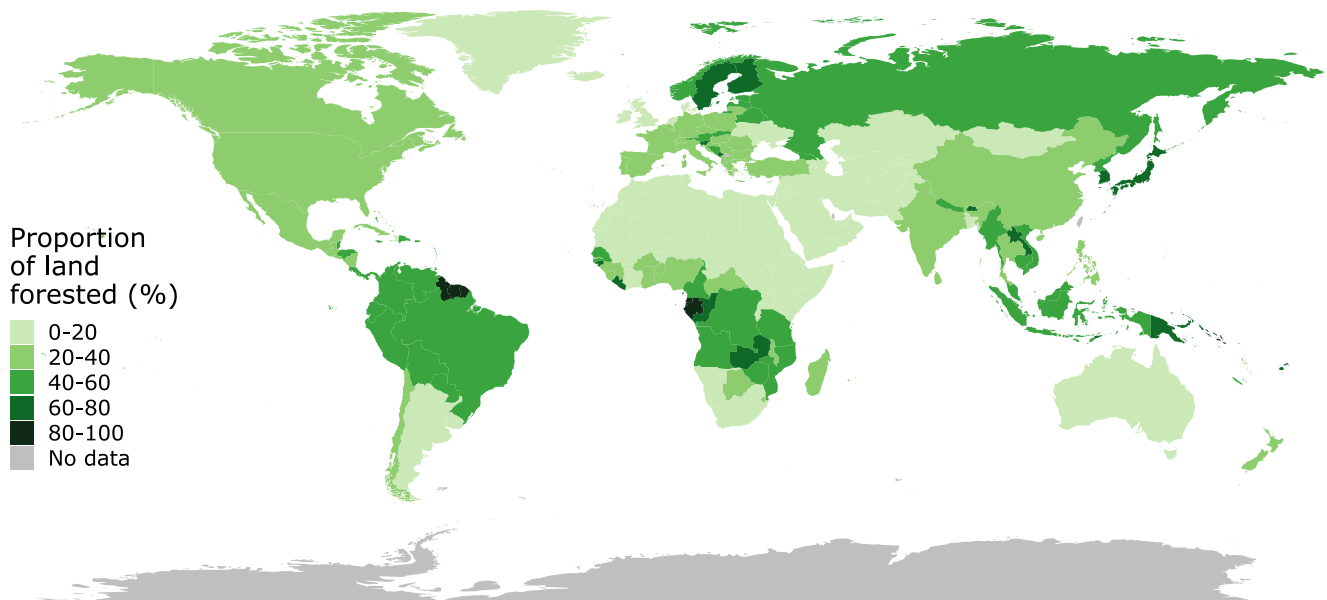
- At around 13% forest cover in 2020, the UK is one of the least densely forested countries in Europe. This compares with 46% for Europe as a whole and 31% worldwide.
- The global forest area reduced by around 4.7 million hectares (0.1%) per year between 2010 and 2020.
- Carbon stocks in forest living biomass have increased in Europe, North & Central America and Asia between 1990 and 2020 but have shown an overall decrease at a global level over this period.
- A total of 4.0 billion m³ underbark of wood was removed from global forests in 2021, of which around one half (49%) was used as woodfuel and the remainder as industrial roundwood (for use by wood processors).
- Global production of wood products in 2021 totalled 496 million m³ of sawnwood, 402 million m³ of wood-based panels and 417 million tonnes of paper and paperboard.
- Europe consumed 24% of all sawnwood, 22% of the world's wood-based panels and 22% of all paper and paperboard in 2021.
- The UK was the third largest net importer (imports less exports) of forest products in 2021, with net imports of US \$9.0 billion. The largest net importer was China.

9.1 Forest cover: international comparisons

The FAO Global Forest Resources Assessment (FRA) is a collation of forest data undertaken by the United Nations Food and Agriculture Organisation (FAO) at the global level every five years.

The UK is one of the least densely forested countries in Europe, with around 13% of its total land area covered in forest in 2020 (Figure 9.1, Table 9.1). This compares with 46% for Europe as a whole and 31% worldwide.

Figure 9.1 Forest cover as a percentage of total land area, World, 2020



Source: FAO Global Forest Resources Assessment (2020).

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Table 9.1 Forest cover as a percentage of total land area: international comparisons, World, 2020

Country	Forest area (million ha)	Total land area (million ha)	Forest area as a percentage of land area (%)
Europe ¹	1,017	2,213	46
United Kingdom	3	24	13
EU ²	159	400	40
Denmark	1	4	15
Finland	22	30	74
France	17	55	32
Germany	11	35	33
Ireland	1	7	11
Italy	10	29	33
Spain	19	50	37
Sweden	28	41	69
Other EU	51	148	34
Russia	815	1,638	50
Africa	637	2,989	21
Asia	623	3,109	20
North & Central America	753	2,133	35
Oceania	185	849	22
South America	844	1,746	48
World	4,059	13,039	31

Source: FAO Global Forest Resources Assessment (2020).

Notes:

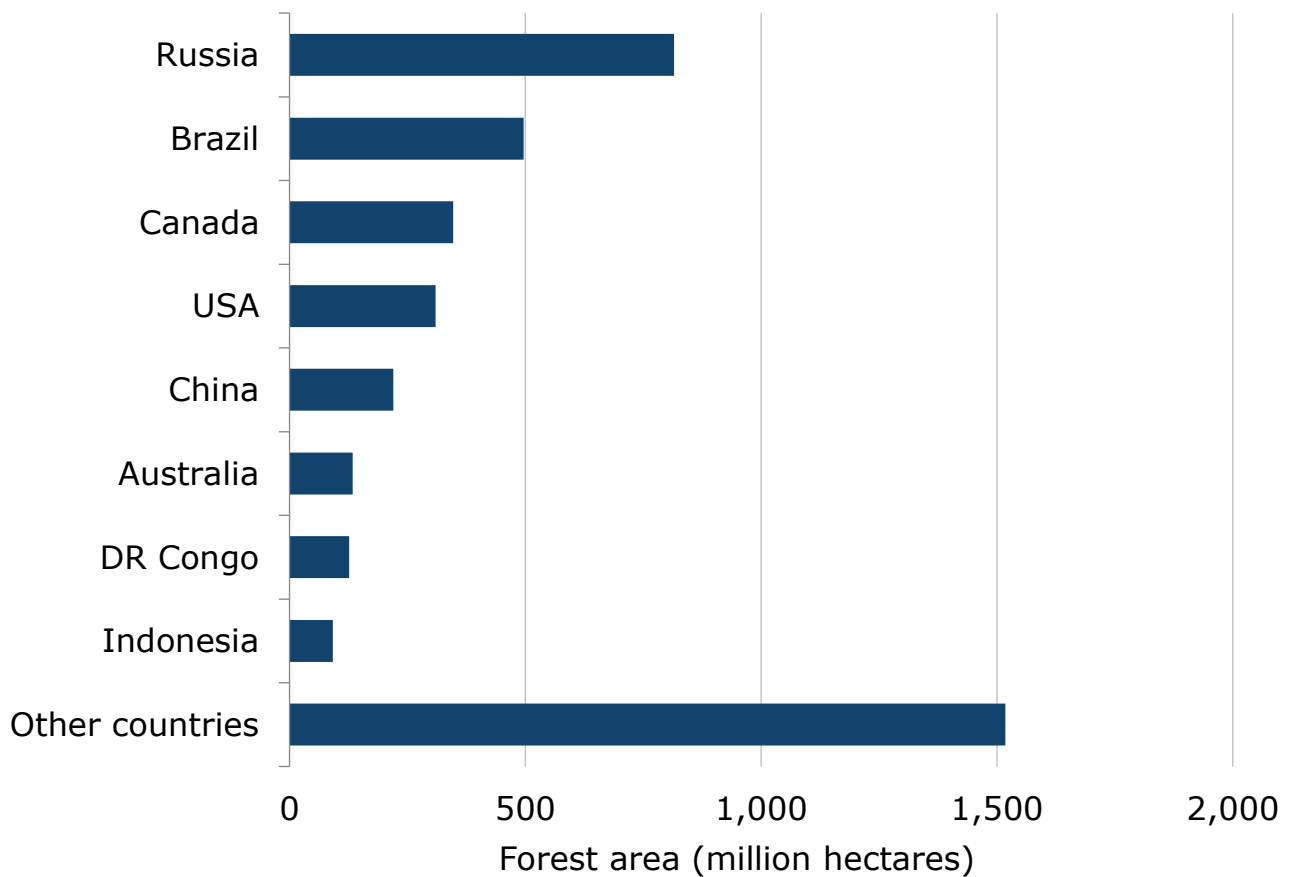
1. The Europe region covers 26 EU countries (excluding Cyprus), the UK, Russia and other countries, including Norway, Switzerland, Serbia and Ukraine.
2. The EU covers 27 member states as at September 2022. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.2 Forest area by country

Figure 9.2 shows the countries with the largest forest areas. Around one half (49%) of the total forest area of 4,059 million hectares in 2020 is located in four countries (Russia, Brazil, Canada and the USA).

Figure 9.2 Forest area by country, World, 2020



Source: FAO Global Forest Resources Assessment (2020).

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.3 Annual changes in forest area

The global forest area has reduced from around 4,128 million hectares in 1990 to 4,059 million hectares in 2020. This represents a decrease of around 7.8 million hectares (0.2%) per year between 1990 and 2000, of around 5.2 million hectares (0.1%) per year between 2000 and 2010 and of around 4.7 million hectares (0.1%) per year between 2010 and 2020 (Table 9.2).

The forest area has reduced in most regions since 1990, except for Europe and Asia (where areas have increased).

Table 9.2 Annual changes in forest area by region, World, 1990 to 2020
percentage change in forest area

Region	1990 to 2000	2000 to 2010	2010 to 2020
Europe ¹	0.1	0.1	0.0
UK ²	0.6	0.4	0.4
EU ³	0.5	0.3	0.2
Africa	-0.4	-0.5	-0.6
Asia	0.0	0.4	0.2
North and Central America	0.0	0.0	0.0
Oceania	-0.1	-0.1	0.2
South America	-0.5	-0.6	-0.3
World	-0.2	-0.1	-0.1

Source: FAO Global Forest Resources Assessment (2020).

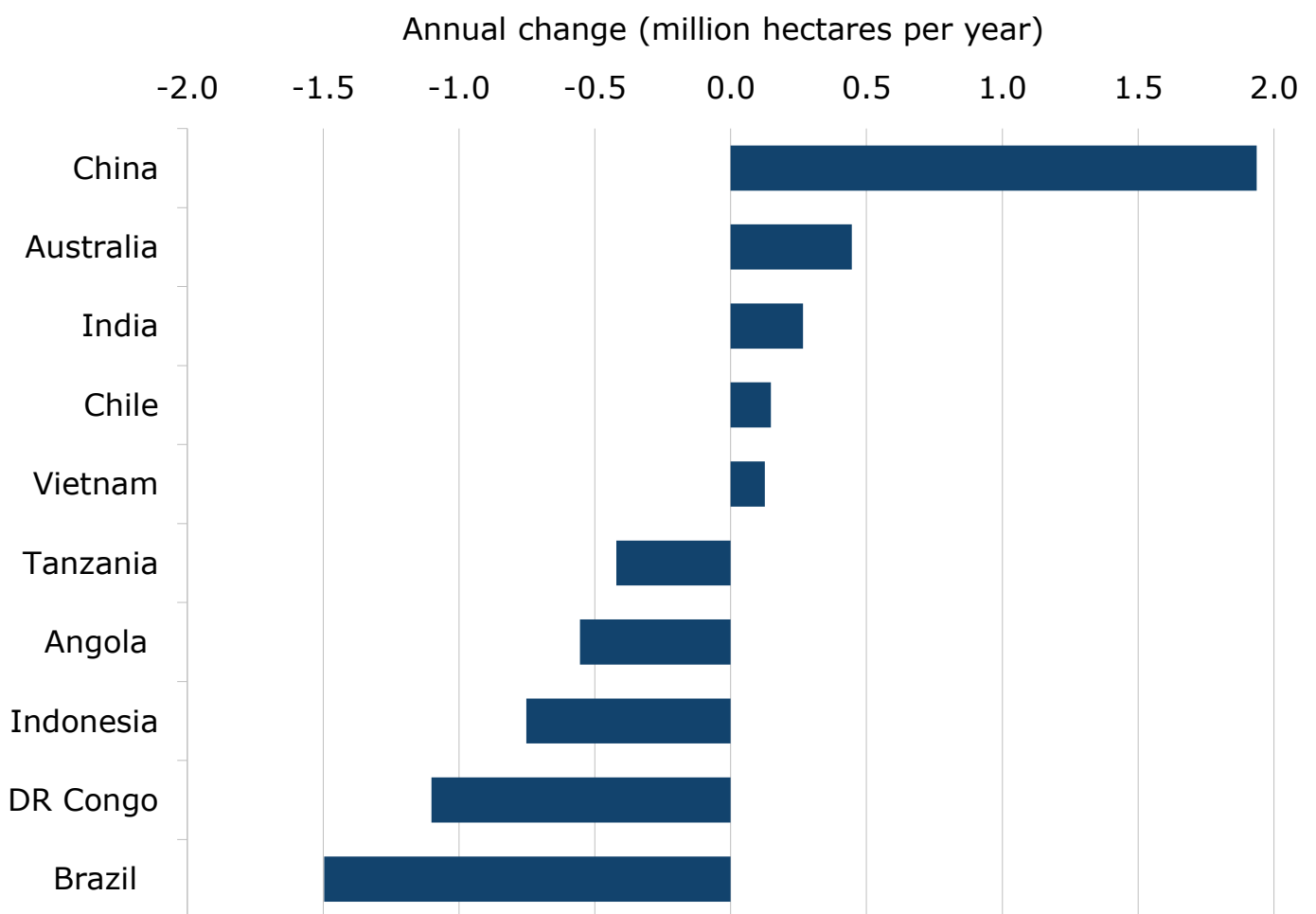
Notes:

1. The Europe region covers 26 EU countries (excluding Cyprus), the UK, Russia and other countries, including Norway, Switzerland, Serbia and Ukraine.
2. UK figures for 2020 are 2018-based estimates. Revised estimates (from Chapter 1) suggest that Table 9.2 slightly under-estimates the change in forest area in the UK in the most recent time period.
3. The EU covers 27 member states as at September 2022. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

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Between 2010 and 2020, the largest decrease in forest area was in Brazil (1.5 million hectares per year on average) and the largest increase was in China (1.9 million hectares per year on average) (Figure 9.3).

Figure 9.3 Countries with largest changes in forest area, World, 2010 to 2020



Source: FAO Global Forest Resources Assessment (2020).

Notes:

1. Top and bottom 5 countries with the largest annual change shown only.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.4 Forest carbon stocks

Carbon stocks in forest living biomass have increased in Europe and North & Central America between 1990 and 2020, but have shown an overall decrease at a global level over this period (Table 9.3).

The overall decrease has mainly been driven by declines in South America and Africa, where forest areas have decreased. Carbon stocks in biomass also increased slightly in Asia, where carbon sequestered in new plantations has balanced out carbon losses from areas of deforestation.

Table 9.3 Carbon stocks in forest living biomass by region, World, 1990 to 2020

Region	giga tonnes of carbon ¹				
	1990	2000	2010	2015	2020
Europe ²	45	48	51	53	55
Africa	59	56	54	52	51
Asia	34	35	36	37	38
North and Central America	39	40	41	41	42
Oceania	14	14	14	14	14
South America	106	102	98	97	96
World	298	296	294	295	295

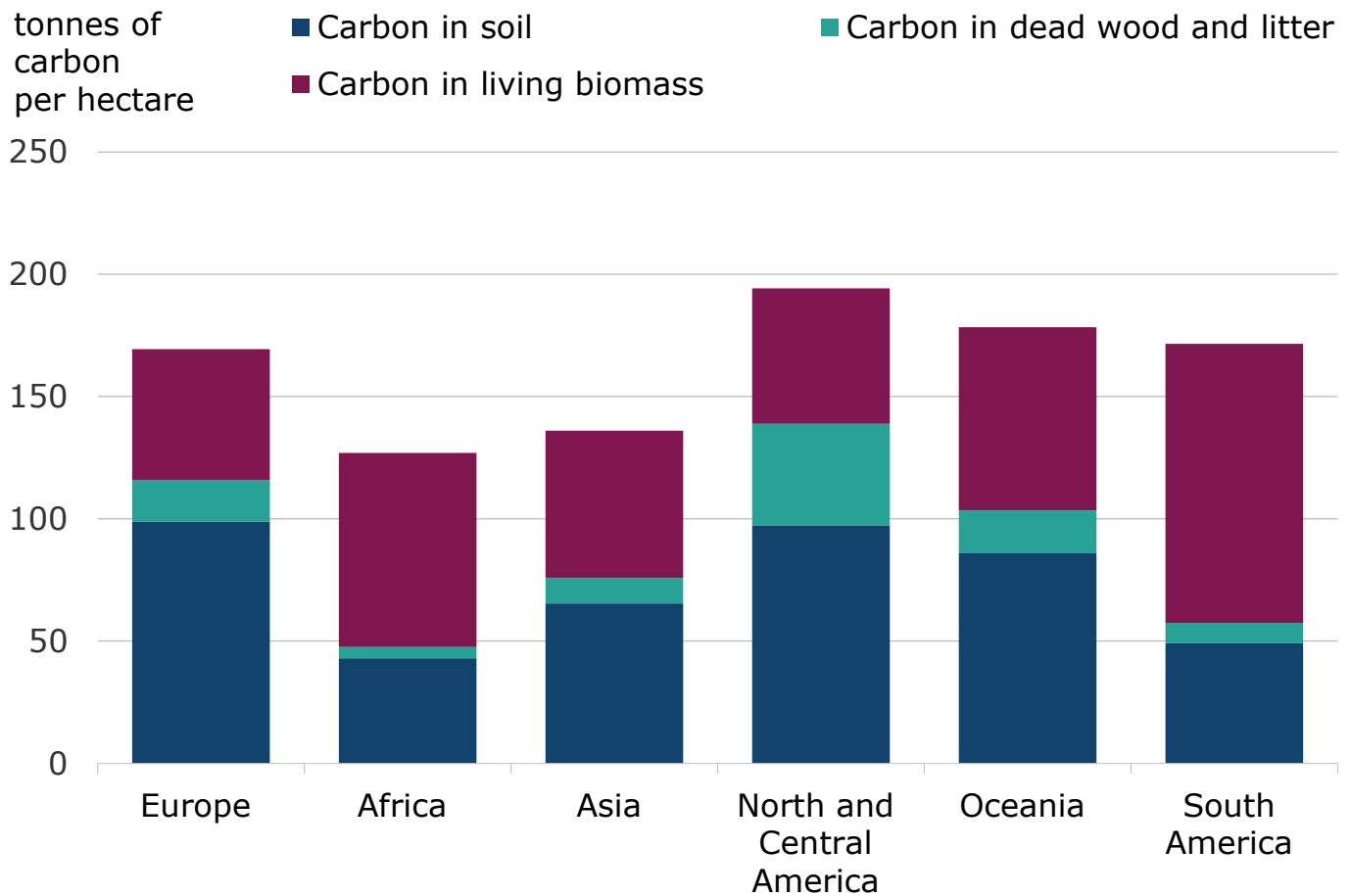
Source: FAO Global Forest Resources Assessment (2020).

Notes:

1. A giga tonne is a thousand million tonnes (10^9 tonnes).
2. The Europe region covers 26 EU countries (excluding Cyprus), the UK, Russia and other countries, including Norway, Switzerland, Serbia and Ukraine.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

Figure 9.4 Forest carbon stock per hectare by region, World, 2020



Source: FAO Global Forest Resources Assessment (2020).

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.5 Wood removals

A total of 4.0 billion m³ underbark of wood was removed from global forests in 2021, of which around 2.0 billion m³ (49%) was for use as woodfuel and the remainder was industrial roundwood (for use by wood processors) (Table 9.4).

North & Central America and Europe together accounted for around three fifths (58%) of all industrial roundwood removals in 2021. Globally, removals of industrial roundwood increased by 3% between 2020 and 2021, resulting from increases in all regions, especially Europe.

Almost three quarters (72%) of woodfuel removals in 2021 took place in Asia and Africa.

Table 9.4 Wood removals by region, World, 1990 to 2021

million m³ underbark

Region	1990	2000	2010	2020	2021
Industrial roundwood	1,585	1,690	1,723	1,995	2,049
Europe	517	519	533	626	645
UK	6	8	8	8	8
EU ¹	311	335	331	343	385
Africa	61	71	72	77	78
Asia	268	273	379	454	466
North & Central America	595	631	484	522	538
Oceania	34	47	57	74	71
South America	110	147	198	241	249
Woodfuel	1,814	1,795	1,864	1,926	1,954
Europe	138	109	155	169	177
UK	0	0	1	2	2
EU ¹	67	85	115	119	132
Africa	445	551	644	713	720
Asia	897	808	764	708	702
North & Central America	162	129	129	145	156
Oceania	9	13	11	10	10
South America	162	185	162	177	185
Total roundwood	3,399	3,485	3,587	3,922	4,003
Europe	655	628	687	795	822
UK	6	8	10	10	10
EU ¹	378	420	446	462	517
Africa	506	623	715	790	797
Asia	1,166	1,081	1,144	1,162	1,168
North & Central America	757	761	614	667	693
Oceania	43	60	68	83	81
South America	272	332	359	418	434

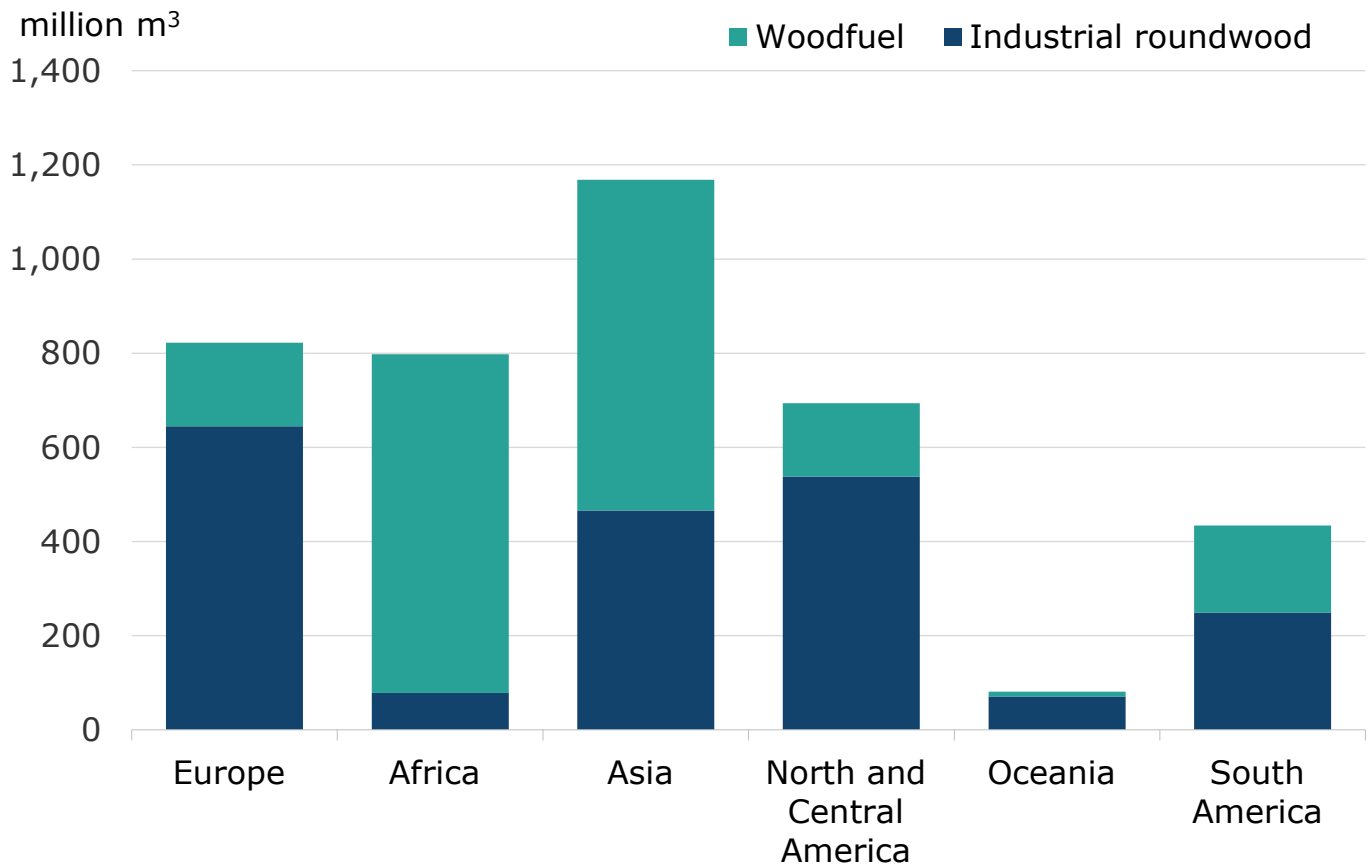
Source: FAO (2023).

Notes:

1. The EU covers 27 member states as at September 2023. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

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Figure 9.5 Wood removals by region, World, 2021



Source: FAO (2023).

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.6 Production of wood products

Global production of wood products in 2021 totalled 496 million m³ of sawnwood, 402 million m³ of wood-based panels and 417 million tonnes of paper & paperboard (Table 9.5).

Europe produced just over one third (35%) of all sawnwood in 2021 (mainly in EU countries), with 30% in Asia and a further one quarter (25%) produced in North & Central America. Overall, sawnwood production increased by 2% between 2020 and 2021, driven by increases in most regions.

Wood-based panels were more commonly produced in Asia, accounting for over one half (59%) of global production in 2021. Over one fifth (23%) were produced in Europe (mainly in EU countries) and 12% in North & Central America. At a global level, wood-based panel production increased by 6% between 2020 and 2021, mainly driven by increases in Europe and in Asia.

Asia also accounted for almost half (49%) of paper and paperboard production in 2021, with one quarter (25%) in Europe and a further 18% in North & Central America. At a global level, paper and paperboard production increased by 4% between 2020 and 2021.

Table 9.5 Production of wood products by region, World, 1990 to 2021

Region	1990	2000	2010	2020	2021
Sawnwood (million m³)	419	385	376	487	496
Europe	149	130	139	167	172
UK	2	3	3	3	4
EU ¹	80	98	98	101	109
Africa	8	8	9	12	12
Asia	105	61	86	148	151
North and Central America	129	146	102	124	126
Oceania	6	8	9	9	9
South America	22	32	30	26	27
Wood-based panels (million m³)	126	178	284	381	402
Europe	48	59	71	86	94
UK	2	3	3	3	3
EU ¹	34	48	53	56	60
Africa	2	1	2	3	3
Asia	27	46	153	225	236
North and Central America	44	61	42	46	47
Oceania	2	3	3	3	3
South America	4	8	15	19	20
Paper and paperboard (million tonnes)	235	325	392	400	417
Europe	74	100	106	100	105
UK	5	7	4	4	4
EU ¹	59	83	91	81	83
Africa	3	4	4	3	3
Asia	57	95	170	197	206
North and Central America	92	111	94	75	77
Oceania	3	4	4	4	4
South America	8	11	15	15	16

Source: FAO (2023).

Notes:

1. The EU covers 27 member states as at September 2023. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

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9.7 Apparent consumption of wood products

Apparent consumption (defined as production + imports – exports) of wood products around the world totalled 482 million m³ sawnwood, 403 million m³ wood-based panels and 418 million tonnes of paper and paperboard in 2021 (Table 9.6).

Around 41% of all sawnwood in 2021 was consumed in Asia and around one quarter in North & Central America (26%) and in Europe (24%). Reflecting the increased production of sawnwood (see Table 9.5), apparent consumption of sawnwood increased by 1% overall between 2020 and 2021. This was largely driven by increases in Europe.

Asia consumed 57% of the world's wood-based panels in 2021, around one fifth (22%) was consumed in Europe and 15% in North & Central America. Apparent consumption of wood-based panels worldwide increased by 5% between 2020 and 2021, largely resulting from increased demand in Asia and in Europe.

Over one half (52%) of all paper and paperboard in 2021 was consumed in Asia, 22% in Europe and a further 20% in North & Central America. At a global level, apparent consumption of paper and paperboard increased by 5% between 2020 and 2021.

Table 9.6 Apparent consumption of wood products by region, World, 1990 to 2021

Region	1990	2000	2010	2020	2021
Sawnwood (million m³)	426	387	372	475	482
Europe	158	121	110	111	117
UK	13	10	9	10	11
EU ¹	83	90	82	79	84
Africa	10	10	17	15	16
Asia	112	78	116	200	196
North and Central America	119	143	95	121	125
Oceania	6	8	8	8	8
South America	20	27	26	19	18
Woodbased panels (million m³)	127	181	282	384	403
Europe	52	57	67	80	88
UK	5	6	6	6	7
EU ¹	36	46	48	51	59
Africa	1	2	3	6	6
Asia	25	50	148	224	229
North and Central America	44	64	48	57	61
Oceania	2	2	3	3	3
South America	3	6	12	14	15
Paper & paperboard (million tonnes)	236	325	391	400	418
Europe	71	90	95	87	91
UK	9	12	11	7	7
EU ¹	53	72	74	71	72
Africa	4	5	7	7	8
Asia	62	103	178	207	216
North and Central America	88	109	90	79	83
Oceania	3	5	5	4	4
South America	8	12	16	15	16

Source: FAO (2023).

Notes:

1. The EU covers 27 member states as at September 2023. This excludes the UK. Cyprus is included in EU total but is part of FAO's Asia region.

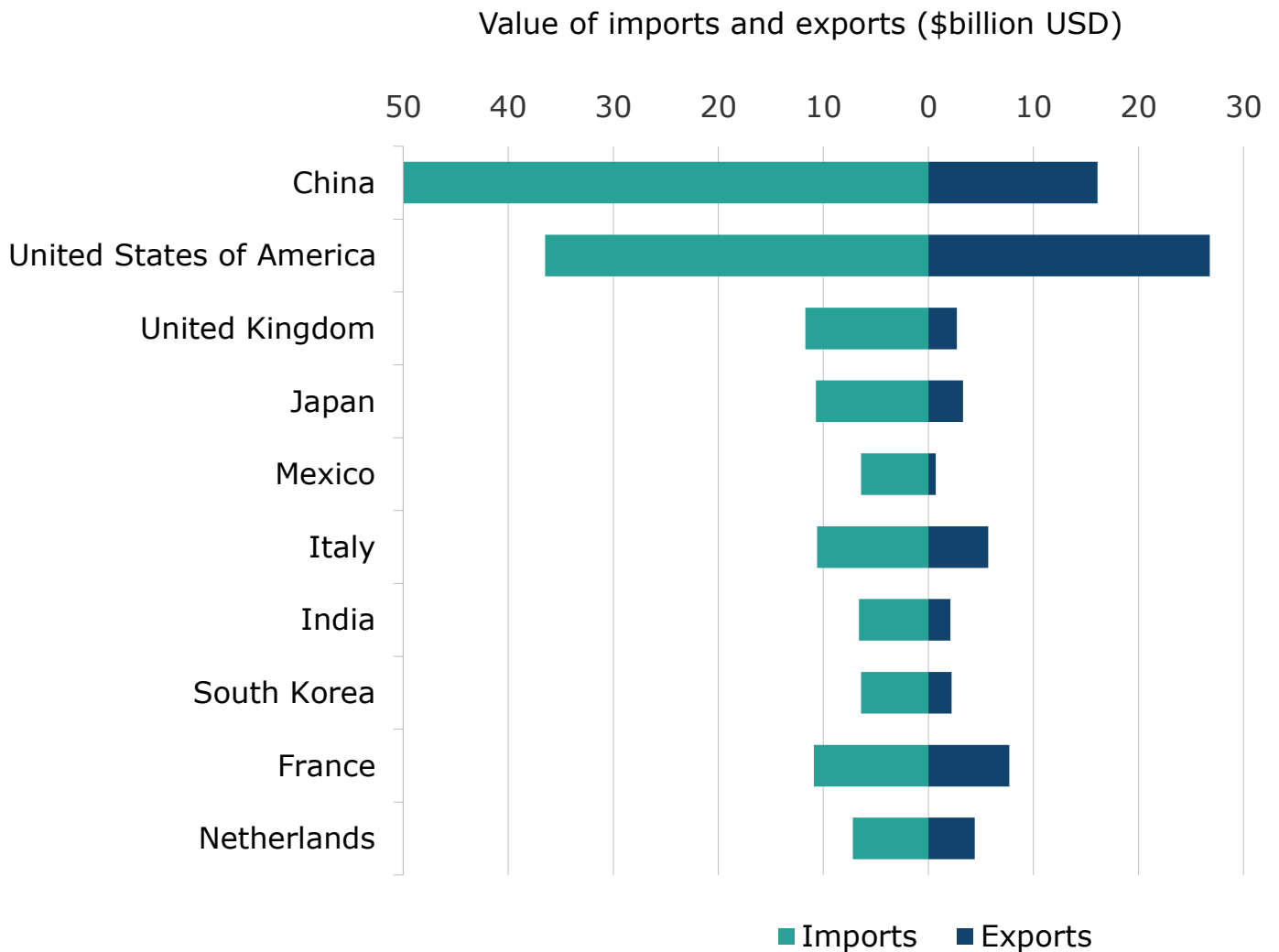
These figures are outside the scope of National Statistics. For further information see the Sources chapter.

9.8 World trade in forest products

Figures 9.6 and 9.7 show the largest ten net importers and exporters (ranked by value) of forest products in 2021. This covers trade in roundwood, sawnwood, wood-based panels, wood pulp and paper and paperboard, but excludes trade in secondary processed wood (e.g., furniture made from wood). Values are expressed in US dollars (USD; the units reported in the data published by FAO).

The UK was the third largest net importer (imports less exports) of forest products in 2021, with net imports of \$9.0 billion USD (Figure 9.6). The largest net importer in 2021 were China (\$37.0 billion USD) followed by the United States of America (\$9.7 billion USD).

Figure 9.6 Largest net importers of forest products, World, 2021



Source: FAO (2023).

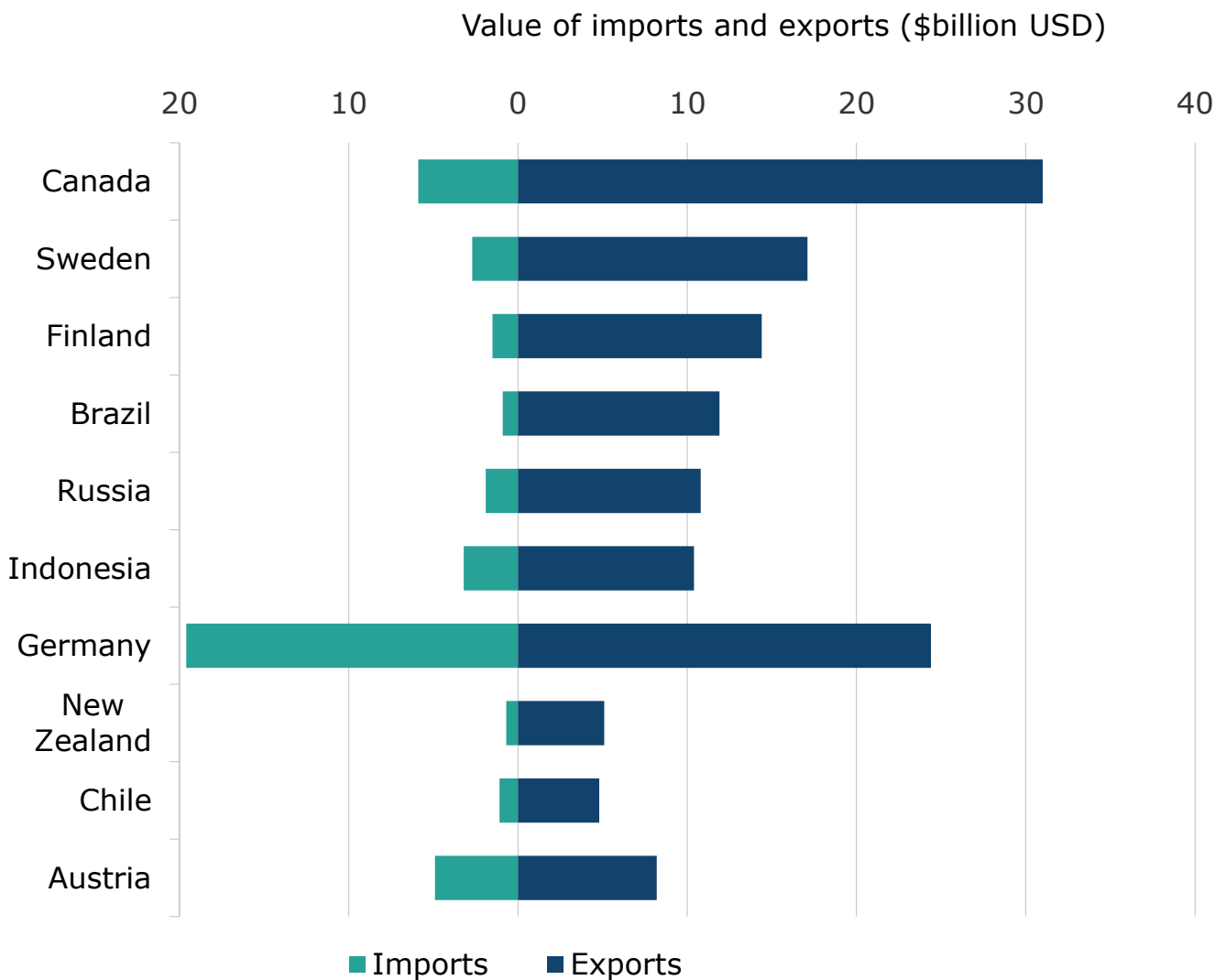
Notes:

1. Excludes trade in secondary wood products.

These figures are outside the scope of National Statistics. For further information see the Sources chapter.

The largest net exporters (exports less imports) of forest products in 2021 were Canada (with net exports valued at \$25.1 billion USD), Sweden (US \$14.4 billion USD) and Finland (\$12.9 billion USD) (Figure 9.7).

Figure 9.7 Largest net exporters of forest products, World, 2021



Source: FAO (2023).

Notes:

1. Excludes trade in secondary wood products.

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