UNECE/FAO Data Brief 2023
Pulp, paper and paperboard

UNECE

Food and Agriculture Organization of the United Nations

Introduction

The global pulp, paper and paperboard industry was profoundly impacted by the COVID-19 pandemic. Worker shortages, logistics and adapting to a changing socioeconomic environment during the 2020-2022 period were a transformative learning experience for all.

In the last three years, pulp capacity has increased significantly in the southern hemisphere. Closures occurred in the developed economies mainly in the north, due to changing consumption habits. Paperboard has experienced such overbuilding in capacities that major rationalization and expansion project delays are occurring.

Incremental investment in additional supplies is developing particularly quickly in the pulp market in South America and in all areas, pulp, paper and paperboard in China. The resulting capacities add to the global production overcapacities in most segments will continue to force closures of production assets around the world.

Europe

PAPER AND PAPERBOARD

Total paper and paperboard production in Europe fell by 4.9% in 2022 to 95.5 million tonnes. High energy costs and raw material prices impacted much of the region. Apparent consumption of paper and paperboard remained unchanged in 2022 at 89.9 million tonnes (Graph 1). During the second half of 2022, numerous paper-machine closures were driven by a decline in consumption. The latter was the result of higher raw material prices and lower advertising budgets for print products. Closures continued into 2023.

The production of graphic grades fell by 9.6% to 24.2 million tonnes in 2022, with uncoated woodfree paper down by 5.9% to 7.4 million tonnes, and coated paper down 10.6% to 8.3 million tonnes. Newsprint production decreased by 10.0% to 4.1 million tonnes.

The production of sanitary and household papers rose by 1.1% to 8.1 million tonnes.

The production of packaging materials fell by 2.8% to 55.8 million tonnes, mainly because of high energy prices. Case material production fell by 3.5% in 2022 to 34.0 million tonnes, while cartonboard decreased by 2.0% to 11.7 million tonnes.

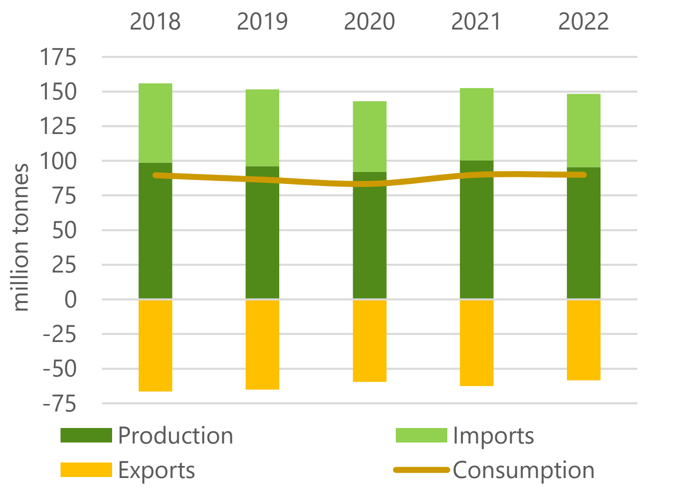
Apparent consumption of graphic grades decreased by 0.7% to 22.2 million tonnes in 2022. Uncoated woodfree paper increased by 0.1% to 7.0 million tonnes, while coated papers decreased by 5.0% to 6.8 million tonnes. Apparent consumption of newsprint rose by 3.2% to 4.2 million tonnes.

Apparent consumption of sanitary and household papers increased 0.4% in 2022 to 8.1 million tonnes.

Apparent consumption of packaging materials rose by 1.0% to 52.2 million tonnes in 2022. This positive trend was driven by increased cartonboard consumption that was up 6.7% to 9.4 million tonnes. Case materials, in contrast, experienced a decline of 1.2% to 33.7 million tonnes, explained in part by lower levels of online shopping as consumers emerged from COVID-19. Exports of packaging papers fell by 3.8% to 36.1 million tonnes, while imports rose by 2.7% to 32.5 million tonnes. Both figures were the result of high energy prices and lower fibre availability from the Russian Federation.

GRAPH 1

Europe: Paper production, trade and consumption, 2018-2023



Note: Exports are shown as negative numbers.
Sources: UNECE/FAO database, 2023.

PULP

Total woodpulp production in 2022 fell by 1.6% to 39.0 million tonnes, with chemical grades down 1.9%. While closures of paper and board machines occurred in 2022 and the first half of 2023, most mills continued to run their integrated pulp lines selling tonnage into the marketplace.

The production of market pulp was down by 3.6% to 14.4 million tonnes in 2022 because of high energy prices and lower log availability from the Russian Federation. As a result, woodpulp imports rose by 4.9% to 20.3 million tonnes in 2022.

Woodpulp exports increased by 2.8% to 16.6 million tonnes in part because of shuttered integrated paper mills finding markets for their pulp production. Paper mills that no longer ran their machines still had fibre-supply contracts for which they saw a benefit selling pulp.

Apparent consumption for woodpulp fell by 0.1% to 43.0 million tonnes in 2022, with market pulp increasing by 3.1% to 16.9 million tonnes (Graph 2).

RECYCLING

Paper for recycling utilization decreased by 6.4% in 2022 to 47.5 million tonnes owing to lower packaging production as well as the record high electricity, gas and CO2 prices. The latter have disproportionally affected paper recycling mills. Collections fell by 5.0% to 52.6 million tonnes. Meanwhile, the recycling rate fell to 70.5% in 2022, down from 72.8% in 2021.

Even with the large-scale investments during the previous years, the need for even larger green investments will be necessary in the near future to meet the EU's climate ambitions.

Eastern Europe, Caucasus and Central Asia

Total paper and paperboard production in Eastern Europe, Caucasus and Central Asia (EECCA) decreased by 1.5% in 2022 to 11.3 million tonnes, while apparent consumption contracted by 2.4% to 10.0 million tonnes in 2022 (Graph 3).

The production of sanitary and household papers increased by 1.3% to 893,000 tonnes, while the apparent consumption increased by 2.0% to 877,000 tonnes.

The production of packaging materials decreased by 2.2% to 7.6 million tonnes in 2022; and apparent consumption decreased by 2.1%% to 6.9 million tonnes. Case material production was down by 3.4% in 2022 to 5.3 million tonnes, while cartonboard contracted by only 0.3% to 1.1 million tonnes. Apparent consumption of case materials dropped by 4.4% to 4.4 million tonnes, while cartonboard increased 3.7%% to 1.8 million tonnes.

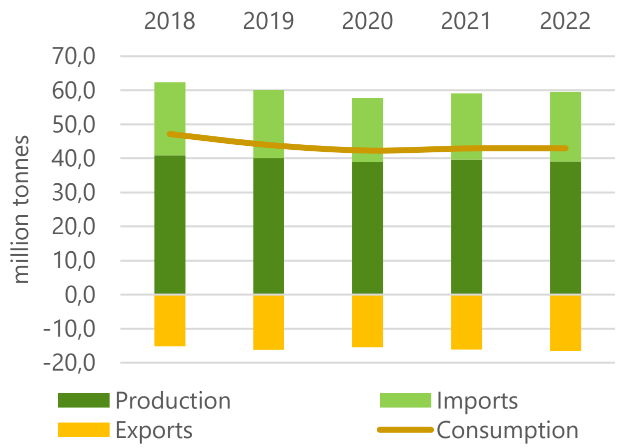
Woodpulp production and apparent consumption were flat in 2022 compared to 2021 at 9.1 and 6.7 million tonnes respectively. Exports were flat at 2.7 million tonnes, while imports contracted by 4.6% to 323,000 tonnes. Much of the trade with the Russian Federation and Belarus was concentrated with China and India.

Highlights

- Pulp capacity has increased significantly in the Southern hemisphere since 2020 while at the same time pulp mill closures occurred in the Northern hemisphere.
- Paper mills in developed economies continue to shutter because of the changing consumption habits of printed media.
- Paperboard capacities experienced such overbuilding that major rationalization and expansion project delays are currently occurring.

GRAPH 2

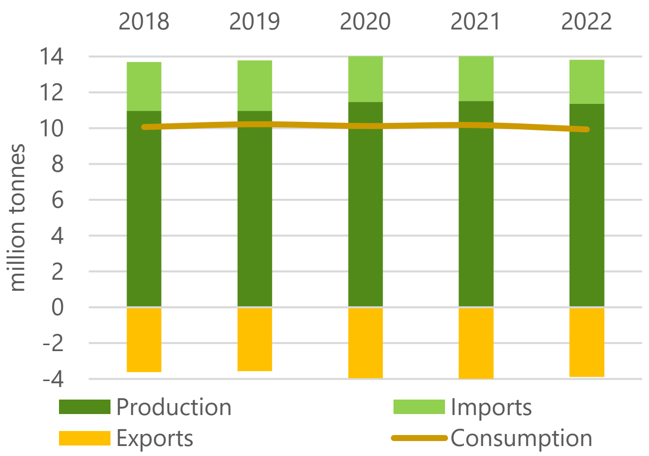
Europe: Pulp production, trade and consumption, 2018-2023



Note: Exports are shown as negative numbers.
Sources: UNECE/FAO database, 2023.

GRAPH 3

EECCA: Paper production, trade and consumption, 2018-2023



Note: Exports are shown as negative numbers.
Sources: UNECE/FAO database, 2023.

North America

PAPER AND PAPERBOARD

The total paper and paperboard production in North America fell by 0.3% in 2022 to 76.5 million tonnes caused by market-related and unplanned downtime including closures of high-cost capacity (Graph 4).

Apparent consumption of paper and paperboard in North America rose by 0.3% in 2022 to 71.2 million tonnes, as the market was increasingly emerging from the pandemic. The opening up of the Canada-United States border facilitated increased trade. During the second half of 2022, numerous paper-machine closures were driven by a decline in consumption. These were mainly the result of higher prices and lower print advertising budgets. The closures continued into 2023.

The production of graphic grades was flat in 2022 versus 2021 at 12.8 million tonnes, with uncoated woodfree paper up by 0.8% to 5.5 million tonnes, coated papers increased by 0.6% to 3.1 million tonnes, but with newsprint down by 3.4% to 2.3 million tonnes. Production of sanitary and household papers fell by 1.8% in 2022 to 8.3 million tonnes.

The production of packaging materials fell by 0.2% to 54.1 million tonnes. Case material production was down by 0.3% to 38.3 million tonnes in 2022, while cartonboard production decreased by 0.2% to 9.2 million tonnes.

The apparent consumption of graphic grades rose by 3.5% to 13.0 million tonnes in 2022 as the region recovered from the pandemic's effects, but this figure was still 30.5% lower than in 2018. Uncoated woodfree paper rose by 4.7% to 6.1 million tonnes (which is still 19.1% below the 2018 value), while coated papers rose by 22.9% to 4.4 million tonnes (which is still 26.7% below the 2018 value). The apparent consumption of newsprint fell by 55.2% to only 589,000 tonnes (-76.2% versus the year 2018).

The apparent consumption of sanitary and household papers decreased by 1.2% in 2022 to 8.4 million tonnes.

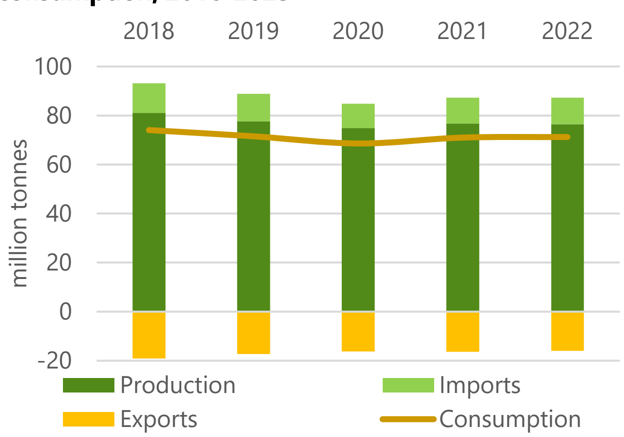
The apparent consumption of packaging materials dropped by 0.1% to 48.7 million tonnes in 2022, with case materials down 0.7% to 34.0 million tonnes, but with cartonboard up 1.4% to 8.6 million tonnes.

Exports of graphic papers fell by 6.2% to 4.9 million tonnes, while imports increased by 0.7% to 5.1 million tonnes. Both figures reflect capacity rationalization in the United States and Canada.

- During the second half of 2022 and early 2023, numerous paper-machine closures were driven by a decline in consumption, as a result of higher prices for raw materials and lower advertising budgets for print.
- Total paper and paperboard production in North America decreased by 0.3% to 76.5 million tonnes in 2022 while in Europe the production dropped by 4.5% to 92.6 million tonnes in the same year. High energy costs and raw material prices impacted much of the region.
- While apparent consumption of graphic grades in North America increased in 2022 by some 3.5% to 13.0 million tonnes this post-pandemic figure still was down 30.5% from 2018.

GRAPH 4

North America: Paper production, trade and consumption, 2018-2023



Note: Exports are shown as negative numbers.
Sources: UNECE/FAO database, 2023.

PULP

Total woodpulp production in 2022 decreased by 1.1% to 63.9 million tonnes, with chemical grades down 0.6% to 52.2 million tonnes. While paper and board machines took market-related downtime in 2022 and some closed permanently, many mills continued to run their integrated pulp lines selling tonnage into the marketplace.

Chemical market pulp exports went up by 1.2% to 12.8 million tonnes. Lower prices in China facilitated purchases by paper mills that have continuously invested in new paper machines from tissue to packaging. However, a surplus of recycled containerboard capacity and high stocks forced the industry to take production cuts in the second half of 2022 and the first of 2023, which mainly impacted imported recycled pulps.

The apparent consumption for woodpulp increased by 0.1% in 2022 to 55.1 million tonnes.

MAJOR TRENDS OUTSIDE THE UNECE REGION

CHINA: China continues to impact market and industry developments in the pulp, paper and paperboard sector as capacity across all grades continued to grow unabated – far more than in any other country.

In 2022,the production of wood pulp grew by 16.9% to 21.2 million tonnes, while recycled pulp experienced a 1.7% rise to 59.1 million tonnes and non-wood pulp was up 0.7% to 5.60 million. These figures exclude dissolving pulp. The overall, production of all types of pulp grew by 5.0% to 85.9 million.

The consumption of wood pulp increased by 2.6% to 113.0 million tonnes in 2022, with wood pulp rising by 4.3% to 43.3 million, recovered paper up 1.9% to 64.3 million tonnes and non-wood pulp declining by 2.0% to 5.4 million.

In 2022, several Chinese-based companies announced major capacity increases in recycled containerboard, tissue, uncoated woodfree paper and coated ivory board. This follows earlier announcements of major integrated pulp projects that will start production in the next 5 years. As China continues to grow its domestic production capabilities in the pulp, paper and paperboard segments, this will noticeably influence global trade. While pulp imports have been a major part of Chinese fibre sourcing, the country's recent and future plans will challenge international suppliers in the marketplace. In the paper and paperboard sector, including tissue, exports are even more likely to grow as domestic production outpaces consumption.

BRAZIL: The production of pulp reached 25.0 million tonnes in 2022, an increase of 10.9% versus 2021, because of capacity increases. Exports increased by 22.1% to 19.1 million, with the vast majority of pulp being bleached eucalyptus kraft pulp.

CHILE: Exports of market pulp were negatively impacted by increased competition from new capacity in Brazil, the temporary closure of a pulp line because of an expansion project as well as high prices. These affected buyers' behaviour and led to a decline of 5% to 4.1 million tonnes in 2022.

Bleached radiata pine kraft pulp exports increased by 6.9% to 1.6 million tonnes, as it undercut more expensive products in the biggest market, China.

Bleached eucalyptus kraft pulp exports dropped by 13.5% to 1.6 million tonnes owing to a major expansion project. Unbleached kraft exports soared by 7.9% to 479,000 tonnes.

Market Outlook

Europe: In the first half of 2023, the production of paper and board in Europe decreased because of lowered demand and falling prices resulting in numerous machine closures. The outlook for production of paper and paperboard in 2023 is a decline of 2.7% to 90.1 million tonnes. Meanwhile, woodpulp production is forecast to rise by 1.3% to 39.8 million tonnes.

Apparent consumption of paper and board in Europe in 2023 is forecast to decline by 4.4% to 82.9 million tonnes owing to reduced economic activity, including destocking throughout the supply chains, as prices for virtually all products declined. As for woodpulp, consumption is forecast for a decline of 1.7% to 42.3 million tonnes. A key driver in 2023 has been the series of paper mill closures that reflect structural shifts in the industry and are not simply the result of cyclical market forces.

North America: In the first half of 2023, production of paper and board in North America has been in decline as compared to 2022 owing to a lower demand, falling prices and mills' adjusting production accordingly with market-related downtime.

North American printing and writing paper production in the first half of 2023 contracted by 23.6% at 3.9 million tonnes, with uncoated mechanical production down 26.7%, uncoated woodfree production 15.0% lower, coated woodfree down 39.0% and coated mechanical 36.4% lower. The printing and writing demand in the first half of 2023 was for 4.4 million tonnes, down 24.1% compared to 2022. Uncoated mechanical demand decreased by 31.5%. Uncoated Woodfree decreased by 17.4%, coated woodfree declined by 31.2% and coated mechanical was down 29.7%. These results reflect a structural change in the sector and are not simply cyclical in nature.

Further trends will be discussed during the market discussion at "FORESTA 2023", the joint session of the ECE Committee on Forests and the Forest Industry and the FAO European Forestry Commission on 21 November 2023 (https://unece.org/info/Forests/events/374850).

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Electronic supplement I:
Graphs & Tables
Data (historic and forecast)
References

Electronic supplement II:
Country market
Statements: