

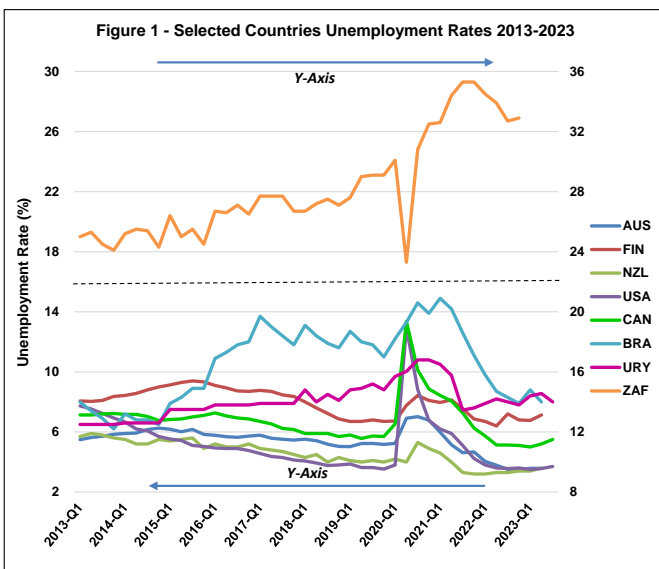
Forest Sector Outlook

Global Consulting Alliance

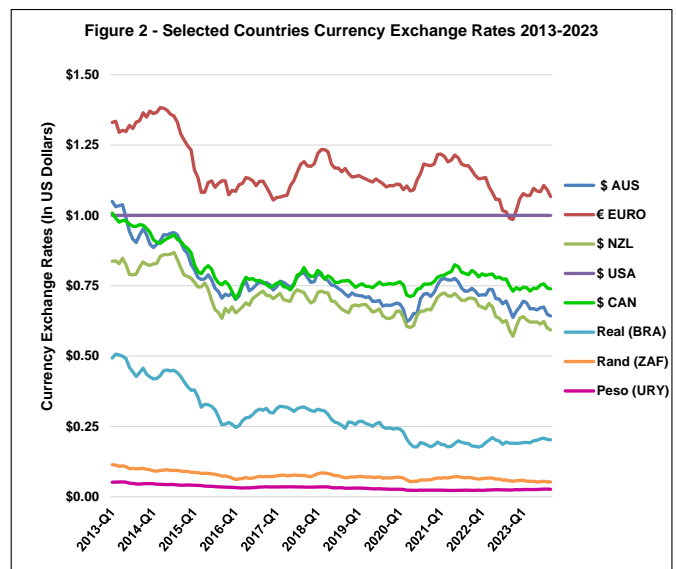
Quarterly Edition 2023-Q3

ECONOMIC DASHBOARD

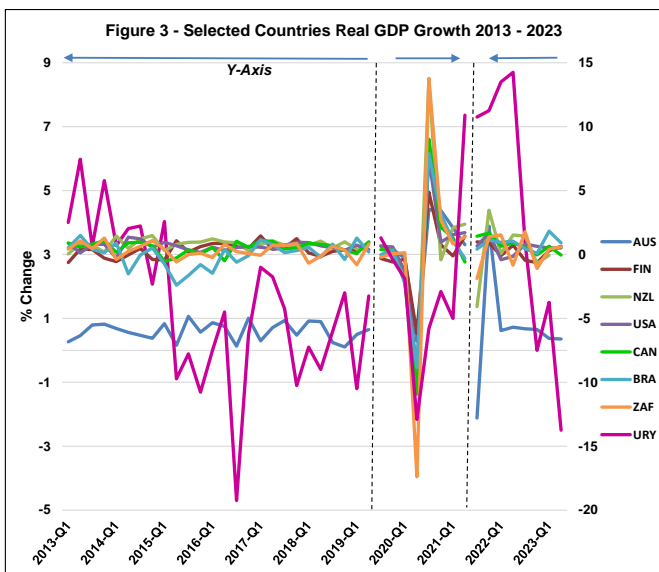
Figures 1 to 4 illustrate four key macroeconomic indicators as observed over the past decade, on a quarterly basis. These can be useful particularly to monitor the aftermath of the COVID-19 pandemic and the market implications of the ongoing Russia-Ukraine war. Figure 4 rates are nominal.



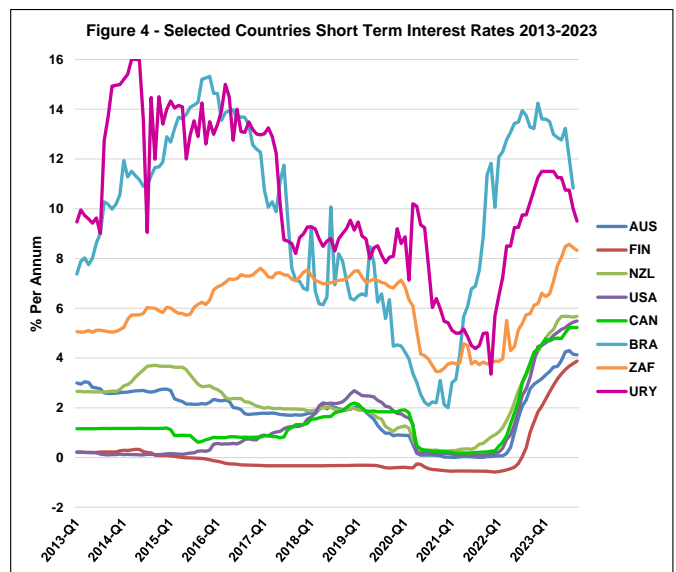
Sources: OEDC, Brazilian Institute of Geography and Statistics, macrotrends.net (World Bank), Statistics South Africa



Source: Federal Reserve, Uruguay Statistics National Institute



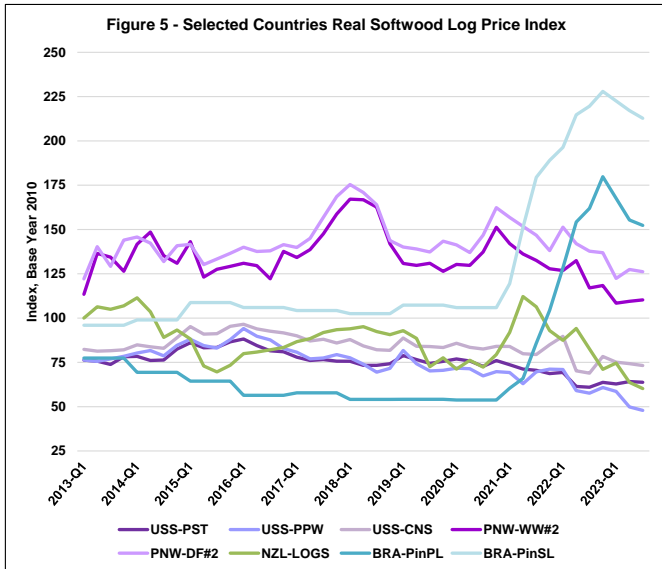
Source: OEDC, Chamber of Commerce and Services of Uruguay



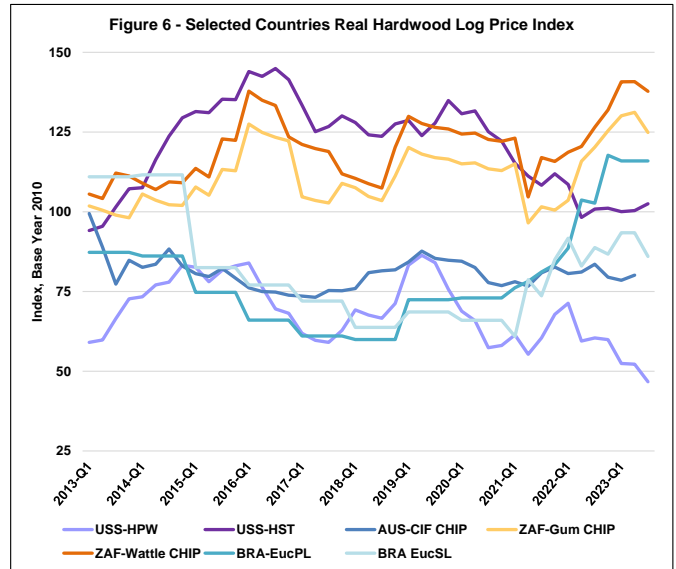
Source: OEDC, FRED - St. Louis Fed, Banco Central Del Uruguay, CEIC Data

Forest Sector Outlook

Figures 5 and 6 show indexed real pricing for select softwoods and hardwoods – with Q1 2010 the base quarter-year.



Source: Timber-Mart South, RISI Log Lines, AgriHQ; USS = US South, PNW = US Pacific Northwest



Source: Timber-Mart South, RISI Log Lines, NCT; USS = US South

Legend:

USS-PST = US South Pine Sawtimber, USS PPW = US South Pine Pulpwood, USS-CNS = US South Chip n' Saw, PNW-WW#2 = US Pacific Northwest Whitewood #2 Saw Avg. Columbia River, PNW-DF#2 = US Pacific Northwest #2 Saw Avg. Columbia River, NZL-LOGS = New Zealand Softwood Logs Composite, BRA-PinPL = Brazil Pine Pulplogs, BRA-PinSL = Brazil Pine Sawlogs.

USS-HPW = US South Hardwood Pulpwood, USS-HST = US South Hardwood Sawtimber, AUS-CIF CHIP = Australia Hardwood CIF Chip, ZAF Gum CHIP = South Africa Gum CHIP, ZAF Wattle CHIP = South Africa Wattle Chip, BRA-EucPL = Brazil Eucalyptus Pulplogs, BRA-EucSL = Brazil Eucalyptus Sawlogs.

ECONOMIC HIGHLIGHTS

Global

- The International Monetary Fund (IMF) in its October 2023 World Economic Outlook report (WEO) projects global economic growth to slow to 3.0% in CY 2023 and 2.9% in CY 2024, down from 3.5% in CY 2022. Advanced economies are expected to slow from 2.6% in CY 2022 to 1.5% in CY 2023 and 1.4% in CY 2024 as tightening monetary policy starts to bite. Emerging markets and developing economies are projected to have a modest decline in growth from 4.1% in 2022 to 4.0% in both CY 2023 and CY 2024.
- The IMF forecasts global inflation to decline steadily, from 8.7% in CY 2022 to 6.9% in CY 2023 and 5.8% in CY 2024, due to tighter monetary policy aided by lower international commodity prices. Core inflation is generally projected to decline more gradually, and inflation is not expected to return to target until 2025 in most cases.
- US GDP – The Bureau of Economic Analysis projected that Q2 2023 GDP growth would remain at 2.1% in their third estimate in September 2023. Forecasters have been revising projections for Q3 2023 through Q1 2024 upward and Q2 2024 downward. The Federal Reserve Bank of Philadelphia released the Third Quarter 2023 Survey of Professional Forecasters on August 11. The panel of 37 forecasters prediction of 2023 GDP growth increased from 1.3% to 2.1% in the 3Q survey, increasing Q3 and Q4 to 1.9% and 1.2% respectively. However,

Forest Sector Outlook

GDP growth for Q2 2024 was revised up from -2.5% to 1.0%, while annual GDP growth for 2024 was revised upward from 1.0% to 1.3%. Forecasters saw lower chances of a negative quarter in this forecast, especially for Q3 2023 which was cut from 45.2% risk to 21.7% risk.

- US Unemployment – In October 2023, the Bureau of Labor Statistics reported that nonfarm payroll increased by 336 000 while the unemployment rate remained at 3.8%, and the number of unemployed persons remained at 6.4 million. The workforce participation rate remained the same at 62.8%, which is below the pre-pandemic rate of 63.3%. The Philadelphia Federal Reserve Bank Third Quarter 2023 Survey of Professional Forecasters projects that unemployment will average 3.6% in 2023. For 2024-2026, the projection is 4.0% to 4.2%, a small downward revision.
- Brazil – The Brazilian economy has performed significantly better than the January market forecast, mainly regarding GDP growth. According to the Central Bank's Focus bulletin (October 6th), the market stakes indicate that 2023 will end with inflation of 4.9% (↓), GDP growth of 2.9% (↑), basic interest rate of 11.7% and exchange rate of 5.0 USD/BRL. At the beginning of January, the projections were 5.5%, 0.8%, 12.3%, and 5.3, respectively.

REGIONAL MARKET UPDATES

Asia Pacific

Australia

- Consensus Economics' October 2023 edition estimates growth expectations for the Australian economy to slow from 3.7%/a in CY 2022 to 1.7%/a in CY 2023. It also forecasts growth to further decline to 1.3%/a in CY 2024. The IMF sees CY 2024 growth at 1.2%/a, sighting problems in the economy of Australia's largest trade partner, China.
- Australia's unemployment rate is expected to remain low, estimated at 3.7%/a for CY 2023 but increasing to 4.4%/a in CY 2024 as the economy slows. However, the unemployment rate has proved sticky this year despite the sharp increases in the Reserve Bank of Australia's (RBA) target cash rate to rein in inflation.
- Australia's inflation rate is forecasted to decline from 6.6%/a in CY 2022 to 5.6%/a in CY 2023, still well above the RBA average target rate band of 2-3%/a. Inflation will moderate to 3.3%/a in CY 2024. The RBA is aiming to get inflation below 3%/a within two years.
- The housing market is losing momentum from its peak FY 2021 when ~141 000 houses were commenced to ~131 000 for FY 2022. The decline in FY 2023 commencements to ~113 000 is expected to be confirmed soon and the outlook for FY 2024 is lower again at ~100 000. The sharp increases in both interest rates and the costs of building over the past year are impacting building approvals and new construction starts. However, the pipeline of houses under construction remains at a record high, which should keep the sector busy well into CY 2024 at least.
- In September 2023, the Australian parliament passed the AUD 10 billion Housing Australia Future Fund (HAFF), which is expected to see ~30 000 new social and affordable homes be built over the next 5 years. This, along with the AUD 2 billion Social Housing Accelerator, the AUD 3 billion New Homes Bonus for States and Territories, and other targeted programs to increase housing supply, should stimulate increased house building activity.
- The RBA has kept interest rates steady since the 2023 Q1 increase to 4.1%/a. The RBA flagged that further tightening of monetary policy may be required to ensure that inflation returns to target in a reasonable timeframe, but that will continue to depend upon the data and the evolving assessment of risks.
- The spot price for Australian Carbon Credit Units (ACCUs) declined from a record high of AUD 57.00 in early 2022 to ~AUD 30.00 in early October 2023. The price drop follows a surge of new ACCUs approved and released by the regulator.
- Trade Tree Online (TTO) and Brian McClay & Associates (BMA) (TTOBMA) reported in September 2023 that Chinese softwood and hardwood pulp prices on the Shanghai Futures Exchange have seen some recent

Forest Sector Outlook

increases. Downstream paper prices also increased, but profitability remains well below normal. TTOBMA indicates that deliverable inventories at the exchange have been trending up before the rally began, pointing to likely speculation. TTOBMA sees no fundamentals to support the increases continuing.

- TTOMBA reports that the unbleached kraft pulp (UKP) market has seen mill closures in recent months (USA and Chile), resulting in increased prices. Downstream the containerboard market appears to have reached a bottom.
- Chinese hardwood woodchip import volumes for CY 2023, annualized as of August are ~24% below CY 2022 imports. Consequently, Vietnamese hardwood woodchip export volumes to China will be ~2.7 million BDMt less this year, and Australian exports ~0.7 million BDMt less. It is unclear to what extent the decline in Chinese hardwood woodchip imports is due to pulp market conditions and/or the availability of surplus domestic hardwood logs given the slowdown in China's plywood manufacturing sector supplying the construction market.
- Australia's projected hardwood woodchip export volume for CY 2023 is ~3.8 million BDMt which represents a ~15% drop compared to CY 2022.
- Australia's projected softwood woodchip export volume for CY 2023 is ~0.9 million BDMt which represents a 21% drop compared to a bumper CY 2022 but remains at a similar level compared to CY 2021.
- The Chinese trade ban on Australian softwood logs was lifted in May 2023 as the China-Australia relationship improved. There is not much evidence of any significant log trade resumption likely due to diminished demand given China's current economic situation and limited supply availability of Australian log.

New Zealand

- The 2023 General election was held on 14 October with a strong swing to the center-right National Party and away from the incumbent Labour Party, which conceded on election night. Interestingly, the hard left Green Party and Te Pāti Māori gained some support at Labour's expense. However, uncertainty remains over the exact makeup of the coalition that will end up governing the country. Over half a million special votes are still to be counted, and the National Party's lead in several electorates is slim. On current numbers, National could form a government with only the right leaning ACT Party but may well need the populist New Zealand First Party support. There is some concern that this may not be stable as New Zealand First has been in the king maker position with National before (1996-1999), which did not lead to a good outcome. Similarly, New Zealand First has been in coalition with Labour in the 2017-2020 term, and with the experience so souring the Labour Party, they refused to consider a further alliance during this election.
- Many legislative and regulatory changes had been put in abeyance for decisions post-election, including the proposed changes to the structure of the Emissions Trading Scheme (ETS) referred to in the last month's FSO. The attitude of the new government towards these changes is yet to become clear. National released their forest policy pre-election, and it includes both positives and negatives for the sector. One negative would be a temporary moratorium on the conversion of farmland to carbon forestry. National has promised to repeal the Forests (Regulation of Log Traders and Forestry Advisers) Amendment Act 2020 which has only just become effective from the 6th of August 2023. It is also planning to streamline the consent process for wood processing developments and offshore wind farms.
- The high level of uncertainty around the final shape of the ETS and land use change restrictions has caused investors to remain on the sidelines in terms of forest establishment for carbon. This has been further exacerbated by recent additional changes. On 18 September, the Ministry for Primary Industries introduced punitive new "cost recovery" charges of NZD 30.25/ha for ETS-registered forests. Greatly increased charges for transfers and other changes were also introduced. These will become effective on the 19 October. The New Zealand Forest Owners Association (NZFOA) released a statement: "The Ministry for Primary Industries' new fees regime, which will increase costs for foresters participating in New Zealand's Emissions Trading Scheme by several thousand percent, will undermine climate action, put Iwi, landowners, and farm foresters under significant financial pressure and threaten the country's climate action...". The New Zealand Institute of

Forest Sector Outlook

Forestry, the Climate Forestry Association, NZFOA, along with several Māori groupings and industry participants have launched a judicial review case in the High Court seeking an examination of these charges. New Zealand Unit (NZU) prices remain well below their peak with the latest spot price between NZD 67 and NZD 68/NZU.

- The Reserve Bank of New Zealand (RBNZ) has held the official cash rate (OCR) constant at 5.5% for the fourth time at its review on 4 October indicating restrictive conditions will need to be maintained well into 2024. June quarter GDP growth, although low, surprised to the upside at 0.9%, showing New Zealand had averted a possible recession. Year-end GDP is forecast by Consensus Economics at 1.5% for 2023 and at 1.2% for 2024. Inflation remains stubborn but is expected to drop only slowly over the balance of 2023 and 2024. The Consensus Economics' forecast for 2023 is 5.8%, down only 0.2% from mid-year with 3.2% predicted for the end of 2024. This remains marginally outside the RBNZ's target band of 1%-3%.
- The bad news coming out of China continues to worsen with China's largest construction developer, Country Garden, missing a principal repayment of USD 60 million on part of its USD 16.5 billion of international debt. Evergrande, another large developer and the world's most indebted company, has already been in default since 2021. Evergrande's losses over the last two years have exceeded USD 81 billion. This is severely impacting the Chinese construction market and wood demand and is likely to have consequences for the global economy due to the sheer size of their debt (Evergrande alone is >USD 300 billion). Although prices for New Zealand logs have increased a little off their lows, sentiment remains slightly negative despite relatively low port stocks at the main import ports (around 3.2 million m³ according to FEA). Offtakes remain in the 60 000-70 000 m³/day range. Current CFR A-grade log prices are around USD 115/m³. New Zealand's export volumes as of August 2023 YTD remain marginally below the previous year but well down on 2021 volumes. In terms of softwood log volume imports, New Zealand's market share has increased substantially to over 61% of the China market. However, New Zealand's 2023 volumes have been held up by windthrow salvage from cyclone Gabrielle and other recent storms. Once this is complete, volumes are likely to drop because of cyclone caused infrastructure damage in two of the main supply regions (Hawke's Bay and the East Coast).

China/Asia

- Factories in China reported their first expansion in activity in September, providing a spark of optimism for the global economy. The nation's manufacturing sector's Purchasing Managers Index (PMI) rose to 50.2, signaling expansion. Similarly, the non-manufacturing sector saw growth, boosted by consumer spending on services and increased construction activity.
- The real estate market continues to face a downturn, with new home sales at major developers falling 29% in September compared to the previous year. China Evergrande Group, a major developer, faces financial troubles and regulatory hurdles, adding uncertainty to the sector. Country Garden is even bigger and it has some financial issues as well.
- China's exports are shrinking, and tensions with the US-led West over trade and technology remain. Local governments are burdened with heavy debts. Economists suggest that Beijing needs to implement more stimulus measures to ensure a stronger and more durable recovery.
- Looking ahead, economists anticipate a challenging transitional period for China's economy as the government aims to shift from a property-driven growth model to one fueled by advanced manufacturing. Most economist groups have lowered their economic growth forecasts for 2023 to around 5.0%, highlighting the need for successful rebalancing to establish a healthier economic footing.
- China's softwood log imports were lower for the first eight months in 2023 by 7.9% at 20.5 million m³ compared to the same period one year ago. The top five suppliers (from Timber-Online) were:
 - New Zealand 11.5 million m³ +2.2%
 - Germany 2.5 million m³ -34.5%
 - Japan 877 000 m³ +16.6%
 - USA 857 000 m³ +5.8%
 - Poland 739 000 m³ +208%



Forest Sector Outlook

Both Germany and Poland export bark beetle-killed spruce logs.

- Softwood lumber imports into China were higher by 11.8% (to 12.3 million m³) in the first eight months of 2023 as compared to the same period in 2022. The top six supplying countries compared to the same period in 2022 (from Timber-Online) were:
 - Russian Fed 8.0 million m³ +3.0%
 - Canada 899 000 m³ +6.0%
 - Belarus 616 000 m³ +80%
 - Sweden 595 000 m³ +83%
 - Finland 588 000 m³ +16%
 - Germany 539 000 m³ +75%
- China has been able to steadily reduce both log lumber inventories at ocean ports and this is encouraging.

Europe

- According to news from EUWiD (Europäischer Wirtschaftsdienst), Fordaq and Timber Industry News (TIN) a general slowdown in the forestry and wood processing industries is observed across multiple European countries. The slowdown is influenced by various economic and industry-specific factors.
 - In September, the Swedish Forest Agency reported an expected decline in harvesting rates in Sweden to ~93 million m³, a decrease of 2.8 million m³ compared with last year. The reduction is attributed to lower demand in the wood processing sector, with lumber production expected to decline by 2%. Firewood demand is still expected to increase by 3%, and imports are expected to increase by 7%.
 - In Finland, the Natural Resources Institute Finland (Luke), reported a decrease in harvest rates to 38.1 million m³ between January to August, down 4% from last year.
 - According to preliminary data from the German Federal Statistical Office (Destatis) for the second quarter of 2023, Germany's wood production sectors have shown mixed results. Unprocessed MDF saw a 1.5% increase in production to 187.4 thousand m³. In contrast, High-Density Fiberboard (HDF) production for sale declined by 18.9% to 357.6 thousand m³. OSB production also decreased by 15.4% year-on-year to 262.8 thousand m³, and its production value dropped by 41.7% to EUR 80.1 million. Particleboard production was down by 14.9%, with output at 979.3 thousand m³. This marks the fourth consecutive quarter where particleboard production was below 1 million m³.
 - In Germany, Destatis noted a 36% decline in beech-sawnwood exports in the second quarter of this year to 87 147 m³, continuing a declining trend started since 2021.
 - In Austria, the sawmilling industry anticipates a further reduction in sales, particularly in the domestic and regional German markets. The trade association forecasts a reduction in Austria's sawnwood to 8.3 million m³ for 2023, the lowest since 2010. Political support measures are seen as essential to bolster the construction industry.
- According to EUROCONSTRUCT, the construction industry in Europe is expected to see minimal growth in the coming years. A contraction of 1.1% is expected in 2023, followed by 0.7% in 2024, before a potential rebound of 1.4% in 2025. This is a downward revision from an earlier prediction of 2% growth in 2023. Residential construction rates are expected to contract by 2% over the year. This decline is attributed to macroeconomic conditions and the impact of the Ukraine war.
- While Europe faces economic challenges and a downturn in the wood industry, there are signs of potential recovery; easing supply bottlenecks, declining energy prices, and the reopening of trade with China are contributing to a more favorable outlook, bolstered by green policy initiatives such as the European Green Deal and the European Renovation Wave.
- In September, the Bayerischen Landesanstalt für Wald und Forstwirtschaft (LWF) reported that the spruce bark beetle was able to produce a third generation at altitudes around 800 m above sea level. Bark beetle swarming began in May and was particularly intense in parts of southern and central Germany.

Forest Sector Outlook

- The current situation with bark beetle damage varies across regions, with weather conditions playing a significant role. Overall, the bark beetle continues to pose a significant threat to various types of forests, with weather conditions and regional responses influencing the extent of the damage.
- The Swedish Forest Industries Federation (Skogsindustrierna) updated their estimates of windblown wood damage to around 1 million m³, primarily in the northern Swedish region of Västerbotten.
- The Czech Republic saw a 19% decrease in gross profit in the first half of the year due to a 21% reduction in timber harvest, linked to the aftermath of the bark beetle calamity. The enterprise expects timber harvesting to decrease to 8.5 million m³ this year, returning to pre-calamity levels.
- During the first half of 2023, Germany's pellet exports surged by 42.8% to 440 636 tonnes, with the value of exports rising by 55.3% to EUR 129.7 million. Italy remained the top recipient, followed by Austria and France. Meanwhile, Svenska Cellulosa Aktiebolaget (SCA) has operationalized its pellet works in Rundvik, Sweden, with an annual production capacity of 25 000 to 30 000 tonnes. The facility will supply energy to the Obbola pulp and paper mill. Interestingly, a study by Interconnection Consulting predicts a 19% decline in the biomass boiler market for 2023, largely due to rising pellet prices and sustainability concerns.
- During July 2023, the United States imported approximately 38% less sawn softwood from the European Union (EU27), according to data from the US Department of Agriculture's Foreign Agricultural Service (FAS). The decline was especially notable in imports from Germany and Romania. In contrast, imports from Sweden and Finland increased by 46% and 18%, respectively.
- The European Parliament formally approved the new Renewable Energy Directive (RED III) on 12 September 2023. The directive had already received agreement from the members of the European Parliament and the Swedish Council presidency of the EU member states earlier in March. The next step is approval by the EU Council. National implementation of the directive must occur no later than 18 months after notification. RED III is anticipated to be enforced in EU member states by spring 2025.
- Following the implementation of the new European Union Deforestation Regulation (EUDR), critics have claimed that the EUDR poses significant challenges, especially for smallholders, who make up a large share of supply in commodities like coffee, palm oil, and rubber. The law's stringent requirements could lead to market exclusion for these producers, thereby increasing poverty and potentially exacerbating deforestation. On the flip side, the SINTETIC¹ research project and other initiatives aim to improve traceability and sustainability, but their effectiveness in mitigating the EUDR's impact remains to be seen.
- After two good years with exceptionally high product prices and profits, the Nordic forest industry is now at the bottom of the business cycle. The industry has reacted strongly to the situation by limiting production – stocks have been unloaded and price increases have already been announced in some sectors. However, the price increases are still driven by supply and the challenges on the demand side persist.
- In the pulp market, capacity limitations start to impact prices which have been decreasing ever since the beginning of this year. Inventories have decreased and there are signs that the pulp cycle is beginning to bottom out. In China, prices have slightly increased, both spot and futures prices. In Europe, Latin American producers have announced price increases for eucalyptus pulp. SCA has also announced price increases for long fiber sulfate pulp. The price difference between long and short fiber in Europe has been at a record level, almost twice as large compared to the levels of previous peaks, driven by the rapid decline in short fiber pulp prices. An important factor in balancing the weak long fiber market is the significant production restrictions made by the industry, both voluntarily and involuntarily. The production of long fiber pulp (BSK) was reduced by over 750 000 tons during the first seven months of the year, of which over 500 000 tons were bleached long fiber sulfate pulp (NBSK). Almost half of this volume has occurred in Canada.
- The entire sawmill industry continues to be under great pressure with an increasingly gloomy outlook for the construction industry. The market for wooden products in the Nordics has stagnated, and the demand in Europe has further decreased during the third quarter of this year. The only potential upside that can be

¹ The Single Item Identification for Forest Production, Protection and Management (SINTETIC) program is a research initiative funded by Horizon Europe that aims to develop a comprehensive data management scheme for tracing the EU forest value chain using integrated tracking systems. <https://sinteticproject.eu/>

Forest Sector Outlook

detected is in the US market. The Nordic producer's export opportunities to the Middle East, North Africa, and China are weak. We believe the challenging market situation for sawmillers will continue, but if we avoid a further dampening of the global economy, most Nordic sawmills will cope with the situation by having a few record-breaking years after.

- At the same time as the demand for wooden products has decreased, the supply has also been radically curtailed. Many Nordic sawmills have seasonally low finished goods stocks after customary summer breaks. The weak market combined with historically record high wood prices has also contributed to temporary capacity closures.
- The shortage of wood is caused by several factors. In Finland, the wood market is affected by the lack of imports from Russia; in Sweden it is mainly due to lower felling activity by private forest owners. In both countries, the sawmills have competition from the pulp mills, which in turn are exposed to increasingly fierce competition from the energy sector. Occasionally, prices paid for energy wood are higher than for pulp wood. This naturally gives some relief to the sawmillers by increasing the value of by-products.
- In a global perspective, the wood supply situation in Sweden and Norway is thus slightly better than in many other regions. The Swedish industry benefits from the weak Swedish krona. In Finland, with a strong Euro, the sawmills are currently suffering, but the outlook is much better from a longer-term perspective. The prices of timber in Finland have already fallen during the last quarter of this year, but the trading volumes have been exceedingly small. In Europe, the production of sawn goods has been reduced even more than in Scandinavia due to raw material shortages. In Canada, the situation is even worse.
- In a longer-term perspective, the increasing wood shortage, both in Finland and in Sweden, will limit growth in production capacity. During the last couple of years, the level of investments in both the pulp and sawmill industries have been at record levels, thus partially replacing outdated or non-competitive capacity. In addition to the large projects, e.g. Metsä Group's investments in Husum and Kemi, SCA's in Östrand and Obbola, Södra's in Värö and Billerud's investment in Gruvön, investments in Nordic sawmills have also increased steadily over the past five years. Already decided expansion projects in the Nordic sawmilling sector correspond to almost 2 million cubic meters in annual capacity.
- For the pulp, paper and packaging industry, the future focus will be on increased value utilization of wood raw materials. Several investment projects are planned or ongoing for the production of more advanced biofuels. Also, strong efforts are being made to expand wood-based construction, wood-based textile fiber production, and develop new chemical products based on lignin and hemicellulose.

Russia

- Russia reduced wood harvesting by 5.5% in January-August 2023 as compared to the same period in 2022.
- From January to August 2023, Russian statistics report exports of over 14 million m³ of sawnwood, with China being the primary destination, accounting for 8.8 million m³, which was 62% of its total shipments.
- Among the top importers of Russian lumber, Uzbekistan received 1.4 million m³, while Kazakhstan imported 627 000 m³.

North America

- US housing starts were 1.283 million units (Seasonally Adjusted Annual Rate, SAAR) in August, a decrease of 11.3% from 1.447 million units in July (revised) and a decrease of 9.0% compared to 1.505 million units in August 2022. Year-to-date housing starts in 2023 are 12.6% lower than during the same time in 2022. Building permits for privately-owned housing units increased to 1.543 million units (SAAR) in August, up 6.9% from July but 2.7% lower year-over-year. Housing completions were up 5.3% month-over-month to 1.406 million units and 3.8% higher year-over-year. The National Association of Home Builders Housing Market Index decreased for the second consecutive month in September, down to 45. Builders reported weaker indices for present and future single-family sales and traffic of prospective buyers for the next six months.



Forest Sector Outlook

- According to the September 2023 Housing Forecast by Fannie Mae, housing starts totaled 1.553 million units for 2022, but will drop considerably to 1.413 million units in 2023 and decline further to 1.298 million units in 2024. This forecast is rather pessimistic for 2024 but has been revised upward significantly since last quarter. Other forecasts are not so pessimistic, especially for 2024. The average of two industry forecasts is 1.419 million units for 2023 and 1.442 million units for 2024.
- After US housing starts moved steadily higher during the pandemic, mortgage rates rose above 7%, making housing less affordable to many buyers. Rising mortgage rates began to put pressure on home prices and sales. Median home prices had been on the rise, but finally began to decline in March, and were down -3.0% year-over-year by May, according to data from the National Association of Realtors. However, prices began to increase once more in July and August at 1.7% and 3.9% respectively. Market evidence points toward slow but growing existing home sales, with transaction volume increasing each month since May, but still down -15.3% year-over-year. Days-on-market were up from 16 to 20 in August 2023 year-over-year. Low sales volumes would adversely impact lumber and panel markets in 2023, perhaps into 2024.
- The latest NAHB/Westlake Royal Remodeling Market Index (RMI) posted a reading of 65 in the third quarter of 2023, declining three points compared to the previous quarter. The survey indicated that remodeling customers pulled back from large projects during the quarter. The Future Indicators Index fell 3 points to 57, indicating that further declines are expected.
- US softwood lumber production for the first seven months of 2023 was lower by 2.5% (to 22.1 billion BF; 35.5 million m³, net) as compared to the first seven months in 2022. US West lumber production was lower by 6.9% (to 8.0 billion BF) while southern yellow pine (SYP) production was up only 0.4% (to 13.1 billion BF).
- Canada's lumber output was lower by 10.3% (11.6 billion BF; 18.6 million m³, net) in the first seven months of 2023 vs. the same period in 2022. BC production was down by a whopping 19.0% (to 4.0 billion BF – a 950 million BF drop). The rest of Canada's production was lower by 4.8% (to 7.6 billion BF).
- North American lumber output in the first seven months of 2023 totaled 33.7 billion BF, a decline of 3.6% or -1.26 billion BF. Only the US South region recorded an increase in production.
- North American lumber prices generally improved in the third quarter of 2023. The benchmark W-SPF 2x4 #2&Better, random lengths (FOB BC mill) price averaged USD 419/thousand board feet (MBF) in the third quarter of 2023 vs. USD 389/MBF in the second quarter. However, prices have been moving lower since the beginning of September 2023 and were already below the second quarter average in the first three weeks of October.
- Canadian softwood lumber exports through August were 8.9 billion BF, down 9.3% compared to last year. Most of the reduction can be attributed to BC, which is tracking at about 4 billion BF through August (-19.1%).
- Canadian lumber exports to the US were 8.1% lower through the first seven months of 2023 (and were even lower through the first eight months at -9.3%) as compared to 2022. BC exports were 19% lower YTD in August. This was partially offset by increased exports to the rest of Canada (+0.9%).
- BC lumber exports to Japan through August 2023 were 30.6% lower than a year earlier. Japan J-grade prices had moved lower in parallel to US lumber prices.
- BC lumber exports to China increased by 28% through August 2023 as Chinese market prices were at least similar to the weak US lumber prices from March to July.
- European imports to the US were higher by 6.5% through the first seven months of 2023 as compared to the previous year (Timber-Online). Year-to-date shipments from the five top exporting countries were mixed: Germany (+14%), Sweden (+24%), Austria (-25%), Romania (-30%), and Finland (+73%).
- Pulpwood prices vary by region and season. In the Lake States region, Q3 hardwood roundwood prices decreased further, pushing them down -14% year-over-year. Softwood roundwood prices decreased similarly in the Lake States dropping them down -12% year-over-year. In the South-Central region, average prices slipped from last quarter for hardwood roundwood and prices were down -8% year-over-year, while softwood roundwood prices were unchanged in Q3 but down -3% year-over-year. South Atlantic region prices remained stable for hardwood and slipped lower for softwood roundwood from last quarter and were down 11% and 10% respectively year-over-year. Northeast region prices for hardwood roundwood and softwood roundwood

Forest Sector Outlook

rose slightly from last quarter but remained down -9% for hardwood roundwood and -2% for softwood roundwood year-over-year. Lastly, Pacific Northwest softwood roundwood prices dropped further from last quarter and were down -27% year-over-year.

- Pacific Northwest Douglas-fir average log prices declined in Q3 2023, but regional variations and some strengthening were seen in the data for August. Prices were continuing to decline in the Puget Sound area, while some strengthening was occurring in the Columbia River and Willamette Valley regions. Average DF 2-Saw prices across regions were down -3.3% YTD through August. Average Whitewood 2-Saw prices were down -10.1% in the Puget Sound region, however, the Columbia River region was just above flat and the Willamette Valley region was up 2.4% YTD through August.
- US Q2-Q3 2023 large timberland transactions were more plentiful, with several packages closing and more in progress or on offer. Several pending transactions were completed, including:
 - The sale of 93 200 acres in four blocks by Conservation Resources. Manulife acquired three of the blocks: 22 100 acres in Arkansas and Louisiana (Piney Valley) for USD 1 782 per acre, 17 900 acres in Virginia (Stonewall) for USD 2 620 per acre, and 30 200 acres in Florida (Relay) for USD 1 239 per acre.
 - The Conservation Fund acquired the 23 000 acre block in Alabama (Red Hill) for USD 2 600 per acre.
 - FIA completed its sale of 13 900 acres in two blocks in south Georgia and north Florida (Osceola) to Langdale for USD 3 210 per acre.
 - The FIA offering of 22 000 acres (Coles Creek) in two blocks of pine plantation in Mississippi was sold to Weyerhaeuser for USD 2 727 per acre.
 - A few others were pending or awaiting results such as:
 - The Campbell Global offering of 57 156 acres (Olympic Tree Farm) in Clallam County, Washington,
 - The Molpus offering of 15 300 acres in Louisiana (Tristar), and
 - The Rayonier offering of 55 000 acres in coastal Oregon (Project Douglas).
 - Notable new listings for Q4 include the Weyerhaeuser/AFM offering of 9 900 acres in southern Mississippi (Woodville), the Manulife/Landvest offering of 34 600 acres in two parts in southwest Washington (Sacajawea), and the Chinook/Landvest offering of 20 900 acres in eastern and south-central Oregon (Wild Vista).
- US hardwood lumber prices started falling sharply during the summer of 2022 and continued to slide until recently, finding a floor and strengthening modestly due to supply constraints but with no increase in demand. Domestic and global demand remain constrained by excess inventories and high interest rates. The annualized estimate of hardwood lumber utilization is down 22.9% from 2022 with an annualized total consumption of 5.611 billion board feet, the lowest in historical record. The total annualized export volume to all destinations is 1.1 BBF in 2023 as compared to 1.4 BBF in 2022. Total export volume to China is down to 413.7 MMBF in 2023 as compared to 462 MMBF in 2022², as is volume to Canada and Europe.

South America

Brazil

Brazilian Forest Industry – Context and Trends

After practically two years of an exuberant market (2H-2020 to 1H-2022), the wood industry had its “*annus horribilis*” in 2023 and an unclear market scenario for 2024.

Before we analyze the market context and try to predict the most likely scenario for 2024, let’s briefly look at what happened in the last three years.

With the advent of COVID-19, a severe global recession emerged, practically stopping worldwide trade and industrial production throughout 2020, which resulted in a -2.8% GDP growth. In an emergency regime, at the

² Correction: last newsletter incorrectly labeled the total hardwood lumber exports to all destinations as the export volume to China only.

Forest Sector Outlook

beginning of the 2Q-2020, countries adopted measures to minimize the severe impacts of COVID-19 on the economy, highlighting the fiscal and monetary incentives promoted by central banks (reduction in interest rates, easing quantitative measures and the purchase of government and corporate bonds), job retention programs and debt renegotiation measures.

As a consequence of these programs, there was a significant increase in monetary liquidity, which, combined with isolation measures, benefited some industrial segments, including the timber one, which saw a substantial increase in the consumption of its products for home renovation, furniture, sanitary ware, and packaging. This movement particularly benefited the Brazilian industry, which practically did not stop during the pandemic. On the contrary, it accelerated its production.

Throughout 2020 and 2021, the Brazilian industry benefited significantly from increased demand for wood products, the disruption of the international supply chain, and the devaluation of the Brazilian Real (~30%). Compared to 2019, exports of solid Pine products grew by 30% in quantity and 130% in BRL, and Eucalyptus pulp grew by 7% in amount and 4.4% in BRL. On the other hand, the industry also saw a significant increase in production costs, mainly those of raw materials and chemical inputs.

With the pandemic subsiding in mid-2021, pro-economy fiscal and monetary measures resulted in a robust economic recovery. Global GDP went from -2.8% in 2020 to +6.3% in 2021 and +3.4% in 2022. However, this strong recovery brought together a persistent inflationary process with a highly deleterious impact. The global economy witnessed inflation climb from 1.9% in 2020 to 8.3% in 2022.

To control the spike in inflation, central banks accelerated their contractionary monetary and fiscal policies throughout 2022 and 2023, still with partial success. The IMF forecast is that global inflation in 2023 will be around 6.5%, falling to 5.2% in 2024. The World Bank predicts that GDP will grow only 1.7% in 2023. The War in Ukraine also contributed to this undesired scenario.

Throughout 2022, the Brazilian forest-based industry began to see its markets decline, with Pine exports closing at -14% in quantity and -17% in BRL compared to 2021. However, due to the increase in productive capacity, the Eucalyptus pulp industry grew 22% in volume but only 8% in BRL (lower prices).

Throughout 2023, practically all industrial segments experienced a “perfect storm”, with significant drops in demand and prices, high stocks of finished products, and high production costs, mainly the “cost of wood”. It is estimated that Pine exports will end with a drop, against 2022, of 10% to 15% in quantity and 25% to 35% in BRL. And exports of Eucalyptus pulp will fall from 3 to 6% in amount and from 10% to 16% in BRL. The most severely impacted segments were plywood, lumber, composite panels, and charcoal. To a lesser extent, moulding, pulp, and paper, usually more resilient. Concerning the spot wood market, the year is expected to close with a Pine wood demand drop of 25% to 35% compared to 2022, and from 5% to 10% regarding Eucalyptus wood.

With 2024 approaching, the common question for all segments is whether the virtuous economic cycle will return next year. However, few players have ventured to date to predict what will happen due to the high uncertainty regarding the global economy.

For the Pine industry, the most likely scenario is gradually returning to growth at rates similar to the pre-pandemic period but recovering faster in volume and slower in price. Reducing production costs will be the biggest challenge since wood costs are not expected to fall significantly due to the forecasted mid-term structural deficit, the significant increase in forestry expenses, and the long-term forest maturation. Between 2019 and 2022, sawlog prices increased in actual terms from 55% to 100%, and pulplog prices up to 135%. At this moment, drops of around 10% to 20% are expected in the short-term via discounts and inflation.

Concerning the Eucalyptus pulp industry, which has its market dynamics, volumes will continue to grow at historical rates. However, pulp prices will not return to 2022 high-levels anytime soon due to the significant supply increase from the new mills starting operations over the next two years. Regarding the pulpwood wood supply, the risk of a structural deficit will continue to pressure prices over the following years. This price scenario also applies to the charcoal industry, characterized by significant market “ups and downs”. It also applies to agro-industries that consume biomass to generate energy and steam, whose consumption has grown exponentially due to the dizzying growth of Brazilian agricultural production and the need to avoid export barriers.

Forest Sector Outlook

To summarize, the forest-based industry will have to rearrange its production chain as of 2024 due to the economic earthquake resulting from the pandemic.

Eucalypts Exports (January-September)

Exports of Eucalyptus manufactured products fell significantly compared to the same period in 2022.

- Pulp: -3% QTY and -9% USD
- Chips³: -28% QTY and -16% USD
- Logs: -28% QTY and -28% USD
- Charcoal via green pig iron: -1% QTY and -29% USD

Pine Exports (January-September)

As for Pinus exports, the performance was significantly lower compared to the same period of the previous year, mainly in terms of revenues:

- Lumber: -12% QTY and -30% USD
- Moulding: -7% QTY and -36% USD
- Plywood: -10% QTY and -34% USD
- Logs: -71% QTY and -63% USD

Pine-Eucalyptus Composite Panel Exports (January-September)

- Quantity: -42% QTY
- Revenues: -53% USD

Uruguay

- UPM1, UPM2 and the Montes del Plata (MdP) pulp mills are consuming eucalyptus log from all forest regions of Uruguay. As of Q3 2023, MdP “imported” 4.05 million m³, UPM1 3.70 million m³ of logs and UPM2 3.41 million m³. Since June 2023, UPM2 consumed higher monthly volumes than UPM1 and MdP, with an average monthly consumption of 0.605 million m³ of log per month.
- As of Q3 2023, eucalyptus woodchip exports were close to 920 000 m³ (19 vessels, one more than for the same period of 2022). These woodchip vessels exported during 2023 showed an increase in FOB price close to USD 7/BDMt compared with 2022, reaching FOB values between USD 158/BDMt and USD 160/BDMt.
- Pine log exports started at a good pace during Q1 2023, with a total exported volume of 0.45 million JAS m³, representing 19 vessels (25% to China and 75% to India). The average FOB price for Q3 2023 is around USD 78/JAS m³. During Q2, exports dramatically slowed down, but a slow recovery was detected during Q3 2023. The total exported volume as of Q3 2023 is close to 0.750 million JAS m³, a volume 44% smaller than the one exported during the same period of 2022, 83% of this volume was exported to India.
- Uruguay’s Q3 2023 eucalypt sawlog exports started at a slower pace than in the same period of 2022. The average FOB price for Q3 2023 is around USD 149/m³ for logs 30+ SED, showing values 7% higher than in the same period of 2022. As of Q3 2023, the total exported volume of these logs reached 118 000 m³, a volume 7% lower than the same period of 2022, but still with higher prices. The main destinations of these logs are China (42%), Vietnam (27%) and Malaysia (17%).
- Only one plywood company in Uruguay is still operational. As of Q3 2023, the exported volume has reached 183 000 m³, a volume 5% smaller than that exported for the same period of 2022. Average prices as of Q2 2023 are around USD 329/m³, 35% lower than 2022.
- Carbon credits from Uruguay’s forest projects have less demand than during 2022, with prices around USD 7/CCBvcu (CCBvcu= Climate, Community & Biodiversity Verified Carbon Unit). It appears that demand started to grow again during Q3 2023 and finally, this month, it appears that buyers are starting to purchase credits again.

³ Eucalyptus + Acacia.

Forest Sector Outlook

- The Environmental Impact Assessment of two Pine sawmills to be located in the North region was presented during the last months. These sawmills belong to Claymark and Kluntex SA. Claymark is one of the largest manufacturers and exporters of premium quality pine products of New Zealand. This project consists of the construction of Claymark's first industrial plant in Latin America, in the vicinity of the city of Tacuarembó, with an annual log consumption of around 300 000 m³/year. Kluntex SA is a smaller pine sawmill, located close to the city of Rivera. The annual consumption of log will be around 150 000 m³/year.

Argentina

- Pine log exports continued during Q3 2023, with a total exported volume of 0.70 million JAS m³. India is the main destination of these exports.
- Argentina is exporting Eucalyptus logs to Uruguay (UPM) by truck. As of Q3 2023, total log exports to Uruguay reached close to 75 000 tonnes, a higher volume (15% higher) than that exported during the same period of 2022.
- HS Timber Group, together with its Belgian joint-venture partner Forestcape, is building a new sawmill in Gobernador Virasoro, in the Argentinian province of Corrientes. The investment will amount to approximately USD 110 million, and the sawmill is expected to create 280 direct jobs. The total employment impact, including the upstream and downstream sectors, is estimated at over 700. The plant is designed to process small diameter pine logs (*Pinus taeda* and *Pinus elliottii*), which will be sourced exclusively in the region from sustainably managed areas. Sawmill start up is planned for the first days of December 2023.
- Fresa Garruchos biomass power station (Planta de biomasa Fresa Garruchos) is an operating power station of 40-megawatts (MW) in Gobernador Virasoro, Corrientes, Argentina. The company is building a second boiler, expecting to consume 3 000 ton/day of forest residues.

Africa

- The past quarter presented another turbulent period for countries in Sub-Saharan Africa. Debt restructuring, high inflation and depreciation of local currencies remained on the agenda. The IMF in its October 2023 Regional Economic Outlook for Sub-Saharan Africa is, however, upbeat and expects economic growth to increase to 4% for the region in 2024. It also projects that inflation will start to fall and that public finances will gradually become more sustainable.
- The region remains vulnerable as debt levels remain high, exchange rate pressure continues, and political instability remains. The coup d'état in Gabon at the end of August 2023 was the seventh for the region since 2020.
- Ghana has become the second country in the world, after Indonesia, to start trading in legally certified wood and wood products with the EU under the Forest Law Enforcement Governance and Trade (FLEGT) framework. Ghana, as a Voluntary Partnership Agreement (VAP) partner country, would be able to issue a FLEGT license which certifies that the goods exported are legal. Such a license will automatically meet the requirements of the EU Timber Regulation (EUTR).
- Gabon has launched a cutting-edge timber traceability system. The new system, which is mandatory for all logging and wood processing companies operating in Gabon, tracks timber products throughout the supply chain using mobile apps, web apps, and geo-location data. The system is the result of collaboration between the Gabonese government, the Environmental Investigation Agency (EIA), and Code4NatureIt.
- The first ever African Climate Summit (ACS) was held in Nairobi, Kenya from 4-6 September 2023. The summit aimed at discussing sustainable solutions for global climate change. It more specifically targeted the role of African countries in sustainable solutions and culminated in the signing of the Nairobi Declaration. During the summit, donor nations and multilateral organizations pledged approximately USD 26 billion to climate investments.

Forest Sector Outlook

- At the ACS, the United Arab Emirates provided a non-binding letter of intent for USD 4.5 billion towards clean energy and USD 450 million for carbon credits. There has been an increase in interest from Middle Eastern countries in carbon related investments in Africa. Blue Carbon, an UAE based company, has signed for instance forest-based carbon MOUs with Zimbabwe, Liberia, Zambia, and Tanzania. In June, the Regional Voluntary Carbon Market Company (RVCMC), which was founded by the Saudi Public Investment Fund and Saudi Tadawul Group, conducted a carbon credit auction in Nairobi, where companies from Saudi Arabia bought more than 2.2 million tonnes of carbon credits.
- Ugandan forest products companies still have to deal with the ban on the export of timber. While the country is trying to protect its indigenous timber resources, the ban is having a detrimental effect on the operations of plantation-based wood processors.
- A fire that started on 30 September 2023 at the NCT Woodchip Mill in Richards Bay, South Africa has destroyed billions of rands of infrastructure and woodchips that were ready for exports. This devastating event will have a significant impact on South African woodchip exports.
- Total woodchip exports through the ports of Richards Bay and Durban in South Africa, for January to August 2023, were 1.26 million Mt which is ~200 000 Mt less than for the same period in 2022 when 1.46 million Mt of woodchips were exported. Pulp exports have increased slightly from about 547 000 ADt to 658 000 ADt when comparing the period January to August 2023 to the same period in 2022.



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