

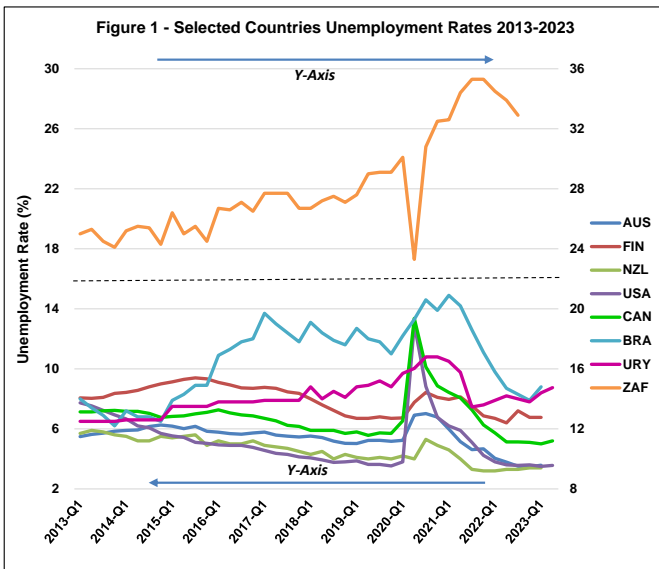
Forest Sector Outlook

Global Consulting Alliance

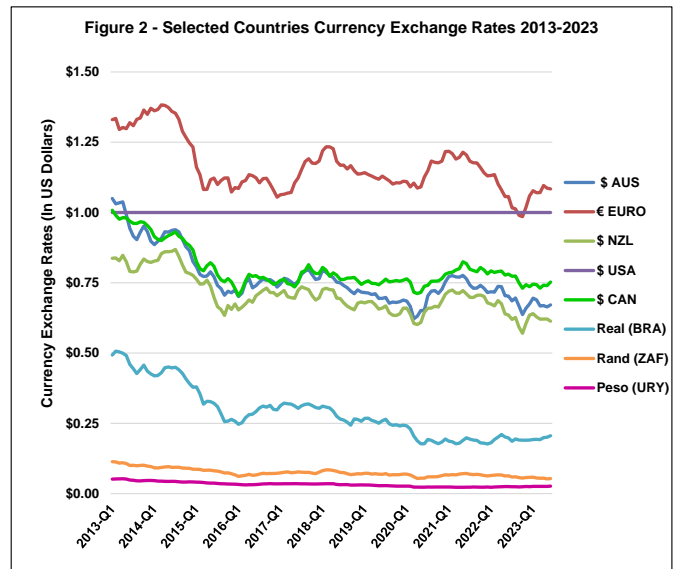
Quarterly Edition 2023-Q2

ECONOMIC DASHBOARD

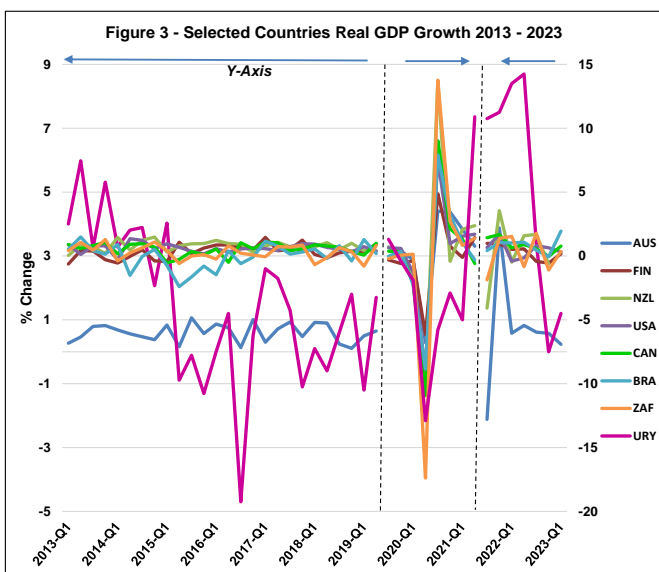
Figures 1 to 4 illustrate four key macroeconomic indicators as observed over the past decade, on a quarterly basis. These can be useful particularly to monitor the aftermath of the COVID-19 pandemic and the market implications of the ongoing Russia-Ukraine war. Figure 4 rates are nominal.



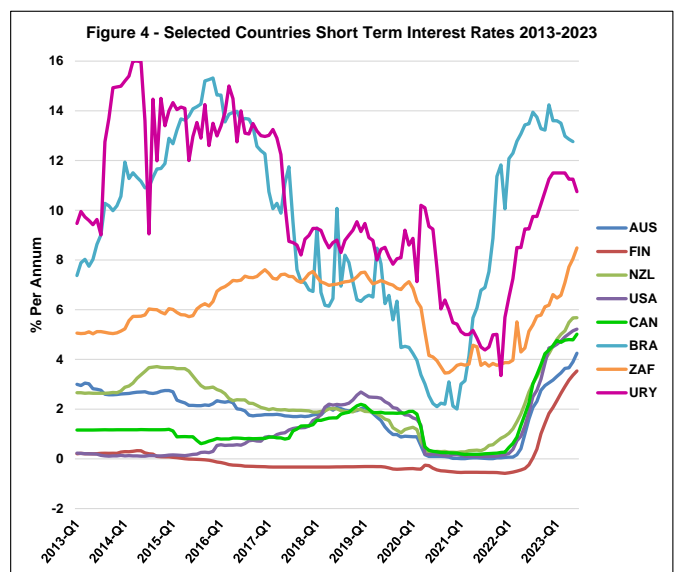
Sources: OEDC, Brazilian Institute of Geography and Statistics, macrorends.net (World Bank), Statistics South Africa



Source: Federal Reserve, Uruguay Statistics National Institute



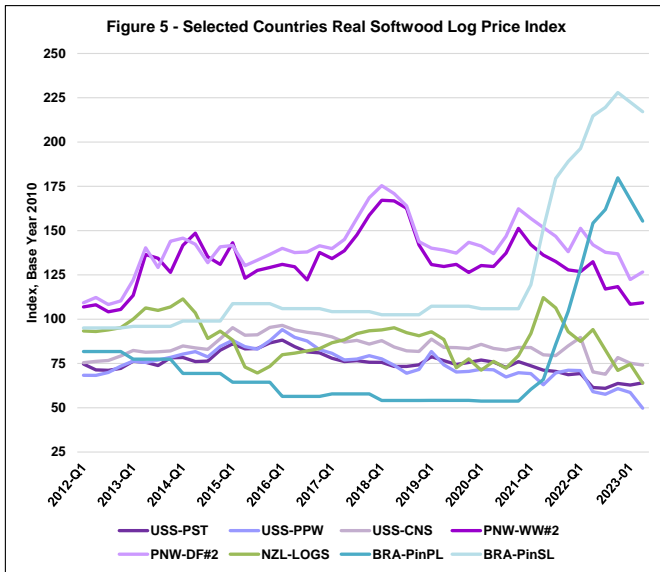
Source: OEDC, Chamber of Commerce and Services of Uruguay



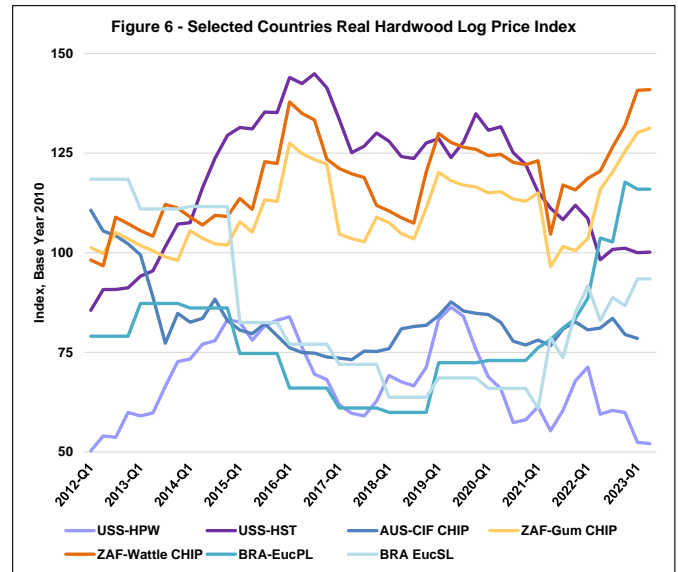
Source: OEDC, FRED - St. Louis Fed, Banco Central Del Uruguay, CEIC Data

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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 in its July 2023 World Economic Outlook report (WEO) projects global economic growth to slow to 3.0% in CY 2023 and CY 2024, down from 3.5% in CY 2022. Global headline inflation is expected to fall from 8.7% in CY 2022 to 6.8% in CY2023 and 5.2% in CY 2024. It forecasts US growth to slow to 1.8%, down from its 2.1% in 2022. China is forecast to grow at 5.3% (4.5% in 2022) but declining to 4.5% in CY 2024. Japan 1.4% (1.0%), Europe 0.9% (3.5%) and emerging and developing Asia 5.3% (4.5%).
- US GDP – The Bureau of Economic Analysis revised Q1 2023 GDP growth up from 1.3% to 2.0% in their estimate in June 2023. Forecasters have been revising projections for Q3 2023 upward and Q4 2023 through Q1 2024 downward. The Federal Reserve Bank of Philadelphia released the Second Quarter 2023 Survey of Professional Forecasters on May 12. The panel of 38 forecasters prediction of 2023 GDP remained at 1.3% in the Q2 survey. However, GDP growth for Q3 2023 was revised up from -0.1% to 0.6% and down for Q4 2023 from 1.2% to 0.0% and Q1 2024 from 1.3% to 1.0% as a shallow recession projection was pushed to the last quarter of 2023 and first quarter of 2024. This is primarily due to monetary policy designed to halt high inflation slowing the economy.

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- US Unemployment – In July 2023, the Bureau of Labor Statistics reported that nonfarm payroll increased by 209 000 while the unemployment rate decreased slightly to 3.6%, and the number of unemployed persons decreased to 6.0 million from 6.1 million the previous month. The workforce participation rate remained the same at 62.6%, which is below the pre-pandemic rate of 63.3%. The Philadelphia Federal Reserve Bank Second Quarter 2023 Survey of Professional Forecasters projected that unemployment will average 3.7% in 2023. For 2024-2026, the projection is 4.3% to 4.4%, a slight upward revision.
- Brazil – Expectations for the Brazilian economy have improved over the past quarter due to inflation control and economic reforms being voted on in Congress. According to the Central Bank's Focus bulletin (July 7th), the market stakes that 2023 will end with inflation of 5.0% (↓), GDP growth of 2.2% (↑), basic interest rate of 12.0% (13.75% currently) 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' June 2023 edition estimates growth expectations for the Australian economy to slow from 3.9%/a in CY 2022 to 1.5%/a in CY 2023. It also forecasts growth to remain flat at 1.5%/a in CY 2024.
- Australia's unemployment rate is expected to remain low, estimated at 3.9%/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 interest rates to rein in inflation, much to the Reserve Bank of Australia's (RBA) chagrin.
- Australia's inflation rate is forecasted to decline from 6.6%/a in CY 2022 to 5.7%/a in CY 2023, still well above the RBA average target rate band of 2-3%/a. Inflation will moderate to 3.1%/a in CY 2024. The RBA is aiming to get inflation below 3%/a in 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 outlook for FY 2023 and 2024 is for a further decline in commencements to ~110 000 and under 100 000 respectively. The sharp increases in both interest rates and the costs of building over the past year are impacting new construction starts.
- The RBA continued its cycle of interest rate increases from 3.6%/a at the end of 2023 Q1 to 4.1%/a by the end of 2023 Q2. There is a possibility for further rate hikes before the end of CY 2023.
- The spot price for Australian Carbon Credit Units (ACCUs) declined from a record high of AUD 39.25 to ~AUD 31.50. The price drop follows a surge of new credits released by the regulator.
- Trade Tree Online (TTO) and Brian McClay & Associates (BMA) (TTOBMA) reported in June 2023 that the graphic paper market is seeing weak demand and high inventories. Global printing and writing markets have been under significant pressure since late CY 2022 following a boost during the COVID-19 pandemic.
- TTOBMA reports that China continues to add paper capacity at the same time that domestic and export markets have slowed. Chinese paper producer's profitabilities are reportedly at record lows.
- Chinese hardwood woodchip import volumes for CY 2023, annualized to April are ~27% less compared to CY 2022 imports. The decline has affected Vietnamese hardwood woodchip export volumes to China the most. It is unclear to what extent the slowdown in Chinese hardwood woodchip 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 4.1 million BDMt which represents a ~8% 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.

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- The Chinese trade ban on Australian softwood logs was lifted in May 2023 as the China-Australia relationship improved. However, it remains to be seen how much log volume will be exported to China going forward given new export markets were found (including softwood woodchips) and unlikely to be let go, the current export price lows, and the domestic shortage of logs in Australia. It is unlikely log exports to China from Australia will resume their previous levels.

New Zealand

- The marine heat wave affecting the South Pacific Ocean continues to exacerbate major rainstorm events with further damaging rainstorms affecting areas already decimated by Cyclone Gabrielle. More infrastructure damage occurred in recent weeks washing out more bridges and roads in Hawke's Bay and Tairāwhiti and flooding of already flood damaged homes. The dramatic damage suffered by the horticultural industry from Cyclone Gabrielle on 14 February remains largely unrepaired. With the ever increasing impacts of climate change, local and national government are now considering mechanisms to remove housing and farming operations from areas at high risk due to flooding and landslips. A managed retreat from certain coastal areas at risk from sea level rise may also be necessary.
- The Reserve Bank of New Zealand (RBNZ) held the official cash rate (OCR) at 5.5% at its review on the 12 July citing easing inflation pressures due to declining global growth. New Zealand's inflation is largely imported from our trading partners. Confirmation of the trend and a possible reason behind the RBNZ's caution is the upcoming July 19 release of the June 2023 quarter CPI. Consensus Economics June 2023 report forecasts an inflation rate of 5.4% for 2023 for New Zealand easing to 2.8% for 2024. New Zealand's economic growth forecasts by the same agency suggest a low 0.6% GDP growth for 2023 increasing modestly to 1.5% for 2024.
- One bright spot on an otherwise sobering outlook was the concluding of a comprehensive free trade agreement with the European Union on the 9th July although this is yet to be ratified by each countries parliaments. This will save New Zealand hundreds of millions of dollars a year in export tariffs to the EU which is New Zealand's fourth largest trading partner. New Zealand is seeking to diversify its trade partners and reduce its over-dependence on China given the increasing tensions appearing in the Asia Pacific.
- After rejecting the Climate Change Commission's recommendations, the government announced on 19 June 2023, its intention to amend the Emissions Trading Scheme (ETS). Four proposed options for amending the ETS as well as three options for redesigning the permanent forest category were presented for consultation. The proposed options will 1) either aim to increase the New Zealand Unit (NZU) prices through adjusting the NZU supply and demand (options 1 and 2), or 2) decrease the NZU demand from removal activities on the secondary carbon market (options 3 and 4). In addition, the government is seeking to either exclude exotic forest from the permanent category or apply stringent restrictions. The proposed amendments are under consultation with the final decision delayed until after the general election in October 2023. This imposes a high level of uncertainty around the development path of the New Zealand carbon market, resulting in the spot price plummeting (NZD 38.25 as at 12 July 2023) which is likely to continue in the short-term.
- The sale of Timberlab's shares to Red Stag Group was completed in early July finally settling the purchase and integration of the company's Glulam and LVL/CLT machining operations into the wider Red Stag Group. The initial purchase began in August 2022. Red Stag Group operates the Southern Hemisphere's largest sawmill at Rotorua which is combined with secondary processing including frame and truss manufacture and a large CLT plant.
- The China market for forest products remains depressed with log prices falling to their lowest level since 2015. CFR A-grade log prices for June fell to USD 100-USD 105/JAS m³, down USD 10-15/JAS m³ from the previous month. Export volumes as at May 2023 held up at around 2.1 million m³/month but are expected to have fallen in June. Despite the dire market conditions, New Zealand's market share of the China softwood log market increased to nearly 60% as at April 2023 according to figures published in the China Bulletin. Although the NZD weakened against the USD during May and early June and shipping freight rates also fell, this was insufficient to offset the fall in CFR prices and in some regions, returns are insufficient to cover production costs. This is

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leading to an exodus of harvesting crews from the industry which will seriously constrain future production capacity.

China/Asia

- China's Gross Domestic Product (GDP) expanded at a faster-than-expected rate of 4.5% in 2023 Q1. This marks the highest growth rate since 2022 Q1 when the economy grew by 4.8%. After China abandoned its "zero-COVID" policy at the end of 2022, COVID infections quickly peaked, and the economy entered a period of fast recovery. Industrial output rose by 3.9% and year-to-date Q1 fixed asset investment increased by 5.1% compared to the previous year.
- Real estate investment continued to decline, however, and growth in both manufacturing supply and demand softened in April. Signs of a weakening rebound were visible in March as the foundation for economic recovery remained unstable. Moving forward, economic growth will still rely heavily on a boost in domestic demand, particularly an improvement in household consumption.
- From January to May 2023, investment in real estate development totaled CNY 4 570 billion, a year-on-year decline of 7%. Investment in residential buildings was down 6.4%. China's massive property sector is still struggling to turn around despite signs of recovery earlier this year.
- China's economy shows further signs of weakness as its manufacturing sector contracted for the third straight month through June, raising concerns about the government's efforts to stimulate growth. Official statistics from China's National Bureau of Statistics reveal that both the manufacturing and nonmanufacturing sectors experienced declining new orders in June, while employment also declined across the board, with a notable impact on young people facing a worsening job shortage.
- Economists warn that China's long-term growth potential is at risk due to mounting challenges, including high youth unemployment, a heavy debt burden, and a brief rebound in the struggling real-estate market. Moreover, persistent political tensions have led more manufacturers to diversify their supply chains, potentially diminishing China's status as the world's primary factory floor.
- China's log imports were lower for the first five months in 2023 by 2.8% at 11.8 million m³ compared to the same period one year ago. New Zealand had a 57% market share with 6.7 million m³, followed by Germany (1.8 million m³) and Poland (0.61 million m³). Both Germany and Poland export spruce bark beetle-killed logs.
- Lumber imports into China were higher by 14.9% (to 7.76 million m³) in the first five 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	4 767 400 m ³	+7.5%
— Canada	578 045 m ³	-4.7%
— Sweden	475 698 m ³	+92%
— Finland	429 157 m ³	+15%
— Germany	423 501 m ³	+87%
— Belarus	357 522 m ³	+97%
- The China market continues to hold high lumber inventories at ports. With the slow take-aways at ocean ports, and in combination of increasing Russian and European exports, this situation has caused Chinese prices to ease further.

Europe

- The European Organisation of the Sawmill Industry (EOS) reported a 13.7% decrease in sawn-softwood consumption in 2022, falling to 58.7 million m³ due to economic uncertainty and a construction slowdown. Despite these challenges, only a 1.7% decline is expected in 2023. Meanwhile, sawn-softwood production dropped by 4% in 2022, with a further 2.3% decrease anticipated for 2023. Despite these declines, the political push to increase wood use in construction is expected to positively impact the market in the coming years. An



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update on these figures will be provided at the International Softwood Conference 2023 in Vienna on 11 October, co-organized by EOS and the European Timber Federation (ETTF).

- According to provisional figures from the Federal Statistics Office (Destatis), Germany saw a decrease of 6.0% in the production of sawn softwood and planed products in the fourth quarter of 2022, totaling 6.2 million m³. The output for rough-sawn goods declined by 3.9% to 4.9 million m³ while planed products dropped by 13.5% to 1.2 million m³. This decline in output corresponds to a slowdown in business activity for rough-sawn sawnwood and planed products in Europe, as witnessed in the second quarter's performance.
- According to EUWID, Central European beech sawmills significantly reduced prices in May and June 2023. Trimmed sawnwood saw decreases of up to 15% and squared timber dropped by 20%, predominantly affecting lower grades. This resulted in a price range for trimmed beech sawnwood, from EUR 615-780/m³ for 26 mm superior grade to EUR 935-1 390/m³ for the premium assortments. Untrimmed beech sawnwood and squared timber have also witnessed similar price declines.
- According to the Swedish Forest Industries Federation (Skogsindustrierna), Swedish sawn-softwood and planed-product exports in April 2023 remained consistent with the previous year's figures at 1.1 million m³. However, there was a mixed regional performance: while exports within Europe and to Asia (but China) fell by 7% (to 687 600 m³) and 16% (to 110 800 m³) respectively, growth was noted in exports to Africa (+2%), the Middle East (+50%), and North America (+87%). Notable increases were also seen in exports to the Baltic states (+79%) and China (+45%), contrasting with a decrease in exports to Japan (-50%). As for the assortments, while planed-product exports declined by 6% to 546 000 m³, exports of rough-sawn pine and spruce sawnwood grew by 14% and 27% respectively.
- Log prices have continued to increase in the Nordics since the first quarter of this year. The historical trend of stable wood prices in Finland has changed. Lacking import volumes from Russia not only reduced supply but impacted on pricing structure, i.e. narrowing the price difference between pulpwood and sawlogs. In Sweden, the wood markets have also experienced historical high price increases and an equalization of pulpwood prices across the country. In some regions, the pulpwood prices have increased by 70-100% in only one year's time.
- In addition to the fact that a quantity of woodchips imported from Russia to Finland has been lost, it is especially the demand for energy wood that is pushing up log prices. In some parts of Sweden, energy wood prices are, if not on parity, at least reaching similar levels to pulp log prices. However, the price variations are very large regionally. In the southeastern parts of Finland, the high pulp log prices have triggered mill shutdowns, e.g. the announced closure of Stora Enso's pulp mill in Sunila.
- In the beginning of the year, markets looked a little brighter for the sawmills in the Nordics, which were able to start reducing inventories and push through some cautious price increases. Production and capacity utilization continued at reasonable levels until April when the market situation began to cool down again. The underlying demand was still supported by the activity of the construction industry despite the drop in the renovation market and prices after some exceptionally good years. Now the professional market is also weakening, which causes the consumption of wood products to experience further downward pressure. Now basically all Nordic producers are signaling tighter demand and price pressure. Combined with high log prices, several sawmills in the Nordics will extend their summer breaks and temporarily curtail their production until getting better signals from the markets.
- The prices of market pulp also declined notably during the spring, mainly driven by the destocking of Chinese buyers. There are some indications that this destocking may be over, i.e. the price of Shanghai futures started to increase in May. Prices for South American BHKP settled at USD 480-510/t last month, following an increase of USD 30/t initiated by Suzano. Other producers will follow. The market conditions for long fiber sulfate pulp started to stabilize in June. Prices for BSKP have climbed to a level of USD 650-660/t. We are likely approaching some kind of bottom, but any immediate notable price increases are not anticipated. In a historical comparison, pulp prices are still on quite a high level.
- The EU Deforestation-free Regulation (EUDR, 2023/1115) entered into force as of the 29th of June 2023, supplanting the prior EU Timber Trade Regulation (EUTR, 995/2010). It is expected to act as a significant step in combating climate change and biodiversity loss. This regulation mandates that key commodities, including

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timber and agricultural products, placed on the EU market or exported, must not contribute to deforestation or forest degradation. This law is applicable to areas that were forested as of 31 December 2020. Businesses trading in these commodities must carry out rigorous due diligence to ensure the products meet the legislation of the production country, adhere to human rights, and don't contribute to deforestation. These new laws will come into effect following a transition period of 18 to 24 months for most businesses, with a slightly extended timeframe for smaller enterprises. Notably, the laws apply to products both inside and outside the EU. These new regulations are expected to encourage trade and generate opportunities for businesses adhering to sustainable practices worldwide. More information about this regulation can be found on the official [European Legislation website](#).

- A recent video published by the European Forest Institute (EFI), titled “Spring Forest: The EU Forest Strategy and the European Green Deal”, discussed the significance of the EU Forest Strategy in the context of the European Green Deal. It notably highlights the importance of trust in forestry and the pivotal role of forest owners in achieving the goals. With improvement in dialogue between high-level policymakers and the EU's goals. The discussion also underscores the necessity for a systematic approach to sharing scientific knowledge with forest practitioners and owners. This would allow decision-makers and policymakers to base their decisions on robust scientific evidence. The video can be viewed at the following [link](#).
- From 17 July 2023 until 30 September 2026, the European Commission's new regulation 2023/1312 has established strict guidelines for importing oak roundwood from the USA. It aims to prevent the introduction of the oak wilt disease caused by the *Bretziella fagacearum* pathogen. Measures include specific shipping periods, mandatory fumigation, plant inspections, immediate processing or wet depot storage, and incineration of residues. This follows the absence of phytosanitary regulations from 2021 to 2022, which led to a substantial decrease in oak imports to about a third of the 2020 figures. Spain is noted as the largest EU recipient of these imports.
- A recent scientific paper, “How does management affect soil C sequestration and greenhouse gas fluxes in boreal and temperate forests? – A review”, by Raisa Mäkipää et al. provides a comprehensive review of how different forest management practices impact soil carbon (C) stocks and greenhouse gas (GHG) emissions. The authors found that these impacts vary significantly depending on the specific management practice and type of land. For instance, intensive timber harvesting can reduce soil C stock, while high stocking density and fertilization can increase it. The paper also highlights the importance of understanding these effects for developing effective forest-based climate change mitigation strategies. The full paper can be accessed [here](#).
- The Bavarian regional forestry institute (LWF) and the Baden-Wuerttemberg forest research institute (FVA) have reported a significant increase in bark-beetle swarming activity in 2023. The high temperatures have accelerated beetle development, and catch figures from monitoring operations are very high, indicating a high risk of acute infestation of standing trees. There are also increasing reports of bark-beetle damage to areas of Douglas-fir and pine rejuvenation.
- Recently it was reported that the duty-free quota for softwood plywood imports into the EU-27 has been significantly reduced, with the remainder of the quota more than halved compared to the last update on 24 May. The quota was reopened on 8 June 2023 after an accounting error led to the quota being listed as full on 22 May, prompting the European Commission's Directorate-General for Taxation and Customs Union to close the quota for two weeks. As of mid-June, only 9% of the total 482 648 m³ quota remained available for duty-free imports.
- Meanwhile, the duty-free quota for softwood plywood imports into Great Britain and Northern Ireland is being depleted at a slightly slower pace than the EU quota. As of 13 June, 82% of this year's total quota of 201 500 m³ had been allocated duty-free status, leaving 36 887 m³ still available for duty-free imports.

Russia

- In 2022, the log harvest volume decreased by 13.5% compared to 2021 and totaled 194.6 million m³.
- In 2023 Q1 Russian lumber exports fell 20.9 % year-over-year to 4.5 million m³ from 5.7 million m³ in 2022 Q1. “Friendly countries” to Russia increased lumber imports from Russia by 6.6% in 2023 Q1 to 4.25 million m³.



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“Unfriendly countries” in 2023 Q1 reduced the import volume of lumber from Russia by 6.4 times, year-over-year, to 271 600 m³. Deliveries to the EU stopped, Japan cut back imports by 65 700 m³, the US by 15 500 m³, South Korea by 13 600 m³, and Singapore by 12 000 m³.

- In total, Russian lumber exports in 2023 Q1 went to 40 destinations, mainly eastward. The primary shipments of lumber went to 15 destinations in the countries of Central and East Asia as well as the Middle East.
- Russian businesses have managed to readjust logistics and find new counterparties on an expedited basis. The partial reduction of phytosanitary restrictions in China again allowed timber producers to restore the flow of goods with their main trading partner. In 2023 Q1, China and Uzbekistan accounted for more than 74% of all Russian lumber exports as compared to only 56% one year earlier. China’s share in the volume of Russian shipments of lumber increased from 48.6% to 63.6%. Uzbekistan is the second largest purchaser of Russian lumber (479 100 m³) with a share of 10.6%.
- Roundwood exports fell 2.7 times in January-March 2023 to 586 000 m³. This was mainly prompted by the restriction on exports of unprocessed softwood and valuable timber as of January 1, 2022. Exports of roundwood remain mainly in the segment of birch timber and 87% of this volume goes to China.
- For the first four months of 2023, changes in production relative to the 2022 are as follows (WhatWood):
 - Sawn timber: -5.5%
 - Plywood: -3.4%
 - Particleboard/OSB: -6.7%
 - Fiberboard/MDF: +12.3%
 - Wood Pulp: -8.2%
 - Paper and P-Board -1%
 - Wood Pellets: -0.8%

North America

- Since the middle of 2022, there are several key factors that continue to negatively influence the US lumber market and demand. These include, high existing and new house prices coupled with a low housing inventory, low builder and consumer confidence, rising home builder cancellations, etc. Interest and mortgage rates in the US and Canada continue to increase to fight stubborn inflation and are a major cause of the housing slowdown due to affordability issues that, in turn, have negatively impacted US lumber demand.
- US housing starts were 1.434 million units (Seasonally Adjusted Annual Rate, SAAR) in June, a drop of 8% from 1.559 million units in May. Year-to-date housing starts in 2023 are 15.9% lower than during the same time in 2022. Building permits for privately-owned housing units decreased to 1.429 million units (SAAR) in June, down 4% from May and 7.8% lower year-over-year. Housing completions were down 3% month-over-month to 1.468 million units but 6% higher year-over-year. The National Association of Home Builders Housing Market Index increased for the sixth consecutive month in June, up to 55. Builders reported improved indices for present single family sales and for the next six months.
- According to the June 2023 Housing Forecast by Fannie Mae, housing starts totaled 1.553 million units for 2022, but will drop considerably to 1.308 million units in 2023 and decline further to 1.233 million units in 2024. Other forecasts are not so pessimistic, an average of three other major economic groups is 1.372 million units for 2023 and 1.423 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 continue to put pressure on home prices and sales. Median home prices had been on the rise and finally began to decline at -1.0% year-over-year in March 2023 and were down -3.1% year-over-year by May 2023, according to data from the National Association of Realtors. Market evidence points toward continued slow home sales, with transaction volume down -20.4% and days-on-market up from 16 to 18 in May 2023 year-over-year. These trends would adversely impact lumber and panel markets in 2023, perhaps into 2024.

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- The remodeling market sentiment edged lower in the second quarter of 2023. However, the demand for remodeling is holding up despite higher borrowing costs and prices. The remodeling market is experiencing multiple tailwinds which is supporting this demand, including low housing inventory (especially for existing homes), aging housing stock, increased prevalence for employees to work-from-home (WFH), and high levels of equity for existing homeowners. Even after the slight decrease in Q1, the Remodeling Market Index (RMI) remains in positive territory and consistent with NAHB's forecast that the remodeling sector will grow in 2023, albeit at a slower pace than in 2022.
- US softwood lumber production for the first four months of 2023 was lower by 2.4% (to 12.40 billion BF; 19.75 million m³, net) as compared to the first four months in 2022. US West lumber production was lower by 9.5% (to 4.40 billion bf) while southern yellow pine (SYP) production was up 2.4% (to 7.44 billion BF).
- Canada's lumber output was lower by 8.6% (6.89 billion BF; 11.0 million m³, net) in the first four months of 2023 vs. the same period in 2022. BC production was down by a whopping 16.8% (to 2.42 billion BF). Mill curtailments were ongoing in the first quarter and into the second quarter due to low lumber prices that were up 10% to 25% below breakeven costs. The rest of Canada's production in Q1 was lower by 3.5% (to 4.48 billion BF).
- The BC lumber industry is facing further reductions in the timber harvest due to a multitude of government forest policies (old-growth protection policies; caribou habitat protection; landscape level planning; a target to protect 30% of the land base by 2030 (from the current 20%); First Nation tenure transfers from companies, and more). As well, there continues to be timber losses from the mountain pine beetle as well as outbreaks of the spruce and Douglas-fir bark beetles.
- So far in 2023, the area of forest land burnt by wildfires in BC has just exceeded the record area burnt in 2018 and it is only mid-July. In Alberta and Quebec, year-to-date forest fires are already 10 to 20 times higher than the average of the last ten years. Forest fires will continue to reduce the annual allowable cut in Canada's forests.
- North American lumber output in the first four months of 2023 totaled 19.29 billion BF, a decline of 4.7% or -0.95 billion BF. Only the US South recorded an increase in production during the first quarter 2023.
- While housing starts and repair and remodeling activity improved modestly in the first half of 2023, North American lumber prices remained subdued through mid-June, with the benchmark W-SPF 2x4 #2&Better, random lengths (FOB BC mill) price averaging only USD 370/thousand board feet (MBF) in the first half of 2023. W-SFP Prices have increased through mid-July and were USD 440/MBF and rising, but SYP #2&Better lumber prices have slumped by 26% (USD 135/MBF) to USD 385/MBF since mid-April.
- The massive and unusual premium held by southern yellow pine (FOB mill) to W-SPF (FOB mill) earlier in the first quarter of 2023 has shrank from USD 175/MBF to USD 46/MBF by the beginning of June, or close to the historic spread of USD 50-75/MBF. However this premium of SYP to W-SPF has further eroded into the middle of July and reversed when W-SPF commanded a USD 55/MBF premium to SYP. This USD 200+/MBF swing in comparative pricing to products that can normally substitute for each other is quite remarkable. Market forces will eventually reestablish a more normal spread. What this should mean is that the price variance between the two products will need to move back to a more normal spread of USD 50-75/MBF. Either W-SPF prices decrease (which would create negative BC sawmill margins), or SYP prices need to increase a lot.
- Canadian lumber exports to the US were 8% lower through the first four months of 2023 as compared to 2022. BC shipments were 22% lower YTD and Alberta was 5% lower. This was partially offset by increased exports from Quebec (+15%) and Ontario (+13%).
- BC lumber exports to Japan through April 2023 were 39% lower than a year earlier. Japan J-grade prices continue to slump in parallel to US lumber prices.
- BC lumber exports to China increased 52% through April 2023 as Chinese market prices were at least similar to the weak US lumber prices from March to June.
- Offshore imports to the US were higher by 15% through the first four months of 2023 as compared to the previous year (Timber-Online). Year-to-date shipments from the five top exporting countries were higher from

Forest Sector Outlook

Germany (+43%), Sweden (+7%) and Romania (+22%), partially offset by decreased volumes from Austria (-19%) and Brazil (-7%).

- Pulpwood prices vary by region and season. In the Lake States region, Q2 hardwood roundwood prices decreased further, pushing them down -2% year-over-year. Softwood roundwood prices decreased more dramatically in the Lake States dropping them down to -4% year-over-year. In the South-Central region, average prices slipped from last quarter and hardwood roundwood prices were down -8% year-over-year while softwood roundwood prices were down -3% year-over-year. South Atlantic region prices also slipped lower for hardwood and softwood roundwood from last quarter and were down 7% and 10% respectively year-over-year. Northeast region prices remained flat from last quarter but remained up 4% for hardwood roundwood and 16% for softwood roundwood year-over-year. Lastly, Pacific Northwest softwood roundwood prices were flat compared to last quarter (revised) but still up 9% year-over-year at USD 49 per green ton.
- Pacific Northwest Douglas-fir average log prices declined in Q1 2023 but regional variations were seen in Q2 2023. 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 were down around 11% for the first five months of 2023 in total. Meanwhile average whitewood prices had declined YTD 2023, with the most pronounced drop in the Puget Sound region at -14.5% and least in the Willamette Valley at -3.6%.
- US Q2 2023 large timberland transactions were extremely limited, with few major transactions closing. Most notably, Manulife sold 19 000 acres east of Mount Shasta, in northern California (McCloud Forest) to New Forests for an undisclosed amount. More details regarding Q1 2023 closings became available. FIA sold 5 127 acres in North Carolina to Roseburg for USD 2 098 per acre. Molpus sold 13 250 acres in Texas (Tristar) for an undisclosed amount. PotlatchDetlic sold 6 939 combined acres, mostly in the US South, for about USD 2 568 per acre. Weyerhaeuser sold 12 600 acres in the US South (Marion) to Schulenburg for about USD 2 016 per acre. Weyerhaeuser sold a combined 8 150 acres in Q1 (25% South/75% West) for about USD 5 135 per acre to undisclosed buyers. There were some pending transactions, such as 93 200 acres in four blocks by Conservation Resources (Verde) said to be acquired by Manulife, 13 000 acres in two blocks in south Georgia and north Florida by FIA (Osceola) reported to be acquired by Langsdale, and 15 500 acres of fee and lease acres in Louisiana by Molpus (Tristar) evidently in progress to an undisclosed buyer. A few others, mostly southern pine plantations, were awaiting transaction results. Further out, there were few large timberlands on the market, besides a Campbell Global offering of 57 156 acres (Olympic Tree Farm) in Clallam County, Washington, and an FIA offering of 22 000 acres (Coles Creek) in two blocks of pine plantation in Mississippi. Markets appeared to be responding to a shift in demand towards A and B grade forestlands.
- US hardwood lumber prices started falling sharply during the summer of 2022 and continue to slide. Supply has become more balanced with demand, but as housing completions and spending on residential construction housing have recently increased, hardwood utilization has not. Reasons for this lag include more imports in the supply chain, which were brought in to meet excess demand, and inventories built up by domestic manufacturers. The midyear estimate of hardwood lumber utilization is down 15% from 2022 with annualized total consumption of 6.575 billion board feet. Pallet utilization was down 20%, cabinet utilization was down 20%, and exports were down 17%. Annualized exports through April were at their lowest level since 2010. Total volume to China is down to 1.175 BBF in 2023 as compared to 1.452 BBF in 2022, but so is volume to Canada and Europe. Then, as a percentage of total exports, volume to China is higher at 41.2% in 2023 as compared to 32.7% in 2022. Buyers in Asia have stated that they are stocking up on lumber while available at lower prices and because they anticipate shortages later in 2023.

South America

Brazil

Brazilian Forest Industry – Context and Trends

According to the IBGE, the Jan-May production of the following forest-related industrial segments varied year-over-year as follows:

- Lumber: -21.4%
- Wood products, cork, and woven, except furniture: -10.6%
- Pulp: +0,5%
- Paper, cardboard, paperboard, and corrugated cardboard packaging: +1.5%
- Pig iron and ferroalloys:+1.8%

The common yearning of industry and forestry companies regarding their end markets can be summarized in one sentence: we hope the second half of 2023 passes as quickly as the first.

The solid wood industry wonders if the recent resumption of external demand is here to stay or if it is a one-off (inventory replacement). In a preventive way, all industrial segments have been reducing production via work-shift reduction. However, BM2C believes the US growing housing demand associated with low stocks will support the sector's revival to the extent that the US central bank successfully addresses its current economic challenges (high base interest rates and inflation).

The pulp and paper industries are using their significant bargaining power to cope with the challenging context they are experiencing. Upstream of the production chain, the focus has been on ensuring wood supply at low cost, which should only be achieved effectively in the middle term. And downstream, the focus is on balancing supply and demand, a task much more complicated due to the market/industry structure.

Concerning the charcoal industry, short-term expectations are downbeat due to the negative context of the national and international steel market. Time series analyses show a significant correlation between the charcoal/wood price with pig iron exports and the hydric regime.

Regarding the composite panel industry, the recent increase in production capacity aggravates the downward context of the domestic and foreign markets. Reducing the wood cost has been the primary strategy to offset the sales drop.

Wood Prices – Context and Trends

Major industrial clusters are experiencing a significant hit in wood prices. Wood consumers have been seeking substantial price reductions to cope with falling demand and revenues, and suppliers in keeping the price gains made from 2020 to 2022 to address the recent significant forestry capex increase and compensate for the low wood production profitability over the previous decade.

Concerning pulpwood, the new supply strategy of the industries (guarantee of supply) should result in proper prices in the long term for industry-forest investor partnerships. However, independent suppliers will probably face small and high-risk spot markets.

In the case of sawlogs, suppliers and consumers are still looking at how the wood balance will look in the midterm to price wood. In the case of Pine wood, the margins for price reductions or increases appear limited. In the case of Eucalyptus wood, price increases are likely to come via industrial growth and diversification, bringing them closer to Pinus wood prices.

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Eucalypts Exports and Wood Prices

Exports of Eucalyptus manufactured products fell significantly in Q2 2023 compared to the same period in 2022.

- Pulp: -8% QTY and -17% USD
- Chips: -29% QTY and -10% USD
- Logs: -10% QTY and -42% USD
- Charcoal via green pig iron: -10% QTY and -35% USD

In the half-to-half-year comparison, exports of pulp (+2% QTY and -1% USD) and chips (-2%/+6%) practically remained in balance, while those of logs (-24%/-25%) and charcoal via green pig iron (-2%/-22%) fluctuated negatively.

Pine Exports and Wood Prices

As for Pinus exports, the performance in Q2 2023 was significantly lower compared to the same quarter of the previous year, mainly in terms of revenues:

- Lumber: -2% QTY and -22% USD
- Moulding: -8% QTY and -37% USD
- Plywood: -25% QTY and -45% USD
- Wood logs: -63% QTY and -42% USD

In the half-to-half-year comparison, all exports had a negative performance, lumber with -4% QTY and -23% USD, Moulding -10% QTY and -35% USD, offset -20% QTY and -41% USD, and logs -72% QTY and -63% USD.

The decrease against Q2 2022 was significant in quantity (-46% QTY) and revenues (-59% USD). The H1 2023 dip in performance against the previous-year's H1 performance was also outstanding (-47% QTY and -57% USD).

Uruguay

- UPM inaugurated its Paso de los Toros pulp mill in the department of Durazno in Central Uruguay on 6 June 2023. The inauguration event was attended by the President of Uruguay Luis Lacalle Pou, several ministers, and representatives of other stakeholders who have participated in the successful execution of UPM's growth project in Uruguay. This is a 2.1 million tonne greenfield eucalyptus pulp mill. Besides the mill, the total investment of USD 3.47 billion also includes a pulp terminal in the port of Montevideo as well as investments in local facilities in Paso de los Toros town. The railroad connecting the UPM mill to the port of Montevideo is still under construction and will probably be finished by the end of 2023.
- UPM1, UPM2 and the Montes del Plata (MdP) pulp mills are consuming eucalyptus log from all forest regions of Uruguay. As of Q2 2023, MdP "imported" 2.65 million m³ and UPM1 2.39 million m³ of logs, 10% and 1% more than for the same period of 2022 respectively. UPM2 consumed 1.76 million m³ of log, approximately 300.000 m³/month, nearly half of the monthly volume that this mill will consume at full capacity.
- As of Q2 2023, eucalyptus woodchip exports were close to 630 000 m³, 7% more than for the same period of 2022. The first twelve 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. During 2023, Uruguay's *Eucalyptus globulus* woodchips exports will increase compared with 2022, Portugal being the main destination.
- Pine log exports started at 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). Average FOB price for Q1 2023 is around USD 78/JAS m³. During Q2, exports dramatically slowed down, with a total exported volume of 0.160 million JAS m³.



Forest Sector Outlook

- Uruguay's Q1 2023 eucalypt sawlog exports started at a slower pace than in the same period of 2022. The average FOB price for Q1 2023 is around USD 145/m³ for logs 30+ SED, showing values 8% higher than in the same period of 2022. As of Q2 2023, total exported volume of these logs reached 80.000 m³, a volume 30% lower than the same period of 2022, but still with higher prices. The main destinations of these logs are China, Vietnam, and Malaysia.
- Only one plywood company in Uruguay is still operational. As of Q2 2023, exported volume has already reached 122 000 m³, a similar volume as that exported for the same period of 2022. Average prices as of Q2 2023 are around USD 335/m³, 30% 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 the last month of Q2 2023.
- Three new plywood mills were announced to be installed in the Center east region, two in the city of Treinta y Tres (Department of Treinta y Tres) and one in the city of Melo (department of Cerro Largo). Of the two in Treinta y Tres, one is a small one that will consume around 20 000 m³ of logs per year, starting in Q4 2023, and the second one will consume around 120 000 m³/year of logs (starting in 2026, owned by Garnica). The one in Melo, is going to be built by Lumin. This is a larger plywood plant that will consume around 350 000 m³ of logs per year. The start of production is planned for mid-2026.

Africa

- Sub-Saharan countries have recently faced exchange rate pressures to devalue their currencies. External factors such as lower risk appetite in global markets and interest rate hikes in the United States led investors to rather focus on safer and higher paying US treasury bonds. According to the IMF, Sub-Saharan African countries have recorded an average of 8% depreciation of their currencies since January 2022. The Nigerian naira currency has dropped as much as 36% on the official market in June 2023, while the Zimbabwe dollar lost 26% of its value in May 2023 and is still losing value despite government attempts at stabilizing the currency.
- Kenyan President, William Ruto lifted a five-year tree-logging ban in June 2023. The logging ban initiated in 2018 to reduce deforestation has had a devastating effect on the country's wood products industry. Lifting the ban will hopefully spur the growth of the timber industry and create new jobs. The Kenya Forest Service also announced in June 2023 the opening of 4 000 vacant positions to be filled by unskilled nursery attendants. Successful recruits will work in the 300 KFS tree nurseries nationwide and will be tasked with the propagation and maintenance of seedlings.
- In May 2023, President Yoweri Museveni signed a ban on the cutting of trees for charcoal production in an attempt to reduce illegal logging in Uganda. At the end of June, the president ordered the cancellation of all licenses and permits, issued to individuals and companies, for the cutting of trees from forests. The ban, hailed by many as an effort to preserve forests, is creating uncertainty within Uganda's thriving forest products sector.
- Over the next five years, the African Development Bank will invest in cross-border electricity interconnections to strengthen connectivity and increase access to reliable and competitively priced electricity in the East Africa region. The pipeline for regional operations during the first three years of the East Africa Regional Integration Strategy Paper (2023-2025) is estimated at USD 1.3 billion. This could result in an increased demand for transmission poles in the region.
- Criterion Africa Partners (CAP) and FMO, the Dutch entrepreneurial development bank, completed an investment of up to USD 20 million each in Merensky Timber in South Africa. The investment will support a total investment package of up to USD 64 million, which will allow Merensky Timber to unbundle from Hans Merensky Holdings. The investment will allow Merensky Timber to capitalize on a range of growth opportunities in forestry, biomass energy, downstream processing, and nature-based solutions to mitigate climate change.

Forest Sector Outlook

- Total woodchip exports through the ports of Richards Bay and Durban in South Africa, for January to May 2023, was 773 000 Mt which is substantially less than for the same period in 2022 when 1 million Mt of woodchips were exported. Pulp exports have increased slightly from about 384 000 ADt to 421 000 ADt when comparing the period January to May 2022 to the same period in 2023.

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