

Impacts of the COVID-19 pandemic on tropical timber production

The COVID-19 pandemic will severely affect global and tropical timber production in 2020. Production levels in tropical producer regions may recover by 2026 to reach pre-crisis production volumes. Latin America will be most affected by the crisis, followed by Southeast Asia.

The COVID-19 pandemic has caused a unique shock to the global economy, resulting in a drop of global gross domestic product (GDP) of 4.4% in 2020 (IMF 2020). The crisis will likely affect timber production in 2020 and may fundamentally change global supply and value chains in the post-pandemic period. Although the impact on timber production cannot yet be quantified, the drop will likely be similar to previous economic shocks. The highest reduction in timber production in recent decades occurred as a result of the global financial crisis in 2008–2009, when global industrial roundwood production fell by more than 6% for two consecutive years.

On the other hand, global timber production recovered within three to five years to reach pre-crisis production levels after the economic downturns in 2001 and 2009 (Figure 1). Nonetheless, history also shows longer recovery periods—for example, the recovery phase of global timber production took more than ten years after the collapse of the socialist economies in the 1990s. Whether the pandemic will induce similar structural changes remains unclear.

Considering that the world economy will recover by the end of 2021 (according to the pessimistic scenario of the International Monetary Fund), it seems reasonable to assume that global timber production will reach pre-crisis levels by 2026. This will affect global timber consumption forecasts. The pre-crisis configuration of the Global Forest Production Model (GFPM) projected a global demand for industrial roundwood (IRW) of about 2.9 billion m³ by 2050. Factoring in a pandemic-induced 5-year recovery period, the consumption volume in 2050 would be about 2.6 billion m³ (Figure 1). The annual growth rate of IRW production will drop from 1.1% to 0.9% over the period 2020–2050, getting close to the growth rate of 0.7% in the 30-year period from 1989 to 2019.

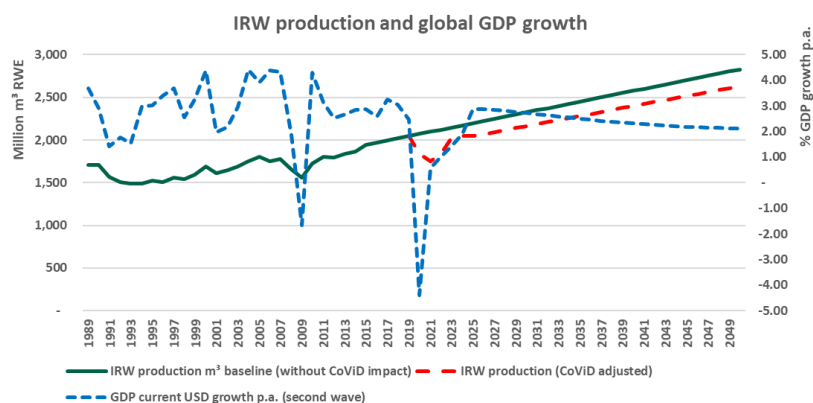


Figure 1. Actual and projected global industrial roundwood production and gross domestic product growth, 1989–2050

Sources: FAOSTAT (baseline years 1989–2019); GFPM (baseline years 2020–2050); World Bank indicators (GDP years 1989–2019); IMF 2020 (GDP 2020 to 2050); own elaboration for COVID-19-adjusted IRW production.

Timber production in the tropical producer regions of sub-Saharan Africa (SSA), Latin America and the Caribbean (LAC) and Southeast Asia (SEA) have reacted differently to past global economic shocks and depressions. Since the early 2000s, however, regional economies have become increasingly connected to global economic development, and regional GDPs now more or less follow global GDP fluctuations (Figure 2).

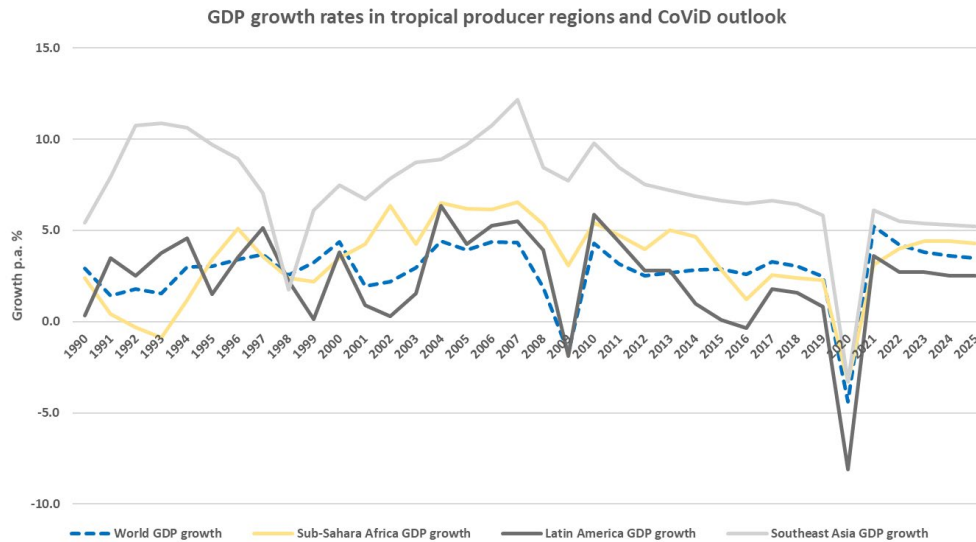


Figure 2. World GDP and regional GDP growth rates, 1989–2050

Sources: World Bank indicators (GDP growth for years 1989–2019); IMF 2020 (GDP growth for 2020–2050)

In the current crisis, all three regions will likely experience massive recessions (IMF 2020). LAC will be affected hardest, with a negative GDP of more than 8% in 2020. Regional GDP growth in SSA and SEA will be about -3% each, which is less than the global average of -4.4%.

Timber production in SSA has been largely disconnected from global economic developments. SSA timber production has barely reacted to global GDP fluctuations, although this may vary for individual countries with a high dependency on wood product exports.

On the other hand, timber production in LAC and SEA has reacted more clearly to GDP fluctuations in the past, including in 2001 and 2009, although timber production in both regions has usually recovered to pre-crisis levels within three years. Notably, in both regions, IRW production showed impressive growth rates in the years after the economic shocks, temporarily overcompensating for losses incurred during the crises.

The impact of the current crisis on tropical forest sectors may be stronger than in previous events due to the magnitude of the economic shock and the greater integration of tropical forest sectors in global value chains. Considering this, it may take longer for timber production in tropical producer regions to reach pre-crisis levels. Figure 3 shows projected timber production assuming a conservative 5-year recovery phase for LAC and SEA, with SSA largely unaffected by the crisis. Note that the production drop in 2020 in Figure 3 is only to visualize the impact of the depression—an exact quantification of production losses is not yet possible.

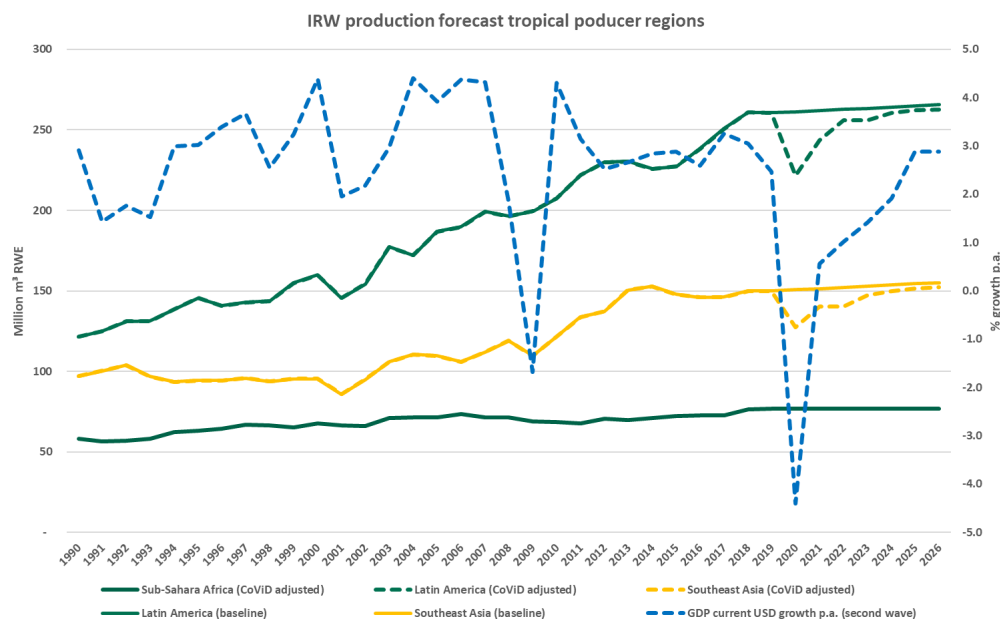


Figure 3. Industrial roundwood production in tropical producer regions and world GDP growth, 1989–2050

Sources: FAOSTAT (baseline years 1989–2019); GFPM (baseline years 2020–2050); World Bank indicators (GDP years 1989–2019); IMF 2020 (GDP 2020–2050); own elaboration for COVID-adjusted IRW production.

Tropical producer regions have reacted differently to economic shocks in the past. Experiences from previous crises may help in understanding the factors and conditions that will determine the impact of the current crisis and those measures that will support the economic resilience of the tropical forest sectors in the decades to come.

Export orientation is a risk factor if market-places are not diversified.

Exports from tropical producer regions were more seriously affected than domestic consumption by the 2008–2009 global financial crisis (Figure 4). Sawnwood and wood-based panel exports were most affected, but woodpulp exports also reacted to the GDP downturn.

The drop in sawnwood and wood-based panel exports from LAC and SEA was massive in 2009 and 2010, and exports have not yet recovered to pre-crisis levels. A major export destination of LAC had been the North American construction sector, which was “ground zero” of that crisis and has only slowly recovered. SEA’s recovery phase was more positive, but export destinations, mainly in East Asia, have been increasingly served by other suppliers in the aftermath of the crisis, challenging the competitiveness of SEA production.

In sum, exports of primary wood products are highly vulnerable to economic shocks, and the focus and strong export dependency on unprocessed wood products should be re-considered to enhance forest-sector resilience in the future. In general, the recovery potential of tropical timber exports will depend on the recovery of key export markets. There are positive signs in China and other Asian markets, but other important markets are now fighting second waves of the pandemic.

Domestic consumption and value adding are stabilizing factors.

Domestic consumption has proven to be a stabilizer for tropical timber production in previous economic crises. The production of sawnwood and wood-based panels recovered relatively quickly in tropical producer regions after the 2008–2009 crisis, with the exception of sawnwood consumption in LAC (Figure 4).

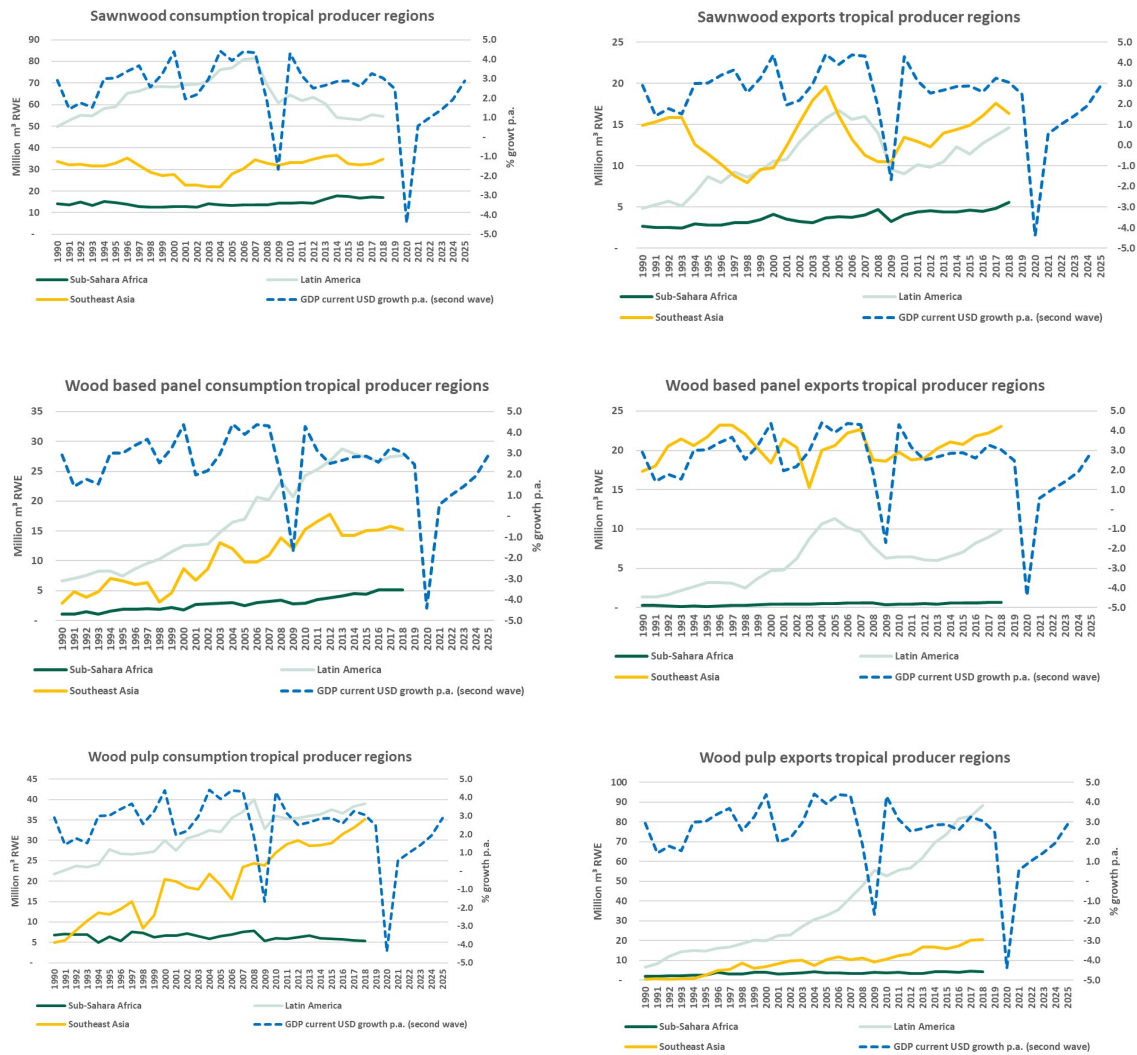


Figure 4. Consumption and exports of primary wood products in tropical producer regions and World GDP growth, 1990–2025

Sources: FAOSTAT (baseline years, 1989–2019); World Bank indicators (GDP, 1989–2019); IMF 2020 (GDP, 2020–25)

Domestic demand, driven by strong population growth, is most likely the reason for stable consumption volumes and fast recovery in SSA, although consumption levels are comparatively low (e.g. Cameroon, see Figure 5). The stabilizing effect of domestic consumption in SEA is due to the use by manufacturing industries of sawnwood and panels as inputs for secondary wood processing. Exports of the derived products have proved to be rather stable against GDP fluctuations (e.g. in Viet Nam and Indonesia, see Figure 6).

LAC’s long-term and SEA’s temporary severe reduction in sawnwood consumption were partly caused by structural changes in both production and demand. Although market demand in tropical producer regions is increasingly drawing on standardized and engineered sawnwood products, the sawmilling industry in the tropics still faces innovation and investment bottlenecks. Further, the substitution of sawnwood by wood-based panels and non-wood products is negatively affecting sawnwood consumption patterns. The 2008–2009 global financial crisis had a catalytic effect on sawnwood industries in tropical regions, resulting in a reduction in production capacity (in LAC), although the overall consumption of wood products was stable (e.g. in Peru, Figure 5). This trend will most likely continue in the current crisis.

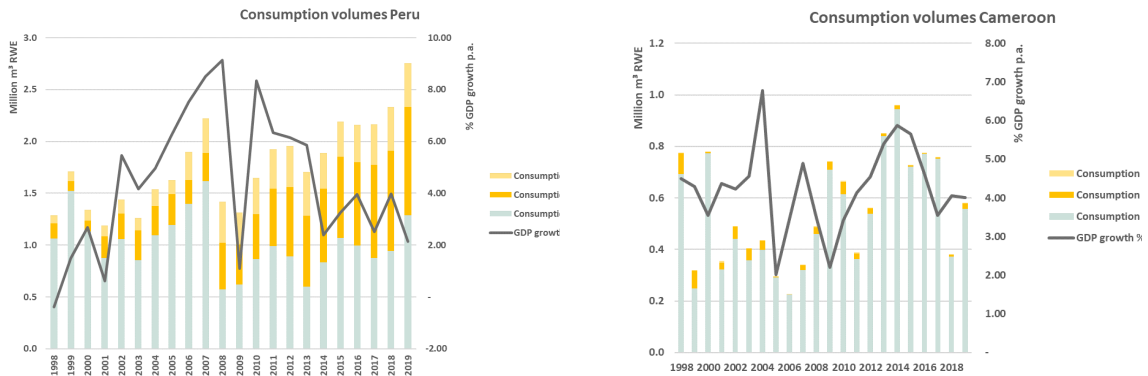


Figure 5. Consumption of primary wood products and national GDP in Peru and Cameroon, 1998–2019

Sources: FAOSTAT and World Bank Indicators

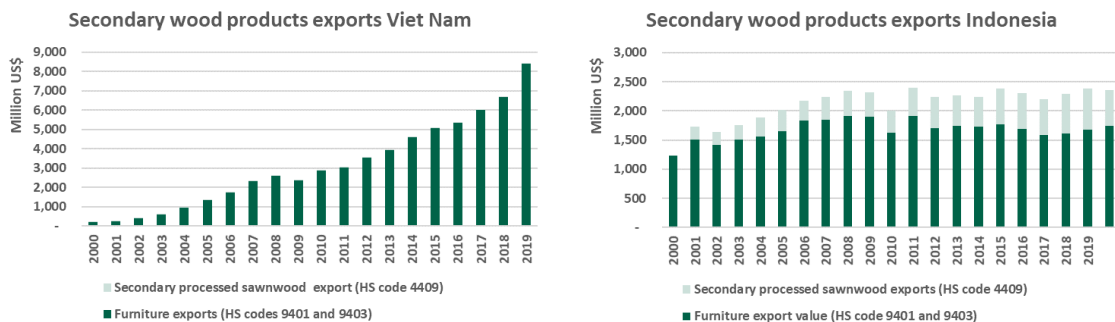


Figure 6. Exports of secondary wood products from Viet Nam and Indonesia, 2000–2019

Source: UN Comtrade database

Pulp and paper will continue to drive timber production in tropical producer regions.

In the past, woodpulp production has been widely robust against economic shocks (Figure 4). Tropical producer regions have maintained stable growth trajectories in recent crises. During the current pandemic, woodpulp production may become a “winner” due to a temporary increase in mail-order packaging and increased demand for hygienic tissue. The woodpulp market is highly internationalized, with opportunities to diversify markets. The consumption and export of woodpulp may stabilize timber production in tropical producer regions and help get it back on pre-crisis growth trajectories. However, given that vast volumes of woodpulp are exported from tropical regions without further processing, these regions may miss opportunities for enhanced value adding.

Participation of the forest sector in post-pandemic reconstruction remains unclear.

As of October 2020, governments had announced USD 11.8 trillion in fiscal stimulus in response to the COVID-19 health and economic crisis, which is more than three times the amount spent in response to the 2008–2009 global financial crisis. Although most of this spending will prioritize healthcare and direct support to the unemployed, about 30% of stimulus packages is being spent in sectors that may affect the consumption of wood (e.g. construction, energy and manufacturing) (WRI, 2020). Most of this volume has been pledged in industrialized economies. Nonetheless, some tropical producers, such as Brazil and Indonesia, have also put in place decent stimulus and reconstruction packages.

The question is: Will the impact of stimulus spending be positive or negative for tropical timber production? A lot will depend on how reconstruction programmes and economic stimuli trigger wood consumption in construction and manufacturing in tropical producer regions. While the reconstruction programmes in the European Union and China are aimed at stimulating green growth, such signals are not yet being given in emerging economies. The concepts of nature-based solutions and build-back-better are being widely discussed but need to be capitalized and operationalized.

Another important aspect to consider is the impact of the crisis on enterprises in the tropical forest sectors. Given the lengthiness of the crisis, an increasing number of enterprises are in danger of bankruptcy, but a pool of viable enterprises will be important for ensuring post-pandemic market growth and the implementation of stimulus packages. Thus, short-term support measures such as access to working capital loans, tax stimuli and reduced-hour compensations are of crucial importance.