COVID-19 Impacts on the Forest Sector: 2020 and Beyond

by Ed Pepke, Ph.D.; Kathryn Fernholz; Jim Bowyer; Gloria Erickson; Harry Groot; Mark Jacobs; and Ashley McFarland
Published by Dovetail Partners December2020

Note: This report includes information that was current as of November 2020. As the COVID-19 pandemic was still evolving at the time of publication, the authors recognize that new information, insights, and impacts will continue to emerge.

Executive summary

The COVID-19 pandemic has had significant, often devastating, impacts on all aspects of global societies and economies. It has resulted in challenges to the forest sector's ability to operate and longer-term challenges to economic viability, market recovery, supply chains, and labor conditions. At the same time, the pandemic has highlighted global needs for forest products. Wood and wood-fiber are essential for personal protective equipment, construction materials, sanitary needs, packaging, energy, and a variety of other uses.

Prior to this crisis, the forest sector and forest products were recognized for their diverse and substantial benefits. The pandemic has furthered this understanding, and there is an opportunity for the post-COVID economy to embrace the benefits of wood as an element of strategies to Build Back Better. Forest products provide climate friendly building products, effective substitutes for fossil fuels, and an alternative to non-renewable materials. The sector supports the livelihood of forest-dependent communities concurrent with managing forests for diverse environmental co-benefits and to meet the needs of present and future generations.

Various governments have responded to the crisis of the pandemic differently. Some nations designated forest industries as essential businesses and allowed them to continue operating. Others stopped business operations, including forest-based industries, to quell the spread of the COVID-19 virus. Many countries' governments provided some financial support to closed businesses and furloughed employees. In some instances, paper mills producing sanitary grades and packaging paper expanded production and ran continually to meet the demand for these products. Other forest sector companies fell victim to declining markets when households and businesses significantly shifted their spending.

This report begins with a background on the pandemic before discussing the effects on the forest sector in 2020. At the time of writing, November 2020, the first wave of the pandemic was still raging in many countries while other countries were experiencing a second wave following a reopening of economies in the late spring and summer of 2020. The report considers future impacts and opportunities.

COVID-19 pandemic background

For decades, human activity near and in forests has been linked to the transmission of zoonotic (animal-to-human) diseases. Commercial wildlife trafficking, deforestation and changing land-use patterns through the expansion of people and livestock into forests increases contact with animal-borne viruses, creating

conditions for the emergence of new diseases in humans.[1] In just such a scenario, the virus which causes COVID-19 leapt from animals to humans, ultimately becoming rapidly transmissible between people. First identified in China in 2019 the disease spread quickly, evolving within months from an epidemic in China to a global pandemic in early 2020. The economic and social costs of the disease rose exponentially as countries drastically curtailed social and business interaction in efforts to control spread of the virus. Globally, as of November 2020, over 55 million people have been recorded as confirmed cases of COVID-19 and over 1.3 million have died from the disease.[2] At the time of writing, cases and deaths were increasing.

Early to mid-2020 impacts, with a US focus

The COVID-19 pandemic has had significant, often devastating, impacts on all aspects of global societies and economies. When governments first ordered people to stay home to reduce the spread of the disease in late-2019 in China and in early to mid-2020 in many other countries, economies seemed to nearly stop. Domestically, the US recorded the largest decline in Gross Domestic Product (GDP) ever with a 32.9% drop in the second quarter as unemployment jumped to nearly 15%.[3] Some impacts from the virus and the government response were immediate, including public health impacts, business closures, supply chain interruptions and shifts in demand for products and services.

During the crisis, forest products have remained critical to the front-line response. Once forest product companies were deemed essential and able to continue operations, some manufacturers were able to shift their capacities to make health care products, including surgical masks, medical gowns, face shields, partitions, and other materials that were often donated to the medical industry and other essential workers.[4] Forest-derived products were recognized for being essential components of personal protective equipment (PPE) and other critical supplies including hygiene and sanitary products and ethanol for sanitizers.

In April 2020, PricewaterhouseCoopers (PwC) conducted a survey of 305 forest, paper, and packaging companies in the US and Mexico about the effects of the COVID pandemic.[5] Respondents underscored the impact of the pandemic on their enterprises, identifying the following concerns (in decreasing order of importance):

---

[1] For further discussion of the link between the health of people and the health of animals in our shared environment, see One Health, a global initiative with local, regional and national partners (https://www.who.int/news-room/q-a-detail/one-health). The Centers for Disease Control and Prevention (CDC) is the leading US based partner, see: https://www.cdc.gov/onehealth/index.html

[2] https://covid19.who.int/. Accessed 19 November 2020.

[3] https://www.usatoday.com/in-depth/news/2020/07/26/covid-economy-unemployment-report-6-charts/5471545002/

[4] For example, see: https://www.vsjf.org/2020/04/29/from-cutting-boards-to-cutting-face-shields-jk-adams-covid-19/ ; https://www.woodworkingnetwork.com/news/woodworking-industry-news/all-woodworking-companies-who-now-make-healthcare-products ,

[5] PwC. https://www.pwc.com/us/en/library/covid-19/coronavirus-impacts-forest-paper-packaging.html

1. Financial impact, including effects on operations, liquidity, and capital resources
2. Potential global recession
3. Effects on workforce and reduction in productivity
4. Decrease in consumer confidence reducing consumption
5. Supply chain disruptions
6. Difficulties with funding
7. Insufficient information to for decision making
8. Impacts on tax, trade, or immigration.

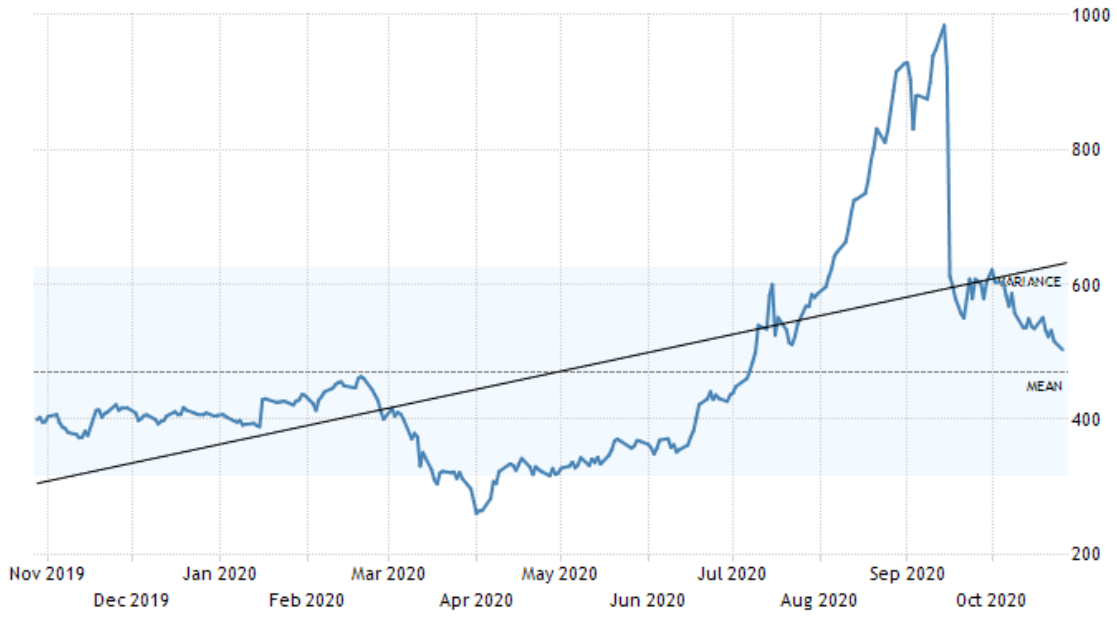
The COVID-19 pandemic has affected companies' financial orientation and management approaches. Companies needed to carefully consider their cash, liquidity, and working capital strategies and capabilities during a period when national and global economies were in turmoil. Normal accounting, financial record keeping, and business planning and operations were disrupted during the economic shutdowns. Many companies have relied on remote working arrangements for employees and use of virtual meeting and information sharing technologies. Major companies in the US and other countries have announced plans to continue remote working arrangements well into 2021 or even permanently for some employees.[6] These shifts are predicted to impact commercial and residential real estate markets which may have direct and indirect impacts on the forest sector for building materials and furnishings. The impacts of the short-term and longer-term changes in basic business operations are yet to be fully understood.

The pandemic has challenged the pulp and paper industry to respond to accelerated changes in product demands and disrupted global supply chains. Near term positive growth in demand is associated with a number of paper products such as personal hygiene paper, food packaging, corrugated paper, paperboard (cardboard) and medical specialty papers. On the other hand, demand for printing and writing paper grades, which have experienced a long trajectory of decline with digitization, saw demand further decline for glossy paper for advertising and newsprint and for office papers. With government mandated confinement, consumers bought online, driving packaging paper demand. For example, China's imports of packaging paper, much of which was subsequently exported to protect products in shipment, increased 125% in the first nine months of 2020.

Collapse of demand in the construction sector, combined with labor restrictions, resulted in a downturn of solid wood markets during country quarantines. But when economies re-opened, shortages of wood-based raw materials led to price spikes. In North America, lumber prices rose to a record level of USD 1000 per 1000 board feet in September 2020, before coming back near the historical average a month later (Figure 1).

[6] For examples, see: https://www.wsj.com/articles/for-many-remote-work-is-becoming-permanent-in-wake-of-coronavirus-11590100453 ; https://www.forbes.com/sites/jasonwingard/2020/05/22/remote-working-how-to-succeed-over-the-long-term/?sh=771034745469 ; https://www.flexjobs.com/blog/post/companies-switching-remote-work-long-term/

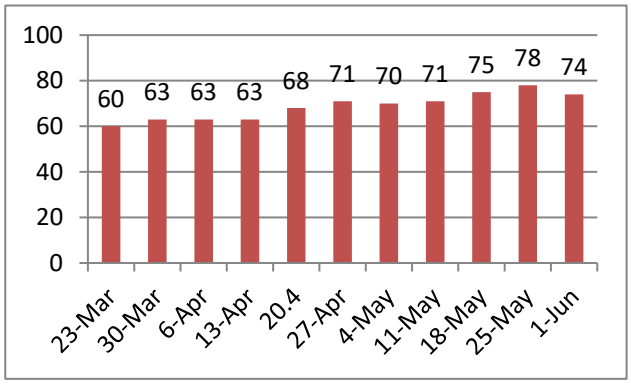
Figure 1. United States sawn softwood prices, November 2019 – October 2020 in USD per 1000 board feet



Source: Trading Economics, 2020.[7]

The transition to working and learning from home had several unexpected impacts in North America and Europe, including a sharp increase in home renovation which together with supply chain disruptions, spiked DIY material prices (Figure 2).

Figure 2. Percent share of US homeowners starting a repair or remodeling project

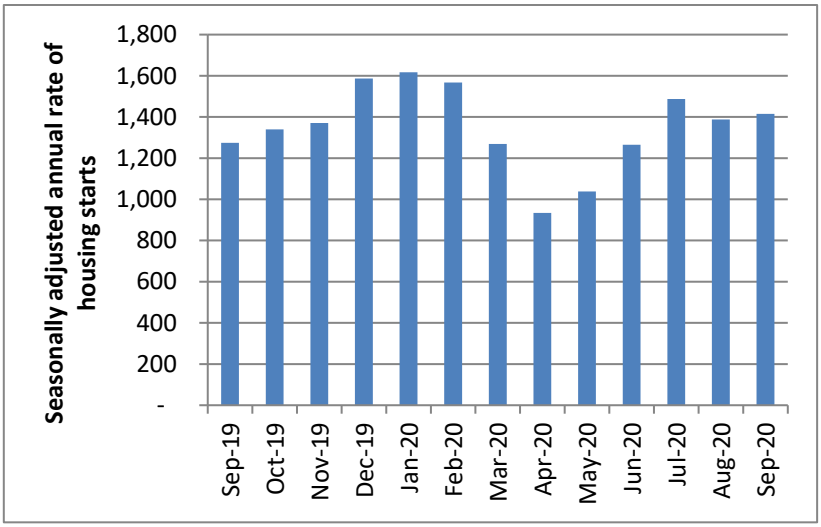


Source: The Virginia Tech—USDA Forest Service Housing Commentary, October 2020.

Existing home sales and new housing construction in the US also rose dramatically (Figure 3).[8] Adding to the impact, forest fires during the summer of 2020 in the western US and hurricane damage to southeastern US forests resulted in record high futures prices for sawn softwood.

[7] Trading Economics. Accessed 26 October 2020. https://tradingeconomics.com/commodity/lumber
[8] The Virginia Tech—USDA Forest Service Housing Commentary, August 2020. https://www.woodproducts.sbio.vt.edu/housing-report/casa-2020-08a-august-main.pdf

Figure 3. United States housing construction starts



Source: US Census Bureau, October 2020.

Disruptions due to the pandemic exposed the vulnerability of existing supply and demand structures, creating a lack of business confidence. Manufacturers quickly identified the weak links in their supply chains, for example when suppliers were in locations heavily affected by COVID-19 and had to shut down due to confirmed cases among their employees. For some businesses, the breaks in supply provided hard lessons, highlighting a need for consideration of greater inventories of purchased supplies and perhaps greater diversification of suppliers. Business practices in recent years have emphasized just-in-time inventory management systems to improve cash flow, but as the pandemic has revealed, this approach is also vulnerable to price shocks and supply disruptions.

Early to mid-2020 impacts, looking globally

The Food and Agriculture Organization of the United Nations (FAO) Sustainable Wood for a Sustainable World (SW4SW) network conducted a global survey in June 2020 on the impacts of COVID-19 on wood value chains and recovery measures.[9] The survey found that all segments of the wood value chain experienced closures of commercial outlets and reduction of salaries. Silvicultural activities (e.g., logging and forestry) were negatively impacted, as was international trade in wood and forest products. Lost revenues translated into reduced support for sustainable forest management (SFM), forest governance and law enforcement, certification, and tenure rights. While segments of the pulp and paper industry, including packaging, tissues, and paper towels, benefitted from strong global demand, other segments, such as printing and writing paper, were hard hit by shifts in business operations.

The International Tropical Timber Organization (ITTO) conducted a study on the "Impact of COVID-19 pandemic on tropical timber producers" through April 2020.[10] The survey of eight countries, which together account for over half of the tropical timber trade, found that responses to the spread of the virus varied considerably. Some tropical countries ordered lockdowns which stopped production. The countries surveyed

[9] FAO. 2020. Policy brief: Impacts of COVID-19 on wood value chains and forest sector responses. Results from a global survey. http://www.fao.org/forestry/sustainable-wood/97384/en/
[10] https://www.itto.int/top_stories/2020/05/08/survey_shines_light_on_covid_19_impacts_on_tropical_timber_sector/

are dependent on export demand for their products, and as partner countries went into confinement, their imports halted. The report stated that "these are extraordinary times and extraordinary measures will be needed to reverse job losses and rebuild revenue flows in much of the tropical timber sector."

The International Labour Organization (ILO) also recently studied the "Impact of COVID-19 on the forest sector".[11] The effects on public health caused "unprecedented disruption to economies and labor markets, including for workers and enterprises in the forest sector." ILO states that the sector provides work to over 54 million people worldwide, and that 1.5 billion people depend on forests for food, income, jobs, energy, and shelter. According to the ILO policy brief, many jobs have been lost in the forest sector, and many more remain at risk as companies adjust to reduced demand for wood and some paper products. During the pandemic, forest sector jobs had higher than normal occupational safety and health risks, in part because workers in some situations live and work in close quarters.

According to the ILO study cited above, indigenous, and tribal people in forest-dependent communities have also experienced greater vulnerability from COVID-19 on top of the consequences of climate change, deforestation, forest fires and illegal logging. These populations already often experience poorer health care access than other populations, putting them at greater risk of negative outcomes due to COVID-19. Their health was also compromised by regulations inspired by the pandemic to ban the hunting and consumption of wild meat; the effect was a decrease in necessary protein levels.[12]

At an October 2020 FAO webinar on the "Experience from forest communities of COVID-19 impacts" speakers discussed the critical roles that forest dependent communities play in addressing COVID-19.[13] Forest-based communities have the key roles of being custodians of their forests by monitoring deforestation and degradation, maintaining livelihoods and food supplies, and production of legal, sustainable forest products.

Future impacts and opportunities

At the end of 2020, the COVID-19 crisis is still far from over. Forest industries and other businesses continue to work in an environment of uncertainty. According to RISI Fastmarkets, the forest products industry will not simply snap back to the pre-COVID period, but "instead it will adapt and morph towards a 'next normal'".[14] To succeed in this unprecedented business environment, "forest, paper and packaging companies need to remain focused and nimble to navigate this crisis."[15]

Building back better involves rebuilding together and rebuilding based on experiences and information from this pandemic. "Build Back Better" is a common theme arising from the pandemic. In the case of the forest sector, this situation can provide an opportunity for reconsideration and long-term planning. The economic and social changes resulting from the pandemic provide an opportunity to holistically consider and plan the recovery and the future of the forest sector. In many instances, forest industries may have a comparative advantage to other sectors if commitments to Build Back Better include increased attention to addressing climate change, reducing fossil fuel use, and finding alternatives to non-biodegradable plastics and other non-

[11] International Labour Organization. 2020. Impact of COVID-19 on the forest sector. https://www.ilo.org/sector/Resources/publications/WCMS_749497/lang--en/index.htm
[12] International Labour Organization. 2020. Impact of COVID-19 on the forest sector. https://www.ilo.org/sector/Resources/publications/WCMS_749497/lang--en/index.htm
[13] FAO webinar on "Experience from forest communities of COVID-19 impacts". http://www.fao.org/in-action/eu-fao-flegt-programme/news-events/news-details/en/c/1318120/
[14] RISI Fast markets. https://insights.risiinfo.com/ufpm-report-2020/index.html
[15] PwC. https://www.pwc.com/us/en/library/covid-19/coronavirus-impacts-forest-paper-packaging.html

renewable materials. From upgrading pulp and paper mills to biorefineries valuable biomaterials and biochemical can replace more carbon-intensive materials, chemicals, and energy sources for a more resilient post-COVID condition. Forest products can step into these opportunities as a renewable resource, with lower embodied fossil energy, greater co-benefits from an environmental perspective, and potential for energy capture at the end of product life. All these attributes can elevate the role of forest products in initiatives to Build Back Better with a more circular economy.[16]

The pandemic crisis period could also enable addressing sustainable forest-related consumption and production patterns and contribute to greater achievement of the UN Sustainable Development Goals (SDGs). The SDGs are 17 goals with 169 targets that all 191 UN Member States have agreed to try to achieve by the year 2030. The SDGs address multiple facets of sustainability, including critical social, economic, and environmental considerations.[17] The challenges created by the pandemic should also be leveraged to improve collaboration and partnerships, addressed in SDG 17.[18] The diversity of the forest sector, including varied forest ecosystems, products, services, economics, and viewpoints, makes the sector resilient but also vulnerable to fragmented approaches and divisiveness. Collaboration and coordination, especially in communications and messaging, can be one way to address this challenge.

Throughout the COVID-19 pandemic the forest sector has been recognized as essential. As a result, there is some increased awareness by consumers, policy makers and businesses of the importance of the sector for society's health and resiliency. The forest sector can respond to the impacts of the pandemic in constructive and innovative ways.[19] Through these actions, the forest sector can become a bright light in challenging times and ensure the world is more resilient, secure, and better prepared.

---

[16] For further discussion of the role of the forest sector in the circular economy, see the Dovetail Report on the topic: https://www.dovetailinc.org/portfoliodetail.php?id=5e6f6fff64cb3

[17] For further discussion of the UN SDGs and their application to the forest sector, see the Dovetail Report on the topic: https://www.dovetailinc.org/portfoliodetail.php?id=5e260bba17982

[18] https://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-17-partnerships-for-the-goals.html

[19] For additional perspective on effective post-COVID strategies with sustainable forest products, see the statement by the Advisory Committee on Sustainable Forest-based Industries (ACSFI), available at: http://www.fao.org/forestry/industries/97646/en/

To respond to the impacts of COVID-19 the forest sector needs:

- To champion domestic and international policies that enable forests to sustainably meet growing demand for forest services and renewable forest products.
- To support policies and further demonstrate practices for responsible consumption of forest products and innovative product development. Sustainable management of forests for all their resources go hand in hand with sustainable production and consumption of forest products.
- To advocate for the circular forest-based bioeconomy as an enormous advantage for the sector and a valuable model for other sectors.
- To benefit from data sharing and access to high quality information that is essential to business, policy and consumer decision making. Improving data, its distribution and its access systems are part of building back better.
- To be part of coordinated multi-stakeholder actions on a global scale, with exceptional speed, to mitigate the risks of this unprecedented pandemic, and those of future pandemics. Organizational convening, engagement and consultations are needed.
- To make investments in business improvements, including business planning, technology enhancements, and strengthening business to business relationships as well as public-private partnerships to address risks and vulnerabilities identified during the pandemic.

For the forest sector to achieve its leadership role, society needs to more fully recognize the importance of its sustainability and governments need to provide policy support and incentives.[20] Communication strategies, information sharing, and policy initiatives are essential to building this awareness and support.

Bottom line

As tragic as the COVID-19 pandemic was as of mid- to late-2020, the situation has created not only a sense of urgency but also a unique opportunity to consider changes to existing systems and operations, and to plan for recovery and the future of the forest sector. "Build Back Better" is a common theme arising from the pandemic. In the case of the forest sector, this situation can provide an opportunity for a bit of rethinking, and repositioning as a leader in the new, post-COVID world.

[20] For an example of a policy platform for the future of the forest sector, see the Forest-Climate Working Group Policy Platform for the 117th Congress, available at: http://forestclimateworkinggroup.org/resource/forest-climate-working-group-policy-platform-for-116th-congress/

Additional Information and Resources

ATIBT.2020. COVID-19 analysis of the social and economic impact on the forest sector. https://www.atibt.org/wp-content/uploads/2020/08/REPUBLIC-OF-CONGO-COVID-19-Analysis-of-the-social-and-economic-impact-on-the-forest-sector-vEN-20200824-1.pdf

ATIBT. 2020. Impact of COVID-19 on timber trade. https://www.atibt.org/en/news/11461/impact-of-covid-19-on-timber-trade

Bioresources.com. 2020. COVID-19: Challenges and perspectives for the pulp and paper industry worldwide. https://bioresources.cnr.ncsu.edu/wp-content/uploads/2020/05/BioRes_15_3_4638_Liu_WLDS_Editorial_COVID-19_Challenges_Pulp_Paper_Industry_Worldwide_17465.pdf

COPACEL. 2020. Les propositions de l'industrie papetière concernant le plan de soutien à l'économie. http://www.copacel.fr/public/media/wysiwyg/files/COPACEL%20-%20Propositions%20plan%20de%20soutien%20%C3%A0%20l'%C3%A9conomie.pdf

CSR Wire. 2020. Opinion: How to address the impact of COVID-19 on global food systems. https://www.csrwire.com/press_releases/45767-opinion-how-to-address-the-impact-of-covid-19-on-global-food-systems

Dovetail Partners. 2019. An introduction to the circular economy: Opportunities for natural resources and the forest sector. https://dovetailinc.org/portfoliodetail.php?id=5e6f6fff64cb3

Dovetail Partners. June, 2020. The global forest sector and covid-19: Navigating a sustainable future in an economically and socially constrained world. Synthesis of an ACSFI webinar. http://www.fao.org/forestry/industries/97524/en/

Dovetail Partners. May, 2020. The global forest sector and covid-19: Navigating a sustainable future in an economically and socially constrained world. Synthesis of an ACSFI webinar. http://www.fao.org/forestry/news/97378/en/

Euractiv. 2020. The EU forest-based value chain, a strategic resource for a sustainable future. https://www.euractiv.com/section/energy-environment/opinion/the-eu-forest-based-value-chain-a-strategic-resource-for-a-sustainable-future/

European Sustainable Tropical Timber Coalition. 2020. COVID-19 crisis has multiple timber trade impacts. http://www.europeansttc.com/covid-19-crisis-has-multiple-timber-trade-impacts/

FAO. 2020. Committee on Forestry (COFO) webinar. The strategic way of integrating forestry into recovery support measures in response to the COVID-19 pandemic, build back better with forests. https://youtu.be/oaB_yT80w_4

FAO. 2020. Chairperson's summary report for COFO. COVID-19 Forestry Webinar Week. http://www.fao.org/about/meetings/cofo/covid-19-forestry-webinar-week/chairperson-summary-report/en/

FAO. 2020. COVID-19: Building back better with forests. https://soundcloud.com/unfao/covid-19-building-back-better-with-forests

FAO. 2020. Policy brief: Impacts of COVID-19 on wood value chains and forest sector responses. Results from a global survey. http://www.fao.org/forestry/sustainable-wood/97384/en/

FAO. 2020. The impacts of COVID-19 on the forest sector: How to respond? http://www.fao.org/3/ca8844en/CA8844EN.pdf

FAO. 2020. COVID-19 and the forest sector: Experience from forest communities of COVID-19 impacts. Webinar 28 October 2020. http://www.fao.org/in-action/eu-fao-flegt-programme/news-events/news-details/en/c/1318120/

Forest Products Association of Canada. 2020. Canada's forest sector: A pandemic recovery partner. A submission to the Canadian Industry Strategy Council.

Globe. 2020. How protecting forests and their communities can prevent the next outbreak. https://southeastasiaglobe.com/protecting-forests-and-their-communities-covid-19/

International Labour Organization. 2020. Impact of COVID-19 on the forest sector. https://www.ilo.org/sector/Resources/publications/WCMS_749497/lang--en/index.htm

ITTO. 2020. Impact of COVID-19 pandemic on tropical timber producers. https://www.itto.int/top_stories/2020/05/08/survey_shines_light_on_covid_19_impacts_on_tropical_timber_sector/

Minnesota Department of Natural Resources. 2020. Wood markets update. https://www.dnr.state.mn.us/

PricewaterhouseCoopers (PwC). 2020. COVID-19: What it means for forest, paper and packaging companies. https://www.pwc.com/us/en/library/covid-19/coronavirus-impacts-forest-paper-packaging.html

RECOFTC. 2020. Impact of COVID-19 on forest communities in Thailand. https://www.recoftc.org/publications/0000381

RISI Fastmarkets. 2020. Uncertainty in forest products markets: The risk of overlooking the forces driving the next normal. https://insights.risiinfo.com/ufpm-report-2020/index.html

Timberbiz. 2020. Malaysian timber industry moves quickly to push past COVID-19. https://www.timberbiz.com.au/malaysian-timber-industry-moves-quickly-to-push-past-covid-19/

Timber iQ. 2020. Summary of international timber trade effects of COVID-19. http://www.timberiq.co.za/2020/05/29/summary-of-international-timber-trade-effects-of-covid-19/

Trading Economics. 2020. United States lumber prices. https://tradingeconomics.com/commodity/lumber

US Census Bureau. 2020. New residential construction. https://www.census.gov/construction/nrc/index.html

The Virginia Tech—USDA Forest Service Housing Commentary. 2020. https://www.woodproducts.sbio.vt.edu/housing-report/casa-2020-08a-august-main.pdf

Wisconsin Public Radio. 2020. How the pandemic is tearing up the timber industry. https://www.wpr.org/how-pandemic-tearing-timber-industry

World Economic Forum. 2020. COVID action platform. https://www.weforum.org/platforms/covid-action-platform

World Economic Forum. 2020. Forest loss could make diseases like COVID-19 more likely, according to study. https://www.weforum.org/agenda/2020/04/forest-loss-diseases-covid19-coronavirus-deforestation-health/