CLIMATE ADVISERS

February 15, 2022

Alberta Securities Commission
Autorité des marchés financiers
British Columbia Securities Commission
Financial and Consumer Services Commission, New Brunswick
Financial and Consumer Affairs Authority of Saskatchewan
Manitoba Securities Commission
Nova Scotia Securities Commission
Nunavut Securities Office
Office of the Superintendent of Securities, Newfoundland and Labrador
Ontario Securities Commission
Office of the Superintendent of Securities, Northwest Territories
Office of the Yukon Superintendent of Securities
Superintendent of Securities, Department of Justice and Public Safety, Prince Edward Island

Grace Knakowski
Corporate Secretary
The Secretary Ontario Securities Commission
20 Queen Street West 22nd Floor, Box 55
Toronto, Ontario M5H 3S8

Dear Ms. Grace Knakowski:

Re: CSA Notice and Request for Comment, Proposed National Instrument 51-107 Disclosure of Climate-related Matters

Thank you for the opportunity to comment on proposed National Instrument 51-107 Disclosure of Climate-related Matters (NI 51-107) and its companion policy. Our organization strongly supports proposed National Instrument (NI) 51-107 and its alignment with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). We commend the CSA for its North American leadership on climate disclosure and ask that any climate related financial regulations explicitly cover all sectors in the Canadian economy and include all local, regional, and global climate risks.

This Comment is being submitted on behalf of Climate Advisers, a Washington, DC-based policy advocacy and technical assistance organization that advises companies and countries on climate risks and strategies to protect and enhance climate ambition. Our work includes a particular focus on forest conservation and sustainable land management globally, in order to prevent deforestation that is linked to trade in seven high-deforestation risk commodities (cattle, palm oil, soy, timber, natural rubber, cacao, and coffee).

Climate Advisers also advises financial institutions and performs sustainability risk analyses for banks, pension funds, and other investors. The leadership of Climate Advisers includes Canadian Peter Graham, Managing Director of Policy and Research, who specializes in forest and land issues. Mr. Graham formerly worked as a Senior Economist for the Canadian Forest Service in the Federal Department of Natural Resources, including as Canada's lead negotiator on forest issues under the UNFCCC and co-chair of negotiations (from 2009 to 2014) that culminated in the Warsaw Framework for REDD+.[1]

Through its work, Climate Advisers has become acutely aware of the lack of transparency in supply chains linked to deforestation and the challenges facing companies and investors seeking to reduce deforestation in their supply chains and investments. These challenges could be at least partially addressed by enhanced climate disclosure as is being proposed by the Canadian Securities Administrators (CSA). Thus, our organization strongly supports proposed National Instrument (NI) 51-107 and its alignment with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD).

However, we suggest several modifications to the proposed instrument so that disclosure pursuant to NI 51-107 would more effectively meet the needs of investors, while also encouraging thoughtful action by issuers to identify and address significant financial climate risks and opportunities in their operations and supply chains. To be specific, we suggest the following modifications to the proposed NI 51-107:

1. Disclosure of Scope 1, 2, and 3 emissions should be mandatory for all issuers, although disclosure according to scope 3 could be phased in according to the size of the company and the significance of scope 3 emissions to an industry's climate change risk profile, beginning with companies with over 40 percent of emissions generated in scope 3. This is particularly important in the forest, food, and land sector because scope 3 emissions represent the vast majority of industry emissions.
2. Issuers should be required to report on each of TCFD's categories of disclosure (climate governance, risk management, strategy, targets for emissions reductions, and metrics by which progress is being evaluated), rather than strategy, targets and metrics only being disclosed if material.
3. Issuers' NI 51-107 disclosure should be audited or otherwise assured by an independent third-party.
4. The CSA should mandate qualitative and quantitative industry-specific disclosures in sectors with outsized climate impacts and related environmental, social, and governance risks. Due to the high risks related to deforestation and the essential role of forests in mitigating climate change, NI 51-107 would be incomplete and ineffective in protecting investors without explicitly requiring disclosures for the forest, food, and land sector.

[1] United Nations Framework Convention on Climate Change, "Reducing emissions from deforestation and forest degradation in developing countries," https://redd.unfccc.int/

Our rationale for each of these modifications to NI 51-107 is discussed below. We start with a short discussion on the importance of forest protection and sustainable land management practices for meeting the ambitions of the Paris climate agreement and the financially significant risks posed by deforestation to investors and issuers.

Rationale for prioritizing forest, food, and land supply chains

Climate-related financial disclosures would be ineffective in protecting investors without specifically including supply chain emissions from the forest, food, and land sector due to the high risk of climate change impacts globally and the emissions-intensive nature of production. The forest, food, and land sector is responsible for almost a quarter of global greenhouse gas emissions, according to the IPCC.[2] Moreover, if activities in the pre- and post-production food systems such as processing, distribution, consumption, and food waste are included, the contribution to net anthropogenic global GHG from AFOLU emissions could be as high as 37 percent.[3]

Deforestation alone is responsible for 11 percent of global emissions, the majority of which are generated in tropical regions to cultivate commodities that play an important role in global supply chains. Up to 39 percent of greenhouse gas emissions from deforestation is estimated to result from international trade.[4] Tropical forests are important carbon sinks, with the ability to store as much CO2 equivalent in one kilometer as the annual electricity usage of about 19,000 Canadian homes.[5] [6] In this way, deforestation both contributes to global annual emissions and reduces our ability to offset emissions in the future as we move towards net zero emissions targets. In fact, 16 to 30 percent of the climate change mitigation necessary for limiting global emissions to between 1.5 and 2 degrees Celsius could come from protecting and restoring forests and natural ecosystems, equivalent to up to three-quarters of all renewable energy technologies' mitigation potential.[7]

Maintaining healthy forests and reforesting degraded forest land are critical to achieving the goals of the Paris agreement, and every IPCC pathway leading to average temperature increases of 1.5 degrees Celsius or less compared to pre-industrial temperatures is premised on no new deforestation after 2030.[8] At COP26 in Glasgow, over 142 countries, including major forested

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[2] Intergovernmental Panel on Climate Change, "Special report on climate change and land use," Summary for Policy Makers, A.3, p. 10, 2019, https://www.ipcc.ch/srccl.
[3] Id.
[4] Pendrill, Florence, U. Martin Persson, Javier Godar, Thomas Kastner, Daniel Moran, Sarah Schmidt, et al. (2019). Agricultural and forestry trade drives large share of tropical deforestation emissions. Global Environmental Change 56:1-10.https://doi.org/10.1016/j.gloenvcha.2019.03.002.
[5] Ceres, "The investor guide to deforestation and climate change," June 2020, "ceres.org/sites/default/files/reports/2020-06/Ceres%20Investor%20Guide%20FINAL%20June%2029.pdf"
[6] Natural Resources Canada, "Greenhouse Gas Equivalencies Calculator," https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/calculator/ghg-calculator.cfm#results
[7] Id. 5
[8] Id. 4, citing Rogelj, J., et al. (2018). Mitigation pathways compatible with 1.5°C in the context of sustainable development. https://www.ipcc.ch/sr15/chapter/chapter-2/.

nations Brazil, Canada, China, Indonesia, Russia, and the United States, committed to stopping deforestation.[9] As tropical deforestation is driven predominantly by the expansion of industrial agriculture, this agreement will have implications for costs and availability of commodities across supply chains. To illustrate the scale of financial impacts, sectors directly exposed to tropical commodity supply chain risk include food and beverage processing and production, automobile manufacturing, textiles, chemicals, pharmaceuticals, retail, food service, personal care products, print publishing, forestry, construction, energy and biofuels, and finance.[10]

The financial risks are particularly acute in seven commodity products – cattle, palm oil, soy, timber, natural rubber, cacao, and coffee -- which are responsible for over half of the deforestation associated with agriculture.[11] A CDP analysis of 187 companies potentially affected by climate and deforestation commodity risk found that nearly 25 percent of those companies' revenue depended on four commodities linked to deforestation: cattle, soy, timber, and palm oil.[12] In another CDP study, over 550 companies estimated the value of financial risks from deforestation at USD 53.1 billion, roughly eight times the cost of responding to deforestation risk.[13] Furthermore, roughly 60 percent of the greenhouse gas emissions generated from tropical deforestation take place in Indonesia (33 percent) and Brazil (27 percent).[14] As a result, investors in downstream companies along tropical commodity supply chains are exposed to extremely concentrated risk in only a small number of countries and commodities, but they do not currently have access to the information needed to mitigate that risk.

In addition to having an outsized impact on climate change through emissions and reducing future carbon storage capacity, these companies also have significant social risks, including:

1. Most deforestation in the developing world linked to internationally traded commodities is illegal (violates local law).[15]
2. Impacts to marginalized groups, labor violations, and illegal activity are often obscured by complex commodity supply chains, leaving investors unable to reliably assess exposure or alignment to personal/institutional values. In Brazil, alone, 55 companies received allegations of human rights abuses related to deforestation.[16]

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[9] Georgina Rannard & Francesca Gillett, BBC News, "COP26: World leaders promise to deforestation by 2030," Nov. 2, 2021.
[10] See Figure 1 in the Appendix for more information.
[11] CDP, "The Collective Effort to End Deforestation: A Pathway for Companies to Raise their Ambitions," p. 5, March 2021, https://cdp.net/en/forests.
[12] CDP, "Revenues in jeopardy as companies reliant on commodities linked to deforestation underestimate risk," December 2016, https://www.cdp.net/en/articles/media/press-release-revenues-in-jeopardy-as-companies-reliant-on-commodities-linked-to-deforestation-underestimate-risk
[13] CDP, "US$53 billion at risk from deforestation, yet only 1% of companies taking 'best practice' action," March 2021, https://www.cdp.net/en/articles/media/53-billion-at-risk-from-deforestation-yet-only-1-percent-of-companies-taking-best-practice-action
[14] Pendrill, Florence, U. Martin Persson, Javier Godar, Thomas Kastner, Daniel Moran, Sarah Schmidt, et al. 2019. Agri-cultural and forestry trade drives large share of tropical deforestation emissions. Global Environmental Change 56:1-10. https://doi.org/10.1016/j.gloenvcha.2019.03.002.
[15] Intergovernmental Panel on Climate Change, "Special report on climate change and land use," 2019, https://www.ipcc.ch/srccl/ 2 and connected to organized crime.
[16] Business and Human Rights Resource Center, " Brazil: NGO report alleges companies complicit in deforestation & human rights abuses in the Amazon," June 2019, https://www.business-humanrights.org/en/latest-news/brazil-ngo-report-alleges-companies-complicit-in-deforestation-human-rights-abuses-in-the-amazon/

3. Receding tropical forests have led to frequent land disputes between commodity producers and Indigenous People or traditional communities.
4. Land insecurities, along with illegal encroachments into indigenous territories, have heightened violence against environmental defenders. In 2020, Global Witness recorded 227 deaths among environmental defenders, 70 percent of which were related to protecting forested land.[17]
5. Loss of native lands risks a loss of indigenous culture, traditions, and knowledge. In one study in the particularly vulnerable Amazon region, Allen Blackman and Peter Veit found that Indigenous forest management reduced both deforestation and forest greenhouse gas emissions.[18]

These issues are particularly sensitive in Canada, where 70 percent of First Nations peoples live in or near forested land.[19] Given that stopping deforestation and land degradation is necessary to meet the goals of the Paris Agreement and the importance of forests to Indigenous cultures' livelihood and culture, companies and investors face transition and liability risks from failing to monitor, account for, and protect forested lands.

The Canadian financial sector has already called for increased corporate accountability to address material climate risks: in October 2021, 36 investors representing CAD 5.5 trillion in assets under management signed a letter encouraging companies to disclose emissions, set targets, and track progress towards them.[20] Due to the significant contributions of agriculture, forestry, and other land practices to ameliorating or intensifying anthropogenic contributions to climate change, clearer identification of these risks in required disclosures would bring about benefits for investors, issuers, Indigenous communities, and the environment. The extent that clearer risk disclosure will have these benefits may depend on the rigor of that disclosure. We turn to an analysis of the impact pathways of forest, food, and land risk before outlining our suggested modifications of proposed NI 51-107, which we contend may well increase the rigor of disclosure, and thus the utility of it to investors.

Impact pathways of forest, food, and land risk

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[17] Global Witness, "Last line of defense," September 2021, https://www.globalwitness.org/en/campaigns/environmental-activists/last-line-defence/

[18] Allen Blackman & Peter Veit, "Titled Amazon Indigenous Communities Cut Forest Carbon Emissions," Ecological Economics, Vol. 153, pp. 56-67 (2018). Blackman and Veit found statistically significant reductions in deforestation and forest GHG emissions from Indigenous community management of forests in Bolivia, Brazil, and Columbia in a study based on data from 2001-2013; no statistically significant reductions were observed in Ecuador from Indigenous community management.

[19] Canadian Council of Forest Ministers, Indigenous Peoples and Forests, https://www.ccfm.org/canadians-and-communities/indigenous-peoples-and-forests/

[20] Responsible Investment Association, "Canadian investors representing $5.5 trillion send an unprecedented call for increase climate accountability in the corporate sector," October 2021, https://www.riacanada.ca/news/canadian-investors-call-for-increased-climate-accountability-in-corporate-sector/

There is growing evidence that forest-related risks are negatively affecting the financial sector. Investors have seen material impact from company connections to deforestation. Companies that operate in tropical forest commodities have experienced suspensions from sustainability organizations, loss of buyers for their products, divestment from investors, substantial reputation risk, and loss in equity value. Consumer-facing downstream companies that source from tropical commodity supply chains contend with reputation risks, changing consumer demand, and increasing risk of supply chain disruptions. Below is a brief summary of the types of climate change risks in forest, food, and land, according to TCFD classifications.

Physical risk:

1. Deforestation exacerbates the physical risk from climate change by reducing the capacity of carbon sinks, eroding fertile soil, changing local precipitation patterns, and increasing the likelihood of more extreme weather events. These changes are, in turn, likely to lead to lower agricultural yields and stranded assets.[21]
2. North America is reliant on ecosystem services from healthy intact tropical forests to regulate precipitation patterns vital to agricultural production, inspire medical breakthroughs, prevent mass migration, and curb the emergence of infectious diseases like Covid-19, and much more.[22]

Transition risk:

1. Policy and legal risks result from government policy changes, litigation, or law enforcement.
    a. The COP26 agreement that resulted in pledges from over 100 countries to halt deforestation by 2030 is likely to accelerate conservation efforts for high conservation value and high carbon stock land.[23] For example, in Indonesia, as much as 76 percent of unplanted palm oil concessions may experience legal or economic stranding by 2040 due to conservation efforts in line with international pledges and the country's Nationally Determined Contribution. [24]
    b. Orbitas Finance estimates that conservation efforts globally will result in a 52 percent decrease in the availability of agricultural land, which would increase the cost of agricultural expansion and, in turn, global commodity prices.[25]
    c. International momentum on carbon pricing is estimated to further drive up operating costs of emissions-intensive agricultural producers by as much as 14

[21] Niamh McCarthy and Matthew Piotrowski, "Climate-Related Forest, Food, and Land Risks Threaten US Financial Stability," Climate Advisers, January 2021, https://www.climateadvisers.org/wp-content/uploads/2022/01/Climate-Advisers-Climate-Related-Forest-Food-and-Land-Risks-Threaten-US-Financial-Stability.pdf
[22] Id.
[23] Jake Spring and Simon Jessop, "Over 100 global leaders pledge to end deforestation by 2030," Reuters, November 2021, https://www.reuters.com/business/environment/over-100-global-leaders-pledge-end-deforestation-by-2030-2021-11-01/
[24] Orbitas, "Climate Transition Risk Analyst Brief: Indonesian Palm Oil", August 2021, https://orbitas.finance/2021/08/27/indonesian-palm-oil-deforestation-climate-transition-risk/
[25] Orbitas, "Agriculture in the Age of Climate Transitions: Stranded Assets. Less Land. New Costs. New Opportunities," December 2020, https://orbitas.finance/2020/12/03/ag-climate-transitions-risk-opportunities/

percent.[26] Similarly, carbon border adjustments will have ripple effects across supply chains.

   d. Supply chain due diligence obligations in Europe are also likely to require businesses to prove their products and services are deforestation-free, which could negatively impact global businesses if they are not prepared or have not developed the resources to do so.[27]
   e. Legal actions are increasingly being taken against high emitting companies that are responsible for escalating climate-related damages.[28]

2. Technology risks originate from disruptive innovations or the rise of substitute products.
   a. In a world with land availability constraints due to forest conservation, supply chains that prioritize emissions reduction technologies and investments that increase productivity will be more resilient to supply chain disruptions.[29]
   b. Alternatively, a lack of investment into new agroforestry techniques and technologies may also lead to lower yields than competitors or reduced resilience to climate change.
3. Market risks arise from quickly changing market dynamics.
   a. Consumer demand for low carbon and deforestation-free sourcing has increased No Deforestation, No peat, No Exploitation (NDPE) requirements in consumer goods companies, manufacturers, and retailers. In turn, NDPE policies now cover around 83 percent of palm oil refineries.[30] On the other hand, companies without effective mechanisms to prevent deforestation in supply chains risk market access declines as trends in consumer preferences continue.
   b. As countries committed to halting deforestation, 10 of the largest global agricultural commodity traders, including Cargill, JBS, Bunge, Marfrig, Golden Agri-Resources, and Wilmar International, also announced deforestation pledges.[31] As the industry moves toward no-deforestation policies and monitoring, climate laggards risk a declining market and rising input costs due to upstream physical and operational risks.
   c. Over 30 financial institutions with USD 8.7 trillion in assets under management committed to ending investment in deforestation-linked activities, which may jeopardize access to credit for companies that do not mitigate these risks.[32]
4. Reputational risks are driven by actions that damage a company's public image.

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[26] Id. 23
[27] Chain Reaction Research, "The Chain: EU Proposal on Deforestation-Linked Products Poses Risks for Companies, Investors," November 2021, https://chainreactionresearch.com/the-chain-eu-proposal-on-deforestation-linked-products-poses-risks-for-companies-investors/
[28] FP, Climate & Systemic Risk: The financial sector's role in managing risk and accelerating the transition to net-zero," https://foreignpolicy.com/2021/11/29/global-finance-and-management-of-climate-related-risk/
[29] Orbitas, "Agriculture in the Age of Climate Transitions: Stranded Assets. Less Land. New Costs. New Opportunities," December 2020, https://orbitas.finance/2020/12/03/ag-climate-transitions-risk-opportunities/
[30] Chain Reaction Research, "NDPE Policies Cover 83% of Palm Oil Refineries; Implementation at 78%," April 2020, https://chainreactionresearch.com/report/ndpe-policies-cover-83-of-palm-oil-refineries-implementation-at-75/
[31] UN Climate Change Conference 2021, "Agricultural commodities companies corporate statement of purpose," November 2021, https://ukcop26.org/agricultural-commodity-companies-corporate-statement-of-purpose/
[32] Global Canopy, "Thirty financial institutions commit to tackle deforestation," November 2021, https://globalcanopy.org/press/thirty-financial-institutions-commit-to-tackle-deforestation/

a. These risks are on the rise as investors and consumers alike are demanding that companies align products and services with global emissions-reduction goals and no-deforestation policies.
b. Companies face increased scrutiny from NGOs, consumers, and governments if deforestation risk is not disclosed.
c. In a world where news of controversies spreads quickly and more than 50 percent of consumers in Western countries are willing to pay a premium for sustainable products, companies risk material financial impacts when links to deforestation and human rights abuses emerge.[33]

Physical climate risks are already being felt by companies and will intensify if deforestation tipping points are surpassed and global water cycle disruptions impact agricultural outputs. Climate transition risks are quickly materializing as governments, international organizations, private sector players, and consumers take action to prevent deforestation. Below are a few examples of companies that have experienced significant financial impacts as a result of of deforestation risks:

1. *Palm Oil Companies Suspended From Sustainability Markets.* From 2015-2019, the equity value of four palm oil companies fell by $1.1 billion due to suspensions from No Deforestation, No Peat, No Exploitation (NDPE) supply chains.[34] The four palm oil companies, Sawit Sumbermas Sarana (SSMS), Austindo Nusantara Jaya (ANJ), Tunas Baru Lampung, and Indofood Agri Resources, were suspended for deforestation, peatland clearing, or worker abuses. Under NDPE supply chain rules, buyers and sellers commit to sustainability standards or risk being suspended. Analysis from Chain Reaction Research shows that the four companies saw $8 million to $50 million in quarterly revenues, gross profit, EBITDA, and net profit per company, while also experiencing higher receivables, inventories, and net debt.[35] The suspensions cut the companies off from selling to market actors – such as Unilever, Nestle, and Wilmar – with strict sustainability criteria, limiting their options and market access.
2. *IOI Corporation.* IOI Corporation, a Malaysian palm oil company, saw material impact after being suspended from the Roundtable on Sustainable Palm Oil (RSPO) for illegally clearing forested land. After the RSPO suspended IOI Corporation, its share price fell by 18 percent and 27 companies – including major commodity traders and large food companies like Mondelez, Procter & Gamble, and Kellogg's – halted purchases of IOI Corporation's palm oil.[36] Once IOI Corporation addressed its deforestation-related

[33] Accenture Chemicals, Global Consumer Sustainability Survey, 2019: https://www.slideshare.net/accenture/accenture-chemicals-global-consumer-sustainability-survey-2019; Toluna, 2019 Sustainability Report: Consumers Hold Brands Responsible: http://go.toluna-group.com/l/36212/2019-10-30/5p7ppd; First Insight, The State of Consumer Spending 2020: https://www.firstinsight.com/white-papers-posts/gen-z-shoppers-demand-sustainability.
[34] Chain Reaction Research, "Palm Oil Growers Suspended Over Deforestation Lose USD 1.1B in Equity Value," August 2019, https://chainreactionresearch.com/report/palm-oil-growers-suspended-over-deforestation-lose-usd-usd-1-1b-in-equity-value/
[35] Id.
[36] Chain Reaction Research, "The Chain: IOI Corporation Commits To Improving its Supply Chain Risk Management," May 2017, https://chainreactionresearch.com/2278-2/

sustainability issues in its supply chains, it regained its RSPO membership, saw its equity value recover, and re-established its relationship with its buyers.

3. *JBS.* Brazilian meatpacker JBS has seen repeated material impacts from its ties to deforestation in the Amazon rainforest. In 2020, Nordea Asset Management sold its shares in JBS over ESG concerns, including deforestation. The action by Nordea reflected longstanding concerns that NGOs and financiers have had over the company's corruption and environmental record. These reputation risks have also contributed to increased scrutiny, which have undermined JBS' multiple attempts to launch an initial public offering in the United States. JBS had initially wanted to launch the U.S. IPO in 2017.[37] But scandals prompted the company to drop its plans.[38] JBS revived its plans in late 2019 with the anticipation of launching the IPO in 2020, but remains delayed in large part because of the combination of COVID-19 and NGO pressure on the company and its investors due to ESG violations.[39]

Key Climate Advisers recommendations for improving regulations

1. Disclosure of Scope 1, 2, and 3 emissions should be mandatory for all issuers, although disclosure according to scope 3 could be phased in according to the industry of the issuer, the materiality of scope 3 emissions to an industry's climate change risk profile, and the size of the company.

Any regulations that do not include disclosure of scope 3 emissions will lead to material misstatements of greenhouse gas emissions, especially in industries with long upstream supply chains. This is particularly important in the forest, food, and land sector, where scope 1 and 2 emissions combined are often significantly less than scope 3 emissions. The food sector and fast moving consumer goods sector, both of which extensively source tropical commodities, generate 83 and 90 percent of total greenhouse gasses in scope 3 respectively.[40]

To demonstrate the scale of omitting scope 3 emissions, we can quantify the global impact of only considering the scope 1 and 2 emissions of downstream food sector companies. The food sector supply chain has the highest emissions of any sector in the world and makes up 25 percent of global emissions.[41] If 83 percent of emissions (food sector scope 3 emissions) are

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[37] United States Securities and Exchange Commission, "JBS Foods International B.V., 2011, https://www.sec.gov/Archives/edgar/data/1691004/000119312516785274/d304020df1.htm

[38] Chain Reaction Research, "The Chain: JBS Cancels 2018 subsidiary IPO, Suspends Slaughter at 7 Locations while Investigations Continue," October 2017, https://chainreactionresearch.com/the-chain-jbs-cancels-2018-subsidiary-ipo-suspends-slaughter-at-7-locations-while-investigations-continue/

[39] Forests & Finance, "Beefing Up Risk: The Exposure Of JBS' Financiers To Financial, Regulatory And Reputational Risks," February 2021, https://forestsandfinance.org/news/beefing-up-risk-the-exposure-of-jbs-financiers-to-financial-regulatory-and-reputational-risks/

[40] World Economic Forum and Boston Consulting Group, "Net-Zero Challenge: The supply chain opportunity," January 2021, https://www3.weforum.org/docs/WEF_Net_Zero_Challenge_The_Supply_Chain_Opportunity_2021.pdf

[41] Id.

omitted from downstream greenhouse gas emissions reporting, that means that those companies are reliant on a supply chain that generates 21 percent of global emissions, but are not incentivized to disclose them.

At Nestlé, for example, requiring only scope 1 and 2 emissions would mean that investors only have visibility to 5 percent of the company's total greenhouse gas emission footprint.[42] If the CSA's goal is to provide investors insight into a company's or industry's climate change risk, transparency around only 5 percent of emissions will not be an effective mechanism of achieving this. It also leaves major sectors of the US economy vulnerable to the financial impacts of both physical and transition climate change risks.

Scope 3 emissions from deforestation are material in tropical commodity supply chains and are especially vulnerable to climate transition risks. Mars Inc. estimated that 29 percent of the company's total scope 1, 2, and 3 emissions are generated from deforestation driven by tropical commodities.[43] Given that internationally agreed upon climate change targets are predicated on halting deforestation, these practices are unsustainable as governments implement climate policies.

The COP26 announcement that over 142 countries would work to halt deforestation by 2030 is likely to lead to an increase in land legally under conservation and moratoriums on agricultural expansion into forested areas. As previously mentioned, economic and financial modeling done by Orbitas Finance, estimates that climate transitions will lead to a 52 percent reduction in agricultural land globally by 2050.[44] As a result, agricultural expansion will become more expensive, while commodity prices are estimated to rise as a result of land availability constraints and a growing global population.

Further commodity price fluctuations are likely as countries around the world put a price on carbon emissions. In Orbitas modeling, emission-intensive palm oil producers with high energy and fertilizer usage are estimated to see emissions cost rise to up to 14 percent of operating costs, which will have downstream price impacts in low margin commodity markets.[45]

On the other hand, downstream companies in these industries have high margins and access to low-cost capital to invest into supply chain emissions reductions.[46] In the food sector, for example, the ratio of net income to total supply chain emissions is 35 Euro/tonnes of CO2 equivalent for upstream companies and 135 Euro/tonnes of CO2 equivalent for downstream companies.[47]

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[42] According to Nestlé's 2020 disclosure to CDP, publicly available via: http://www.cdp.net.
[43] Mars, "Mars – Climate Change 2019 report to CDP," 2019. Downloadable from the CDP website: https://www.cdp.net/en
[44] Orbitas, "Agriculture in the Age of Climate Transitions: Stranded Assets. Less Land. New Costs. New Opportunities," December 2020, https://orbitas.finance/2020/12/03/ag-climate-transitions-risk-opportunities/
[45] Orbitas, "Climate Transition Risk Analyst Brief: Indonesian Palm Oil", August 2021, https://orbitas.finance/2021/08/27/indonesian-palm-oil-deforestation-climate-transition-risk/
[46] Chain Reaction Research, "FMCGs, Retail Earn 66% of Gross Profits in Palm Oil Value Chain," June 2021, https://chainreactionresearch.com/report/palm-oil-value-chain-deforestation/
[47] World Economic Forum and Boston Consulting Group, "Net-Zero Challenge:

For companies reliant on land-intensive imports, the risk of extreme commodity price fluctuations and supply chain disruptions has the potential to threaten the profitability of entire product lines.[48] However, if downstream companies work with suppliers to reduce emissions and increase the productivity of land currently under cultivation now, they can mitigate these risks in the future and may even benefit financially.

In an analysis of the Indonesian palm oil sector, Orbitas modeling predicts that if companies respond optimally, the industry could gain up to USD 9 billion from climate transition opportunities.[49] An optimal response in the Indonesian palm oil sector would include productivity increases, planting more efficient varieties with lower fertilizer dependence, and investment in emissions reduction technologies like biogas capture and cogeneration.

If investors are not aware of the vast majority of greenhouse gas emissions generated by their investments, they may be unknowingly exposed to material financial risks in a world that is increasingly internalizing the financial costs of carbon. Omitting scope 3 emissions in the forest, food, and land sector would, in short, create a market imperfection and lead to a misallocation of resources into high-risk investments.

Key recommendations:

1. Climate Advisers supports the proposal to require disclosure of Scope 1, 2, and 3 emissions; however, we do not support the 'comply-or-explain' approach. Quantitative data on emissions is necessary as a critical complement to the qualitative information that will be elicited pursuant to NI 51-107, based upon the TCFD framework. Analysis of emissions is important for investors to have a basis on which to accurately evaluate companies' climate risks and opportunities and to observe progress in a company over time. These data, and trends, are also useful indicators of the quality of management, which is always relevant to investors.
2. Scope 3 emissions data concerning an issuer's value chain is particularly important to identifying the financial risks associated with deforestation in tropical commodity supply chains (cattle, soy, palm oil, timber, natural rubber, cacao, and coffee). The GHG Protocol Organization has issued specific guidance for scope 3 accounting in agriculture and separately for the land sector, among a suite of guidance documents and sector-specific tools. These resources provide the tools conscientious issuers say they need to make decisions about where to concentrate reductions efforts within their operations. Indeed, the GHG Protocol materials emphasize the importance of these Scope 3 data to issuers as a management tool.

The supply chain opportunity," January 2021, https://www3.weforum.org/docs/WEF_Net_Zero_Challenge_The_Supply_Chain_Opportunity_2021.pdf

[48] Chain Reaction Research, "Chain Reaction Research Applies TCFD-aligned Framework to Assess Deforestation Risks," January 2021, https://chainreactionresearch.com/report/chain-reaction-research-applies-tcfd-aligned-framework-to-assess-deforestation-risks/

[49] Orbitas, "Climate Transition Risk Analyst Brief: Indonesian Palm Oil", August 2021, https://orbitas.finance/2021/08/27/indonesian-palm-oil-deforestation-climate-transition-risk/

3. To ease the transition burden on issuers, disclosure according to scope 3 could be phased in according to the size of the company and the materiality of scope 3 emissions to specific industries' climate change risk profile. The Science Based Target Initiative requires scope 3 disclosures in industries in which over 40 percent of a total emissions fall under scope 3, which would be a good starting point when phasing in mandatory disclosures.

2. Issuers should be required to report on each Task Force on Climate-Related Financial Disclosure (TCFD) category of disclosure (climate governance, risk management, strategy, targets for emissions reductions, and metrics by which progress is being evaluated), rather than strategy, targets, and metrics only being disclosed if material.

The TCFD's disclosure categories are management-friendly and potentially useful in that they do not call on issuers to make speculative determinations about how large-scale, systemic disruptions such as climate change might affect their business at a far future date. Rather, they call upon individual companies to discuss how that company is approaching the identification, management, and quantification of climate change risks and opportunities today, and what strategic risks and opportunities the company perceives from the transition to a low-carbon economy. In other words, what is company management doing now to respond to the challenges of the Paris Agreement and their country's Nationally Determined Contributions to meet the ambitions of that agreement or the country's net-zero ambitions? Far from requiring speculative or boiler-plate disclosure, then, the TCFD has focused on specific information that managers can provide (how they are evaluating and managing these risks to their company in their industry and geographic regions), and specific information that investors can use to direct their capital to companies with smart, proactive management.

However, one of the drawbacks of the TCFD framework, carried forward in NI 51-107, is the use of a materiality screen for disclosure of strategy, targets, and metrics. Materiality as a concept is often difficult to apply, calling for careful, and in many cases speculative, judgments about what a reasonable investor would consider significant in deciding to purchase, hold, or sell securities. In particular, the duty to disclose and manage supply chain links to tropical commodities known to drive deforestation and land-use emissions should not depend solely on a company's assessment of financial materiality for the following reasons:

1. The broad societal interest in addressing climate change and the magnitude of future catastrophic impacts to the economy, national security, and the public necessitate disclosure of both material risks to stakeholders and long-term financial flows.
2. Available research in tropical commodity supply chain risks already supports evidence of financially material, industry-wide risks in tropical commodity supply chains when climate-related risks are not addressed.[50] For example, economic modeling suggests that 15 percent of Indonesian peat plantations are likely to become stranded and that

[50] Chain Reaction Research, "Chain Reaction Research applies TCFD-aligned framework to assess deforestation risks," January 2021, https://chainreactionresearch.com/report/chain-reaction-research-applies-tcfd-aligned-framework-toassess-deforestation-risks/

> Colombian cattle ranchers face a sixfold increase in production costs related to emissions.[51]

If an issuer has determined, on good faith and with reasonable investigation, that it need not change its business strategy because of climate risk, a statement to that effect would be sufficient. Such a statement would inform investors that management has turned its attention to the issue, has evaluated it, and has reached an informed judgment, thus giving investors valuable information. Similarly with targets and metrics, we thus suggest requiring disclosure on each of the four TCFD topics (climate governance, risk management, strategy, targets and metrics), irrespective of materiality.

Key recommendations:

Require disclosure on each of the four TCFD topics (climate governance, risk management, strategy, targets and metrics), irrespective of materiality. Climate change represents a disruptive risk to existing business models, so investors should be aware of companies plans and progress towards adapting to a changing world, including:

1. Clear goals for carbon neutrality, with interim targets at least every 5 years and annual progress updates.
2. Common assumptions for scenario analysis, based on multiple climate change outcomes (degrees of warming).
3. Disclosure of natural capital dependencies.
4. Disclosure of physical and transition risks related to climate change, including in tropical commodity supply chains.
5. Insight into company strategy to mitigate climate risks, to pursue climate opportunities, and to adapt business models to be successful in the long-term.
6. Standardized climate-related quantitative metrics for all industries.
7. Industry specific quantitative and qualitative metrics (see part 4 below).

3. Issuers' NI 51-107 emissions disclosure should be audited or otherwise assured by an independent third-party.

The proposed NI 51-107 does not require auditing or other third-party assurance of issuer's emissions disclosure, but the CSA seeks advice on whether it should require such assurance. Climate Advisers recommends such a requirement. Auditing or other third-party assurance is important to the integrity of climate disclosure generally as it develops. NI 51-107 will be establishing the foundation in Canada for climate disclosure. Over time, the quality of the data and its specificity is expected to improve. Establishing the market for climate disclosure from the outset with high-quality, audited data will protect investors from greenwashing. It will also give issuers valuable insights into their data development systems and integration of those systems

[51] "Agriculture in the age of climate transitions: Stranded assets. Less land. New costs. New opportunities." Orbitas, December 3, 2020, https://orbitas.finance/2020/12/03/ag-climate-transitions-risk-opportunities/

into management and compliance functions, much as auditing a company's financial statements and bringing in outside auditors to cooperate with the internal audit provides insights with respect to financial disclosure.

Investor disclosures and audits are especially important in the forest, food, and land sector when investors may not comprehend the complexity of tropical commodity impacts on deforestation, land use change, and human rights. Tropical commodity supply chains are often opaque and often require additional due diligence in sourcing decisions. To ensure that investors have access to accurate information, supply chain risks should be visible and actively mitigated as a part of a company's enterprise risk management process to avoid financial impacts. These risks should also be specifically included in management reputation letters and company audits, in order to drive executive engagement and incentivize careful consideration of risk mitigation processes at a leadership level.

Key recommendations:

1. To ensure accuracy and confidence in deforestation and land use change disclosures, disclosures should be subject to the same assurance standards as financially material data.
2. These disclosures, just like financial filings, should have clear lines of reporting and oversight to the board or the C-suite to ensure comparable accountability.
3. There should be clear procedures and auditable records, so that areas of non-compliance can be identified and remedied.
4. All quantitative disclosures of climate and ESG metrics should be tagged in a machine-readable format to allow academics and other stakeholders to easily use this information and compare, analyze, and identify discrepancies which could be the basis for shareholder pressure and enforcement action.

4. The CSA should mandate qualitative and quantitative industry-specific disclosures in sectors with outsized climate impacts and related environmental, social, and governance risks. Due to the high risks related to deforestation and the essential role of forests in mitigating climate change, NI 51-107 would be incomplete and ineffective in protecting investors without explicitly requiring disclosures for the forest, food, and land sector.

As CSA staff members are certainly aware, both the TCFD and the GHG Protocol have produced industry-specific guidance on applying the frameworks. These and other reliable sources of guidance are particularly important as climate disclosure matures, since the specificity of industry risks and opportunities should lead to particularized, sector-specific, comparable disclosure over time—yet time is of the essence in climate mitigation and adaptation.

In the agricultural commodities industries, for instance, which certification procedures a company uses to ensure deforestation-free supply chains, what percentage of its supplies are certified deforestation-free, from what countries and regions it sources its commodities, whether

suppliers are involved in land disputes with Indigenous People or traditional communities, and what "know your supplier" monitoring systems are in place are decision-useful data for investors.

Industry specific guidance from TCFD, the GHG Protocol, SASB, CDP, and other reliable partners, together with engaged CSA oversight and guidance, can help this market in climate disclosure mature based on decision-useful, sector-specific, comparable information. In particular, CDP is already used by companies to voluntarily report on tropical commodity exposure and oversight through CDP Forests. The disclosures are targeted to commodities and countries at high risk of deforestation, and the scope is clearly defined. CDP Forests is largely compatible with language used in the TCFD and could easily be integrated to provide a more complete view of tropical commodity dependencies and risk.

Since deforestation both generates GHG emissions in the current year and reduces carbon storage capacity in future years, companies that operate in sectors with high deforestation risk have an outsized impact on climate change. With the vast majority of GHG emissions generated abroad, often in regions at high risk of deforestation, the forest, food, and land sector puts investors at particularly high risk of funding activities linked to illegality, environmental damage, climate change impacts, human rights abuses, and more. As such, any climate-related financial regulations that do not *explicitly* mandate industry-specific disclosures for the forest, food, and land sector would be incomplete and ineffective in protecting investors.

Key recommendations:

Industry-specific qualitative disclosures for companies in the forest, food, and land sector should include:

1. Company policy around supply chain deforestation, including any no-deforestation policies for suppliers.
2. What processes are in place for implementing no-deforestation policies and how the company monitors its supply chain to verify compliance to no-deforestation policies.[52]
3. A time-bound plan for eliminating deforestation and progress toward that plan.
4. What grievance mechanisms are in place to report supplier non-compliance.
5. Procedures in place to address grievances and resolve non-compliance.
6. A publicly available supplier list for high risk tropical commodity suppliers (many companies already publish this).
7. Specific reference to a company's plan for mitigating deforestation risk in the company's overall TCFD analysis.

Industry-specific quantitative disclosures for companies in the forest, food, and land sector should include:

[52] Types of monitoring include, but are not limited to geospatial monitoring tools, ground-based monitoring systems, community-based monitoring, first-party verification, second-party verification, third-party verification, or no monitoring and verification approach. These categories are currently used by CDP in company disclosures.

1. Scope 3 emissions, if not already required for all industries.
2. Volume sourced or produced for any high deforestation risk commodities
3. High deforestation risk commodities as a percentage of total procurement
4. Percentage of a company's revenue dependent on this high deforestation risk commodities
5. Procurement by country/region/subnational jurisdiction of origin, if available. If not, a time-bound plan for attaining this information.
6. Percentage of high deforestation risk commodity sourcing that is traceable and to what supply chain level.
7. Percentage of total volume in compliance with relevant commodity certifications.

Industry-specific disclosures for financial institutions with holdings in the forest, food, and land sector should include:

1. Scope 3 emissions, if not already required for all industries.
2. Engagement strategy to drive action on eliminating deforestation from company supply chains.
3. Value of investments in companies that operate in commodities in countries with high deforestation risk.
4. Specific reference to a financial institution's plan for mitigating deforestation risk in the company's overall TCFD analysis, including clear targets and progress towards them.

Industry-specific disclosures for companies with direct ownership or control of forested land should include:

1. Country in which forest investments are located.
2. Area of land owned by land type (For example, forest, savannah, agricultural land, etc.)[53]
3. Percentage of land covered by natural forests.
4. Percentage of land covered by relevant certification schemes.
5. Area of land converted from natural ecosystems during the reporting year.

To ensure consistency with current reporting methods, Climate Advisers recommends using the following classifications of high deforestation risk countries and high deforestation risk commodities:

1. Forest risk countries defined by CDP Forests: Angola, Argentina, Australia, Bolivia (Plurinational State of), Brazil, Cambodia, Cameroon, Central African Republic, Colombia, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Ecuador, Gabon, Guatemala, Guinea, Honduras, India, Indonesia, Kenya, Lao People's Democratic Republic, Liberia, Madagascar, Malaysia, Mexico, Mozambique, Myanmar, Nicaragua, Nigeria, Panama,

[53] Land types include, but are not limited to, set-aside land, natural ecosystems with potential to be legally converted for forest risk commodity production or degraded/abandoned area with potential for forest risk commodity production. These categories are currently used by CDP in company disclosures.

Papua New Guinea, Paraguay, Peru, Philippines, Thailand, United Republic of Tanzania, Venezuela (Bolivarian Republic of), Viet Nam, Zambia, and Zimbabwe.

2. Forest risk commodities defined by CDP Forests: timber products, palm oil, cattle products, soy, rubber, cocoa, and coffee.

These classifications may change over time based on data-driven assessments conducted by CDP.

We sincerely appreciate the leadership of the CSA on this important initiative. If we can be of any assistance, including by providing research assistance or other technical guidance, please do not hesitate to call on us.

Sincerely,

Climate Advisers

Appendix

Figure 1: Sectors highly exposed to deforestation

Sector	Industry	Commodities associated with deforestation
Consumer staples	Food Products	**Beef**, **cocoa** and **coffee** are relatively easy to spot in grocery products, but **palm oil** and **soybeans** may be hidden in processed products. **Palm oil** and its derivatives are widely used in food processing and show up in products such as bread, pastries, cereal, peanut butter, chocolate and margarine. **Soybeans** are made into soybean oil for cooking and are consumed by pigs and poultry as soy meal, so emissions from soy-related deforestation are embedded in those products.
	Household Products; Personal Products	**Palm oil** and its derivatives are widely used in soaps, detergents and makeup. **Cocoa** butter is also used in personal care products.
	Food & Staples Retailing	Food distributors and retailers source **all food commodities** associated with deforestation, as well as **paper** products for packaging and shipping.
Consumer discretionary	Textiles, Apparel & Luxury Goods	Footwear and luxury goods companies source **leather** and **rubber.** Textiles and apparel industries use woven fiber from **wood pulp**, often sourced from deforested areas, into rayon, viscose and modal fabrics.
	Household Durables	Home furnishings use **leather** and **timber**.
	Hotels, Restaurants & Leisure	Hotels, restaurants and resorts source **paper** and **food commodities**, as well as timber used in furniture.
	Auto components	Tire manufacturers source over 70 percent of the world's **rubber**. **Leather** is also used in automobile interiors.
	Internet & Direct Marketing Retail	Internet and direct marketing retailers source products containing **all commodities** associated with deforestation, such as food products, footwear, apparel and furniture. They also use large amounts of **paper** packaging in their shipping operations.
	Multiline retail; Specialty retail	Retailers of shoes, apparel, office supplies, auto parts and home furnishings are exposed to deforestation through products using **leather**, **rubber**, **timber** and **paper**.
Materials	Containers & Packaging	Forest plantations for wood pulp (**paper** and **cardboard**) production, are a major driver of deforestation.
	Paper & Forest Products	Forest plantations for wood pulp (**paper** and **cardboard**) and **timber** are a major driver of deforestation.
Energy	Oil, Gas & Consumable Fuels	**Soybean oil** and **palm oil** are used for production of biodiesel.
Utilities	Independent Power and Renewable Electricity Producers	Biomass power plants burn **wood pellets**. Claims that this process is carbon neutral have been disputed by scientists.[44]
Financials	Banks	Finance institutions are exposed to deforestation through their financing of companies in all of the above industries.

Source: "The Investor Guide to Deforestation and Climate Change," Ceres.[54]

[54] Ceres, "The investor guide to deforestation and climate change," June 2020, "ceres.org/sites/default/files/reports/2020-06/Ceres%20Investor%20Guide%20FINAL%20June%2029.pdf"