



June 17, 2022

Ms. Vanessa A. Countryman
Secretary
Securities and Exchange Commission
100 F. Street, NE
Washington, D.C. 20549-1090

Re: File No. S7-10-22

Dear Ms. Countryman:

This Comment is being submitted by Climate Advisers, a think tank and advocacy organization that specializes in analyzing climate policy and climate-related financial risks. Although we focus on all aspects of climate policy and climate-related financial risk, we specialize in risks related to global deforestation and land-use change, both of which are leading sources of greenhouse gas emissions globally. Climate Advisers counsels financial institutions and performs sustainability risk analyses for banks, pension funds, and other investors through projects such as Orbitas and Chain Reaction Research.^{1,2,3}

At Climate Advisers, we strongly support the Security and Exchange Commission's ("SEC" or "the Commission") proposed rules for expanded climate transparency, and their alignment with the recommendations of the Taskforce on Climate-Related Financial Disclosures (TCFD) and the Greenhouse Gas (GHG) Protocol. ([Release No. 33-11042, March 21, 2022](#)). This bold and thoughtfully framed proposal for the enhancement and standardization of climate-related disclosures will do much to protect the integrity of the capital markets, promote market efficiency, and protect investors through requiring more comparable, consistently presented, and reliable information about climate-related risks.

In this Comment, we recommend several modifications to the proposed rules so that mandated disclosure would more effectively meet the specific needs of investors exposed to the financial implications of climate-related risks from deforestation. Most notably, Climate Advisers recommends an economy-wide approach that incorporates global supply chain emissions. A holistic approach is particularly important in the forest and land use sector, since many U.S. companies rely on tropical commodities with high risk of links to deforestation, human rights abuses, and land disputes with Indigenous People and traditional communities.

¹ Through our work, Climate Advisers has become acutely aware of the material financial risks faced by U.S. and foreign companies importing these commodities given the underlying deforestation issues. Moreover, there is a lack of transparency about deforestation and the challenges facing companies and investors seeking to reduce the financial risks from deforestation in their supply chains and investments. Many U.S. companies across a range of industries face material financial risk from deforestation, both physical risk, transition risk, and liability risk, but that information is not clearly and consistently presented in reliable, comparable formats to investors.

² Orbitas, "Navigating Climate Transition Risks," <https://orbitas.finance/>

³ Chain Reaction Research, "Sustainability Risk Analysis," <https://chainreactionresearch.com/>

Our Comment will explain the role of the forest, food, and land sector in climate-related financial risk, answer specific questions posed by the SEC, and highlight the three key priorities below:

1. **Scope 3 Disclosure:** Disclosure of Scope 3 emissions should be mandatory for all registrants, based on the best available data and methodologies, rather than as proposed, only if material. In the alternative, disclosure of all Scope 3 emissions of a registrant's upstream supply chain should be required. If not required for all issuers, disclosure of Scope 3 emissions should be mandatory for all sectors at risk of deforestation in their supply chains, using the CDP definition of high tropical deforestation risk commodities and countries. This is necessary because emissions from deforestation are relevant to both current year emissions and future carbon storage capacity. At a minimum, disclosure of Scope 3 emissions should be mandatory in industries where Scope 3 emissions are at least 40 percent of the registrants GHG emissions, unless a lesser percentage would be material to a particular issuer given that issuer's strategy, business model, location, and/or transition risks. These comments predominantly relate to the Commission's questions 98 through 135.
2. **Identification of nature-related dependencies and financial risks:** The SEC should require companies to identify and disclose their nature-related dependencies and the financial risks arising from those dependencies because the collapse of natural ecosystems, in turn, creates significant climate-related financial risks. The emerging Taskforce on Nature-Related Financial Disclosures (TNFD) framework measures nature-related financial risks, including those that exacerbate climate-related financial risks, and it also aligns closely with the TCFD in its coverage of strategy, governance, risk management, metrics, and targets when assessing the potential impact of nature-related financial risks.
3. **Industry specific guidance:** The SEC should develop industry-specific guidance for climate disclosure in the forest, food, and land sector, much as it has done previously in oil and gas; banking; real estate; and insurance. Regulations that do not explicitly mandate industry-specific disclosures for the forest, food, and land sector would be incomplete and ineffective in protecting investors because:
 - a. Deforestation both generates GHG emissions in the current year and reduces carbon storage capacity in future years, so sectors with high deforestation risk have an outsized impact on climate change.
 - b. With the vast majority of GHG emissions generated abroad in regions at high risk of deforestation, the forest, food, and land sector puts investors at a high risk of funding activities linked to illegality, environmental damage, climate change impacts, human rights abuses, and more.

We note at the outset that throughout this Comment, Climate Advisers relies upon the concepts of "materiality" and "material financial risks" using the definitions of material facts and processes of analysis as articulated by relevant U.S. law, including decisions of the U.S. Supreme Court.⁴

⁴ See *TSC v. Northway*, 426 U.S. 438, 449 (1976)(defining an omission of fact in a proxy statement as material where there is "a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available."); *Basic v. Levinson*, 485 U.S. 224 (1988)(the materiality of an uncertain or future event "will depend at any given time

Thank you in advance for considering our comments as you contemplate any changes that are needed to the SEC disclosure requirements related to climate change risks. We would be pleased to discuss any questions that you may have on our feedback.

Sincerely,

Climate Advisers

A. Deforestation as a material financial risk

1. WHY DEFORESTATION MATTERS

Climate-related financial disclosures would be ineffective in protecting investors without specific requirements directed to agriculture, forestry, and other land use (AFOLU). Globally, the forest, food, and land sector is responsible for almost a quarter (23 percent) of net anthropogenic global greenhouse gas (GHG) emissions, according to the Intergovernmental Panel on Climate Change (IPCC).⁵ Moreover, in the food sector, alone, if activities in the pre- and post-production systems such as processing, distribution, consumption, and food waste are included, the contribution to net anthropogenic global GHG emissions from AFOLU emissions could be as high as 37 percent.⁶

A major reason that the forest, food, and land sector contributes so substantially to anthropogenic GHG emissions is through deforestation, which alone is responsible for 11 percent of global emissions.⁷ Maintaining healthy forests and reforesting degraded forest land are critical to achieving the goals of the Paris Agreement and the United Nations Sustainable Development Goals. 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 In fact, an estimated 16 to 30 percent of climate mitigation needed to limit global emissions to 1.5-2 degrees Celsius is based on halting deforestation by 2030 and a quarter of the 2030 climate mitigation promised in countries' Nationally Determined Contributions comes from land-based mitigation options.⁹

Combatting deforestation is so important that the AFOLU sector is the only economic sector with its own chapter in the Paris Agreement. Political support for conserving and restoring forests globally was also on display in 2021 when President Biden joined more than one hundred and forty world leaders in endorsing the Glasgow Leaders Declaration on Forests and Land Use, which committed nations representing more than 90 percent of the world's forests to ending natural forest loss this decade.¹⁰

upon a balancing of both the indicated probability that the event will occur and the anticipated magnitude of the event in light of the totality of the company activity," citing *SEC v. Texas Gulf Sulphur Co.*, 401 F.2d 833, 862 (2d Cir. 1968)(*en banc*)).

⁵ 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/srcl/>.

⁶ *Id.*

⁷ 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>

⁸ *Id.*, 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/>

⁹ 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/srcl/>

¹⁰ Georgina Rannard & Francesca Gillett, BBC News, "COP26: World leaders promise to deforestation by 2030, Nov. 2, 2021.

The impacts of deforestation are diverse and far reaching, and their emissions have a cascading effect on climate change resilience going forward for the following reasons:

1. **Indigenous People and Local Communities (IPLC):** Displacement of Indigenous People risks the loss of traditional cultures and valuable expertise in maintaining healthy ecosystems that aid in mitigating climate change. Receding tropical forests have already led to frequent land disputes between commodity producers and IPLCs. Illegal encroachment onto Indigenous territories and land insecurity have also heightened violence against environmental defenders defending their homes.¹¹ IPLCs are the most effective protectors of forest carbon and biodiversity, which is vital for investors given that intact ecosystems are worth \$44 trillion to the global economic sector.¹² The traditional knowledge of IPLCs continues to be the basis for medicines and foods of incalculable value. All climate mitigation measures should include these groups as important partners because at least 36 percent of the world's large, unbroken swaths of natural forests, known as "intact forests," are held by Indigenous People, along with about 80 percent of remaining biodiversity.¹³
2. **Carbon storage:** Terrestrial ecosystems release 10 to 20 percent of the total global CO₂ to the atmosphere and sequester 30 percent annually.¹⁴ Of this, gross emissions and sequestration in the tropics is about four times larger than temperate and boreal ecosystems combined.¹⁵ If deforestation emissions are conflated with those of other sectors in climate-related financial risk calculations, their role in sequestering carbon in future years is likely to be undervalued.
3. **Illegal activity:** The lack of transparency into complex supply chains provides a cover for illegal activities, including deforestation, intentional fires, and human rights abuses. Most deforestation in the developing world linked to internationally traded commodities is illegal (violates local law) or is connected to organized crime.¹⁶ Corruption, bribery, money laundering, illegal logging, and other illegal acts referred to as "forest crimes" are common in the forest and land use sectors in many developing countries. The potential consequences, which can be widespread, include social conflict, injustice, poverty, economic stagnation, and carbon emissions.
4. **Biodiversity loss:** Habitat loss is causing a biodiversity crisis and threatening valuable ecosystem services. Nowhere is this more apparent than in tropical forests, which are home to more than 80 percent of animal, plant, and fungi biodiversity.¹⁷ Wildlife populations, including mammals, birds, fish, amphibians, and reptiles, have been reduced by 68 percent since 1970 and about one million

¹¹ Global Witness, "Global Witness records the highest number of land and environmental activists murdered in one year – with the link to accelerating climate change of increasing concern," 29 July 2020, <https://www.globalwitness.org/en/press-releases/global-witness-records-the-highest-number-of-land-and-environmental-activists-murdered-in-one-year-with-the-link-to-accelerating-climate-change-of-increasing-concern/>

¹² World Economic Forum, "The Global Risks Report 2020," <https://www.weforum.org/reports/the-global-risks-report-2020/>

¹³ Peter G. Veit, "9 Facts About Community Land and Climate Mitigation," October 2021, <https://files.wri.org/d8/s3fs-public/2021-10/9-facts-about-community-land-and-climate-mitigation.pdf>

¹⁴ Liang Xu et al., "Changes in global terrestrial live biomass over the 21st century," Science Advances, Vol. 7, No. 27, <https://www.science.org/doi/10.1126/sciadv.abe9829>

¹⁵ *Id.*

¹⁶ Forest Trends, "Illegal agriculture is the main reason we're still losing forests. Is a crackdown coming?" 19 May 2021, <https://www.forest-trends.org/blog/illegal-agriculture-is-the-main-reason-were-still-losing-forests-is-a-crackdown-coming/>

¹⁷ UN Environment Programme, "UNEP and Biodiversity," September 2020, <https://www.unep.org/unep-and-biodiversity>

animal and plant species face the threat of extinction.^{18,19} The agriculture sector is responsible for about 80 percent of deforestation globally, but it is also among the sectors most reliant on ecosystem services, particularly pollination.²⁰ Pollinator loss is currently placing USD 235 billion to USD 577 billion of annual agricultural production at risk.²¹ The economic cost of biodiversity loss is already estimated to be between USD 2.0 trillion and 4.5 trillion per year.²²

5. **Soil Degradation:** Soil degradation costs an estimated USD 400 billion every year and has been linked to a potential 12 percent reduction in global food productivity and a 30 percent increase in food prices by 2030.²³ Degradation is driven by the loss of organic matter and soil erosion, excessive use of fertilizers and pesticides, other types of contamination, salinization, acidification, and a loss of genetic diversity.²⁴ Soil erosion, for example, is a major consequence of tropical deforestation because soil can no longer rely on intricate root structures to hold it in place or canopies to protect it from drying in the sun. Although recently deforested land may support productive agricultural activity, soil fertility decreases over time as topsoil is blown or washed away. For example, a study of deforested land in Iran measured a 70-82 percent drop in soil productivity of cultivated land and a 50 percent drop in organic matter overall.²⁵
6. **Global water cycles:** As deforestation and land use change lead to the conversion of tropical forests to grasslands or savanna, less moisture is stored and released into the atmosphere. Thus, the hydrological cycle is disrupted with a major ripple effect on precipitation patterns around the world. Climate scientists have predicted a tipping point when 20–25 percent of the Amazon is cut down, warning that the rainforest's hydrological cycle will be unable to support itself and the biome will convert to a savanna.²⁶ Since the Amazon provides water to a region in South America responsible for 70 percent of the continent's GDP, the risk to the continent's financial sector is sizeable. This problem is not limited to South America.²⁷ Deforestation in the Amazon could lead to a 25 percent reduction in rainfall in Texas, for example.²⁸ Meanwhile, deforestation in Central Africa could reduce rainfall in the U.S. Midwest by 5-35 percent, and deforestation in Southeast Asia can influence rainfall in Europe.²⁹

¹⁸ WWF, Living Planet Report 2020, <https://livingplanet.panda.org/en-us/>

¹⁹ UN Sustainable Development Goals, "UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating,'" 6 May 2021, <https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>

²⁰ Id. 14.

²¹ Ceres, PRI, Climate Action 100+, "Global Sector Strategies: Recommended Investor Expectations For Food and Beverage," August 2021, <https://www.climateaction100.org/wp-content/uploads/2021/08/Global-Sector-Strategies-Food-and-Beverage-Ceres-PRI-August-2021.pdf>

²² The Sustainable Finance Platform, "Biodiversity Opportunities and Risks for the Finance Sector," June 2020, https://nwbbank.com/download_file/729/783

²³ Peter M. Kopittke et. al. "Soil and the Intensification of Global Agriculture for Global Food Security," Environment International, <https://www.sciencedirect.com/science/article/pii/S0160412019315855#bbb0055>

²⁴ Id.

²⁵ Salar Rezapour & O. Alipour, "Effect of deforestation on fertility attributes of Mollisols in the NW of Iran," 17 August 2016, Chemistry and Ecology, <https://www.tandfonline.com/doi/abs/10.1080/02757540.2017.1288227>

²⁶ The Nature Conservancy, "The Amazon Approaches Its Tipping Point," August 2020, <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/amazon-approaches-tipping-point/>

²⁷ Id.

²⁸ Greenpeace, "Impacts of Deforestation on Weather Patterns and Agriculture," October 2013, <https://wayback.archive-it.org/9650/20200430193134/http://p3-raw.greenpeace.org/international/Global/international/publications/forests/2013/JN455-An-Impending-Storm.pdf>

²⁹ Mongabay, "Rainforests Help Maintain the Water Cycle," July 2020, <https://rainforests.mongabay.com/kids/elementary/404.html>

7. **Clean Drinking Water and Flood Mitigation:** Deforestation and land use change can have devastating implications to the availability and quality of clean drinking water to populations both locally and regionally. Forested land covers about 31 percent of watersheds worldwide and provides essential storage and filtration services.³⁰ By absorbing nutrients and sediment, forests provide clean drinking water to large populations in urban centers downstream and can reduce infrastructure investments and water management costs.³¹ By storing water in roots, branches, and canopies, forests can also reduce the intensity of flooding and mitigate irregular rainfall patterns. Conversely, deforestation and land use change can lead to devastating flooding, increased need for costly infrastructure, and significant pollution because of the loss of ecosystem services and preventing the previously discussed runoff of agricultural fertilizers and pesticides.
8. **Infectious disease outbreak:** Deforestation and land use change lead to habitat loss and increase the likelihood of zoonotic infectious diseases that result from proximity between humans and animals. Since infectious disease emergence is driven primarily by land use change (31 percent), followed by agriculture (15 percent), commodity-driven deforestation is a primary risk factor for future pandemics.³² Furthermore, according to some studies, 75 percent of emerging infectious diseases are zoonotic compared to 60 percent of all existing infectious diseases, which indicates that habitat loss resulting from land use change is playing an increasing role in infectious disease emergence over time.³³ The Covid-19 pandemic has provided some insight into the potential costs of infectious diseases to both humans and the economy. In addition to the millions of lives lost, as early as October of 2020, the International Monetary Fund estimated that the pandemic would cost the global economy USD 28 trillion in lost output.³⁴ Without halting deforestation, the likelihood of society being exposed to more costly zoonotic diseases we are unprepared to manage will continue to increase.
9. **Pollution:** In addition to absorbing CO₂, trees absorb toxic chemicals and filter the air providing noteworthy benefits to human health. Despite only covering 6 percent of land, tropical forests produce 40 percent of the world's oxygen alongside the absorption of harmful pollutants.³⁵ Furthermore, particulate matter from fires linked to longer dry seasons and land clearing for agricultural use has been shown to increase pollution-related hospitalizations by 65 percent and to cost the Brazilian public healthcare system the equivalent of USD 660,000 during the 2019 fire season.³⁶ With wildfire seasons increasing in severity and longevity, driven by climate change and

³⁰ Katie Lyons and Todd Gartner, "3 Surprising Ways Water Depends on Healthy Forests," World Resources Institute, 21 March 2017, <https://www.wri.org/insights/3-surprising-ways-water-depends-healthy-forests>

³¹ Suzanne Ozment et. al. "Protecting Drinking Water At The Source," World Resources Institute, https://wriorg.s3.amazonaws.com/s3fs-public/Protecting_Drinking_Water_at_the_Source.pdf

³² Elizabeth Loh et. al. "Targeting Transmission Pathways for Emerging Zoonotic Disease Surveillance and Control," July 2015, <https://www.liebertpub.com/doi/abs/10.1089/vbz.2013.1563>

³³ UNEP, "Emerging Issues of Environmental Concern," 2016, https://wesr.unep.org/media/docs/assessments/UNEP_Frontiers_2016_report_emerging_issues_of_environmental_concern.pdf

³⁴ The Guardian, "The IMF Estimates Global Covid Cost at USD 28 Trillion in Lost Output," 2020, <https://www.theguardian.com/business/2020/oct/13/imf-covid-cost-world-economic-outlook>

³⁵ Jeri Curley, "How Does Deforestation Affect the Air?" 16 March 2018, Sciencing, <https://scienking.com/deforestation-affect-air-10632.html>

³⁶ Andre Albuquerque Sant Anna & Rudi Rocha, "Health Impacts of Deforestation-Related Fires in the Brazilian

the effects of global deforestation, a major step in mitigating the potential pollution impacts must include curbing global deforestation.

10. **Environmental refugees and local conflict:** By depleting the ecosystem services that millions of people rely on for food, clean water, and energy, deforestation and land use change are likely to create climate change refugees and exacerbate geopolitical conflict. The inevitable floods, droughts, and repeated crop failures are likely to destabilize economies as they become unable to support their populations. Over 1.2 billion people could become climate change refugees by 2050.³⁷ The world is already experiencing climate refugees and will continue to see an increase of this tragedy in the near-term. For example, the 90 percent reduction in the size of Lake Chad has provided some insight into the scale of potential migration patterns with 2.4 million displaced people and increased geopolitical conflict in the region.³⁸
11. **Medical Innovation:** Future medical breakthroughs are dependent on the conservation of plant biodiversity today. The market for medicinal plant products is valued at over 100 billion USD and approximately 80 percent of the global population is reliant on botanical drugs.³⁹ Moreover, a quarter of modern medicine originates in tropical forests.^{40,41} Yet, scientists have only scratched the surface of cataloging and understanding the vast biodiversity of the world's forests. It is estimated that up to 100 species of animal and plant species disappear per day as tropical forest habitats are destroyed.⁴² A loss of plant biodiversity before medicinal impacts are understood is likely to lead to adverse impacts on human health and a slowdown in innovation in the pharmaceutical industry globally.

2. FINANCIALLY MATERIAL RISKS FROM DEFORESTATION

Financial market actors have already signaled that they consider deforestation a financially material climate risk. A recent investor initiative of US \$8.5 trillion, the Investors Policy Dialogue on Deforestation (IPDD), is indicative of investors' growing understanding.⁴³ IPDD, established in 2020, is comprised of 58 financial institutions and investors concerned about the "financial impacts that deforestation and the violation of the rights of indigenous peoples and local communities may have on their clients and investee companies by potentially increasing reputational, operational and regulatory risks."⁴⁴ It identifies three channels by which

Amazon," August 2020, https://www.hrw.org/sites/default/files/media_2020/08/Health%20Impacts%20of%20Deforestation-Related%20Fires%20in%20the%20Amazon_EN_0.pdf

³⁷ Tetsuji Ida, "Climate Refugees – the World's Forgotten Victims," 18 June 2021, <https://www.weforum.org/agenda/2021/06/climate-refugees-the-world-s-forgotten-victims/>

³⁸ UN Migration, "Environmental Migration Portal," <https://environmentalmigration.iom.int/country/chad>

³⁹ Abayomi Sofowora, "The Role and Place of Medicinal Plants in the Strategies for Disease Prevention," 12 August 2013, National Library of Medicine, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3847409/>

⁴⁰ "Ten things you may not know about forests," Food and Agriculture Organization of the United Nations, September 2017, <https://www.fao.org/zhc/detail-events/en/c/1033884/>

⁴¹ Tuhinadri Sen & Samir Kumar Samanta, "Medicinal Plants, Human Health and Biodiversity: A Broad Review," Biotechnological Applications of Biodiversity, https://link.springer.com/chapter/10.1007/10_2014_273

⁴² COP9 Press Kit Forests, "Forest Biodiversity," <https://www.cbd.int/doc/meetings/cop/cop-09/media/cop9-press-kit-forest-en.pdf>

⁴³ See IPDD, <https://www.tropicalforestalliance.org/en/collective-action-agenda/finance/investors-policy-dialogue-on-deforestation-ipdd-initiative/>. IPDD has a secretariat established by the World Economic Forum, and is supported by PRI (U.N. Principles for Responsible Investment).

⁴⁴ *Id.*

deforestation risks create financial risk for issuers and investors: ESG risks; supply chain risks; and finance sector risks.⁴⁵

These supply chain risks are concentrated in commodities coming from Indonesia and Brazil, which together generate roughly 60 percent of the GHG emissions generated from tropical deforestation.⁴⁶ Although the supply chain risk is concentrated from a country perspective, a broad cross-section of industrial and retail sectors in the United States is directly exposed to tropical commodity supply chain risks. These sectors include food and beverage processing and production, automobile manufacturing, textiles, chemicals, pharmaceuticals, retail, food services, personal care products, print publishing, forestry, construction, energy and biofuels, and finance.⁴⁷

Below is a summary of the types of climate change risks in forest, food, and land, according to TCFD classifications.

Physical climate-related financial risks from deforestation:

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.⁴⁸
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.⁴⁹

Transition climate-related financial risks from deforestation:

1. Policy and legal risks result from government policy changes, litigation, or law enforcement.
 - a. The COP26 agreement that resulted in pledges from over 140 countries to halt deforestation by 2030 is likely to accelerate conservation efforts for high conservation value and high carbon stock land.⁵⁰ For example, in Indonesia, as much as 76 percent of unplanted palm oil

⁴⁵ *Id.* Among ESG risks, IPDD identifies GHG emissions, biodiversity loss, flood and soil erosion, and rainfall reduction among environmental risks; land rights violations, Indigenous peoples' rights violations; and health hazards from increased exposure to haze as among social risks of concern; and illegality of the deforestation, bribery to reduce enforcement of limits on permissible forestry or agriculture, and financial crimes, including tax evasion and money laundering, as among governance concerns. Supply chain risks include productivity declines; property damage; increased security staff costs, inability to adapt to changes in regulation, litigation for failure to manage ESG risks, and cancellation of contracts and reduced demand from consumers concerned about deforestation. Finance sector risks include losses to investors from stranded assets or negative returns on investments; banks' losses from nonperforming loans, increased default risk and loss of revenues; regulatory risks from the inability of companies to meet new regulatory requirements, such as due diligence/ESG requirements and risk weightings; failure to disclose ESG risks in portfolios; possible litigation against investors for breach of fiduciary duty due to failure to integrate ESG; increased accountability for ESG impacts under the new OECD guidelines; and reputational risks from damage to brand value and loss of credibility as a responsible investor or bank. *Id.*

⁴⁶ 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>.

⁴⁷ 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>

⁴⁸ 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>

⁴⁹ *Id.* 21

⁵⁰ Jake Spring and Simon Jessop, "Over 100 global leaders pledge to end deforestation by 2030," Reuters, November 2021,

- 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.⁵¹
- b. Orbitas 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.⁵²
 - c. International momentum on carbon pricing is estimated to further increase operating costs of emissions-intensive agricultural producers by as much as 14 percent.⁵³ 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.⁵⁴
 - e. Legal actions are increasingly being taken against high-emitting companies that are responsible for escalating climate-related damages.⁵⁵
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.⁵⁶
 - 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.⁵⁷ On the other hand, companies without effective mechanisms to prevent deforestation in supply chains may see declines in market access 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.⁵⁸ As the industry moves toward no-deforestation policies and monitoring, climate laggards risk seeing a declining market and rising input costs due to upstream physical and operational risks.

<https://www.reuters.com/business/environment/over-100-global-leaders-pledge-end-deforestation-by-2030-2021-11-01/>

⁵¹ Orbitas, "Climate Transition Risk Analyst Brief: Indonesian Palm Oil", August 2021, <https://orbitas.finance/2021/08/27/indonesian-palm-oil-deforestation-climate-transition-risk/>

⁵² 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/>

⁵³ Id. 66

⁵⁴ 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/>

⁵⁵ 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/>

⁵⁶ 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/>

⁵⁷ 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/>

⁵⁸ UN Climate Change Conference 2021, "Agricultural commodities companies corporate statement of purpose," November 2021, <https://ukcop26.org/agricultural-commodity-companies-corporate-statement-of-purpose/>

- 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.⁵⁹

- 4. Reputational risks are driven by actions that damage a company's public image.
 - 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.⁶⁰

Given the systemic economic and financially material physical risks to investors if limiting temperature increases of 1.5 degrees Celsius or less is not achieved, and conversely, the financially material climate transition risks to investors if public and private sectors collaborate to mitigate the worst impacts of climate change, specific climate disclosure of deforestation risks needs to be more clearly incorporated into the ruling the SEC ultimately promulgates.

3. THE ROLE OF PRECEDENT IN THE MATERIALITY OF FOREST, FOOD, AND LAND RISK

A key factor that has informed the SEC's consideration of expanded climate disclosure has been investors' increasing understanding that climate change data is material to their decisions concerning buying, selling, or voting shares in individual companies. An analysis conducted by the Commonwealth Climate and Law Initiative of comments submitted to the SEC's March 15, 2021, Request for Information on climate change disclosure found as follows:⁶¹

- Eighty of 83 asset managers and investment companies that submitted comments were in favor of expanded climate disclosure, describing it as financially material information.
- Fifty-seven of those 83 asset managers and investment companies supported disclosure of Scope 1, 2, and 3 GHG emissions as a baseline requirement. Regarding Scope 3, it was supported as a disclosure requirement either now or over the next few years.

In their discussions of materiality, most investors rely upon the U.S. Supreme Court's decision in *TSC v. Northway*, 426 U.S. 438 (1976), which defined material information in the proxy context as information that "a reasonable shareholder would consider important in deciding how to vote." As the Court stated, "[p]ut another way, there must be a substantial likelihood that the disclosure of the omitted fact would have been

⁵⁹ Global Canopy, "Thirty financial institutions commit to tackle deforestation," November 2021, <https://globalcanopy.org/press/thirty-financial-institutions-commit-to-tackle-deforestation/>

⁶⁰ 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/I/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>.

⁶¹ "Review of public comments to US Securities and Exchange Commission regarding proposed climate change disclosures," Climate and Law Initiative, June 2021, <https://commonwealthclimatelaw.org/wp-content/uploads/2022/06/SEC-Comment-Review-Summary-of-findings-June-2022.pdf>

viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.” *Id.* at 449. The importance of the omitted fact need not be outcome determinative. A plaintiff would not need to show that disclosure would likely have affected the outcome of the proxy vote at issue to prevail. Rather, the significance of an omitted fact in altering the total mix of information available was emphasized.

Materiality is hardly a bright line standard but is rather a fact intensive analysis in any individual litigation. However, the perspective from which materiality is to be determined is clear: Materiality is to be determined from the perspective of reasonable investors. Given the precedent set in *TSC v. Northway*, it is notable that investors have an extensive track record of calling for climate-related financial disclosures related to deforestation and risk mitigation mechanisms. Below are a few examples of these statements:

1. **Global Canopy’s “Financial Sector Commitment Letter on Eliminating Commodity Driven Deforestation,” signed by financial institutions that collectively manage over US\$ 8.7 trillion in assets:**⁶² “The conditions for investing in, and providing financial services to, forest-risk agricultural commodities operations and supply chains are increasingly uncertain. We see that weakening environmental and human rights policies and lack of effective enforcement are exposing the sector to growing ESG, market, reputational and litigation-related risks, as well as regulatory uncertainty. We believe these risks should be addressed.”
2. **Ceres’ “Investor Statement on Deforestation and Forest Fires in the Amazon,” endorsed by 230 investors, collectively representing approximately US \$16.2 trillion in assets:**⁶³ “As investors, who have a fiduciary duty to act in the best long-term interests of our beneficiaries, we recognize the crucial role that tropical forests play in tackling climate change, protecting biodiversity and ensuring ecosystem services … As investors, we see deforestation and the associated impacts on biodiversity and climate change as systemic risks to our portfolios and see the reduction of deforestation as a key solution to managing these risks and contributing to efficient and sustainable financial markets in the longer term. Considering the growing risks due to increased deforestation in Brazil, Bolivia, and other Amazonian countries, we therefore urgently request companies to redouble their efforts and demonstrate clear commitment to eliminating deforestation within their operations and supply chains, including by:
 - a. Publicly disclosing and implementing a commodity-specific no deforestation policy with quantifiable, time-bound commitments covering the entire supply chain and sourcing geographies.
 - b. Assessing operations and supply chains for deforestation risk and reducing this risk to the lowest possible level, disclosing this information to the public.
 - c. Establishing a transparent monitoring and verification system for supplier compliance with the company’s no deforestation policy.
 - d. Reporting annually on deforestation risk exposure and management, including progress towards the company’s no deforestation policy.”

⁶² UNFCCC, “Financial Sector Commitment Letter on Eliminating Commodity Driven Deforestation. This statement is endorsed by over 30 financial institutions representing c. (US) \$8.7 trillion in assets” <https://racetozero.unfccc.int/wp-content/uploads/2021/11/DFF-Commitment-Letter-.pdf>

⁶³ Ceres, “Investor statement on deforestation and forest fires in the Amazon. This statement is endorsed by 230 investors representing approximately US \$16.2 trillion in assets.” <https://www.ceres.org/sites/default/files/Investor%20statement%20on%20deforestation%20and%20forest%20fires%20in%20the%20Amazon.pdf>

3. **Amanda Blanc, Group CEO, Aviva Plc:**⁶⁴ “Protecting our forests and their biodiversity is fundamental to the fight against climate change ... Aviva is proud to sign the commitment to end deforestation, helping build a critical mass for change. Together we can reduce risk to the planet and the financial markets and capitalize on the opportunities that come from more sustainable investment.”
4. **Emine Isciel, Head of Climate and Environment, Storebrand Asset Management:**⁶⁵ “Deforestation is not only a risk to climate and biodiversity, but it can pose financial risks to our portfolios. A huge number of economic sectors are exposed to increasing physical and regulatory risks associated with deforestation.”
5. **Hubert Keller, Senior Managing Partner of Lombard Odier Group:**⁶⁶ “Today, some of the most convincing opportunities for growth and returns come from a transition to a more sustainable economic model that both harnesses and preserves Nature. At Lombard Odier, we continue to develop solutions that allow mainstream investors to position capital across asset classes to benefit from this largely untapped investment opportunity.”
6. **Lauren Compere, Managing Director, Boston Common Asset Management:**⁶⁷ “Addressing agricultural commodity-driven deforestation is absolutely crucial if we are to achieve net zero emissions by 2050. We see a pressing need for the realignment of finance from companies that do not meet reduction criteria to companies that are addressing these risks strategically and supporting the required transition in the sector. This has long been a focus of Boston Common’s approach to investing in and engaging with our portfolio holdings across sectors, including the financial sector.”

“Reasonable investors” have shown time and time again that climate-related financial risks from deforestation are of strategic importance and that disclosures would provide decision-useful information.

This materiality standard, first set out in the proxy context, was expressly adopted to the context of a Section 10(b)/Rule 10b-5 fraud cause of action in *Basic v. Levinson*, 485 U.S. 224 (1988). At issue in *Basic v. Levinson* was something that might happen—a merger between two companies, and so the U.S. Supreme Court was asked how to define the materiality of “contingent or speculative” information. It did so in *Basic v. Levinson*, 485 U.S. 224 (1988) as follows: “[M]ateriality ‘will depend at any given time upon a balancing of both the indicated probability that the event will occur and the anticipated magnitude of the event in light of the totality of the company activity,’” citing *SEC v. Texas Gulf Sulphur Co.*, 401 F.2d 833, 862 (2d Cir. 1968)(*en banc*). The greater the magnitude of potential impact, the lower the probability of occurrence needed in order to understand information as “material.”

Generally, the materiality of a future event is evaluated from a specific company perspective, such as the materiality of a merger to a target company’s shareholders, as in *Basic v. Levinson*. Still, it is possible to use the *Basic v. Levinson* process of analysis to evaluate some of the implications of deforestation to commodity agriculture companies and users of those products as a general matter.

Research has concluded that the financial risks of deforestation are particularly acute with respect to seven commodity products – cattle, palm oil, soy, timber, natural rubber, cacao, and coffee. A CDP analysis of 187

⁶⁴ Race to Zero, “Leading Financial Institutions Commit to Actively Tackle Deforestation,” 2 November 2021, <https://climatechampions.unfccc.int/leading-financial-institutions-commit-to-actively-tackle-deforestation/>

⁶⁵ Id.

⁶⁶ Id.

⁶⁷ Id.

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.⁶⁸ If the probability of deforestation is high in particular countries, such as Indonesia or Brazil, assuming the continuation of practices that are today leading to deforestation, a potential 25 percent reduction in revenue is of significant magnitude to be understood as "material." Thus, companies importing significant quantities of cattle, soy, timber, or palm oil, and/or with extensive supply relationships in Indonesia, Brazil, and other countries with high tropical deforestation risk, would likely need to disclose information, both quantitative and qualitative, concerning the risks of deforestation; regulatory risks that might lead to asset stranding; and supply chain parameters, such as proposed by the Sustainability Accounting Standards Board (SASB), CDP, or Climate Advisers, since this information can portend future financial risks of significant magnitude. Furthermore, the probability of these risks is unfortunately still high, such that the information is material under the *Basic v. Levinson* standard. This "probability/magnitude" process of analysis is also not a bright-line rule, notwithstanding its use of mathematical language.

Also relevant to materiality are voting rights. Prior SEC commissioners have often spoken of investors' interests narrowly, emphasizing the importance, thus materiality, of information for making decisions on buying or selling securities, and de-emphasizing or entirely ignoring investors' voting rights. It may be useful for this Commission to understand the importance of voting rights. Shareholders voting on expanded climate disclosure proposals at companies' annual meetings have increasingly been in favor of such disclosure, which is another indication that this is "material" information. It is particularly notable that in 2020, BlackRock voted in favor of a shareholder resolution requesting an assessment report to identify further opportunities to combat deforestation and degradation of intact forests in Proctor & Gamble (P&G) supply chains.^{69,70} After the resolution passed by 67 percent, BlackRock released a statement with its rationale for supporting the proposal: "As a long-term investor, the reputational and operational risks faced by companies being implicated in deforestation allegations is concerning to us."^{71,72} BlackRock's statement also highlighted an opportunity for P&G to further align its responsible forestry disclosures with the TCFD framework and SASB standards.

A final point to consider under current law and guidance is disclosure pursuant to Regulation S-K's Item 303, Management Discussion and Analysis, MD&A. For the most part, the SEC encourages but does not require forward-looking information to be disclosed. Item 303 of Regulation S-K, MD&A, is one exception where known events, trends, or contingencies that may have a material effect on the company's assets or results of operations are required to be disclosed. The goal of this disclosure is for investors to be able to see and evaluate companies' financial results "through the eyes of management," and so to have a clear view of future financial risks to the company. The SEC has provided guidance on the process of analysis it expects companies to use in preparing their company's MD&A disclosure. It emphasizes that if a company cannot rule out that an event, trend, or contingency will occur, then it must evaluate the potential effect of that event, trend or contingency on the company's assets, revenues, or profits on the assumption that it will occur. Where the natural resource constraints imposed by climate change are known contingencies that firms are currently exposed to, or likely will be exposed to in the future, pursuant to that process of analysis

⁶⁸ 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>

⁶⁹ "Voting Bulletin: The Procter & Gamble Company," Blackrock Investor Stewardship Group, 2020, <https://www.blackrock.com/corporate/literature/press-release/blk-vote-bulletin-procter-and-gamble-oct-2020.pdf>

⁷⁰ P&G 2020 Proxy Statement, 2020, https://s1.q4cdn.com/695946674/files/doc_financials/2020/ar/PG-Bookmarked-Proxy-Statement.pdf

⁷¹ "P&G Shareholders Deliver Overwhelming Vote for Better Forest Sourcing," NRDC, October 2020, <https://www.nrdc.org/media/2020/201013>

⁷² Id. 15

companies need to evaluate and disclose those resource constraints to meet the requirements of Item 303 under current law. That said, further specific SEC guidance, such as we expect to see, will clarify issuers' obligations, and provide investors with material information concerning future risks and contingencies.

Some commentators have argued that specific climate disclosure mandates are unnecessary because, to the extent that climate risks are material, reporting companies are already obligated to disclose all material information. This argument misconceives the disclosure obligations of the federal securities laws. Unlike some jurisdictions, U.S. law does not require reporting companies to disclose all material information.⁷³ Instead, such companies need only disclose the information explicitly required by the SEC to be set out in the Registration Statement, periodic reporting documents, and proxy statements, based on the requirements of Regulation SK.⁷⁴ Other than situations in which the SEC has mandated disclosure, a failure to disclose material information is only actionable when an issuer has made an incomplete disclosure or half-truth, or in the case of some other disclosure duty, such as in the context of insider trading.

It is because of this structure of U.S. securities law, and the risk of inconsistent interpretations of "materiality" in the climate change context, that a line-item disclosure regime is needed. Without clear guidelines and standards for deforestation disclosures, investors are likely to see uneven implementation among companies within the same industry, making it difficult to compare results. In 2020, the 687 companies that reported through CDP Forests' voluntary reporting framework estimated USD 53.1 billion in climate-related financial risks from deforestation and USD 6.6 billion in costs to respond to these risks.⁷⁵ Even though 27 percent more companies submitted CDP Forests disclosures in 2020 than 2019, only 31 percent of all companies contacted by CDP Forests submitted disclosures.⁷⁶ The 2020 annual CDP Forests report highlighted: "Progress to end deforestation to date has been slow, limited to certain products, geographies, or value chains. The majority of the market is falling short of the ambition needed."⁷⁷ Despite repeated calls from investors for disclosures in this area, some companies are at risk of continuing to avoid disclosures without clear guidance from the SEC.

B. Priority issues for investors' access to deforestation data

We turn now to discussing three priority comments on the Commission's proposals for expanded climate disclosure.

1. The SEC Should Close Loopholes in Scope 3 Disclosure Recommendations: *Disclosure of Scope 3 emissions should be mandatory for all registrants, based on the best available data and methodologies, rather than as proposed, only if material. In the alternative, disclosure of all Scope 3 emissions of a registrant's upstream supply chain should be required. If not required for all issuers, disclosure of Scope 3 emissions should be*

⁷³ See *Gallagher v. Abbott Laboratories*, 269 F.3d 806 (7th Cir. 2001) (Easterbrook, J.) ("Much of plaintiffs' argument reads as if firms have an absolute duty to disclose all information material to stock prices as soon as news comes into their possession. Yet that is not the way the securities laws work. We do not have a system of continuous disclosure. Instead, firms are entitled to keep silent (about good news as well as bad news) unless positive law creates a duty to disclose."). In contrast, the EU's Market Abuse Regulation requires issuers (with certain exceptions) to disclose all information of a "precise" nature, including information about unfolding events. See generally Ido Baum & Dov Solomon, *More Jomo Less Fomo: The Case for Voluntary Disclosure of Uncertain Information in Securities Regulation*, 14 VA. L. & BUS. REV. 171, 190-96 (2020).

⁷⁴ See Staff Report on Review of Disclosure Requirements in Regulation S-K, U.S. Securities and Exchange Commission, Dec. 2013, <https://www.sec.gov/files/reg-sk-disclosure-requirements-review.pdf>

⁷⁵ CDP Global Forests Report 2020, "The collective effort to end deforestation: A pathway for companies to raise their ambition," <https://www.cdp.net/en/research/global-reports/global-forests-report-2020>

⁷⁶ Id.

⁷⁷ Id.

mandatory for all sectors at risk of deforestation in its supply chains, using the CDP definition of high tropical deforestation risk commodities and countries. This is necessary because emissions from deforestation are relevant to both current year emissions and future carbon storage capacity. At a minimum, disclosure of Scope 3 emissions should be mandatory in industries where Scope 3 emissions are at least 40 percent of the registrants GHG emissions, unless a lesser percentage would be material to a particular issuer given that issuer's strategy, business model, location of and/or transition risks.

Scope 3 disclosure according to these parameters could be phased in based on the industry of the issuer, the significance of scope 3 emissions to an industry's climate change risk profile, and the size of the company. The Commission has proposed that companies disclose their Scope 1 and 2 emissions, but predicates Scope 3 emissions disclosures on internal materiality assessments. Leaving Scope 3 disclosure subject to a non-standardized materiality assessment would not serve the interests of investors as clearly as would requiring all issuers to disclose Scope 3 emissions, using the best available data and methodologies. There are several reasons we support mandatory Scope 3 disclosure with available data and methodologies.

First, for many industries with significant climate and transition risk, including forest, agriculture, food, other land use, oil and gas, Scope 3 emissions are the most significant sources of risk. The food sector and FMCGs, for example, often see 83 and 90 percent of their total GHG emissions in the scope 3 classification respectively.⁷⁸ For a company like Nestlé, requiring only scope 1 and 2 emissions would mean that investors see only 5 percent of the company's total GHG emission footprint.⁷⁹ If the goal of the SEC is to provide investors with insight into the financial risk related to a company's or industry's exposure to climate change risks, transparency for around only 5 percent of emissions would not effectively achieve this goal.

It should be noted that we are able to see the scale of this issue due to Nestlé's leadership in disclosing its emissions voluntarily. However, many public companies do not voluntarily disclose these data, and we should not assume that current laggards will voluntarily share these critical data with investors in the future. Furthermore, advocates for investor protection argue that disclosing Scope 3 emissions provides insight into a company's supply chain and the impact of products and services after the point of sale. This is vital for better understanding of the company's exposure to both physical impacts of climate change and transition risks, such as new government policies to address emissions, market access and financing risk, reputation risk, and changing consumer demand. In 2022, investors representing USD 4.7 trillion in assets under management stated that:

As the financial system moves to address climate risk, the lack of adequate data is increasingly clear. Reporting of Scope 1 and 2 emissions leaves gaping information holes that banks, insurance companies, asset managers, governments, investors, and innovators must traverse, impeding action and sound decision making.⁸⁰

Second, as governments and consumers respond to the risks of climate change, the lack of Scope 3 emissions disclosure means investors are unable to discern which companies are best positioned to weather these changes. Policies to keep global warming below 2 degrees may mean that up to 10 percent of agricultural

⁷⁸ 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.

⁷⁹ According to Nestlé's 2020 disclosure to CDP, publicly available via: <http://www.cdp.net>.

⁸⁰ As You Sow, "75 Investors With \$4.7 Trillion AUM Weigh in on Upcoming SEC Climate Disclosure Rulemaking", March 8, 2022, <https://www.asyou sow.org/press-releases/2022/3/8/sec-climate-disclosure-rulemaking>.

land could revert to forests.⁸¹ Consumers are increasingly willing to purchase green products like alternative proteins or products utilizing certified deforestation-free commodities. Scope 3 emission disclosures would show investors which companies have business strategies and operations that are able to contend with these changes that could have major impacts on costs, create stranded assets, and threaten profitability.

Finally, non-disclosure of Scope 3 emissions by one registrant based on that registrant's materiality assessment may leave investors with a false sense of an investment's risk/return profile. It may become far more difficult to compare risks and potential returns between companies within the same industries where materiality determinations differ, particularly since it would increase the burden on the investor to understand and compare the basis for those materiality determinations. The lack of required disclosure similarly poses additional risk to responsible leaders in the corporate sector. Companies that do disclose Scope 3 may face a disadvantage as their emission profiles may look drastically different than those who do not disclose if investors are not well versed in emissions terminology. Investors will not have the necessary data to accurately compare the risks of investing in similar companies within an industry if emissions data is not standardized.

The World Economic Forum and the Boston Consulting Group recognized that Scope 3 disclosures are critical for understanding material climate risks in many industries in a recent report, concluding that “[a]ddressing Scope 3 emissions is fundamental for companies to realize credible climate change commitments.”⁸² Scope 3 emissions in the downstream companies dependent on tropical commodities typically comprise upward of 80 percent of total emissions, and 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.⁸³ Given that internationally agreed upon climate change targets are predicated on halting deforestation, these supply chain deforestation practices are unsustainable as governments implement climate policies, and present regulatory and transition risk for investors across the economy.

A number of financial institutions and investors responding to the March 15, 2021, Request for Information on climate change disclosure have supported a Scope 3 disclosure requirement, some with caveats.⁸⁴ For instance:

BlackRock: “BlackRock believes climate disclosure should be TCFD-aligned and should include qualitative and quantitative disclosure items modeled on those of the TCFD framework, as well as sector-specific metrics, such as those identified by SASB. . . We support the inclusion of select quantitative disclosure in connection with the SEC’s adoption of any rules. We recommend that the SEC look to GHG emissions data as an appropriate starting point for mandated quantitative disclosures. However, we recognize that Scope 3 and any other quantitative disclosures may require a phased approach and appropriate safe harbor where data and methodologies are still emerging. We further request that the SEC issue guidance encouraging issuers to continue to produce

⁸¹ Orbitas, “Agriculture in the Age of Climate Transitions: Stranded Assets. Less Land. New Costs. New Opportunities.” 3 December, 2020, <https://orbitas.finance/2020/12/03/ag-climate-transitions-risk-opportunities/>.

⁸² World Economic Forum and Boston Consulting Group, “Net-Zero Challenge: The supply chain opportunity,” p.5, January 2021, https://www3weforum.org/docs/WEF_Net_Zero_Challenge_The_Supply_Chain_Opportunity_2021.pdf.

⁸³ Mars, “Mars – Climate Change 2019 report to CDP,” 2019. Downloadable from the CDP website: <https://www.cdp.net/en>.

⁸⁴ U.S. Securities and Exchange Commission, “Comments on Climate Change Disclosures,” 14 June 2021, <https://www.sec.gov/comments/climate-disclosure/cl12.htm>

quantitative information (including but not limited to comprehensive emissions disclosures) aligned with the TCFD framework, supplemented by sector specific metrics, even if doing so goes beyond what is formally required under an initial rulemaking.”

BNP Paribas: “Beyond requiring the disclosure of material information, the SEC should also adopt a framework that includes mandatory disclosure of detailed, non-material—but relevant information—related to scope 1, 2, and 3 GHG emissions. . . .In terms of the timing and detail for these requirements, while disclosures of scope 1 and 2 GHG emissions should be in the SEC’s initial phase for implementation, scope 3 emissions should go into effect at a later stage for financial institutions. Scope 3 disclosures are important for investors to understand the broader impact of corporate activities on climate change, and the long-term financial viability of companies as a result of changing climate—and therefore should be a critical part of the SEC’s disclosure framework.”

The comment went on to discuss particular issues for financial institutions in Scope 3 disclosure and emphasized the importance of the SEC’s developing sectoral standards for Scope 3 disclosure.

Credit Suisse: “The materiality and scope of information provided in such [climate] disclosures should be specific to the industry of the reporting company. With that said, Credit Suisse supports the mandatory disclosure of a limited set of metrics, such as Scope 1,2, and 3 GHG emissions, across key industries as such information is critical for financial market participants to have a better understanding of their total climate-related exposure to the highest emitting sectors.”

T. Rowe Price: “The SEC should adopt a discrete set of core metrics that all issuers must disclose. Within the framework described above [generally aligned with TCFD disclosure], the SEC should require issuers to provide, as a first step, Greenhouse Gas (GHG) Scope 1 and Scope 2 emissions data accompanied by a qualitative narrative explaining the related risks, and the issuer’s total energy consumption. Additionally, the SEC should require Scope 3 emission data for industries where they are particularly material.”

Vanguard: “[W]e support a well-designed disclosure framework to help investors and companies understand and manage climate-related risks and protect long-term shareholders value. At a minimum, such a framework would provide investors with uniform reporting of Scope 1 and Scope 2 greenhouse gas emissions supplemented by additional information for industries and public issuers with more acute climate risk. . . For public companies that have more acute climate risk, qualitative disclosure of performance metrics and progress against goals should be provided along with disclosures of governance, strategy analysis, and risk management processes.”

Bloomberg, L.P., which sells data to investors worldwide, similarly supports disclosure of Scope 3 emissions, given its perspective on the importance of that data in investors’ assessments of companies’ vulnerability to climate risk:

Bloomberg: “Disclosures should provide decision-useful metrics and information for investors on both current and forward-looking potential climate-related risks and opportunities facts by filing companies. This information, at a minimum, includes metrics on company GHG emissions, actual and projected financial impacts, and assessments of strategy resilience using scenario analysis. For example, GHG emissions—particularly scope 1 and scope 2 emissions, and increasingly scope 3 emissions—are critical components of any climate-related financial disclosure scheme. Because these emissions are the major drivers of temperature increases, understanding the emissions contributions of a company is an important factor for understanding how financially vulnerable they may be to shifts in regulation, technology, and markets as the world adjusts to a lower-carbon economy. Indeed, a company’s level of emissions is an important factor in investors’ and other market participants’ assessments of potentially material climate-related transition risks and opportunities.”

To ease the transition burden on issuers, disclosure according to Scope 3 could be phased in based on the size of the company and the materiality of Scope 3 emissions to specific industries’ climate change risk profile. The Science Based Targets Initiative suggests Scope 3 disclosures in industries in which over 40 percent of a total emissions fall under Scope 3. Such an approach to phasing in Scope 3 disclosure based on specific industry characteristics is consistent with developments in voluntary ESG disclosure, which have emphasized sector-specific disclosure based on an understanding of varying material challenges that are industry-specific. This observation brings up a larger point: the general importance of sector-specific disclosure guidance in the AFOLU sector, discussed in our third priority.

2. The SEC should mandate disclosure of nature-related dependencies and financial risks across industries: *The SEC should require companies to identify and disclose their nature-related dependencies and the financial risks arising from those dependencies because the collapse of natural ecosystems, in turn, creates significant climate-related financial risks. The emerging Taskforce on Nature-Related Financial Disclosures (TNFD) framework measures nature-related financial risks, including those that exacerbate climate-related financial risks. It also aligns closely with the TCFD in its coverage of strategy, governance, risk management, metrics, and targets when assessing the potential impact of nature-related financial risks.*

Climate-related financial disclosures would be incomplete without considering the nature-related financial risks with significant climate impact or that have a multiplying impact on climate-related financial risks. For example, if rising deforestation rates result in a tipping point being surpassed in the Amazon rainforest, scientists estimate that the majority of the ecosystem would gradually collapse and turn into a Savannah-like ecosystem, releasing up to 90 billion metric tons CO₂, equivalent to seven years of global emissions, as the forest dies off.⁸⁵ The impact to agricultural supply chains would be substantial as a result of reduced rainfall for irrigation and rising temperatures.

More than 50 percent of the world’s economic output – USD 44 trillion – is “moderately or highly dependent on nature and its services, and is therefore exposed to nature loss,” according to a 2020 report by the World

⁸⁵ Principles for Responsible Investment, UNEP Finance Initiative, & UN Global Compact, “The Amazon: A Critical Tipping Point,” https://www.unpri.org/Uploads/s/h/b/pri_theamazon_acriticalclimatetippingpoint_2019_659012.pdf

Economic Forum and PwC.⁸⁶ The research underlying the report was conducted by assessing the reliance on natural capital assets of 163 economic sectors and examining them at an industry and regional level.⁸⁷ As that report states, “[p]rimary industries such as food and beverages, agriculture and fisheries, and construction exhibit the highest nature dependency.”⁸⁸ They rely directly on extracting resources from forests or oceans, or they rely on the provision of other natural services such as healthy soils, clean water, pollination, and a stable climate.⁸⁹

All these nature-based dependencies are intrinsically interlinked with the stresses on forests, land, fresh water, and oceans from climate change. The following three sectors, alone, generate close to USD 8 trillion of economic value annually: construction (USD 4 trillion); agriculture (USD 2.5 trillion); and food and beverages (USD 1.4 trillion).⁹⁰ Yet, even businesses not directly dependent on forests, land, or oceans can be indirectly affected by nature loss through impacts on operations, supply chains, and markets.⁹¹ Changes in natural environments, including through deforestation, and loss or degradation of natural services, are increasing climate-related financially material risks to companies and economies, but they are not currently being incorporated into financial reporting or qualitative disclosures in any systematic way.

To address this gap, senior executives from financial institutions, corporations, and accounting firms have cooperated in the development of the TNFD, whose framework is supported by the G7 Finance Ministers and the G20 Sustainable Finance Roadmap process.⁹² It is developing an analytic approach to physically locating companies’ interfaces with nature; evaluating nature-based dependencies and impacts; assessing risks and opportunities; and disclosing responses to nature-related risks and opportunities to investors.⁹³ It is explicitly being modeled to align with the TCFD, using the governance, strategy, risk management, metrics and targets framework, and structured to align with the International Sustainability Standards Board (ISSB) as a global baseline, with additional disclosure as needed to report on material nature-related risks.⁹⁴ TNFD recently published (March 2022) its first version of the framework for beta-testing. Although it is an emerging framework and is still in the process of incorporating valuable stakeholder feedback, the SEC should evaluate it carefully as it develops its final rule, since the financial impacts of nature-based risks are exacerbated by, and interrelated with, those of climate change.

3. Industry-specific guidance: The SEC should develop industry-specific guidance for climate disclosure in the forest, food, and land sector, much as it has done previously in oil and gas; banking; real estate; and insurance.⁹⁵

⁸⁶ World Economic Forum and PwC, *Nature Risk Rising: Why the Crisis Engulfing Nature Matters to Business and the Economy* (2020), p.8, https://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf.

⁸⁷ *Id.*, at 13.

⁸⁸ *Id.*, at 7.

⁸⁹ *Id.*, at 13.

⁹⁰ *Id.*, at 7.

⁹¹ *Id.*, at 2.

⁹² Taskforce on Nature-related Financial Disclosures, <https://tnfd.global/>.

⁹³ TNFD, The TNFD Nature-related Risk and Opportunity Management and Disclosure Framework, <https://tnfd.global/the-tnfd-framework/tnfd-framework-summary/>.

⁹⁴ *Id.*

⁹⁵ See List of Industry Guides, Reg. S-K, Item 800, 17 C.F.R. § 229.800; Securities Act Industry Guides, Reg. S-K, Item 801, 17 C.F.R. § 229.801 (identifying industry guides in oil and gas; banking; real estate; and insurance); Exchange Act Industry Guides, Reg. S-K, Item 802 (identifying industry guides in banking and insurance). See [47 FR 11401](https://www.gpo.gov/fdsys/pkg/FR-1982-03-16/pdf/FR-1982-03-16-01401.pdf), Mar. 16, 1982, as amended at [49 FR 47600](https://www.gpo.gov/fdsys/pkg/FR-1984-12-06/pdf/FR-1984-12-06-47600.pdf), Dec. 6, 1984; [57 FR 36468](https://www.gpo.gov/fdsys/pkg/FR-1992-08-13/pdf/FR-1992-08-13-36468.pdf), Aug. 13, 1992; [61 FR 30401](https://www.gpo.gov/fdsys/pkg/FR-1996-06-14/pdf/FR-1996-06-14-30401.pdf), June 14, 1996; [74 FR 2193](https://www.gpo.gov/fdsys/pkg/FR-2009-01-14/pdf/FR-2009-01-14-2193.pdf), Jan. 14, 2009; [83 FR 66448](https://www.gpo.gov/fdsys/pkg/FR-2018-12-26/pdf/FR-2018-12-26-66448.pdf), Dec. 26, 2018; [85 FR 66140](https://www.gpo.gov/fdsys/pkg/FR-2020-10-16/pdf/FR-2020-10-16-66140.pdf), Oct. 16, 2020.

Due to the outsized climate-related financial risks related to deforestation and the essential role of forests in mitigating climate change, climate-related financial disclosures would be incomplete and ineffective in protecting investors without explicitly requiring sector-specific disclosures for the forest, food, and land sector. In agricultural commodity 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. These are the kinds of specific disclosure requirements that an Industry Guide would be well positioned to develop. The SEC has often published industry-specific guidance when taking on new disclosure challenges. Such guidance for issuers in sectors with high climate-related financial risks from deforestation, in addition to promulgating rules based on the Climate Proposal of March 21, 2022, would promote certainty for issuers and investors alike.

Industry guidance, incorporated into Industry Guides, “represent policies and practices followed by the Commission’s Division of Corporation Finance in administering the disclosure requirements of the federal securities laws.”⁹⁶ Very often, these industry guides rely upon industry association practices and definitions, which are incorporated into regulations when the disclosure requirements of an Industry Guide are codified into an Item in Regulation S-K. An example of this process can be seen in the specialized disclosure requirements about, and accounting treatment of, oil and gas assets. These requirements, formerly set out in Industry Guide 2, are now set out in Item 1201 of Reg. S-K, based on definitions developed by the Petroleum Resource Management System (PRMS).⁹⁷ Developing an Industry Guide for the forest, food, and land use sectors would help to ensure that climate risk and deforestation information of decision-relevance to investors is produced and disclosed in reliable, consistently presented, and comparable form.

The TCFD, GHG Protocol, and CDP Forests have produced industry-specific guidance on applying their frameworks. These, along with other reliable sources of guidance, are particularly important as climate-related financial disclosure matures, since the specificity of industry risks and opportunities should lead to particularized, sector-specific, comparable disclosure. Thus, we encourage the SEC to take an active role in either developing sector-specific Industry Guidance for this sector or delegating the authority to self-regulatory organizations such as TCFD, the GHG Protocol, TNFD, and CDP Forests to further develop sector-specific disclosure guidance. As recognized in a securities law professors’ Comment in response to the SEC’s March 15, 2021, RFI, “[i]n formulating specific ESG disclosure requirements, the SEC indisputably possesses the legal authority either to incorporate in rules and regulations standards developed by private entities or to develop its own expertise to establish the operative standards internally.”⁹⁸

Industry specific guidance from TCFD, the GHG Protocol, SASB, CDP, and other reliable partners, together with engaged SEC oversight and guidance, can help to provide the frameworks for attaining decision-useful, sector-specific, comparable information. For deforestation risk specifically, CDP Forests has produced the clearest decision-useful metrics. Companies already use the CDP Forests disclosure framework to voluntarily

⁹⁶ Guides for Statistical Disclosure by Bank Holding Companies, Release No. 33-5735 (Aug. 31, 1976) [41 FR 39007] (“Guide 3 Release”).

⁹⁷ Modernization of Oil and Gas Reporting, Release Nos. 33-8995; 34-59192; FR-78; File No. S7-15-08 (2008).

⁹⁸ Jill E Fisch et al., Securities Law Professors’ Comment Letter, p. 14, June 11, 2021, <https://www.sec.gov/comments/climate-disclosure/cl12.htm>

report on tropical commodity exposure and oversight. The disclosures are targeted toward commodities and countries at high risk of deforestation, and the scope is clearly defined. Furthermore, 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.

In its response to the SEC's March 15 Request for Information, the National Association of Manufacturers, which is the largest industrial trade association in the United States, endorsed the SEC's climate disclosure initiative and supported industry-specific disclosure requirements. It stated that:

National Association of Manufacturers: "The NAM believes strongly in the importance of ensuring that investors have access to disclosures on material climate-related metrics, risks, and opportunities. . . . Any reporting framework should be conducive to flexible and diverse climate change or ESG disclosures that reflect the disparate risks and opportunities faced by different companies and industries. . . . Given that risk factors differ from company to company and from industry to industry, the resulting disclosures under any reporting framework should be correspondingly diverse. . . ."

Companies that will be subject to the new disclosure requirements similarly support industry specific guidance. United Airlines encourages the SEC to "rely on, and benefit from, the current private market reporting frameworks that apply industry-based standards." It supports this recommendation as follows:

United Airlines: "[T]hese frameworks encourage decision-useful disclosure by allowing companies to choose the 'off the shelf' metrics appropriate to their specific business operations and avoid the 'one-size-fits-all' standard."

While it may present challenges to the SEC to promulgate its climate disclosure line-item requirements at the same time as producing industry specific guidance for the forest, food, and land sector, we urge the Commission to promulgate such industry-specific guidance as expeditiously as possible, when or after the Rules come out. We would be available to provide technical assistance to the Staff in undertaking that project.

C. Responses to Specific SEC Questions

We now turn to specific SEC questions and provide our perspective on how to ensure that financially material deforestation risks are incorporated into required disclosure pursuant to the final rule. Question numbers are aligned with those in the proposed Rule.

Question 1: Should the SEC promulgate rules to require climate-related qualitative and quantitative disclosure as proposed?

Yes, Climate Advisers strongly supports the SEC's promulgation of rules to require more specific qualitative and quantitative climate risk disclosure in order to protect investors, to promote the integrity of the U.S. capital markets, and to bring the United States climate disclosure regime into alignment with international developments.

Question 3: Should we model the Commission’s climate-related disclosure framework in part on the framework recommended by the TCFD, as proposed?

Yes, Climate Advisers supports the use of the TCFD framework as a structure for the qualitative disclosure of issuers’ analysis and governance of climate risks and, as appropriate, opportunities. The framework has been developed by global companies, including accounting firms, financial institutions, and operating companies, and has been widely adopted both by issuers and regulators. It is also a framework that can provide structured qualitative disclosure of how companies and investors are evaluating and governing climate risk, and so has the potential to encourage companies to avoid boiler-plate disclosures. For nature-based risks and sector-specific risks for sectors exposed to deforestation, however, we suggest that the SEC also incorporate disclosures according to the TNFD and CDP Forests respectively, as discussed above.⁹⁹

Question 9. Should we define “climate-related risks” to mean the actual or potential negative impacts of climate-related conditions and events on a registrant’s consolidated financial statements, business operations, or value chains, as proposed? Are there any aspects of the definitions of climate-related risks, physical risks, acute risks, chronic risks, and transition risks that we should revise?

Climate Advisers supports the broad definition of “climate-related risks,” including both physical (chronic and acute) and transition risks as risks to be evaluated. We note, however, that deforestation risk is not specifically identified, and we assert that deforestation risk needs to be specifically included as both a physical risk and a transition risk. The Forest500, which is a project of the UK charity Global Canopy, has tracked deforestation commitments and performance over the past eight years from the 350 global operating companies most highly exposed to deforestation risk in their value chains, and from the 150 financial institutions similarly exposed in their loan portfolios and investments.¹⁰⁰ The results published in 2022 indicate that three-quarters of operating companies do not have deforestation policies covering all of the forest risk in commodities in their value chains, nor do 93 of 150 financial institutions have such policies for their financed forest risk.¹⁰¹

These risks need to be clearly disclosed in registration statements and annual reports for the protection of U.S. investors, particularly given the Glasgow Leaders Declaration on Forest and Land Use (see page 3 above), which, if enforced by the 141 signatory countries, would be a turning point in addressing deforestation. As such, it presents material risk of stranding assets, producing negative returns on invested capital, increasing non-performing loans previously extended in the forest, food, and land sectors, and reducing revenues in those sectors.

Question 11. Some chronic risks might give rise to acute risks, e.g., drought (a chronic risk) that increases acute risks, such as wildfires, or increased temperatures (a chronic risk) that increases acute risks, such as severe storms. Should we require a registrant to discuss how the acute and chronic risks they face may affect one another?

Climate Advisers supports requiring registrants to discuss how exposure to deforestation (an acute physical risk) in supply chains increases the chronic risks of drought, decreased soil productivity, and changing water cycles, and how these in turn increase the risks of further acute physical risks such as lack of access to

⁹⁹ See Taskforce on Nature-related Financial Disclosures, <https://tnfd.global/>.

¹⁰⁰ Forest500, 2022 Report, January 2022, www.forest500.org.

¹⁰¹ *Id.*, Executive Summary, p. 4.

irrigation, soil erosion, flooding during acute weather events, and increased frequency of infectious disease emergence. We support this disclosure where these interactions are relevant to the material climate risks in the registrant's own operations or supply chains, including through knock on price fluctuations and supply chain disruptions. Companies with significant imports from Brazil, Indonesia, and other countries with significant deforestation risk, should have such "interaction disclosure duties," given that physical tipping points have been identified in those regions that would create cascade effects with highly material implications for commodities importers.

The Amazon biome is an excellent example of significantly increased systemic financial risk, should the tipping point for ecosystem collapse arrive. Already, around 17 percent of the Amazon has been deforested.¹⁰² However, climate scientists have predicted a tipping point when 20-25 percent of the Amazon is cut down, warning that the rainforest's hydrological cycle will be unable to support itself and the biome will convert to a savanna.¹⁰³ Since the Amazon provides water to a region in South America responsible for 70 percent of the continent's GDP, the risk to the continent's financial sector is sizeable, as is the risk to downstream U.S. companies reliant on agricultural supply chains or U.S. financial institutions with regional investments.¹⁰⁴ As discussed on page 5, this problem is not limited to South America, and the negative financial impact on U.S. investments, supply chains, and revenues is likely to multiply when these tipping points are surpassed, which necessitates holistic analysis of critical ecosystems in risk management processes.

Moreover, the healthcare sector, specifically, should consider these risks in its forward-looking predictions, since a quarter of modern pharmaceuticals originates in tropical forests.¹⁰⁵ A loss of plant biodiversity before medicinal impacts are understood is likely to lead to adverse impacts on human health and a slowdown in innovation in the pharmaceutical industry globally, which would have material financial impacts to future growth projections. Finally, companies should consider the heightened risk of infectious disease occurrence in risk calculations as deforestation rates rise, given that deforestation and land use change elevate the risk of infectious disease emergence as described on page 6.

Question 12. For the location of its business operations, properties, or processes subject to an identified material physical risk, should we require a registrant to provide the ZIP code of the location or, if located in a jurisdiction that does not use ZIP codes, a similar subnational postal zone or geographic location, as proposed?

Climate Advisers supports the SEC's proposed granular approach to disclosure of the location of material physical risks in a company's business operations, properties, or processes, including the risk of tropical deforestation in supply chains. This location information is highly significant to an accurate evaluation of the financial risks in commodity importers' supply chains. The granularity of the information, specified to a zip code or other similarly precise location descriptor, is needed in the forest, food, and other land use industries in order for investors to accurately evaluate future financial implications of deforestation in their investees' supply chains.

¹⁰² Diana Roy, "Deforestation of Brazil's Amazon Has Reached a Record High. What's Being Done?" Council on Foreign Relations, 17 March 2022, <https://www.cfr.org/in-brief/deforestation-brazils-amazon-has-reached-record-high-whats-being-done>

¹⁰³ The Nature Conservancy, "The Amazon Approaches Its Tipping Point," August 2020, <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/amazon-approaches-tipping-point/>

¹⁰⁴ Id.

¹⁰⁵ "Ten things you may not know about forests," Food and Agriculture Organization of the United Nations, September 2017, <https://www.fao.org/zhc/detail-events/en/c/1033884/>

For registrants with direct ownership or control of forested land, we recommend disclosure of not only country specific location information, as proposed by the SEC, but also specific disclosure of the area of land owned by land type (forest, savannah, agricultural land, etc.); percentage of land covered by natural forests; percentage of land covered by certification schemes such as the Forest Stewardship Council, Roundtable on Sustainable Palm Oil, the Round Table on Responsible Soy Association, the Global Roundtable for Sustainable Beef, among others; and area of land converted from natural ecosystems during the reporting year. This information, consistently produced from year to year, will be necessary for investors to monitor how well companies' commitments to reducing deforestation in their supply chains are being implemented, as well as to evaluate the on-going risks of deforestation on those supply chains.

Question 14. If a material risk concerns the location of assets in regions of high or extremely high water stress, should we require a registrant to quantify the assets (e.g., book value and as a percentage of total assets) in those regions in addition to their location, as proposed?

Climate Advisers supports these requirements. Given the effects on productivity, water stress in a registrants' supply chain is material information for commercial agricultural and timber producers, and for large commodities importers. The effects of water stress are not limited to those producers, of course. As McKinsey stated in a 2020 report *Agriculture and Climate Change*, one of the challenges of reducing GHG emissions in agriculture is that "farms of 2 hectares or smaller produce 30 to 34 percent of the food supply and account for about 75 percent of farms. This fragmentation contributes to the slow pace of change in agriculture."¹⁰⁶

Increasing water stress by the activities of large commercial entities, particularly in cattle and rice (agricultural products with high water needs), can have serious consequences for the livelihoods of small producers throughout the developing world. These consequences may exacerbate existing stresses in societies and increase political risk for companies operating globally. Water stress affecting large, publicly listed agriculture and forestry companies presents material financial risk to U.S. investors, and so we commend the SEC for having identified it as among items of required disclosure.

It is also important that risk disclosures related to water stress also include the potential impacts of surpassing scientific tipping points in key ecosystems that provide ecosystem services in a registrant's supply chain.

Question 15: Are there other specific metrics that would provide investors with a better understanding of the physical and transition risks facing issuers?

Yes. As stated above, climate-related financial risks from agriculture, forest, and other land use are relevant to both current year emissions and future emissions, because of reduced carbon storage capacity and soil erosion. In addition to contributing close to one-quarter of all global GHG emissions, according to the IPCC,

¹⁰⁶ McKinsey & Co., Agriculture and Climate Change, 2020, p. 6,
<https://www.mckinsey.com/~/media/mckinsey/industries/agriculture/our%20insights/reducing%20agriculture%20emissions%20through%20improved%20farming%20practices/agriculture-and-climate-change.ashx>

AFOLU emissions weaken future efforts to mitigate climate risks and they also often come with significant social risks.¹⁰⁷ Most notably:

1. Most deforestation in the developing world linked to internationally traded commodities is illegal (violates local law).
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 between 2017 and 2019.¹⁰⁸
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.¹⁰⁹
5. Loss of native lands risks a loss of indigenous culture, traditions, and knowledge. One study found that forest management by Indigenous Peoples reduced both deforestation and forest greenhouse gas emissions.¹¹⁰

Due to the outsized nature, climate, and social risks, regulations that do not explicitly mandate industry-specific disclosures for the forest, food, and land sector would not be effective in protecting investors. Creating industry-specific metrics will reduce the burden on issuers, as their disclosure obligations will be clear, and will increase decision-useful information for investors. Models for such industry-specific metrics exist in several of the voluntary disclosure initiatives that have been developed over the last decades.

The best example of such disclosures has been developed by CDP Forests, which is already used by companies to voluntarily report on tropical commodities. CDP Forests clearly defines high deforestation risk commodities and countries and provides a menu of key performance indicators that companies with tropical commodity supply chains, financiers with high deforestation risk investments, and forestry asset managers could use to provide shareholders with standardized and comparable disclosures.

The following industry-specific metrics for companies in the forest, food, and land sector would provide investors with material information:

1. Company policy around supply chain deforestation, including any NDPE and Free, Prior, and Informed Consent (FPIC) policies for suppliers.

¹⁰⁷ 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/srcl/>.

¹⁰⁸ 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/>

¹⁰⁹ Global Witness, "Last line of defense," September 2021, <https://www.globalwitness.org/en/campaigns/environmental-activists/last-line-defence/>

¹¹⁰ 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.

2. What processes are in place for implementing NDPE and FPIC policies and how the company monitors its supply chain to verify compliance to these policies.¹¹¹
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. Any history of land conflicts with Indigenous People or traditional communities as a result of high tenure insecurity.
8. 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:

1. Scope 3 emissions, if not already required for all industries, as we'll discuss below.
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, if any, 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 toward 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.)¹¹²
3. Percentage of land covered by natural forests.
4. Percentage of land covered by relevant certification schemes.

¹¹¹ 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.

¹¹² 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.

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, 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.

Question 16: Are there other physical risks about which disclosure should be required?

Yes. As discussed above in response to question 9, deforestation risk as a physical risk needs to be specified in the rule. Since deforestation both generates GHG emissions in the current year, but also reduces the carbon storage capacity for years to come, the magnitude of its impact on climate change is immense and deforestation accelerates other climate risks. It increases soil degradation, heat stress, changes local precipitation patterns, and increases the likelihood of more extreme weather events. It also intensifies other social risks such as land disputes between commodity producers and Indigenous Peoples or traditional communities. Since each of these physical changes can cause changes in firms' costs, revenues, and community relationships, disclosure is needed so that investors can weigh investments with appropriate risk weightings.

Furthermore, deforestation harms the biodiversity and the productivity of agriculture in key regions that produce these commodities as well.¹¹³ Recent analysis from investors highlights how warmer global temperatures is likely to eliminate 20 percent of the global value of beef production and 7 percent of dairy production by the end of the century and stresses that 10 percent of land currently suitable for major crops and livestock will be unsuitable by mid-century under some warming scenarios.¹¹⁴ The Amazon rainforest is a key source of precipitation for key U.S. agricultural areas in the Midwest, and were the ecosystem to collapse, it would have drastic knock-on effects for global agricultural production that feeds billions of people and supports the global economy.¹¹⁵ Investors who recognize these risks from deforestation will benefit from understanding the extent to which their investments are resilient to climate-related financial risks.

Question 17: Should we include the negative impacts on a registrant's value chain in the definition of climate-related risks, as proposed?

¹¹³ Sarah Ruiz, "Climate change is pushing Brazil's farmland out of agricultural suitability range", Woodwell Climate Research Center, 12 November, 2021, <https://www.woodwellclimate.org/brazils-farms-losing-agricultural-suitability/>.

¹¹⁴ Eline Reintjes, "Food Systems and Livestock Production Under Climate Change: The IPCC's Sixth Assessment", FAIRR, 3 May, 2022, <https://www.fairr.org/article/food-systems-and-livestock-production-under-climate-change/>.

¹¹⁵ American Geophysical Union, "Water scarcity predicted to worsen in more than 80% of croplands globally this century", 5 May, 2022, <https://www.eurekalert.org/news-releases/951856>.

Yes, the negative impacts of climate change on a registrant's value chain should be included in the definition of climate-related risks, as proposed. These climate change risks have the potential to increase costs and decrease supplies of necessary inputs into registrants' businesses, so they are clearly material risks to be disclosed.

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. A detailed list of physical and transition risks in the forest, food, and land sector is included on pages 8 to 10 above.

Below are a few examples of companies that have experienced significant financial impacts as a result 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.¹¹⁶ 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.¹¹⁷ 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.¹¹⁸ Once IOI Corporation addressed its deforestation-related 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 2017.¹¹⁹

¹¹⁶ 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/>

¹¹⁷ Id.

¹¹⁸ Chain Reaction Research, "The Chain: IOI Corporation Commits to Improving its Supply Chain Risk Management," May 2017, <https://chainreactionresearch.com/2278-2/>

¹¹⁹ United States Securities and Exchange Commission, "JBS Foods International B.V., 2011, <https://www.sec.gov/Archives/edgar/data/1691004/000119312516785274/d304020df1.htm>

But scandals prompted the company to drop its plans.¹²⁰ 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.¹²¹

Question 19: Should the SEC require disclosure of actual and potential impacts of climate change on strategy, business model, and outlook?

Yes. This disclosure is core to investors being able to evaluate the quality of engagement of the board and management with the significant risks of climate change, particularly in the context of countries and companies making net-zero commitments that will need to drive strategy, business model, and outlook. This disclosure will allow investors to have insights into how management is thinking about future implications of climate change on strategy, the company's business model, and outlook. As such, it is comparable to the policy rationale underlying Management Discussion and Analysis, Item 303 of Regulation S-K, where the SEC has sought to allow investors to see the company's financial results through the eyes of management and understand risks to those results going forward.¹²² Specifically, actual and potential impacts of climate-related financial risks from deforestation on strategy, business model, and outlook should be included for companies and financial institutions with exposure.

Question 34: Should we require a registrant to describe, as applicable, the board's oversight of climate-related risks, as proposed?

Yes. Investors should have clear and consistent insights into the role of the board regarding identifying, evaluating, and incorporating climate risk into strategy, oversight, and disclosure. We agree that the disclosure should be specific, as proposed, about which board members have climate experience and which committees have carriage of the climate risk issues. In any company with significant deforestation exposure, board expertise on that issue should be disclosed. These will be data points by which investors can gauge the seriousness with which the company is undertaking its evaluation of climate risks and its responses.

Question 38: Should we require a registrant to describe, as applicable, management's role in assessing and managing climate-related risks, as proposed? Should the required disclosure include whether certain management positions or committees are responsible for assessing and managing climate-related risks and, if so, the identity of such positions or committees, and the relevant expertise of the position holders or members in such detail as necessary to fully describe the nature of the expertise, as proposed?

Yes. Having a clear view of the management structure for evaluating and responding to climate change is as important as understanding the role of the board in climate risk oversight and strategy development. The

¹²⁰ 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/>

¹²¹ 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/>

¹²² See *In re: Caterpillar, Inc., SEC Administrative Proceedings*, Administrative Proceedings No. 3-7692, SEC Rel. No. 34-30532 (1992)(company's MD&A did not allow investors to understand the importance of Brazil to the company's consolidated financial results, and therefore general statements about currency risk in Brazil did not adequately meet the company's obligations to allow investors to understand future risks to the financial results).

specificity of the SEC's proposal is important for the reasons cited above in response to question 34. Specific information on the management of climate risk issues provides data points for understanding a company's approach to understanding and managing this issue, and as one mechanism for gauging the seriousness of any commitments the company has made to a net-zero transition. In forest, food, and land industries, any specific committees or management positions responsible for evaluating and mitigating deforestation risk should be specifically described and included in the industry-specific guidance that Climate Advisers argues is critical to providing decision-useful information to investors.

Question 40. Should we specifically require a registrant to disclose any connection between executive remuneration and the achievement of climate-related targets and goals? Is there a need for such a requirement in addition to the executive compensation disclosure required by 17 CFR 229.402(b)?

Clarity in the disclosure requirements is useful for registrants, and adding climate-related targets and goals, where applicable, is unlikely to produce duplicative disclosure. If the SEC determines that it is useful to add a specific requirement to discuss how remuneration is connected to achieving climate-related targets and metrics, then any remuneration metrics related to avoiding deforestation, promoting reforestation, or improving soil productivity should be included.

Question 43. When describing the processes for identifying and assessing climate-related risks, should we require a registrant to disclose, as applicable, the factors as proposed for new Item 1503? Are there additional aspects of the analytic process that should be included?

We have argued that the SEC should specifically identify climate-related financial risks from deforestation as among the physical risks that registrants should evaluate, and about which disclosure should be required in proposed Item 1502 (see answer to question 16 above). Here, to be certain that investors in agriculture, forestry, and land use are specifically apprised of deforestation risk, proposed Item 1503 (c)(2)(i) should be amended in parallel to add deforestation risks specifically to the identified risks to be evaluated in the context of registrants' transition plans. Thus amended, Item 1503(c)(2)(i) would provide:

“1503 (c)(2): If the registrant has adopted a transition plan, discuss, as applicable:
(i) How the registrant plans to mitigate or adapt to any identified physical risks, including but not limited to those concerning energy, land, **deforestation**, or water use and management; . . .”

Question 48. If a registrant has adopted a transition plan, should we require it to disclose, if applicable, how it plans to mitigate or adapt to any identified transition risks, including the following, as proposed: • Laws, regulations, or policies that: . . . Require the protection of high conservation value land or natural assets?

Yes. We commend the SEC for including changes in laws, regulations, or policies that require the protection of high conservation value land or natural assets as among the transition risks that companies should discuss in proposed Item 1503 (c)(2)(ii)(A)(2).

Given the importance of protecting tropical forests to achieving the ambitions of the Paris agreement and that governments (and investors) are increasingly understanding that importance, new laws, regulations, and policies requiring protection of these high conservation value lands and natural assets constitute a transition risk for tropical commodity companies and importers. Evaluation of that transition risk and disclosure of how

it will be mitigated or how forest, food, and land companies will adapt to it within a company's transition plan is decision-useful information for investors in those sectors.

For example, economic and financial modeling done by Orbitas estimates that climate transitions will lead to a 52 percent reduction in agricultural land globally by 2050, partially driven by government moratoriums on deforestation as a part of Nationally Determined Contributions.¹²³ 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. Based on modeling from Orbitas, 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.¹²⁴

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.¹²⁵ 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.¹²⁶ 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.

Question 49. If a registrant has adopted a transition plan, when describing the plan, should we permit the registrant also to discuss how it plans to achieve any identified climate-related opportunities, as proposed?

Yes. We agree that companies should be encouraged but not required to discuss climate-related opportunities. As the SEC has recognized, some climate-related opportunities will constitute new products or services, the timing of disclosure of which should be subject to the board and management's considered business judgement. The U.S. Supreme Court emphasized that companies properly have discretion over the timing of disclosure of future or speculative information in *Basic v. Levinson*.¹²⁷ Protecting companies' discretion over the timing of disclosure of these opportunities will also reduce concerns of any competitive disadvantages to companies while in the research and development process, as the Commission recognizes in this proposal.

Question 50. If a registrant has disclosed its transition plan in a Commission filing, should we require it to update its transition plan disclosure each fiscal year by describing the actions taken during the year to achieve the plan's targets or goals, as proposed?

¹²³ 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/>

¹²⁴ Orbitas, "Climate Transition Risk Analyst Brief: Indonesian Palm Oil", August 2021, <https://orbitas.finance/2021/08/27/indonesian-palm-oil-deforestation-climate-transition-risk/>

¹²⁵ 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/>

¹²⁶ Orbitas, "Climate Transition Risk Analyst Brief: Indonesian Palm Oil", August 2021, <https://orbitas.finance/2021/08/27/indonesian-palm-oil-deforestation-climate-transition-risk/>

¹²⁷ 485 U.S. 224 (1988).

Yes. Annual updates would provide useful benchmarks for active investors to use to judge the sincerity of companies' statements concerning transition plans, and the quality of management in operationalizing those plans. No more frequent disclosure needs to be specifically required, since major events that might relate to transition plans, such as initiating or terminating material contracts, would already need to be disclosed pursuant to registrants' current report obligations on Form 8-K.

Question 59. Should we require registrants to disclose the financial impact metrics, as proposed? Would presenting climate-specific financial information on a separate basis based on climate-related events (severe weather events and other natural conditions and identified physical risks) and transition activities (including identified transition risks) elicit decision-useful or material information for investors? Are there different metrics that would result in disclosure of more useful information about the impact of climate-related risks and climate-related opportunities on the registrant's financial performance and position?

Yes, the Commission should require registrants to disclose the impacts of severe weather events and other natural conditions and transition activities on the consolidated financial statements, where the 1 percent threshold on any identified line item is met. As in our suggestion regarding modifying the climate-related risks to be identified pursuant to proposed Item 1502 (c), above, deforestation should be specified as among the changes in natural conditions whose effect on line items of the consolidated financial statements needs to be evaluated and disclosed if above the 1 percent threshold. Climate-related risks from deforestation should be specifically mentioned, if relevant. A summary of physical and transition risks in the forest, food, and land sector is provided on pages 8 to 10 above.

Question 74. Are there other natural conditions for which expenditures should be disclosed, other than fires, floods, drought, extreme weather events and heat?

Yes. Expenditures for irrigation and improving soil health in deforested areas should be included among expenditures related to changes in natural conditions caused by deforestation.

Question 98. Should we require a registrant to disclose its Scope 3 emissions for the fiscal year if material, as proposed? Should we instead require the disclosure of Scope 3 emissions for all registrants, regardless of materiality? Should we use a quantitative threshold, such as a percentage of total GHG emissions (e.g., 25%, 40%, 50%) to require the disclosure of Scope 3 emissions? If so, is there any data supporting the use of a particular percentage threshold? Should we require registrants in particular industries, for which Scope 3 emissions are a high percentage of total GHG emissions, to disclose Scope 3 emissions?

Climate Advisers supports requiring the disclosure of Scope 3 emissions alongside Scope 1 and 2, not based on a determination of materiality, but rather using the most reliable data and methodologies available over a phased in period.

In general, we strongly support many aspects of the Commission's proposal for quantitative GHG disclosure, including (a) basing the proposal on the GHG Protocol; (b) requiring disclosure of Scopes 1 and 2 GHG emissions by all registrants, including GHG intensity, and excluding the use of offsets; and (c) requiring large, accelerated filers and well-known accelerated filers to have their Scopes 1 and 2 disclosures attested. As the many comment letters cited in Footnote 432 of the Commission's March 21, 2022, Proposal show, commentators generally wrote in support of mandatory Scope 1 and 2 disclosures, and many supported mandatory Scope 3 disclosure as well. Disclosing GHG emissions data based on the procedures developed in

the GHG Protocol provides quantitative metrics by which the efficiency of companies can be compared within industries and geographic regions, much as quantitative return on investment (ROI) data allows financial comparisons today.

Recognizing that the market is evolving, we support the alternative disclosure of all upstream/supply chain GHG emissions by all companies. Here the data may be more readily available, and significantly, under registrants' effective control. Large commodity purchasers can require suppliers to produce the necessary data – and are doing so today in many instances¹²⁸ – and can then work together with suppliers to ensure the integrity of the data and develop systems for reducing emissions. For example, the world's largest supplier of cattle, JBS, which a recent Bloomberg investigation concluded was “one of the biggest drivers of Amazon deforestation,” stated in 2020 that it would cut its Scopes 1 and 2 emissions by 30 percent within 10 years.¹²⁹ Even if it can meet that target – which would represent a departure from its past record – that would entirely miss major deforestation aspects of JBS’ operations: Federal prosecutors in Brazil concluded in October 2021 that JBS had purchased over 300,000 cattle from ranches with significant “irregularities” the previous year, including illegal deforestation.¹³⁰ Being required to report at least upstream GHG emissions would give investors more complete information on whether registrants are working to mitigate climate-related financial risks from deforestation and are improving total emissions intensity over time.¹³¹

In the alternative, either mandatory Scope 3 emissions disclosure or mandatory upstream/supply chain disclosure should be required in specified sectors of the economy where those emissions are demonstrably significant. Agriculture, forestry, and other land use is such a sector, along with industries that import tropical commodities highlighted by CDP Forests as being at high risk of having deforestation linkages. Excluding the majority of emissions in these industries would materially mislead investors about a company’s climate-related financial risks. Creating clear obligations to disclose Scope 3 emissions or upstream emissions on a sector-by-sector basis will reduce burdens on registrants to make individualized materiality determinations, and thus increase the potential for comparable, consistently produced data to be disclosed, allowing for better comparisons between companies within sectors.

As a final alternative, the Commission has asked whether it should adopt a quantitative threshold for the significance of Scope 3 emissions as a trigger for a registrant’s disclosure obligation. While this is not Climate Advisers’ preferred alternative, we do support this approach as providing more guidance to registrants than would a materiality trigger alone. The Commission has promulgated quantitative triggers for disclosure in various of its rules, including with respect to some environmental matters. For instance, where a government entity is bringing an enforcement action alleging environmental violations, disclosure is required where the penalties reach certain financial thresholds.¹³² If the Commission chooses this approach, we suggest use of the

¹²⁸ For example, see Nestlé’s 2020 disclosure to CDP, publicly available via: <http://www.cdp.net>.

¹²⁹ Shefali Sharma, Institute for Agriculture and Trade Policy, *The Great Climate Greenwash: Global Meat Giant JBS’ emissions leap by 51% in 5 years*, Apr. 20, 2022, <https://www.iatp.org/jbs-emissions-rising-despite-net-zero-pledge>.

¹³⁰ *Id.* According to JBS own data, even its Scopes 1 and 2 emissions intensity actually increased by 30% between 2019 and 2020.

¹³¹ Terrence McCoy & Julia Ledur, “Devouring the Rainforest: The Amazon Undone,” Washington Post, Apr. 29, 2022, <https://www.washingtonpost.com/world/interactive/2022/amazon-beef-deforestation-brazil/>, (discussing the incentives of Brazilian beef suppliers and U.S. beef importers to look the other way as cattle raised by very small suppliers on illegally deforested land enters large suppliers’ supply chains by first being sold to medium-sized enterprises with better compliance records, a process the authors call “cattle washing”).

¹³² Item 103 of Regulation S-K, Legal Proceedings, allows a registrant to exclude disclosure of any legal <https://sciencebasedtargets.org/proceedings> that risk less than 10% of the registrant’s current assets. Item 103 (b)(2), 17 CFR § 229.103(b)(2)(2020). If the government is a party to any environmental enforcement proceedings, the registrant should disclose the proceeding if the penalties could be \$300,000 or more, except that the registrant may use a different threshold so long as material proceedings are disclosed, so long as the threshold is disclosed, and so long as the

Science-based Targets Initiative's suggested quantitative trigger: Disclosure of Scope 3 emissions would be required if those emissions were 40 percent or more of the registrant's total GHG emissions.¹³³

As the Commission recognizes, even using such a general quantitative trigger, a particular registrant's Scope 3 emissions could be material at lower percentages based on a probability/magnitude analysis, under the particular circumstances of that registrant's industry, business model, and location of assets, as set out in *Basic v. Levinson*.¹³⁴ We support emphasizing this point if the Commission uses a quantitative target rather than a materiality trigger for establishing a registrant's disclosure obligation.

Question 99. Should we require a registrant that has made a GHG emissions reduction commitment that includes Scope 3 emissions to disclose its Scope 3 emissions, as proposed?

Yes. That information will be useful to investors to be able to judge the seriousness of a registrant's commitment to its reduction targets, as well as to judge the quality of the registrant's management and operational efficiency. This information will also be increasingly decision-useful for making comparative assessments between different companies within the same industry as industry norms increasingly incorporate GHG reductions targets across Scopes 1, 2, and 3.

However, it is likely to mislead investors and consumers alike if some companies make goals that include Scopes 1, 2, and 3, while others only include Scopes 1 and 2. The scope of a goal or target is frequently missed by an untrained eye or included in small print in footnotes, which may disincentivize companies from making more ambitious goals with a broader scope, since their total emissions may seem uncompetitive compared to a company that only includes Scope 1 and 2. It also may accidentally create incentives for vertically integrated companies to increasingly shift emissions-intensive operations into their Scope 3 category through divestments because these rules may inadvertently create a loophole for downstream, horizontal companies and financial institutions with the majority of their emissions in Scope 3.

The current SEC draft rule will require disclosure of Scope 3 emissions if a company sets a climate goal that includes Scope 3 emissions, but only if the company volunteers to set a goal that includes this category of emissions. A significant number of corporations today have set climate goals that ignore Scope 3 emissions, leaving investors unable to identify their impact and risks because Scope 3 often makes up the vast majority of emissions in downstream companies. Omitting Scope 3 emissions in the forest, food, and land sector could, for example, create a market imperfection through misleading information and lead to a misallocation of resources into high-risk investments. The Commission has recognized the importance of preventing greenwashing and evaluating strategy expenditures: Comparable data within industries will be important for that purpose.¹³⁵

Question 100. Should Scope 3 emissions disclosure be voluntary? Should we require Scope 3 emissions disclosure in stages, e.g., requiring qualitative disclosure of a registrant's significant categories of upstream

potential penalties are not more than \$1 million or 1% of current assets, whichever is less. Item 103 (c)(3)(iii)(A), (B) & (C), 17 CFR § 229.103 (c)(3)(iii)(2020).

¹³³ Science Based Targets Initiative, <https://sciencebasedtargets.org/>. This initiative is developing benchmark standards for transition plans in different industries, working with industry partners to develop the standards.

¹³⁴ The Commission recognized this point at page 165 of the March 21, 2022 Proposal, The Enhancement and Standardization of Climate-Related Disclosures for Investors, Nos. 33-11042, 34-94478, Mar. 21, 2022.

¹³⁵ As an example, the world's largest supplier of cattle, JBS, which a recent Bloomberg investigation concluded was "one of the biggest drivers of Amazon deforestation," stated in 2020 that it would cut its Scopes 1 and 2 emissions by 30% within 10 years. Federal prosecutors concluded

and downstream activities that generate Scope 3 emissions upon effectiveness of the proposed rules, and requiring quantitative disclosure of a registrant's Scope 3 emissions at a later date? If so, when should we require quantitative disclosure of a registrant's Scope 3 emissions?

For the reasons set out above, we do not believe that disclosure of Scope 3 emissions should be voluntary, but rather mandatory using best available data and methodologies. We do support phasing in requirements for Scope 3 disclosure based on the industry of registrants, and the size of the firm (based on assets and revenue). Adopting a mandatory qualitative disclosure obligation for all firms first, and following with quantitative disclosure, as set out in Question 100, would be a useful way to ease the transition into Scope 3 analysis and then disclosure for firms that have not yet conducted this kind of analysis of their GHG emissions profile. We would suggest taking this approach with small and medium-sized enterprises for the first five years after the proposals come into effect, and perhaps even with large, accelerated filers in years one and two after the proposals come into effect.

Question 101. Should we require a registrant to exclude any use of purchased or generated offsets when disclosing its Scope 1, Scope 2, and Scope 3 emissions, as proposed? Should we require a registrant to disclose both a total amount with, and a total amount without, the use of offsets for each scope of emissions?

Yes. It is important that investors be able to judge company's emissions with and without offsets, since the quality of offsets and their longevity vary widely. Climate Advisers supports the use of the Voluntary Carbon Market Integrity Initiative (VCMI) framework on the use of high integrity carbon credits in corporate net-zero commitments. After a consultation process with stakeholders from civil society, the private sector, Indigenous Peoples' groups, governments, businesses, and others in 2021, VCMI put together a framework for how carbon credits can be voluntarily used and claimed by businesses as part of credible net-zero strategies.¹³⁶ As such, Climate Advisers supports the transparent use of high integrity carbon credits with clear disclosures that provide investors with Scope 1, Scope 2, and Scope 3 emissions with and without the use of carbon credits.

Question 102. Should we require a registrant to disclose its Scope 3 emissions for each separate significant category of upstream and downstream emissions as well as a total amount of Scope 3 emissions for the fiscal year, as proposed?

Yes. Where those data are available and the registrant has relied upon that data in determining total Scope 3 emissions, separate disclosure of significant upstream and downstream emissions, by category, should be required on an annual basis. As above, this requirement could initially be a qualitative disclosure obligation, whereby registrants would be asked to discuss their most significant categories of Scope 3 emissions, both upstream and downstream, and then quantitative disclosure phased in by size of registrant and filing status.

Question 104. Should we, as proposed, allow a registrant to provide their own categories of upstream or downstream activities? Would it be useful to allow registrants to add categories that are particularly significant to them or their industry, such as Scope 3 emissions from land use change, which is not currently included in the Greenhouse Gas Protocol's Scope 3 categories? Should we specifically add an upstream emissions disclosure category for land use?

¹³⁶ Voluntary Carbon Market Integrity Initiative, "Code of Practice," 2022, <https://vcminintegrity.org/vcni-claims-code-of-practice/>

Yes. Where methodologies and guidance are available, we would recommend compliance to the GHG Protocol to increase standardization and comparability between registrants. To the extent that registrants use categories for analysis that differ from the Greenhouse Gas Protocol's categories, however, disclosure of those categories and their definitions would provide flexibility for registrants while also communicating decision-useful information to investors. Since emissions from land use change are particularly material in the upstream emissions of the forest, food, and other land use sectors, we support adding an upstream emissions disclosure category for land use and requiring that those emissions be disclosed.

Question 106. Should we require a registrant that is required to disclose its Scope 3 emissions to describe the data sources used to calculate the Scope 3 emissions, as proposed? Should we require the proposed description to include the use of: (i) emissions reported by parties in the registrant's value chain, and whether such reports were verified or unverified; (ii) data concerning specific activities, as reported by parties in the registrant's value chain; and (iii) data derived from economic studies, published databases, government statistics, industry associations, or other third-party sources outside of a registrant's value chain, including industry averages of emissions, activities, or economic data, as proposed?

Yes. These categories of information should be relatively uncomplicated and inexpensive for registrants to provide, given that information about data sources is a function of the registrant's analysis of Scope 3 emissions. This information could be provided as notes to the Scope 3 disclosures, and that will allow investors to assess the quality of the information being provided. Over time, changes in the sources of information being provided, and whether it is verified or unverified, will be decision-useful to investors to judge the seriousness of any one registrant's commitments to reducing their total GHG emissions, including Scope 3.

Question 127. Should we require a registrant to disclose any material change to the methodology or assumptions underlying its GHG emissions disclosure from the previous year, as proposed? If so, should we require a registrant to restate its GHG emissions data for the previous year, or for the number of years for which GHG emissions data has been provided in the filing, using the changed methodology or assumptions?

Yes. Registrants should be asked to disclose any material changes in methodologies or assumptions underlying their GHG emissions disclosure from year to year. However, asking registrants to restate the prior year's data using changed methodologies and assumptions may discourage companies from making such changes. The data sources, methodologies and assumptions should be improving over time, and registrants should be encouraged to adopt such improvements. Given the useful information that is gained from year-over-year comparisons, perhaps changes in methodologies should be described and a qualitative assessment given of how using the changed methodology would have affected the prior year's emissions if it had been applied.

Question 128. Should we require a registrant to disclose, to the extent material, any gaps in the data required to calculate its GHG emissions, as proposed? Should we require the disclosure of data gaps only for certain GHG emissions, such as Scope 3 emissions?

Yes. Data gaps disclosure and how a registrant has addressed those gaps should be provided for each of the registrant's Scopes 1, 2, and 3 emissions disclosure. This information provides useful insights into a

registrant's processes and operational efficiency, as well as allowing an analysis of the quality of the information being provided.

Question 135. Should we require accelerated filers and large accelerated filers to obtain an attestation report covering their Scope 1 and Scope 2 emissions disclosure, as proposed? Should we require accelerated filers and large accelerated filers to obtain an attestation report covering other aspects of their climate-related disclosures beyond Scope 1 and 2 emissions? For example, should we also require the attestation of GHG intensity metrics, or of Scope 3 emissions, if disclosed?

Yes. The attestation of Scopes 1 and 2 emissions for accelerated filers and large accelerated filers is important to protect the quality of the quantitative disclosures being proposed, and thus the integrity of the U.S. capital markets, comparable to annual audit requirements for financial statement disclosures. Requiring the attestation of GHG intensity metrics would also be important for similar reasons. A recent empirical analysis of the 2020 GHG disclosures of a randomly-selected subset of 200 of the S&P 500 largest companies in the U.S. shows that 81 percent are already reporting emissions for Scopes 1 and 2 using the GHG Protocol standards, even though they have no legal obligation to do so.¹³⁷ The analysis also showed that of the companies reporting GHG emissions, 59 percent included data subject to some version of third-party assurance.¹³⁸ These data suggest that for many accelerated filers and large accelerated filers, systems are already in place to produce these data and for many to have them attested. Thus, the costs of these requirements would likely not be prohibitive, particularly in light of the benefits of reducing greenwashing and improving the information available to investors.

Attestation of Scope 3 disclosures would likely add significantly to the costs of annual attestation and should not be required at this time. Rather the disclosures discussed above about sources of data, data gaps, and methodologies used would likely be sufficient in the initial years of the proposed rules to protect the quality of the data and the integrity of the U.S. capital markets.

Question 170. Should we require a registrant to discuss how it intends to meet its climate-related targets or goals, as proposed? Should we provide examples of potential items of discussion about a target or goal regarding GHG emissions reduction, such as a strategy to increase energy efficiency, a transition to lower carbon products, purchasing carbon offsets or RECs, or engaging in carbon removal and carbon storage, as proposed? Should we provide additional examples of items of discussion about climate-related targets or goals and, if so, what items should we add?

Yes. A registrant's disclosure of how it intends to meet any climate-related targets or goals that it has set forth is quite important information for judging how realistic a registrant's ambitions to reduce its emissions are, and thus how likely they are to be realized. Excessive reliance on unproven or emerging technologies or low integrity carbon credits may convey a lack of seriousness or a lack of engagement with industry leaders for obtaining the most up-to-date technical assistance. This information is useful in determining how likely it is that a registrant's trajectory will avoid or mitigate the most serious physical and transition risks in its industry, which is decision-useful information for investors to evaluate their risk/reward parameters, engagement, and voting strategies as applied to individual registrants. Climate Advisers recommends the use

¹³⁷ Lynn M. LoPucki, *Corporate Greenhouse Gas Disclosures*, 56 U.C. Davis L. Rev. (Forthcoming 2022).

¹³⁸ Id.

of the VCMI provisional claims code of conduct for guidance on how companies should make emissions reduction goals, report on the use of high integrity carbon credits, and provide interim updates.

Question 173. If a registrant has used carbon offsets or RECs, should we require the registrant to disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECS, the source of the offsets or RECs, the nature and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs, as proposed? Are there other items of information about carbon offsets or RECs that we should specifically require to be disclosed when a registrant describes its targets or goals and the related use of offsets or RECs?

Yes. As set forth immediately above, information about the use of carbon credits or RECs is extremely important information to understand the integrity of credits used, the role of internal emissions reductions in achieving goals, and the period over which emissions reductions are made. As mentioned in response to question 170, Climate Advisers recommends the use of the VCMI provisional claims code of conduct for guidance on how companies should make emissions reduction goals, report on the use of high integrity carbon credits, and provide interim updates.

Question 190. Should we require registrants to tag the climate-related disclosures, including block text tagging and detail tagging of narrative and quantitative disclosures required by Subpart 1500 of Regulation S-K and Article 14 of Regulation S-X in Inline XBRL, as proposed?

Yes. Tagging this information in Inline XBRL will allow the information to be more readily incorporated into investors' analyses and thus promote the efficiency of the U.S. capital markets.