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Governance

Disclose the organization's governance around climate-related risks and opportunities.

a) Describe the board's oversight of climate-related risks and opportunities.

We have an integrated Board of Directors (Board) and executive-level governance structure to oversee sustainability and ESG matters, including climate change. Currently, the Public Policy and Environment Committee of our Board has overall responsibility for overseeing and assessing environmental and sustainability (including climate change), public policy, legal, health and safety, and technology issues and risks. Our Board's Governance Committee also has oversight of certain public policy and sustainability matters. Our Board – including our Chief Executive Officer (CEO) – receives regular updates regarding environmental, social and governance (ESG) issues, risks and opportunities from multiple Board committees, our Chief Sustainability Officer and members of management.

b) Describe management's role in assessing and managing climate-related risks and opportunities.

Our vice-president and chief sustainability officer (CSO) lead our sustainability strategy and initiatives day-to-day, including our approach to address climate change. Our CSO leads our Global Citizenship team, which has day-to-day responsibility for the company's sustainability strategy including implementing our Science Based Targets initiative (SBTi) approved GHG reduction goal. Our stewardship council, a cross-functional leadership team with representatives from businesses and functional teams, guides and supports our sustainability strategy and tactics, including our climate-related strategies. Our Energy and Greenhouse Gas (GHG) Steering Team is a group of topical experts from across our company who provide strategic and technical guidance on our climate strategy and decarbonization plan, including monitoring progress on our science-based GHG emissions reduction targets. At the facility level, company management is responsible for managing day-to-day identification, understanding and mitigation of all risks.

More info:
2022 Proxy Statement, "ESG Oversight" pg. 6
CDP Climate Change Response, "C1. Governance"

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning where such information is material.

a) Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term.

If unmitigated, climate change is expected to disrupt society and business as we know it. We will likely face both physical and transition risks[1] in the coming years. As a leading producer of renewable, fiber-based products, we see significant opportunities in the growing low-carbon circular bioeconomy. In the attached matrix, we have mapped our potentially material climate-related risks and opportunities, along with corresponding mitigation and adaptation strategies. This analysis focuses on potential impacts to our operations, supply chains and businesses – primarily in North America and western Europe – through 2030. Over this short-to-medium timescale, we believe that transition risks and opportunities are more likely to impact our company than physical risks. Any physical risks are more likely to be acute impacts rather than chronic during this decade. Longer-term, all risks and opportunities are expected to grow in likelihood and impact, though in differing ways depending on various possible climate scenarios. We are performing climate scenario analyses to help plan for these possible futures. We will continue to refine these analyses in the coming years in order to plan effectively and communicate transparently to our stakeholders.

1. The Task Force divided climate-related risks into two major categories: (1) risks related to the transition to a low-carbon economy and (2) risks related to the physical impacts of climate change. The Task Force identified certain subcategories under each of these categories: Transition Risks – Policy and Legal, Technology, Market, Reputation; Physical Risks – Acute, Chronic. (Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures. October 2021. pg. 74.)

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b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.

We are proactively incorporating climate-related considerations into our business and operations. Our Vision 2030 strategies – on Sustainable Operations, Renewable Solutions and Healthy and Abundant Forests – are guided by cross-functional teams evaluating climate-related risks and opportunities at the business, operational and facility levels. For example, extreme weather events worsened by climate change are already impacting our operations, particularly in certain coastal areas. We are continually evaluating such risks, disclosing financial impacts via our annual voluntary and legally required reporting and incorporating mitigation measures into our operational planning and landscape-level environmental resilience efforts.

c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

We are performing ongoing climate-related scenario analysis using quantitative modeling by our partner, The Climate Service, as well as qualitative input from internal and external industry experts. We intend to disclose more detail in the coming years in accordance with applicable reporting rules. We are using three commonly cited scenarios based on the latest climate research.[2]

- **Paris Ambition** (RCP2.6) – Most stringent pathway with substantial GHG emissions reductions beginning now (1.5-2°C warming by 2100)
- **Stabilization** (RCP4.5) – Consistent with relatively ambitious GHG emissions reductions and GHG emissions increasing slightly before declining around 2040 (2-3°C warming by 2100)
- **Business as Usual** (RCP8.5) – Scenarios that lead to high GHG concentration levels, consistent with a future of no policy changed to reduce emissions and increasing GHG emissions (>4°C warming by 2100)

The attached matrix outlines high-level strategies which will likely apply under any scenario, with emphasis and investment depending on the scenario. In general, we assume that physical risks are likely to lead to greater potential impacts over time under higher-emission scenarios, while transition risks are likely to have greater potential impacts over time under lower-emission scenarios. Climate-related business opportunities are more difficult to quantitatively model, but we believe that we are well-positioned to meet growing demand for sustainable packaging and pulp products as part of the low-carbon, circular economy.[3]

More info:

2021 Annual Report, "Climate Change" pg. 5
CDP Climate Change Response, "C2. Risks and Opportunities" and "C3. Business Strategy"
2021 Sustainability Report, "**Improving our Climate Impact**" pg. 33

2. "Developed by the IPCC, the representative concentration pathways (RCP's) are time- and space-dependent trajectories of concentrations of GHGs and pollutants from human activities (including changes in land use). RCP's provide quantitative descriptions of atmospheric pollutants over time as well as radiative forcing in 2100. The RCPs include a stringent mitigation scenario (RCP2.6), two intermediate scenarios (RCP4.5 and RCP6.0), and one scenario with very high GHG emissions (RCP8.5)." (NCASI WHITE PAPER "Scenario-Based Climate Change Risk Assessment under TCFD and CDP," JANUARY 2022)
3. This is due in part to our use of carbon-neutral biomass residuals for approximately 70% of our mill energy needs.

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Climate-related Risk and Opportunity Matrix

Category	Chronic	Acute	Impact Type	Potential Impacts	Mitigation Strategy (Decarbonization)	Possible Adaptation Strategies (Resilience Planning)
Physical Risk	X		Facility Impacts: Extreme Temperature	Increased heat-related operational impacts and costs as a result of overall rising temperatures and increasing humidity	Deliver science-based GHG emissions reduction targets (SBTi-approved) across Scopes 1, 2 and 3 via operational improvements, strategic partnerships and nature-based solutions	Increase operational cooling capacity in manufacturing facilities where appropriate
Physical Risk		X	Facility Impacts: Extreme Weather	Asset damage, insurance premium increase, production delays, and related costs and/or revenue loss from weather events including storms, floods, droughts and wildfires of increasing severity and/or frequency		Invest in natural and built infrastructure improvements at highest-risk facilities
Physical and Transition Risk	X	X	Fiber Supply Impacts	Supply interruptions and/or increased input costs from impacts to North American managed forests and recovered fiber supply, including weather and temperature, changing species ranges and growth rates, transport costs and competing demand for wood		■ Support research, policies and landowner efforts on forest management, restoration and afforestation ■ Extend fiber procurement ranges as necessary
Physical and Transition Risk	X	X	Supply Chain Impacts	Supply interruptions and increased input costs from physical and transition impacts on suppliers, energy supply and transportation		■ Improve supply chain monitoring, supplier diversification and resilience planning ■ Leverage high % of energy self-generation
Transition Risk / Opportunity	X		Regulatory Impacts	Carbon pricing and cost of compliance with related climate regulations		Support research and policies: ■ for low-carbon industrial technology development ■ to maintain carbon neutrality of biomass residuals
Transition Risk / Opportunity	X		Marketplace Impacts	Influence on competitive position due to customer and end consumer preferences regarding low-carbon, circular products with a high recycling rate		All of the above plus improved reporting methods and direct stakeholder engagement
Transition Risk / Opportunity	X		Financing and Shareholder Impacts	Influence on access to affordable capital and investor goodwill		All of the above plus improved reporting methods and direct stakeholder engagement
Transition Opportunity	X		Impact of Renewable Energy Participation	Increased revenue from sales of Renewable Energy Certificates (RECs) from green power generation		Develop opportunities at specific mills with favorable REC markets

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Risk Management

Disclose how the organization identifies, assesses and manages climate-related risks.

a) Describe the organization's processes for identifying and assessing climate-related risks.
In 2020-2021, we began convening cross-functional internal experts to provide input on our anticipated climate-related risk and opportunity areas; this group includes company leaders representing our businesses, operations, supply chain (including fiber supply) and key support functions such as government relations and environment, health and safety. Quantitative climate impact modeling from our partner The Climate Service has informed these discussions and our strategy and public disclosures. Our Global Citizenship team performs ongoing research and risk identification as climate issues evolve, and we leverage expertise and best practice guidance from trusted consultants and forest sector-focused groups including the National Council on Air and Stream Improvement (NCASI) and the World Business Council for Sustainable Development (WBCSD).

b) Describe the organization's processes for managing climate-related risks.
We use a robust internal environmental management system to track and report our GHG emissions, and our cross-functional teams stay informed about developments concerning climate-related policies, regulations and emissions standards. We regularly assess whether such developments may have a material effect on our operations or businesses, and incorporate any related disclosures as appropriate. IP senior management with responsibility for environment, health and safety, sustainability, manufacturing, legal and government relations identify and evaluate risks and opportunities that are relevant to IP. If the likelihood and potential impact are significant enough to meet IP's "enterprise" criteria per our Enterprise Risk Management (ERM) charter, then actions are taken to ensure that IP is able to mitigate those risks. The higher the likelihood and potential impact, the higher the priority to mitigate.

c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.
Climate-related risks and opportunities are material to our business, and we are working to formally integrate these into our ERM process. Our ERM Council has responsibility for ensuring that the people and processes are in place to identify, assess and mitigate risk. The Council is made up of senior company leaders representing our businesses and major staff functions. We evaluate downside and upside risks considering potential impact and likelihood of occurrence within our strategic planning period of four years. Given the longer-term risks that climate change may present, we are working to incorporate an extended time horizon into our ERM process. Enterprise risks are periodically reviewed with the company Board of Directors and Audit and Finance Committee.

More info:
2021 Annual Report, "Climate Change" pg. 5
CDP Climate Change Response, "C2. Risks and Opportunities" and "C3. Business Strategy"

Metrics & Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
We disclose a number of climate-related metrics reflecting our alignment with regulatory requirements and leading standards such as GRI, CDP, SASB and TCFD. These include annual reporting on GHG emissions, energy use and sources, water use and water stress, sustainable fiber supply, renewable solutions and others.

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b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
Our past three years of GHG emissions in millions of metric tons of CO_2 equivalents are as follows:

Greenhouse Gas Emissions (metric tonnes CO_2e)	2019	2020	2021
Scope 1 GHG emissions[4]	6,329,139	6,568,066	6,718,568
Scope 2 GHG emissions (market-based)	4,708,777	4,544,032	4,332,728
Scope 1 + Scope 2 GHG emissions	11,037,915	11,112,098	11,051,296
Scope 3 GHG emissions	21,997,776	21,292,962	21,901,966

We continually assess and incorporate developments in emissions accounting and reporting standards and frameworks including the GHG Protocol, the SBTi and CDP. We are engaged directly in working groups focused on forest sector topics of relevance.

c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.
Our Vision 2030 strategy includes an absolute GHG reduction target of 35% from a 2019 baseline across Scopes 1, 2 and 3; this target was approved by SBTi in 2021. We met and exceeded our previous target of a 20% absolute reduction in Scopes 1 and 2 GHG emissions from 2010-2020, while reducing our use of coal and fuel oil by approximately 50%. Our Vision 2030 also includes a Renewable Solutions target to have 100% of our products be reusable, recyclable or compostable; each business is developing specific objectives to deliver sustainable solutions within the circular bioeconomy. This year, for the first time, we are reporting progress against our Vision 2030 targets in our 2021 Sustainability Report, which we will continue on an annual basis.

More info:
2021 Sustainability Report, "**Improving our Climate Impact**" pg. 33
2021 Sustainability Report, "**GRI Index**" pg. 76
2021 Sustainability Report, "**SASB Index**" pg. 71
CDP Climate Change Response, "C4. Targets and Performance"

4. Consistent with the GHG Protocol, our reported Scope 1 GHG emissions and associated targets do not include biogenic GHG emissions, which were approximately 24.7 million metric tons in 2021

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A Note on Materiality

While certain matters discussed in this report may be significant, any significance should not be read as necessarily rising to the level of materiality used for the purposes of complying with the U.S. federal securities laws and regulations. We use the definition of materiality established under U.S. federal securities laws for the purposes of complying with the disclosure rules and regulations promulgated by the U.S. Securities and Exchange Commission (SEC) and applicable stock exchange listing standards. However, in our voluntary ESG disclosures, including those that relate to our climate change-related efforts, we have adapted our approach to materiality based on both the subject matter and purpose of the disclosures. In particular, our approach to these voluntary disclosures often considers broader definitions of materiality promulgated by certain external frameworks and reporting guidelines that take into consideration a wider range of factors relevant to climate and ESG disclosures. For the purposes of discussing climate risks and opportunities in this report, we use an approach to materiality that is consistent with the TCFD recommendations. This approach means that this report and many of our other voluntary disclosures capture details on ESG issues, including climate-related risks and opportunities that may not be, and are not necessary to be, incorporated into our required disclosures with the SEC.

Forward-looking Statements

Certain statements in this report may contain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on our current expectations, beliefs, plans or forecasts and are typically identified by words or phrases such as “may,” “will,” “could,” “should,” “would,” “anticipate,” “estimate,” “expect,” “project,” “intend,” “plan,” “believe,” “target,” “prospects,” “potential,” “aim” and “forecast,” and other words, terms and phrases of similar meaning and include, but are not limited to, our Vision 2030 goals. Forward-looking statements involve estimates, expectations, projections, goals, forecasts, targets, assumptions, risks and uncertainties. These statements speak only as of the date they are originally made and are based on management’s current expectations and are subject to known and unknown risks, uncertainties, changes in circumstances, and assumptions that are difficult to predict and are often beyond our control. These statements are not guarantees of future results, occurrences, or performance. Actual results and outcomes may differ materially from those expressed in or implied by any of these forward-looking statements due to a variety of factors, including, among others, global socio-demographic and economic trends, climate-related conditions and weather events, legislative and regulatory changes, and other unforeseen events or conditions. You should not place undue reliance on any forward-looking statement. Factors that could cause actual results to differ materially from those described in forward-looking statements can be found in our filings with the SEC, including, without limitation, the “Risk Factors” section of our 2021 Annual Report on Form 10-K, quarterly reports on Form 10-Q and disclosures available on our corporate website. The Company does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made.