

Building on Our Vision

2022 TCFD Report

Governance

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

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

➤ More info:

See 10k & CDP C1.1, C2.2

International Paper (IP) has an integrated board and executive-level governance structure to oversee sustainability and Environmental, Social, and Governance (ESG) topics, including climate change. The board is responsible for ensuring long-term resiliency and climate-related risks and opportunities are built into our corporate strategy and reflected in our approach.

The board receives regular updates on ESG issues, risks and opportunities from applicable board committees, our vice president and chief sustainability officer (CSO) and additional members of management. The Public Policy and Environment (PPE) committee of the board has overall responsibility for the review of environmental, sustainability and climate-related issues and risks that could potentially affect IP. The PPE committee has additional responsibility for current and emerging public policy issues, as well as technology issues affecting IP. The PPE committee charter is reviewed annually. In 2022, this committee met three times with a 100% attendance rate. Our chief sustainability officer briefs the PPE committee twice annually. The Audit and Finance (A&F) committee assists the board of directors in its oversight of our disclosure and financial reporting process

as well as the implementation and maintenance of effective controls to prevent, deter and detect fraud by management. The A&F committee coordinates the risk oversight role exercised by the board's standing committees and management and receives updates on the enterprise risk management (ERM) processes twice per year. The risks and opportunities assessed by both the PPE and A&F committees include climate-related topics.

Our board believes that diversity of backgrounds, tenures and skills enhances the quality of its deliberations and decisions, including climate-related issues. Dr. Kathryn Sullivan, board member and chair of the PPE committee, is a leading climate scientist and former Administrator of the National Oceanic and Atmospheric Administration, who brings experience in natural resource conservation. Jacqueline Hinman, board member and A&F committee member, has unique knowledge of environmental and sustainability issues globally, combined with experience in a global environmental engineering consulting business. Through the skills and experiences of our board members, we get a valuable perspective on climate-related issues affecting our business.

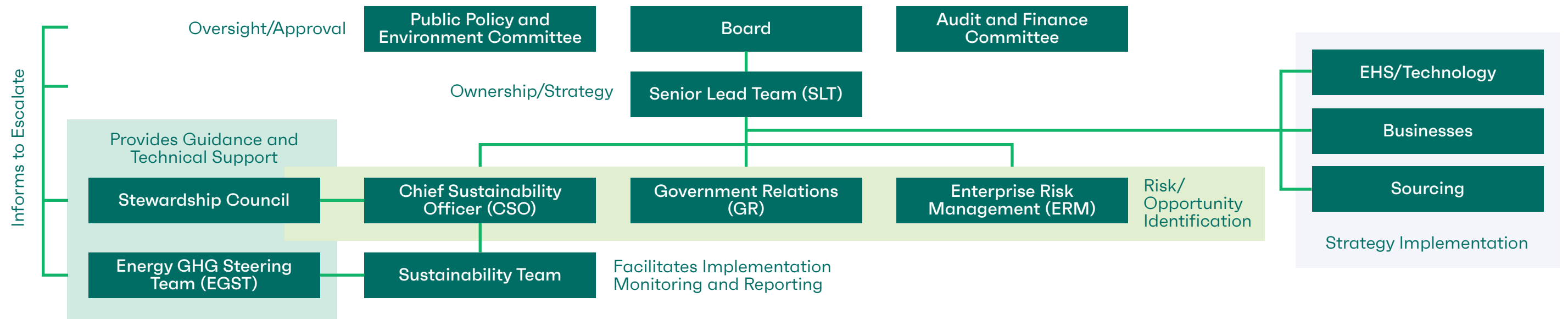
b) Describe management’s role in assessing and managing climate-related risks and opportunities.

➤ More info:
See 10k & CDP C2.2

Our enterprise risk management (ERM) council is responsible for identifying, categorizing and creating climate risk management plans. The ERM council receives regular updates from our chief sustainability officer, who supports risk identification related to ESG topics including climate. Risk identification and management are built into our business-specific strategic planning. Quantitative physical climate impact modeling from S&P Global’s Climonomics has informed risk discussions, our strategy and public disclosures.

Our chief sustainability officer leads our sustainability team, and has responsibility for the development of our sustainability strategy. This includes the advancement of our GHG reduction goal which has been approved by the Science Based Targets initiative (SBTi). As climate issues evolve, our sustainability team performs ongoing research and risk identification. This information is shared with our business teams who can implement appropriate tactics to achieve our goals. We leverage expertise and best practice guidance from trusted consultants and forest sector groups including the National Council on Air and Stream Improvement (NCASI) and the World Business Council for Sustainable Development (WBCSD).

Vision 2030 is International Paper’s commitment to building a better future for people, the planet and our company. It consists of our sustainability goals and targets. Our stewardship council, with representatives from businesses and functional teams, guides and advises on our sustainability tactics to advance Vision 2030 integration and goal achievement. The stewardship council provides thought leadership and consultation on key issues. Our energy and 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 plans. This group is responsible for oversight of our GHG emission reduction tactics. The sustainability team, with support from technology, has responsibility for aggregating, monitoring and publicly reporting environmental metrics. The sustainability team coordinates activities across IP businesses and functional areas to deliver on our Vision 2030 targets. At the facility level, mill or plant management is responsible for managing day-to-day identification, understanding and mitigation of risks.



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.

➤ More info:

See attached risk & opportunity matrix.
See also 10k & CDP

Climate change will disrupt society and business, as we know it. We will likely face both physical and transition risks¹ in the coming years. As a leading producer of renewable, fiber-based products, we see significant opportunities in the growing low-carbon, circular, bioeconomy. We have mapped our potentially material climate-related risks and opportunities as well as the corresponding mitigation and adaptation strategies in table 1. This analysis focuses on potential impacts to our operations, supply chain, and businesses — primarily in North America and Western Europe — over the short-to-medium term, through 2030. Potential regulatory and transition market risks and opportunities associated with the shift to a low-carbon economy include changing consumer preferences and future government policy and regulation. We recognize that transition risks and

opportunities are more likely to affect our company over the short-to-medium term than physical risks. Among physical risks, we are more likely to experience some acute rather than chronic impacts related to extreme weather and water scarcity during this decade. Long 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 a climate scenario analysis to help plan and test the resiliency of our company's strategic and financial planning. We define time horizons as follows; short-term: 5 years, medium-term: 5–10 years, and long-term: 10 or more years. We will continue to refine these analyses in the coming years to plan effectively and communicate transparently to our stakeholders.

¹ The Task Force on Climate-Related Financial Disclosures 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. P 74.)

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

➤ More info:

See SR & 10k & CDP
Water Security 4.2

We proactively incorporate climate-related considerations into our business, operations and capital strategies. We continually evaluate such risks and incorporate mitigation measures into our planning and strategic partnerships. We recently incorporated a carbon sensitivity tool for certain capital project analyses to plan for transition risk in our capital approval process.

Cross-functional teams evaluating climate-related risks and opportunities at the business, operational, and facility levels guide the implementation of our goals.

We perform ongoing climate-related scenario analysis using quantitative modeling as well as qualitative input from internal and external industry experts. This analysis provides context for a wider climate transition and possible pathways to a range of outcomes. Using S&P Global's Climonomics, a scenario-modeling tool developed by a team of climate scientists, economists, and data and financial specialists, we generated a climate risk scenario analysis to understand our specific climate risks and opportunities under a variety of climate scenarios. For this report, we analyzed 28 International Paper mill locations, with the associated climate and socioeconomic data, to model potential impacts unique to each location. Our top risks were consistent across the three representative

concentration pathway scenarios investigated with small variations in relative impact as a percent of the total asset value at risk. The top physical risks this decade were temperature extremes, wildfire and fluvial or river flooding. The top transition risks are risks associated with changing supply and demand in a lower carbon economy and carbon pricing. Our scenario modeling provides directional indicators and we do not consider these inevitable, especially as we act to mitigate risk and realize opportunity because of modeling.

Extreme weather events amplified by climate change are already affecting our operations, particularly in certain coastal areas.



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

➤ More info:

See SR & CDP

We are using several tools to inform our scenario analysis. We perform ongoing climate-related scenario analysis using quantitative modeling by our partner S&P Global, WBCSD's Climate Scenario Tool, and internal and external industry experts. We use three commonly cited temperature target scenarios based on the latest climate research² and five potential pathways through which temperature targets may be achieved.

- Paris Ambition (RCP2.6) – Most stringent pathway with substantial GHG reductions beginning now (1.5-2°C warming by 2100)
 - 1.5°C Societal Transformation, where strong coordinated global policy and market responses enable decarbonization and limit physical impacts
 - 1.5°C Innovation, where bioenergy and agricultural innovation result in greater land efficiency and emission targets are met without significant market changes (compared to the 1.5°C Societal Transformation pathway)
- Stabilization (RCP4.5) – Consistent with relatively ambitious emissions reductions and GHG emissions increasing slightly before declining around 2040 (1.7-2.3°C warming by 2100)
 - <2°C Forecast Policy Scenario (IPR) where climate action starts abruptly and late, between 2025 and 2030 resulting in higher transition risk with higher GHG price and land protection regulation
 - <2°C Coordinated Policy Scenario, in which more timely policy and regulation curbs emissions in a more orderly fashion, decreasing transition risk relative to RCP8.5 or IPR

- Business as Usual (RCP8.5) – Scenarios that lead to high GHG concentration levels, consistent with a future of no policy changes to reduce emissions and increasing GHG emissions (4.2-5.4°C warming by 2100)

All the pathways we considered show growth in timber and pulpwood demand to varying degrees and more land competition between food production, forest products, protected areas and the bioenergy sector. These effects are stronger with lower emission scenarios although in the same direction. Later and more reactive policy/regulation engagement is expected to result in higher transition risks. Higher warming scenarios (i.e. RCP 8.5) are expected to result in more dramatic physical risks and outcomes. The RCP2.6 pathways are expected to result in better transition opportunities driven by consumer preferences for low-carbon products and innovation in bioenergy production and agriculture.

Table 1 outlines high-level strategies that will likely apply under any scenario. In general, we assume physical risks are likely to lead to greater potential impacts over time in higher-emission scenarios, while transition risks are likely to have greater potential impacts over time in lower-emission scenarios. This is because the low-emission pathways will most likely require greater market and regulatory shifts. Climate-related business opportunities are more difficult to quantitatively model, but we believe we are well-positioned to meet the growing demand for sustainable packaging and pulp products as part of the low-carbon, circular, bioeconomy.

Details of our adaptation strategies for the risks and opportunities mentioned in the matrix can be found in our response to CDP 12.3a.

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)." (Scenario-Based Climate Change Risk Assessment under TCFD and CDP. NCASI WHITE PAPER, JANUARY 2022.)

Table 1: Climate-related Risk & Opportunity Matrix

(projections through 2030)

Category	Chronic	Acute	Risk/Opportunity	Potential Impacts	Mitigation Strategy (Decarbonization)	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 and land		<ul style="list-style-type: none"> • Support research, policies and landowner efforts on sustainable forest management, restoration, afforestation, and carbon sequestration in working forests • 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		<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 accounting and 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		Project Funding Opportunities	Tax credit and funding opportunities to expand green energy production		<ul style="list-style-type: none"> • Leverage energy from carbon neutral biomass residuals to produce steam and electricity • Stakeholder engagement with government departments
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	

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.

➤ More info:
See 10k & CDP

Our ERM council has responsibility for ensuring that the people and processes are in place to identify, assess and mitigate risk. The ERM council is made up of senior vice presidents and vice presidents representing each IP business and certain major staff functions. The council is chaired by our chief financial officer and coordinated by our vice president, corporate audit. The council meets on a regular basis to evaluate enterprise risks and to ensure proper understanding, ownership and mitigation of risks.

Our sustainability team performs ongoing risk assessment using cross-sector research and benchmarking as climate issues evolve. The team leverages the expertise and best practice guidance from trusted consultants and forest sector groups including NCASI and WBCSD.

Our sustainability team also conducts materiality assessments at regular intervals by surveying all stakeholder groups for unidentified risks. The findings are brought to the ERM council by our CSO. Quantitative climate impact modeling from our partner S&P Global informs these discussions along with our strategy and public disclosures. The ERM council considers climate as a subset of overall risk management.



b) Describe the organization's processes for managing climate-related risks.

➤ More info:

See 10k & CDP

We use a robust internal environmental management system to track and report our GHG emissions. In 2022, we began developing a system that automates Scope 1 and Scope 2 GHG emissions data collection with built-in quality checks and consolidates enterprise emissions with strengthened control protocols.

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. Senior management, who have responsibility for environment, health and safety, sustainability, manufacturing, legal and government

relations, identify and evaluate the risks and opportunities relevant to IP. If the likelihood and potential impact are significant enough to meet the company's enterprise criteria as determined by ERM, plans are created to ensure that IP can mitigate such risks. The higher the likelihood and potential impact, the higher the priority to mitigate.

As a way to mitigate climate impacts, for example, we converted one of our last-remaining coal-fired power boilers to cleaner-burning natural gas in 2021-2022. This \$2.36 million project has resulted in a 39% GHG emissions reduction from the 2019 baseline at our Rome, Georgia containerboard mill. This project advances our decarbonization efforts and mitigates our market and transition risk.

c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

➤ More info:

See 10k & CDP

Climate-related risks and opportunities are material to our business and are integrated into our ERM processes. Our ERM council adopted the Committee of Sponsoring Organizations (COSO) framework for risk management. We evaluate risks and opportunities by considering potential impact and likelihood of occurrence and its impact on the company's

strategic objectives. The company, board of directors, and A&F committee review enterprise risks at least twice a year. Risks are also assessed and planned for annually as part of our strategic review process at all levels of the company.

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 several 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. Our annual sustainability report includes more detailed information regarding our GHG metrics.

➤ More info:

See GRI, SASB & TCFD data tables & CDP



b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

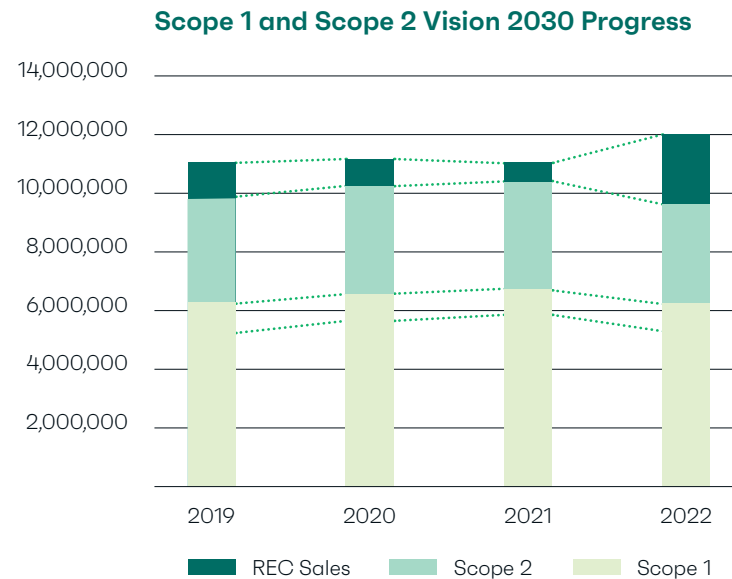
➤ More info:

See TCFD data table & SR narrative sections & CDP

Our 2022 emissions in millions of metric tons of CO2 equivalents are as follows:

- Scope 1: 6.3M metric tons
- Scope 2:
 - Location-based: 3.3M metric tons
 - Market-based: 5.7M metric tons

Scope 1 emissions remained flat from 2019 to 2022 with decreased biomass fuel usage/fossil fuel increase at other facilities offsetting the reductions made at our Rome, Georgia containerboard mill. There was a reduction in scope 2 emissions associated with grid greening but an overall increase in reported emissions due to increased renewable energy certificate (REC) sales. This does not amount to a change in actual emissions but rather sales of environmental attributes from our renewable power generation. REC sales will continue in the short term, but eventually will be retired and used to achieve our 2030 target. We continually assess and incorporate developments in emissions accounting as well as reporting standards and frameworks including the GHG Protocol, the SBTi and CDP. We are engaged directly in working groups focused on relevant forest sector topics.



c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

➤ More info:

See TCFD data table & SR narrative sections & CDP

Our Vision 2030 strategy includes an absolute GHG reduction target of 35% from a 2019 baseline across scopes 1, 2 and 3; SBTi approved this target 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 strategy 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. We report on our progress annually in our sustainability report and will continue to do so.





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