

TCFD

**Task Force on Climate-Related
Financial Disclosures 2023**

Crown Holdings, Inc.
June 2024



Introduction

In 2020, Crown launched the Twentyby30™ sustainability program. In 2022, we published the first report aligned with recommendations from the Task Force on Climate-Related Financial Disclosures (TCFD) to demonstrate how the Company's sustainability efforts fit into the overall business strategy. Now we continue to disclose the progress of our sustainability program through the lens of the TCFD disclosures because we recognize the impacts of climate change and the role our Company plays is as vital to the business as is our financial data.

Last year's TCFD report included a deep dive into the recommended disclosures with details on scenario analysis, mitigation approaches and quantitative metrics to support qualitative planning. With much of the data still current and relevant, this year's report summarizes the analysis that was done with examples of how we continue to integrate the insights into our business. In the spirit of a shared purpose, this report highlights the integration of climate change resilience on a financial and risk management level throughout our Company and into our value chain.

Disclosure Summary

Crown has committed to aligning with the recommendations of the TCFD as summarized in the table below:

	Executive Summary	Disclosures
Governance	<p><i>Organization's governance around climate-related risks and opportunities</i></p> <p>Crown prioritizes the management of climate risk and capitalizes on climate-related opportunities whenever possible. Our leaders maintain oversight responsibilities and encourage all employees to contribute to combating climate change and all aspects of Crown's sustainability journey.</p>	<p><i>Describe the board's oversight of climate-related risks and opportunities.</i></p> <p>Board Oversight</p> <p><i>Describe management's role in assessing and managing climate-related risks and opportunities.</i></p> <p>Management Oversight</p>
	<p><i>Metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material</i></p> <p>The Company's Twentyby30™ program established twenty measurable goals to be achieved by or before the end of 2030. Progress toward these goals is tracked regularly. Additional metrics from the scenario analysis allow for comparisons across the organization.</p>	<p><i>Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</i></p> <p>Twentyby30™ - Climate Action Status update CDP Climate C2.2-2.4</p> <p><i>Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</i></p> <p>Twentyby30™ - Climate Action Status update CDP Climate C6</p> <p><i>Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</i></p> <p>Metrics and Targets CDP Climate C1.3</p>
Strategy	<p><i>Actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material</i></p> <p>Preparation and action are critical in our strategy against climate change. We use scenario modeling to consider potential alternative outcomes and include actors, processes and impacts along the entire value chain. With sustainability integrated into all aspects of our business, Crown is working to improve operational efficiencies in our processes and lower the environmental footprint of our products. Quantitative scenario analysis is critical in modeling potential future states for the Company's operational footprint and helping to establish more robust mitigation strategies.</p>	<p><i>Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.</i></p> <p>Key Risks and Opportunities</p> <p><i>Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.</i></p> <p>Key Risks and Opportunities</p> <p><i>Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</i></p> <p>Scenario Analysis</p>
	<p><i>How the organization identifies, assesses, and manages climate-related risks</i></p> <p>Crown's annual Enterprise Risk Management (ERM) process includes climate risks and opportunities in the ongoing overall risk management of the Company. This report covers acute and chronic physical risks, transition risks and opportunities, their potential financial impacts and the mitigation strategy Crown developed.</p>	<p><i>Describe the organization's processes for identifying and assessing climate-related risks.</i></p> <p>Key Risks and Opportunities</p> <p><i>Describe the organization's processes for managing climate-related risks.</i></p> <p>Crown 2023 Form 10K, Page 9</p> <p><i>Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.</i></p> <p>Integration and Planning</p>

Climate-Related Governance

Crown recognizes that sustainability must be integrated into every aspect of the organization and that is why it is driven from the highest levels of the organization. Sound governance of any company aspect, including climate resilience, is the foundation for successful implementation. The table below summarizes the structure within Crown and illustrates how the various functions of the Company work together.



Board Oversight

Crown’s Board of Directors has oversight of climate risks and opportunities. They recognize the importance of meeting climate-related goals as a risk mitigation strategy. Specific responsibilities are delegated as appropriate.

The Nominating and Corporate Governance Committee

- Responsible for decision-making around climate and other sustainability-related policies
- Periodically reviews and assesses Crown’s sustainability and climate-related policies and programs in place to support the Company’s goals and practices
- Make recommendations regarding the sustainable growth of the Company

The Audit Committee

- Responsible for reviewing the Company’s climate and other sustainability-related disclosures, reports and audits
- Reviews management’s assessment of the adequacy and effectiveness of applicable internal controls relating to sustainability reporting
- Reviews the assessment and measurement of the Company’s progress toward achieving its sustainability-related goals and objectives, including the pace of such progress and the Company’s performance with respect to key metrics of the **Twentyby30™** program

Chairman of the Board (COB)

- Responsible for overall oversight of climate-related and other sustainability issues at the Company
- Supports the **Twentyby30™** sustainability program as the executive leader

Further details are available in our Company’s committee charters:

[Audit committee charter](#)

[Nominating and corporate governance committee charter](#)

Management Oversight

Sustainability is integrated into all aspects of our business. Crown's management and employees who are more directly involved with day-to-day operations drive progress at a more granular and direct level. Team members across the global Company contribute to the success of the Twentyby30™ program and other climate-related ambitions. Cross-functional committees are involved in ensuring alignment throughout the organization.

Crown's Senior Vice President - Crown Technology, Global Sustainability and Regulatory Affairs

- Leads sustainability initiatives and drives accountability and performance in meeting associated goals
- Includes identifying and implementing innovative ways to manage operational risks and opportunities related to climate change
- Reports directly to the Chief Operating Officer and regularly updates the Board of Directors and/or its Nominating and Corporate Governance Committee and Audit Committee.

A global team dedicated to the Company's sustainability efforts reports up to the Senior Vice President. The responsibilities of this team include:

- Managing the **Twentyby30™** Program
- Company-wide data collection and analysis
- Driving operational efficiency improvements
- Managing a sustainability CAPEX budget
- External reporting
- Partnering with customers, suppliers, industry groups and government bodies

Global Executive Sustainability Committee

- Makes strategic decisions related to sustainability throughout various functions of the organization
- Guides daily activities to help the Company meet its goals
- Chaired by the Senior Vice President, Crown Technology, Global Sustainability and Regulatory Affairs

Other members of the committee include

- Global Director of Sustainability
- Investor Relations
- Research and Development
- Procurement
- Human Resources,
- Environmental, Health and Safety (EHS)
- Risk Management

Risk Management Team

- Assesses, elevates and appropriately assigns risks, including climate-related risk, to be addressed and mitigated at an operational level by designated teams within the Company
- Where appropriate, the team elevates risks directly to the CEO, who determines whether further evaluation by the Board is necessary
- This team includes local plant management champions for on-the-ground sustainability efforts in the communities in which we operate

Division Management Teams

The Company's various regions and operating divisions manage sustainability on a site-level is handled by and work closely to report details to the corporate sustainability department. While responsibilities are handled in ways that work best for each division and site, all teams work with the global sustainability team to validate and ensure progress. Teams are dedicated to building resilience within the Company.

- **Plant managers and other leaders** : at the manufacturing sites: include aspects of the **Twentyby30™** goals in their annual Key Performance Indicators and aim to align any site-specific goals with overall business strategy
- **Engineers and plant personnel** : continuously seek improvements to drive operational efficiency while reducing emissions, reserving resources and creating positive financial impact.
- **Research and development department** : commit at least 50% of spending toward sustainability.

Metrics and Targets

Crown values data in creating measurable goals and tracking our progress towards targets. Whether it is tracking progress of Twentyby30™ goals or evaluating the industry and markets to ensure Crown is positioned for success, quantitative data is used whenever possible. All goals of Crown’s Twentyby30™ Program are quantifiable, and those within the Climate Action pillar of are particularly relevant to the TCFD recommendations. Progress on these targets is reported in Crown’s 2023 [Sustainability Report](#) and more details on these and all the Twentyby30™ goals can be found [here](#).

Data is critical in identifying, assessing, and managing climate related risks. The list below are examples of metrics used to evaluate performance with quantifiable information collected and used to make informed decisions:

- Financial metrics to structure CAPEX budget (payback, IRR)
- Carbon pricing (internal shadow price) in approval process to evaluate CAPEX projects
- Cost related to the impact of changing regulations
- Revenue linked to individual sites
- Insurance costs
- Percent of the Company’s revenue that comes from critical suppliers
- Demand of our product portfolio in terms of raw materials
- Site-specific hazard level with regards to water-stress
- Number and percentage of sites with certain levels of elevated water risk
- Level of customer dependency on a single site
- Percent of critical suppliers located in water-stressed regions or regions of high potential biodiversity risk
- Percent of employees invited to participate in engagement surveys
- Sustainability-related ratings and rankings of external agencies (CDP, Sustainalytics, MSCI)
- Social media engagement number

With the focus on a 2030 horizon, this TCFD report is guided by the metrics used to measure these goals as summarized below:

Twentyby30™ Climate Action Goals		Metric
1	Reduce Scope 1 GHG emissions, targeting a 50% combined reduction in absolute Scope 1 (fuel) and Scope 2 (electricity) emissions.	MT CO ₂ e Scope 1
2	Reduce Scope 2 GHG emissions, targeting a 50% combined reduction in absolute Scope 1 (fuel) and Scope 2 (electricity) emissions.	MT CO ₂ e Scope 2
3	Reduce absolute GHG emissions from our supply chain (Scope 3) by 16%.	MT CO ₂ e Scope 3
4	Source 75% renewable electricity by 2030 in accordance with our SBTi GHG goals and 100% by 2040.	% Renewable
5	Reduce Volatile Organic Compound (VOC) emissions by 10% per unit of product.	MT VOC/ Unit of Product

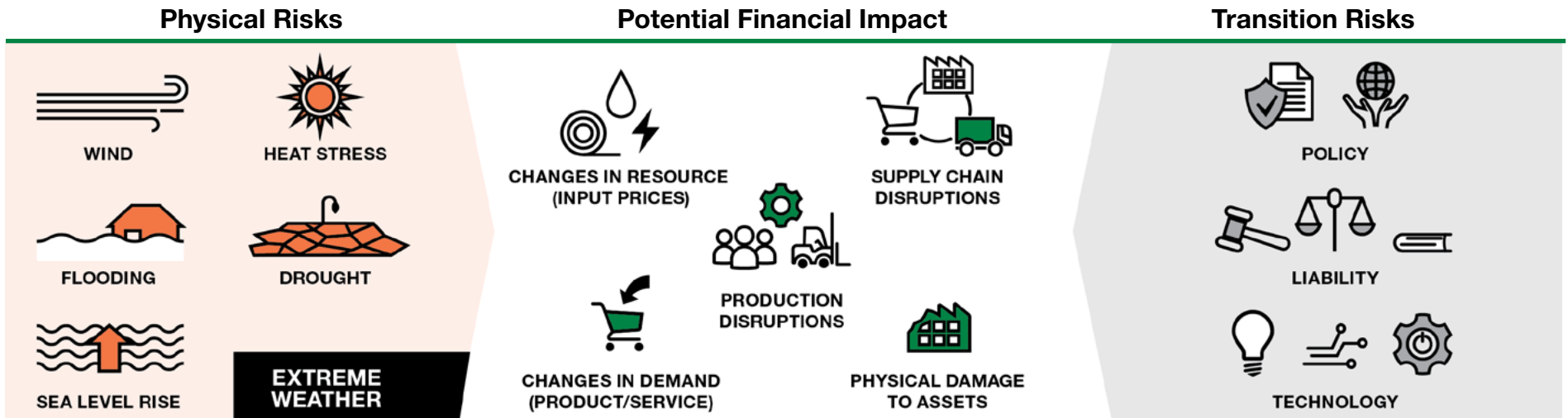
Strategy and Risk Management

Crown recognizes the risks and potential business impacts attributable to climate-change-related factors such as supply chain disruption and limited resource availability. These potential risks include weather pattern changes, natural disasters and water shortages, among others. Any damage, disruption or shutdowns due to physical risks related to climate change could adversely impact Crown's business and overall operational costs. To build resilience for the future of the Company, we go beyond the risks commonly associated with climate change and consider physical and transition risks and opportunities in scenario analysis. Crown takes responsibility in recognizing our actions can have a material impact on the environment and also that there are opportunities to make a positive impact and benefit from changes.

Integration and Planning

The recognition of the impact of climate change on our business is not siloed within the sustainability team at Crown, but rather integrated into critical functions at the senior leadership level. Crown’s Risk Management Team conducts regular discussions with Crown’s Business and Executive Leadership, who manage assessing relevant climate related risks and opportunities and appropriately allocating resources and establishing mitigation plans. Our ERM process includes an annual interview with various subject matter experts across the organization, through which we evaluate both risks and opportunities in order to determine what may meet the threshold of a potential substantial financial or strategic impact.

We also take into consideration Crown’s established processes that may help mitigate or capitalize on climate-related risks and/or opportunities. We evaluate these risks and/or opportunities alongside feedback from the Company’s subject matter experts and collaborate with key strategic leaders, including the Company’s senior-level leadership, in order to set a course of appropriate next steps.



Key Risks & Opportunities

Crown recognizes that physical and transition risks to our business require important consideration. Physical risks can be grouped into two categories: acute, referring to increased severity of extreme weather events; or chronic, referring to long term shifts in climate patterns that could lead to severe changes such as rising sea levels and heat waves. Transition risks include anything that could be a financial or reputational threat to the organization depending on the nature, speed and focus of the shift to a low-carbon economy, such as new policies and regulations or technology development. In following the TCFD recommendations, we consider risks in the following categories: policy and legal, technology, market and reputation. Additionally, transitioning to a low-carbon economy could create transition opportunities. These could involve resource efficiency, energy sources, products and services, markets or resilience. When risks are evaluated for financial or strategic decisions, the rate and severity of potential substantive impacts are considered based on the likelihood that a risk event could affect the organization.

In response, we have established management strategies for the short, medium and long term. Using both physical and transition scenarios allows for a holistic approach to potential futures for our business. An ambitious scenario that minimizes long-term physical risk could involve a more challenging transition in the short-term. An conservative transition scenario in the short-term could result in more extreme physical risk in the long-term. Crown uses this forward-looking approach to make decisions for short and long-term success.

The tables on the following pages detail what Crown has identified as key potential risks to our business. Proactively thinking about the financial implications these risks and opportunities could have on our business allows us to plan strategically for all scenarios. Crown is well-positioned to sustain the low-carbon transition based on our potential risks and opportunities and our established mitigation responses.

Risk scenario time frames

Short term	Medium term	Long term
0-3 year	3-10 years	10-30 years

Physical Risks

	Details	Potential Financial Impact	Crown's Mitigation Response		
Short to medium term horizon	Acute				
	<ul style="list-style-type: none"> Tornadoes Hurricanes Floods Droughts Wildfires Earthquakes 	<ul style="list-style-type: none"> Exposure to physical risks varies by geography Natural disasters may cause damage, disruption or shutdowns Employee safety is threatened by natural disasters 	<ul style="list-style-type: none"> Reduced revenue from production disruptions Early retirement of existing assets Increased costs associated with damage response Increased insurance premiums 	<ul style="list-style-type: none"> Construction plans are reviewed by Crown's Project Management & Engineering group and Loss Control service provider to identify and mitigate potential weather risks Natural catastrophe risk modeling, including evaluating the latitude and longitude of locations to assess physical hazards and the likelihood and potential for events to occur, such as windstorms, wildfires, floods, etc. Structural integrity of the facilities is designed to withstand potential weather events Considering physical environmental attributes of sites when selecting location to mitigate risks from potential local weather events 	
	Long term horizon	Chronic			
		<ul style="list-style-type: none"> Changes in precipitation patterns and weather patterns Water scarcity Poor harvest for customers Rising sea levels 	<ul style="list-style-type: none"> Weather pattern changes and environmental shifts could interrupt available resources Crop failures create risk of reduced demand from food customers 	<ul style="list-style-type: none"> Increased costs of maintaining infrastructure Higher operational costs due to shifts in material availability Increased revenue from greater customer need for canned products or decreased revenue from limited customer demand 	<ul style="list-style-type: none"> Water restoration projects Building resilience by minimizing natural resource reliance Climate Action goals to lower any contribution to climate conditions

Transition Risks

	Financial Impact	Crown's Mitigation Response
Short, Medium, Long Horizon	Policy and Legal - constraints on emission-intensive activities	
	<ul style="list-style-type: none"> Enhanced disclosure requirements Stricter environmental requirements Jurisdiction to restrict materials - coatings Increased taxes on GHG emissions Carbon pricing regulations 	<ul style="list-style-type: none"> Increased operating costs (e.g., higher compliance costs, operating permits, treatment/disposal/storage of waste, remediation of contamination) Increased insurance premiums Need for additional capital investments Investments in new equipment and R&D resources
Short, Medium, Long Horizon	Technology - emerging tech developments to support a low-carbon economy	
	<ul style="list-style-type: none"> Need to transition to lower-emission production equipment Substituting Company vehicles such as gas-powered forklifts to electric alternatives Suppliers charging more for low-carbon alternatives Availability of cleaner energy sources Cybersecurity 	<ul style="list-style-type: none"> Capital investments in technology development Asset write-downs of old equipment Greater investment in Security Infra structure
Short, Medium, Horizon	Market - shifts in supply and demand as consumer preferences change	
	<ul style="list-style-type: none"> Rising conventional energy prices Increased cost of raw materials Uncertainty in market signals 	<ul style="list-style-type: none"> Increased production costs due to input prices Increased cost of output requirements such as waste treatment
Medium, Long Horizon	Reputation - changing perceptions of an organization's contribution in transition to a low-carbon economy	
	<ul style="list-style-type: none"> Shifts in consumer preferences Response to offsetting increased costs to customers Negative stakeholder feedback 	<ul style="list-style-type: none"> Reduced revenue from decreased demand Capital availability challenges
		<ul style="list-style-type: none"> Driving down emissions from operations with energy efficiency optimization projects Ongoing solicitations and feedback from subject matter experts Annual interview to determine the relevance and impact of legal risks to our business Transitioning to renewable energy sources to minimize associated GHG emissions In 2022, we implemented an internal price on carbon as a shadow price mechanism to be applied to sustainability CAPEX projects and eventually all CAPEX for the Company
		<ul style="list-style-type: none"> Ongoing solicitations and feedback from subject matter experts Proactive transition to established and emerging technology Long term renewable energy contracts at low price Established Information Security Team
		<ul style="list-style-type: none"> Strong efforts to increase recycling to keep metal costs low Switching to renewable energy to avoid high energy costs Long-term contracts with suppliers and customers
		<ul style="list-style-type: none"> Actively engaging with stakeholders Strong internally and externally facing communications team Regular benchmarking

Opportunities

	Financial Impact	Crown's Mitigation Response	
Medium, Long horizon	Resource Efficiency <ul style="list-style-type: none"> Improved recycling mechanisms More efficient buildings Reduced usage/consumption of water and electricity 	<ul style="list-style-type: none"> Reduced operating costs Increased production capacity to generate greater revenues 	<ul style="list-style-type: none"> Increasing recycling efforts and engagement with industry partners New buildings constructed with greater efficiency and updates to old buildings Process improvement and optimization to meet resource efficiency goals
	Energy Source <ul style="list-style-type: none"> Increased availability of lower-emission energy sources Using new renewable technology in addition to wind and solar such as nuclear power or battery storage 	<ul style="list-style-type: none"> Reduced exposure to fossil fuel price increases and fluctuations Less sensitivity to cost of carbon with lower GHG emissions Reputational benefits leading to increased demand for cans 	<ul style="list-style-type: none"> Increasing amount of renewable electricity procured Engaging with subject matter experts and industry experts to stay up-to-date on relevant technology advancements Encouraging suppliers to source energy from lower-emission sources Using materials from lower-emission sources whenever possible
Short, Medium-Long Horizon	Products and Services <ul style="list-style-type: none"> Developing new innovative products through R&D Light-weighting goals to decrease raw material usage 	<ul style="list-style-type: none"> Better competitive position resulting in increased revenue Decreased cost of raw materials needed Better competitive position with shifting consumer preferences 	<ul style="list-style-type: none"> Dedicating 50% of R&D budget to sustainability efforts Marketing recyclability of our products and promote support of circular economy
	Markets <ul style="list-style-type: none"> More public-sector incentives Increased ready-to-drink products in aluminum cans Increased demand for recyclable products 	<ul style="list-style-type: none"> Increased revenue Reputation benefits leading to increased demand for cans 	<ul style="list-style-type: none"> Supporting industry groups efforts to strengthen our products' position in relevant markets Continuous review of products and business models Strong marketing of products
	Resilience <ul style="list-style-type: none"> Participation in renewable energy programs and adoption of energy efficiency measures Improving efficiency Diversification 	<ul style="list-style-type: none"> Increased revenue Increased market valuation 	<ul style="list-style-type: none"> 100% renewable electricity in certain regions Avoiding reliance on any single supplier for any critical material

Scenario Analysis

Through a strategic process, we have identified physical, operational and reputational risks and opportunities that climate change may create for our business. We employ scenario analyses based on publicly available climate scenario data including **Representative Concentration Pathways** (RCPs) 2.6 and 8.5 and **Shared Socio-economic Pathways** (SSPs) 1 and 5 from the [Intergovernmental Panel on Climate Change](#) (IPCC) and [Net Zero Emissions](#) (NZE) from the **International Energy Agency** (IEA) along with an external, third-party consultancy to model potential future scenarios for our global business.

Physical Scenario		Transition Scenario
Most Ambitious	Business-as-usual	Most Ambitious
<p><i>Based on assumptions and projections from SSP1 and RCP2.6</i></p> <p><i>Global climate change mitigation aligned to The Paris Agreement to limit climate change to 2°C (and further to 1.5°C).</i></p>	<p><i>Based on assumptions and projections from SSP5 and RCP8.5</i></p> <p><i>Drastic climate change warms global temperature to 3.7°C</i></p>	<p><i>Based on published IEA Net Zero Emissions (NZE)</i></p> <p><i>Faster transition considers the most aggressive and most promising changes critical to the low-carbon transition. This depends on rates of change of key parameters*</i></p>
<p>Crown set 1.5°C science-based targets as part of the Twentyby30™ program. As of the end of 2023, we are on track to meet the goals set in accordance with this Paris-Aligned scenario.</p>	<p>We chose this as a climate change scenario that would yield a risk assessment reflecting the largest potential risk to our organization in terms of climate change.</p>	<p>As IEA's most updated, this scenario compliments the SSP1/RCP 2.6 physical scenario we used by modelling what the future could look like following significant progress.</p>

*e.g. rate of technology development and deployment; changes and timing of key policies; etc.

While the severity of the risks varies between the chosen two extreme potentials, physical risks have been incorporated in investment screening and future business strategy in terms of current physical risks. To build resilience, this assessment incorporates climate scenario modeling to consider changing weather patterns and more frequent natural disasters in the future. Crown used the parameters of these scenarios to predict what our Company might look like on these pathways considering negative and positive impacts of costs and benefits. Our modeling extended to 2050, and all business units across the global organization were included. As Crown's operations fit into a dynamic value chain, upstream and downstream components were also considered.

While we understand that risks from policy to technology and impacts from physical climate change can happen simultaneously and suddenly, this practice allow us to take a tailored approach to modeling these predictions to our business. This awareness drives decision-making and strategy to build resilience for Crown for many years to come. Scenario analysis confirms the call for all businesses to be more proactive in protecting our shared future. The scenario modeling provides a data-driven approach to understand which locations to prioritize and which regions the Company should explore for future projects such as water conservation.

As a global organization, Crown's risks regarding the uncertainty of physical impacts of climate change will vary by geography. We proactively evaluate which geographical locations present climate-related weather risks to our business and have integrated processes into our acquisition and divestment processes to mitigate future climate-related risks. Crown has also built manufacturing facilities in locations to strategically serve major customers and minimize the environmental footprint of and likelihood of disruption during transportation. As part of the **Twentyby30™** program, Crown is working to reduce GHG emissions from the supply chain by reducing downstream logistics, distribution, and transportation fuel consumption and mileage. We source global operations locally, taking into account the transportation distances of our suppliers. While supply chain disruptions may cause Crown to source from suppliers that are not nearby or less preferred, there is a larger focus on domestic supply within each region for the most efficient transportation. Likewise for optimization of outgoing shipments, allocation in our production centers and plants is structured to supply customers from the closest plants to the customer locations. We utilize full truckloads and optimize load capacity, striving to be as efficient as possible in our demand-supply planning considering transport represents a large portion of overall costs.

Approach

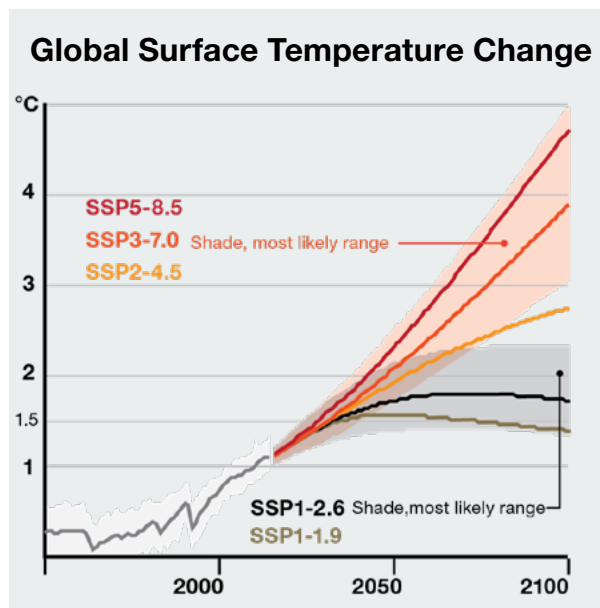
- The physical risks in each scenario were quantitatively assessed with global water and climate risk screening tools focused on 2 variables: precipitation and surface air temperatures in 2030 and 2050.
- Possible risk to our sites were ranked by considering both current water consumption and the anticipated changes in precipitation and air temperature.
- In assessing the level of severity, we also took into consideration our locations' relative contribution to the Company's overall revenue.
- Comparing the impacts of the various climate change scenarios at each site helped us identify which sites to prioritize in terms of building more resilience.
- Crown represents a resilient and diverse climate footprint with no site responsible for more than 1-3% of the Company's overall revenue at the time of analysis.

With the transition-focused scenario, we considered the technological, political, legal, market and economic changes required to reach the specific pathway to Net Zero, including the associated risks and opportunities to get there. This guided a high-level analysis of the impacts that may arise as we position our Company to successfully transition to a low-carbon economy. For example, we assumed that by 2030, global employment in energy supply will shift from oil/gas and coal to electricity and bio energy while clean technologies (such as renewable energy sources and electric vehicles) ramp up. These shifts will likely be incentivized by new policies and supported by increased investments in low-emission fuels, electricity generation and energy infrastructure.

Climate Change Risk Screening Scenarios

Scenario	Period	Precipitation anomaly*	Temperature Increase*
SSP1 RCP2.6	2030	-0.1% Low-Medium	+1.25°C Medium High
	2050	-0.6% Low-Medium	+1.52°C High
SSP5 RCP8.5	2030	-3.9% High	+1.34°C Medium High
	2050	-6% Extremely High	+2°C Extremely High

*from 1981-2015



Source: Based on IPCC data/illustration

Overall Climate Change Risk Screening Results

Scenario	Period	% of sites with extremely high climate risk	% of sites with high climate risk
SSP1 RCP2.6	2030	0%	17%
	2050	5%	41%
SSP5 RCP8.5	2030	4%	30%
	2050	60%	24%

Assumptions

We made the simplifying assumptions that our business activities in terms of industry and global footprint will remain relatively similar to those today. While our geographical footprint has expanded with multiple new manufacturing sites in the past few years as the canmaking industry experienced above average growth, we expect less expansion in the short to medium term. We assumed macro-economic variables and demographic variables to remain flat. Climate sensitivity assumptions were that temperature increased based on the available RCP 2.6 and RCP 8.5 models and those models remain constant.

Assumptions, Parameters and Business Impact

The table below illustrates general assumptions and parameters of each of the scenarios as they may relate to businesses in general. These are parameters of the selected extreme scenarios and may not all have a likely material impact to our business. The below list will be updated continuously as progress is made and additional data is collected to better prepare for potential future conditions.

	Earnings/Costs/Revenues	Assets	Capital Allocation/Investments	Business Interruptions
High Efforts Low Emissions	<ul style="list-style-type: none"> Commodity prices may rise slightly more than otherwise seen from inflation Costs of our raw materials would likely increase in direct proportion to commodities; cost of production may decrease with more efficient equipment and processes Higher taxes on carbon emissions will have minimal effect as significant source of energy has involved transition to renewables 	<ul style="list-style-type: none"> Assets would be expected to depreciate at the same rate as today Minimal physical impacts to assets from environmental stressors Newly available technology could lead to asset write-downs of outdated equipment 	<ul style="list-style-type: none"> Similar to today, investments are made to upgrade equipment and improve operational efficiency Capital will be allocated to build additional manufacturing sites based on market demand 	<ul style="list-style-type: none"> Periodic instances may occur Operations in affected regions will be impacted by potential secondary stressors on the facilities Supply chain and distribution channels have developed to withstand interruptions
Low Efforts High Emissions	<ul style="list-style-type: none"> All commodity prices may rise significantly more than otherwise seen from inflationary changes with increased overall stress on the global economy; supply chain disruptions caused by climate change could lead to an increased need for flexibility in our operations and logistics Costs of our raw materials would likely increase as commodities; cost of production would remain flat Taxes on carbon emissions would be minimal and not have much effect on revenue Temperature increases and extreme weather events (the negative effects of climate change) have the potential to reduce economic activity 	<ul style="list-style-type: none"> Assets would be expected to depreciate at a higher rate than today if facilities face increased climate stress There is the potential for assets in coastal areas to lose value, but for other assets to potentially gain value with a demand for locations with less impact from climate change; water scarcity will also have an impact, with potential for changes in average surface temperature, sea level, and precipitation to devalue assets 	<ul style="list-style-type: none"> In addition to investments made to upgrade equipment, improve operational efficiency, and build additional manufacturing sites based on market demand, more capital will likely be necessary to prevent or respond to damage caused by weather-related changes 	<ul style="list-style-type: none"> Frequency is assumed to increase Operations in most affected regions will be most impacted by immediate stress on the facilities Supply chain and distribution channels have potential to demand increased flexibility if the supply chain is challenged, or transportation is interrupted; for example, flooding could cause quantifiable downtime, and brown-outs could affect both production and employee safety overall with more significant climate changes

	Carbon Price	Technology	Policy	Energy Demand Mix
High Efforts Low Emissions	<ul style="list-style-type: none"> By 2030, there are carbon prices in place, at least partially, where our operations are located Carbon pricing will operate within existing or new tax and/or emissions trading frameworks These potential carbon pricing mechanisms would apply to our manufacturing sector, but carbon prices themselves will vary based upon global locations 	<ul style="list-style-type: none"> Renewable energy technology improves in efficiency, availability, and cost to install Availability of more electric vehicles increases and their price decreases; 60% of global car sales are electric Our own operations will include more energy and water efficient technologies than what are currently available in the marketplace today 	<ul style="list-style-type: none"> Policy will be used to incentivize change 	<ul style="list-style-type: none"> Energy demand continues to rise due to increased population and industry growth The ratio of green to brown energy should favor green energy with both supply and end-use improvements Energy mix will still include coal/oil/gas in marketplace, but nuclear/renewables will be more readily available and affordable
Low Efforts High Emissions	<ul style="list-style-type: none"> Carbon pricing is introduced in certain countries in which we operate, which could result in either payments or earnings to the company, depending on the structure of the mechanism and the emissions associated with our operations These potential carbon pricing mechanisms may not apply to our manufacturing sector 	<ul style="list-style-type: none"> Some new technology may be available Demand for better technology could outweigh what is available, keeping switching costs high 	<ul style="list-style-type: none"> Assume same level of movement, some additional climate-related policies (such as TCFD in the U.S., carbon taxing in Europe, increased pollution control laws in Asia) 	<ul style="list-style-type: none"> Energy demand mix does not change significantly from what is offered today Oil/gas/coal are still heavily relied upon but demand for renewables grows

Looking Ahead

These are highlights of how we monitor and react to climate-related impact throughout the Company. Each year, we are accelerating our progress in various aspects of sustainability. We will continue to align our overall business strategy with our efforts to identify and mitigate climate-related risks and opportunities in an effort toward a low-carbon world. We are closely monitoring the introduction of new regulations such as the U.S. Securities and Exchange Commission's Enhancement and Standardization of Climate-Related Disclosures, the European Commission's Corporate Sustainability Reporting Directive (CSRD), and California's Climate Corporate Data Accountability Act that will require sustainability activity to be increasingly tied to financial disclosures. To further strengthen our future TCFD reports, we aim to improve the quality and scope of our quantitative analysis.



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