Task Force on Climate-Related Financial Disclosures (TCFD)

This is our latest TCFD disclosure and is also available in our 2023 Annual Report on Form 10-K.

a. Climate-Related Financial Disclosures

Under the UK Listing Rule LR 9.8.6R, Carnival plc is required to report certain climate-related financial disclosures. With a goal towards transparency and consistent disclosure amongst our filings and stakeholders, we are including the UK required disclosures in our Form 10-K filing. Accordingly, we set out below our climate-related financial disclosures fully consistent with the Task Force on Climate-Related Financial Disclosures ("TCFD") Recommendations and Recommended disclosures, taking into account guidance published by the TCFD including the Guidance for All Sectors. Our consistency with the TCFD's four pillars, Governance, Strategy, Risk Management and Metrics and Targets, and the recommendations thereof, are represented in the table below.

TCFD Pillar	Recommended disclosures	Section Reference
Governance	a) Describe the Boards' oversight of climate-related risks and opportunities.	*Governance*
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	*Strategy: Qualitative scenario analysis*
	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	*Strategy: Quantitative Scenario Analysis*
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks.	*Risk Management: Climate Risk and Opportunity Identification, Owner Assignment and Assessment*
	b) Describe the organization's processes for managing climate-related risks.	*Risk Management: Climate Risk and Opportunity Monitoring, Management and Reporting*
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	*Risk Management: Integration into our overall risk management*
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	*Metrics and Targets*
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks.	
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	

Governance

The Chief Climate Officer ("CCO") and the Boards of Directors are responsible for the oversight of climate-related matters and are directly supported by members of executive management. In addition, the CCO and the Boards of Directors set the tone at the top with regards to embedding a climate risk culture through fulfilling their responsibilities as outlined in the climate risk management framework. The CCO leads the identification of climate-related risks and opportunities and oversees how these are embedded in our strategic decision-making and risk management processes.

To further support our climate-related efforts, we created a Strategic Risk Evaluation ("SRE") Committee in 2022. The SRE Committee consists of members of executive management and an advisor and reports to the CEO and CCO, who in turn, reports to the Boards of Directors. As of November 30, 2023, the SRE Committee was comprised of the following:

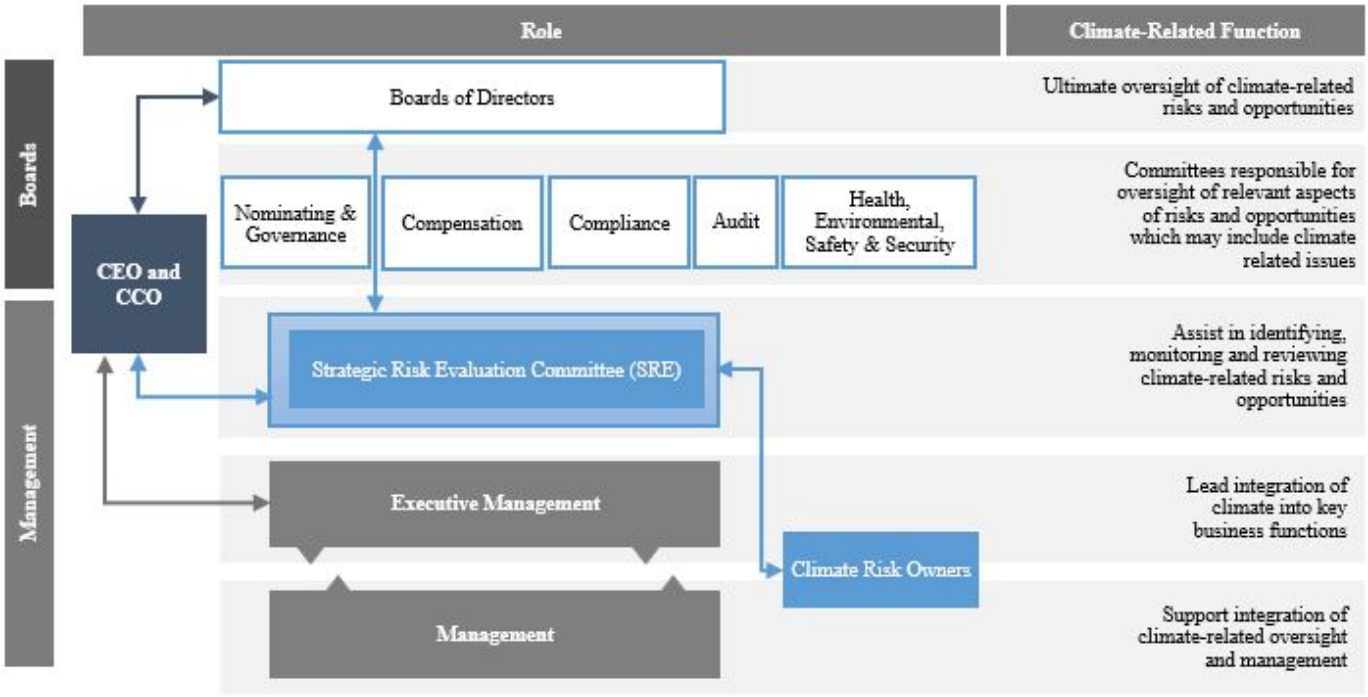
- Josh Weinstein - President, Chief Executive Officer and Chief Climate Officer
- David Bernstein - Chief Financial Officer and Chief Accounting Officer (Chair of SRE Committee)
- William Burke - Chief Maritime Officer
- Richard Brilliant - Chief Risk and Compliance Officer
- Jan Swartz - Executive Vice President of Strategic Operations (appointed to the SRE Committee in October 2023)
- Stein Kruse - Advisor to the CEO & Chair of the Boards

The primary responsibility of the SRE Committee is to assist the CCO in fulfilling his responsibility to identify, monitor and review the management of climate-related risks and opportunities. The diagram below sets out the function of the SRE Committee and illustrates the interaction between the Boards of Directors, executive management and the SRE Committee. Common recurring activities of the SRE Committee include:

- Discussing climate considerations in the planning processes to further support its focus on reducing GHG emissions
- Considering if any new climate risks or opportunities should be included in the list of identified climate risks and opportunities
- Ensuring appropriate assignment of identified climate risks and opportunities to risk owners, who are responsible for their day-to-day evaluation and management
- Obtaining at least annual reporting from the risk owners on the monitoring and management of identified risks and opportunities and reviewing, scrutinizing and challenging management of climate-related risks and opportunities
- Tracking of energy efficiency spend and progress on the installation of Service Power Packages
- Monitoring progress against our 2030 Climate Action Goals
- Reviewing and approving the climate risk management framework
- Reviewing and approving the SRE Committee charter

The SRE Committee meets at least once a quarter and in 2023, five SRE Committee meetings were held. From these discussions, the SRE Committee has provided a quarterly update to the Boards of Directors on climate-related matters such as:

- Additional costs that will be included in the strategic, capital, itinerary and other long-term Plans
- Updates from risk owners on the monitoring and management of identified risks and opportunities for all of our monitored risks
- Updates on evolving regulations
- Results of our Scope 3 emissions quantification



Board Education Program

To enable the CCO and Boards of Directors to fulfil their responsibility to oversee climate-related risks and opportunities, a Board sustainability and TCFD education program was established in 2022, with core education components and optional self-study courses. This sustainability and TCFD education program was developed with support from external advisors and the Senior Independent Director. The core education components of the program were completed in November 2022. A refresher education program, including updates to sustainability and TCFD considerations was performed in February 2023.

Strategy

Risks and opportunities are reviewed and developed as part of our climate risk management framework described below. In 2022, we performed a qualitative and quantitative scenario analysis to assess our climate-related risks and opportunities over the short, medium and long-term. The qualitative and quantitative scenario analysis were reviewed by the SRE Committee in 2023 and no changes were identified.

Qualitative scenario analysis

In 2022, we qualitatively applied two (and quantitatively applied three) distinct plausible climate scenarios, global warming limited to below 1.5ºC above pre-industrial levels by 2100 “Steady Path to Sustainability” and global warming of 2.8ºC above pre-industrial levels by 2100 “Regional Rivalry.” The scenarios were used to generate the climate-related risks and opportunities listed in the table below.

As part of our qualitative scenario analysis, a series of workshops with the SRE Committee and a cross-section of management was conducted to identify material climate-related risks and opportunities, based on likelihood and degree of potential financial impact, over the following time horizons:

- Present – 2025 (short-term) - consistent with our internal forecasting
- 2025 – 2035 (medium-term) - aligns with our existing sustainability goals
- 2035 – 2050 (long-term) - consistent with the useful life of our ships

Following the workshops, the SRE Committee selected certain risks and opportunities for further assessment and quantification. The process of selecting these risks and opportunities included an in-depth assessment by each participant of the proposed risks

and opportunities. The process incorporated the use of a feasibility matrix and subsequent group discussion to arrive at consensus on which risks and opportunities were most appropriate for quantification. Feasibility was evaluated on the availability of internal and external climate-related data, the estimated number of assumptions required and the magnitude of impact and likelihood of occurrence.

Climate-related risks identified through qualitative scenario analysis

Our initial selected risks and opportunities for quantification are in **bold**:

TCFD risk categories	Risk summary	Impact time horizon
Markets and Products / Shifting Markets (1)	**Cruising no longer aligns to consumers' climate values**	Medium Term
	Reduced availability and access to fuel*	Medium Term
	Unable to meet climate-related requirements reduces access to capital / insurance	Medium Term
Policy and Legal (1)	**Increased costs driven by climate-related regulations***	Short-Medium Term
	Risk is that cruising (as a high-GHG emissions industry) is severely restricted or subject to bans	Medium Term
Reputation (1)	Failure to attract and retain talent due to climate credentials	Medium Term
	Increased demand for reducing GHG emission practices	Medium Term
Technology (1)	Lack of viable low GHG emission technology to replace fossil fuels	Medium Term
Physical	**Chronic climate change impacting supply chain availability and price**	Medium Term with expected increases in the Long Term
	Itineraries are not viable due to extreme weather and/or sea level rise	Medium Term with expected increases in the Long Term

(1) Transition Risks

***Due to the similar nature of these risks, we have combined them for the quantitative analysis into a combined risk: "How does a transition to a low-GHG emissions future impact the price of the fuels needed to power our ship engines?"**

Climate-related opportunities identified through qualitative scenario analysis

TCFD opportunity categories	Opportunity summary	Realization time horizon
Energy Source	Support the adaptation of sustainable technological advances for the cruise industry	Medium Term
Market Access	Access to new financing options available for organizations working on a low-GHG emission future	Short-Medium Term
	Access to private destinations or islands with infrastructure built by us	Short-Medium Term
	Attract and retain new customers and improve reputation through sustainable itineraries and activities for changing climate-induced preferences	Short-Medium Term
	Positioning as a sustainability leader	Short-Medium Term
Products & Services	Opportunities for the ship to be the destination	Long Term
Resilience	Engage with more sustainable and economically favorable alternative suppliers	Short Term
	Improve resilience to physical climate risk through adaptation of itinerary routes and investment in port infrastructure	Short Term
Resource Efficiency	Improved operational efficiencies arising from technological advancements	Medium Term
	Increased fuel efficiency through alternative itinerary planning and reduced energy use	Short - Medium Term
	Increased resource efficiency through reduced on-board energy demand and consumption	Medium Term

We presently consider transition risks to be the most significant in terms of likelihood and impact. The risks with the highest impact and likelihood of occurrence are associated with the transition to a low-GHG emission future, in a scenario where low GHG emission technology does not exist, or where we have not been able to access these technologies and where we have reduced availability and access to fuel.

The climate-related opportunities with the highest impact are a mix of mitigation and adaptation opportunities. These include the positive impacts of supporting the adaptation of sustainable technological advances for our business, improved operational efficiencies from technological advancements, and more energy efficient itineraries from investing in port and destination projects.

Quantitative Scenario Analysis

In 2022, we quantitatively applied three distinct plausible climate scenarios to determine the potential impacts of the risks and opportunities assessed. Using transition scenario assumptions from the International Energy Agency (“IEA”) and climate and transition scenarios from the Intergovernmental Panel on Climate Change (“IPCC”), we utilized two interlocking types of pathways, the Representative Concentration Pathways (“RCPs”) and Shared Socioeconomic Pathways (“SSPs”) to create three sets of scenarios to understand the relative materiality and possible range of impacts to the business from the selected climate-related risks and opportunities under different potential futures.

Scenario 1: Steady Path to Sustainability (average temperature increase limited to 1.5°C above pre-industrial levels by 2100) SSP1 / RCP1.9

Under this scenario, the world takes the rapid and strong policy measures required to meet the ambition of the 2015 Paris Agreement (to keep the mean global annual temperature rise to well below 2°*C* warming above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°*C* above pre-industrial levels). Under this scenario, low GHG emission technology takes over from fossil-fuels, and reduced economic growth is also important for reaching net zero emissions by 2050

We selected this scenario, as it provides us insight into a low-GHG emissions world that would benefit us and our Climate Action Goals. Under this scenario, transition risks identified are material and our resilience is dependent on our ability to effectively adopt low GHG emission technologies, refer to XX. Sustainability for further details on ways we are monitoring and piloting technology developments. A transition to low GHG emission technologies would help us adhere to increasing requirements to transition to a low-GHG emissions future, including existing and emerging regulations, consumer preferences, and talent market expectations. Our most impactful opportunity is the enhancement of our reputation and competitiveness, by supporting the adaptation of sustainable technological advances for the cruise industry. This would also further help us to mitigate our transition risks.

Scenario 2: Regional Rivalry (average temperature increase limited to below 2.8°C above pre-industrial levels by 2100) SSP3 / RCP7.0

This scenario explores a possible route in which the world is seeing an emergence of tribalism and nationalism. Low international priority for addressing environmental concerns leads to strong environmental degradation in some regions. The combination of impeded development and limited environmental concern results in poor progress toward climate sustainability. Growing resource intensity and fossil fuel dependency along with difficulty in achieving international cooperation and slow technological change imply high challenges to mitigation.

We selected this scenario, as it provides an indication of the world we would operate in if we do not achieve the Paris Agreement target. This scenario presents a higher emissions future where physical risks are material. Business resilience under this scenario is dependent on our ability to adapt to extreme weather events and chronic physical risks. Under this scenario we can remain resilient by taking advantage of the mobility of our cruise ships, which enables us to move our vessels between regions and adapt itineraries in cases of extreme weather events. Additionally, based on a study performed, we are well placed to respond to increased physical risks at our new port development projects, see Investment in Port and Destination Projects.

Scenario 3: Fossil-fueled growth (average temperature increase limited to below 4°C above pre-industrial levels by 2100) SSP5 / RCP8.5

The 4°C scenario explores a possible route in which as countries emerge from the coronavirus pandemic, governments around the world focus on restoring growth through direct support to fossil fuels and reverting to the tried and tested methods of the past.

This scenario presents the highest emissions future where physical risks have the potential to be most significant and would therefore allow us to model the impact of these extreme climate risks. Akin to Scenario 2, business resilience under Scenario 3 will be dependent on our ability to adapt to extreme weather events and chronic physical risks as well as the impacts to our supply chain across different geographical areas. Our experience with previous supply chain disruptions suggests that under this scenario, we would be resilient to supply chain risks given our ability to adapt to supply chain disruptions.

Key assumptions and limitations

The results of our quantitative scenario analysis have a high degree of uncertainty as there are assumptions made for all modelling inputs. This means that results should be taken as an indicative “order of risk”. Furthermore, the analysis assumes

that the future conditions from climate change are shifted to today to contextualize impacts in relation to the current business size. The analysis does not include:

- Forward-looking forecasting of our business operations; or
- Potential mitigation or adaptation measures that could be taken either by us, or by other parties over the period considered (e.g., sustainable ship fuel development, governments building flood defenses).

Estimations and projections

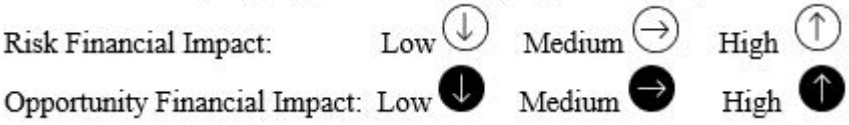
In 2022, we completed several scenario analyses over three time horizons (2025, 2030, and 2050). Any assumption made about fuel prices acknowledges the 2022 energy crisis and assumes that by 2025, oil prices will stabilize in line with IEA price projections, at the time of analysis. We have also projected physical and transition risks at a global level due to the high mobility of our assets.

The degree of potential impact was determined on a linear scale range of "Low", having no material impact or "High" having a material impact on Carnival Corporation & plc's financial statements.

Results of the Quantitative Scenario Analysis: Potential Impact on Operating Income

Key

Transition Risk (**TR**); Physical Risk (**PR**); Opportunity (**O**)



		2025	2030	2050
Scenario 1	**(TR)** How does a low-GHG emissions future impact the price of the fuels needed to power our ship engines?	→	↑	↑
	(TR) How would changing consumer sentiment drive changes in demand for our offering?	↑	↑	↑
	(PR) How are our profits affected by an increase in food commodity prices?	↓	↓	↓
	(O) What are the future savings associated with operational efficiency improvements?	→	↑	↑
	(O) How could providing a service geared towards changing consumer sentiment drive long-term growth for us?	↑	↑	↑
Scenario 2	**(TR)** How does a low-GHG emissions future impact the price of the fuels needed to power our ship engines?	↑	↑	↓
	(TR) How would changing consumer sentiment drive changes in demand for our offering?	↓	↓	↓
	(PR) How are our profits affected by an increase in food commodity prices?	↓	↓	↓
	(O) What are the future savings associated with operational efficiency improvements?	↑	↑	↑
	(O) How could providing a service geared towards changing consumer sentiment drive long-term growth for us?	↓	↓	↓
Scenario 3	**(TR)** How does a low-GHG emissions future impact the price of the fuels needed to power our ship engines?	↓	↓	↓
	(TR) How would changing consumer sentiment drive changes in demand for our offering?	↓	↓	↓
	(PR) How are our profits affected by an increase in food commodity prices?	↓	→	↑
	(O) What are the future savings associated with operational efficiency improvements?	→	↑	↑
	(O) How could providing a service geared towards changing consumer sentiment drive long-term growth for us?	↓	↓	↓

How does a low-GHG emissions future impact the price of the fuels needed to power our ship engines?

There is an increased global regulatory focus on GHG and other emissions. Climate-change related regulatory activity and developments that require us to reduce our emissions, which includes both the EU regulations and the IMO Strategy, may require us to make capital investments in new equipment or technologies, pay for emissions, purchase allowances and/or carbon offset credits, or otherwise incur additional costs or take additional actions related to our emissions. Such activity may also impact us indirectly by increasing our operating costs, including fuel costs. Additionally, fossil fuels are currently the only viable option for our industry at present, we are closely monitoring technology developments and partnering with key organizations to help identify and scale new technologies not yet ready for the cruise industry. Refer to XIX. Governmental Regulations and XX. Sustainability.

How would changing consumer sentiments drive changes in demand for our offering?

To mitigate the impact of this risk, our short and medium-term GHG emissions goals focus on GHG intensity reduction, measured in both grams of CO_2e per ALB-km and kilograms of CO_2e per ALBD. In addition, we are committed to our reduction of GHG emissions and pursuing net zero emissions by 2050, aligned with the IMO Strategy and are at the early stages of developing our transition plan. While fossil fuels are currently the only scalable and commercially viable option for our industry, we are closely monitoring technology developments and pioneering important sustainability initiatives in the cruise industry. To provide a path to net zero emissions, alternative low GHG emission fuels will be necessary for the maritime industry; however, there are significant supply challenges that must be resolved before viability is reached. Refer to XX. Sustainability.

How are our profits affected by an increase in food commodity prices?

Under Scenarios 1 and 2, the impacts on food prices are indistinguishable from the historical commodity market volatility. Under Scenario 3, we could face higher food costs which may impact our value chain and operating profit. Our existing supply chain management strategies have remained resilient through the more recent supply chain issues experienced globally, demonstrating our ability to mitigate global-scale disruptions. In addition, our Circular Economy 2030 Goals include achieving a 50% unit food waste reduction per person by 2030. Refer to XIII. Supply Chain and XX. Sustainability.

What are the future savings associated with operational efficiency improvements?

Under each scenario, the estimated total price of the fuel is the same, but the amount of fuel demanded differs based on assumptions about operational efficiency improvements. To capture this potential upside, we are investing in projects that improve the energy efficiency of our fleet. A premium for lowering our GHG emissions, ranging between $75 and $100 per metric ton depending on the type of fuel, was added to the cost of fuel during the strategic, capital, itinerary and other long-term planning processes and is used to evaluate the payback period and return on investment for capital projects. We are also ensuring that our brands design more energy efficient itineraries through our Corporate Itinerary Reviews. For further details of our strategies in place to capture this opportunity, refer to XX. Sustainability.

How could providing a service geared towards changing consumer sentiment drive long-term growth for us?

Under scenarios 2 and 3, an immaterial number of consumers would align to low-GHG emissions services. Under Scenario 1, from 2025 to 2050 across all countries, there is an increase in the expected price per Passenger Cruise Days that we will be able to charge. By continuing to reduce our GHG emissions through our strategies such as investing in energy efficiency projects, fleet changes, itinerary changes, and port developments, we can remain resilient under Scenario 1. For further details of our strategies in place to capture this opportunity, refer to XX. Sustainability.

Investment in Port and Destination Projects

In addition, a climate study was undertaken in 2022 by a third party for two of our port development projects at Celebration Key and Half Moon Cay Pier Project (The Bahamas), to enhance climate resilience. Based on the results of this study, we are well placed to respond to the physical risks of climate change at the two planned port locations and will have a number of measures in place to address physical climate impacts. These results were reviewed by the SRE Committee and presented to the Boards of Directors in 2022 for an investment decision, which was approved. Furthermore, our investments in these ports and destinations support our efforts to design more energy efficient itineraries based on their strategic locations.

Risk Management

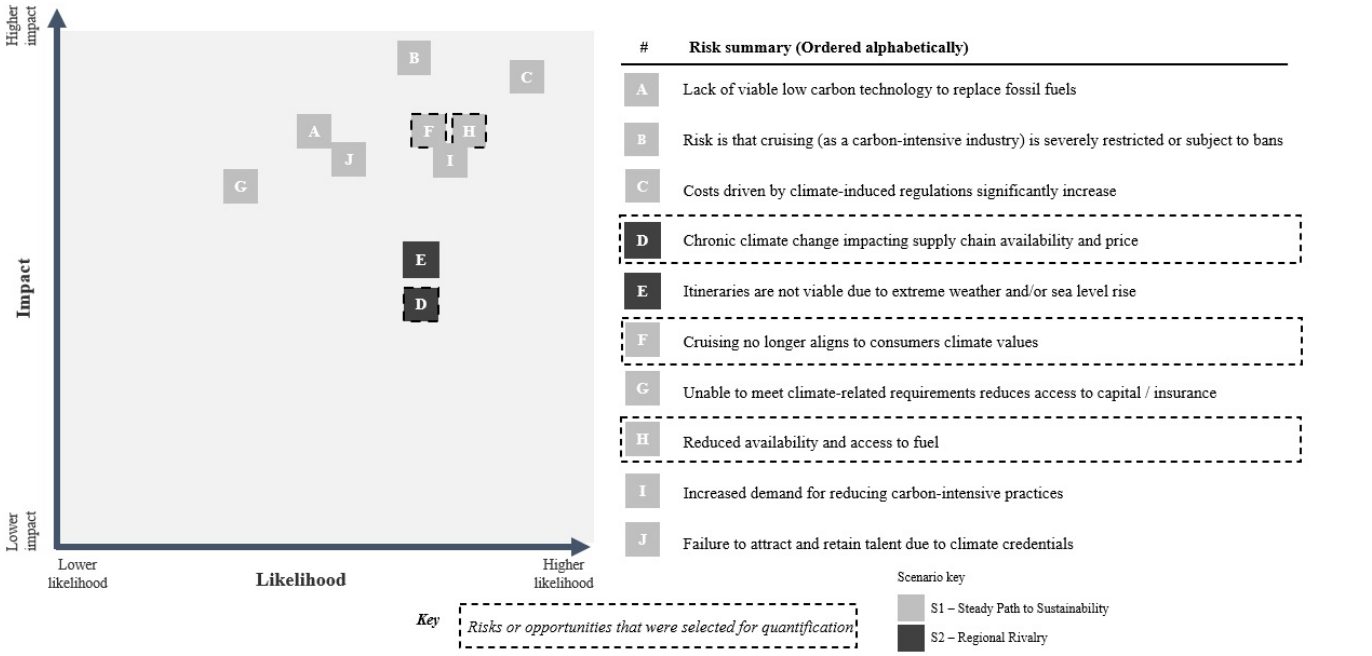
We utilize a process for managing our climate risks and opportunities which begins with climate risk and opportunity identification then follows with owner assignment, assessment, monitoring, management and reporting. This process is ongoing and iterative.

Climate Risk and Opportunity Identification, Owner Assignment and Assessment

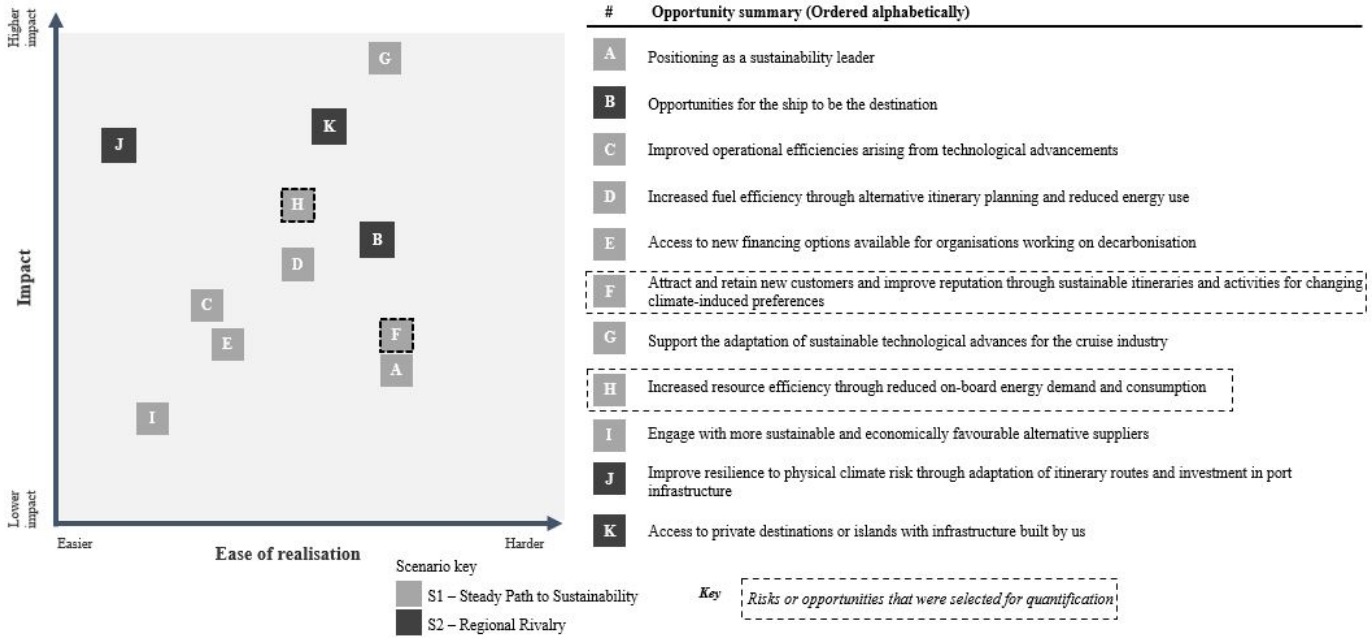
The qualitative scenario analysis is the foundation of our climate risk and opportunities identification and assessment process and began with the evaluation of a long list of climate-related risks and opportunities we may face, to generate an initial list of possible risks and opportunities. As discussed above, we considered a high-GHG emissions and a low-GHG emissions scenario. Input from key stakeholders in the business was obtained through facilitated workshops to identify additional climate risks and opportunities and refine the list before prioritizing those identified. Assessment of these risks and opportunities was performed by the SRE Committee and a cross section of management, who qualitatively evaluated the impact and likelihood of these risks and opportunities. Certain financial, regulatory, reputational and physical risks and opportunities were then selected for more detailed quantitative scenario analysis.

The SRE Committee reviews the selected risks and opportunities from our qualitative scenario analysis quarterly and considers if any risks or opportunities no longer need monitoring, and if any new climate risks or opportunities should be identified. Each climate risk has been assigned an owner who has responsibility for the day-to-day evaluation and management of the risk.

Following the climate risk identification process, climate risks are assessed based on expected impact, likelihood, time horizon and speed of onset.



#	Risk summary (Ordered alphabetically)
A	Lack of viable low carbon technology to replace fossil fuels
B	Risk is that cruising (as a carbon-intensive industry) is severely restricted or subject to bans
C	Costs driven by climate-induced regulations significantly increase
D	Chronic climate change impacting supply chain availability and price
E	Itineraries are not viable due to extreme weather and/or sea level rise
F	Cruising no longer aligns to consumers climate values
G	Unable to meet climate-related requirements reduces access to capital / insurance
H	Reduced availability and access to fuel
I	Increased demand for reducing carbon-intensive practices
J	Failure to attract and retain talent due to climate credentials



#	Opportunity summary (Ordered alphabetically)
A	Positioning as a sustainability leader
B	Opportunities for the ship to be the destination
C	Improved operational efficiencies arising from technological advancements
D	Increased fuel efficiency through alternative itinerary planning and reduced energy use
E	Access to new financing options available for organisations working on decarbonisation
F	Attract and retain new customers and improve reputation through sustainable itineraries and activities for changing climate-induced preferences
G	Support the adaptation of sustainable technological advances for the cruise industry
H	Increased resource efficiency through reduced on-board energy demand and consumption
I	Engage with more sustainable and economically favourable alternative suppliers
J	Improve resilience to physical climate risk through adaptation of itinerary routes and investment in port infrastructure
K	Access to private destinations or islands with infrastructure built by us

Climate Risk and Opportunity Monitoring, Management and Reporting

The primary method for review, scrutiny, and challenge of climate risks, involves the risk owners monitoring, assessing and reporting how each risk and opportunity is changing over time based on climate risk indicators and discussing options with the SRE Committee to reduce, accept, avoid or transfer risk.

Integration into our overall risk management

Overall, the Boards of Directors are responsible for determining the strategic direction of the company and the nature and extent of the risk assumed by it. Within our risk management framework, the Boards of Directors have ultimate oversight of climate-related risks, which have been identified as a principal risk. Refer to the Governance pillar for a description of how climate-related risks are overseen.

Metrics and Targets

Our most material quantified risks are the transition risks. To mitigate the impact of these risks, we have identified a four-part strategy, including fleet optimization, energy efficiency, itinerary efficiency, and new technologies and alternative fuels. The metrics and Climate Action Goals associated with these risks and opportunities, are outlined above within XX. Sustainability. To demonstrate our commitment to achieving our Climate Action Goals, our executive compensation targets are linked to our progress toward achieving certain of our 2030 Sustainability Goals.

Our direct (Scope 1), indirect (Scope 2) and indirect value chain (Scope 3) GHG emissions are quantified and reported. Additionally, limited assurance is provided on our GHG emissions by an independent third party. These are disclosed in our Carnival plc Annual Report but are not incorporated by reference into this Form 10-K. In 2022, we stated that our climate disclosures were consistent with 10 of the 11 TCFD recommendations. The one area where we were not consistent related to the disclosure of scope 3 emissions. In 2023, we performed an inventory of our Scope 3 GHG emissions using the U.S. EPA Supply chain GHG Emission Factors v1.2 and determined that our Scope 3 emissions were estimated to be approximately 40% of our total emissions.

We have made progress over the past 15 years reducing our GHG emissions intensity and achieved our 2020 goal (to reduce the intensity of CO2e by 25% relative to a 2005 baseline, measured in grams CO2e / ALB-km) three years early, in 2017. We have also made progress towards our 2030 GHG intensity reduction goal of 20% from our 2019 baseline, measured in both grams of CO_2e per ALB-km and kilograms of CO_2e per ALBD. In 2023, we reduced our GHG emission intensity on a lower berth distance basis by 14.0% and on an ALBD basis by 14.1% relative to our 2019 baseline. Relative to 2008, our GHG emissions per ALBD have been reduced by 39.3% while our capacity has grown by 55%.