Apollo Jets

2023 TCFD Report

south pole
The Climate Company

apollojets

Details

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Acronyms and abbreviations

BAU	business as usual
CO_2	carbon dioxide
CO2e	carbon dioxide equivalent
EXCO	Executive Committee
FDM	Flight Data Monitoring
FSB	Financial Stability Board
GHG	greenhouse gas
RCP	Representative Concentration Pathway
R&O	risks and opportunities
SAF	Sustainable Aviation Fuel
SAG	Safety Action Group
SRB	Safety Review Board
SSP	Shared Socioeconomic Pathways
TCFD	Task Force on Climate-Related Financial Disclosures
US	United States

01 Introduction

In 2023, Apollo Jets continued with its sustainability and climate resilience efforts, summarised and presented in their second Task Force on Climate-related Financial Disclosures (TCFD) Report. The second report includes analysis based on new climate scenarios and an updated analysis of the current climate landscape.

Mark Carney and Michael Bloomberg played a key role in establishing the TCFD framework in 2017 by the Financial Stability Board (FSB). The aim of the FSB was to assist companies in effectively communicating climate-related information across every sector and market. Currently supported by over 4000 stakeholders, this framework relies on four key pillars: governance, strategy, risk management, and metrics and targets.

The first section of this report introduces the Governance structures that focus on identifying and managing climate-related topics across the company, followed by the Strategy section which lays out how climate risks and opportunities are identified, analysed and addressed strategically. The third section of the report describes the Risk Management processes by which Apollo Jets assesses and integrates climate-related risks and opportunities into its internal risk management systems. In the final section, Apollo Jets' Metrics and Targets are presented, including the greenhouse gas (GHG) emissions calculated for 2022.

02 Governance

Vista level governance structure is attributed to each individual company within the Vista group, including Apollo Jets. The Executive Committee, the Chief Sustainability Officer representing the Sustainability Department, the Safety Review Board and the Safety Action Group are the main bodies in Vista's climate governance structure with the ultimate responsibility for overseeing climate-related issues falling on the Executive Committee (EXCO), which is in charge of shaping Vista's strategy. The EXCO monitors risks and opportunities, including those related to climate change (e.g., changes in carbon pricing regulations) and approves the climate strategy and targets.

The Sustainability Department reports to the Chief Sustainability Officer and is responsible for implementing and monitoring Vista's climate strategy and targets and developing the GHG accounting and TCFD report, supported by an external consultancy.

In 2023, Vista is further working on integrating sustainability issues into its governance structure, by introducing the role of a Chief Sustainability Officer, with the existing overall governance structure undergoing changes with the goal of achieving further improvements.

The Safety Review Board involves functional or senior management and has the objective of providing a forum to discuss safety issues. The SRB meets at least twice per year. The Safety Action Group reports to and takes strategic direction from the SRB. The composition of the SAG varies based on the process under analysis, but meetings are always attended by members of the Safety Department and by personnel with expertise in the relevant areas. The SAG meets quarterly or more often if deemed necessary. The Sustainability Department oversees the development of the yearly GHG accounting and TCFD reports and overall sustainability reporting, as well as the implementation and monitoring of the climate strategy and targets. The diagram below summarises how these departments are structured.

Figure 1. Vista's sustainability governance structure

03 Strategy

Following TCFD guidance, Apollo Jets assessed two types of climate risks and opportunities (R&O): physical and transition. Physical R&O are defined as those that affect companies due to changes in the climate, for example more frequent and/or intense heatwaves, extreme rainfall events, and flooding. The impact of physical risks can translate into operational interruptions and delays as well as damage to infrastructure and aircraft. Transition R&O, meanwhile, are associated with the economic and policy shifts necessary to mitigate climate change and transition to a low-carbon economy, such as regulatory and policy changes, and technological advancements. The impact of transition risks can be translated into increased costs of investment in green technologies, while opportunities can be harnessed in the form of enhanced reputation and consumer confidence due to strong sustainable offerings.

Apollo Jets is analysing climate related-risk and opportunities for the short, medium and long-term. The time horizons are defined as follows:

- Short: Current day (baseline)
- Medium: 2030
- Long term: 2050

3.1 Physical risks

The analysis focused on the company's strategic locations from an operational perspective, based on locations where operators fly. Future exposure to physical risks was evaluated by assessing the future changes as projected under a high emissions scenario typically referred to as a 4°C scenario[1]. Under this scenario, GHG emissions continue rising until the end of the century, with little mitigation efforts. As a result, physical risks become more severe, intense, and/or frequent, with the exact magnitude of the change depending on the region and risk.

A qualitative rating was assigned to each physical risk, varying from very low to very high, according to its projected degree of change from historical conditions until a medium-term (2030) and a long-term (2050 onwards) time horizon.

Apollo Jets applied the following process to identify key risks. Current day exposure was estimated based on a record of historical events that were deemed as being financially material across its network of aircraft operators. The physical risks screening included hazards (see below) that affected other Vista companies to better understand all possible physical risks that Apollo Jets may face.

The physical risks selected for the analysis were: extreme temperatures, storms and tropical cyclones, riverine and coastal flooding, extreme rainfall, thunderstorms and hail, frost, snowfall, high winds, and clear-air turbulence.

The key impacts of these hazards as well as the risk rating based on the results of the climate scenario analysis are shown in the table below.

[1] 4°C refers to the temperature change by the end of the century compared to preindustrial levels. The correct scientific name for the scenarios are Representative Concentration Pathway (RCP) 8.5 or the new Shared Socioeconomic Pathway (SSP) 5-8.5

Strategy

Table 1. Summary of the selected physical risks, and their potential impacts and risk levels under two time horizons under a 4°C scenario.

Hazard	High-level impact	2030	2050
Extreme temperatures	Extreme temperatures can affect locations where Apollo Jets charters flights by potentially decreasing the flight destination options in case of airport infrastructure being damaged. Airports in Florida and California are projected to have the largest increases in annual maximum temperatures and hot days.		
Riverine flooding	Flooding caused by the overflowing of rivers can lead to takeoff and landing disruptions and road closures, this can lead to a reduction in the number of flights offered. Airports in New York and Boston are projected to have the highest inundation heights.		
Coastal flooding	Coastal flooding can lead to takeoff and landing disruptions and road closures; this can lead to a reduction in the number of flights offered. Airports in San Francisco are projected to have the highest inundation heights.		
Extreme rainfall	Extreme precipitation can cause flooding and potentially disrupt takeoffs and landings and closure of roads nearby airports, this can lead to a reduction in the number of flights offered. Airports in the Northeast of the United States and Toronto are projected to have the highest increases in extreme rainfall measured over one day and five consecutive days.		
Thunderstorms	Thunderstorms and lighting strikes can damage aircraft and temporarily reduce the number of aircraft available to serve customers. In the long term, airports located in the Southeastern United States are projected to experience the biggest increases in spring, while those in the Northern United States, in summer.		
Storms and tropical cyclones	Severe storms can cause damage to offices and airport infrastructure, increasing operational costs. If aircraft is damaged, strong storms can reduce the number of aircraft available to serve customers. Airports located along the East Coast in the United States are projected to experience increases in storm strength.		
Frost	Frost can damage aircraft and temporarily reduce the number of aircraft available to serve customers. Decreases in the number of cold days (Tmin<°0C) were found in all of Apollo Jets' key locations.		
Extreme snowfall	Extreme snowfall can cause damage to aircraft and temporarily reduce the number of aircraft available to serve customers, as well as operational delays by interrupting takeoff and landing. Only the airport located in Aspen, Colorado, is projected to have slight increases in the amount of heavy snowfall days.		
High winds	High winds can damage aircraft and temporarily reduce the number of aircraft available to serve customers. No changes in the highest and the average wind speeds were found at the locations.		
Clear air turbulence	Sudden severe turbulence can harm crew and passengers, cause aircraft damage, and increase operational costs due to safety inspections. Marked increases in severe clear air turbulence are projected in North America in the long term.		

Very Low | Low | Moderate | High | Very High

The hazards that are projected to have the highest change in the future under a 4°C scenario, particularly in the long term, are extreme temperatures, thunderstorms and clear air turbulence. Other hazards, such as frost days, high winds, and extreme snowfall, are projected to experience decreases in both the medium and the long term at almost all of the locations analysed. The number of facilities at risk of riverine and coastal flooding are projected to remain stable overtime.

Apollo Jets will continue monitoring the climate physical risks material to the company, which can have indirect impacts by reducing the number of flights offered. Currently, the impacts of physical climate risks are mitigated by measures already in place, taken by the individual companies part of Apollo Jets network of aircraft operators. This includes safely parking aircraft when a strong storm is expected to impact a location, otherwise, flooding and extreme rainfall have a limited impact due to the flexible nature of private flights where flights can be booked to transport passengers out of a certain place before a storm or flooding warning. Turbulence is constantly monitored and avoided as part of flight safety. The impact of extreme temperatures is managed by avoiding scheduling flights at the peak hottest times of the day in the warmest locations.

Additionally, by continuously monitoring the weather, the exposure of aircraft operators is reduced and aircraft damage is avoided. This is vital to avoid a reduction in the number of aircraft available to Apollo Jets' customers. More information about how physical risks are monitored and managed can be found in the Risk Management section.

3.2 Transition risks and opportunities

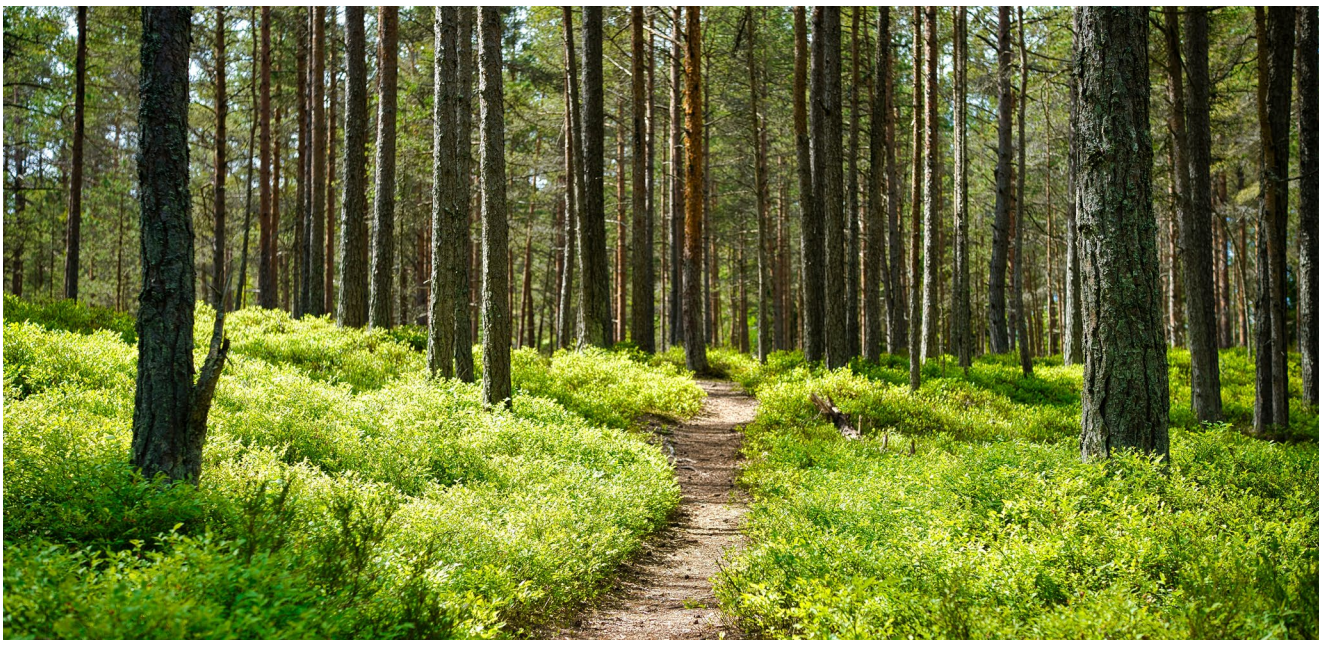
The analysis focused on Apollo Jets' operations in the United States. Future exposure to transition risks and opportunities was primarily assessed under a 1.5°C scenario[2], with consideration of current data and trends under a business as usual scenario (BAU), reflecting current policies and trajectories.

Similarly to physical risks, a qualitative rating was assigned to each transition risk and opportunity according to the strength and direction of its change relative to current conditions for a medium-term (2030) and a long-term (2050 onwards) time horizon.

The transition risks and opportunities selected for the analysis were: customer preferences and behaviours, the air-flight tickets market, and policies impacting the private airline industry.

A summary of the selected risks, potential impacts and risk levels, can be seen in Table 2.

Apollo Jets finds itself more exposed to transition risks than physical risks; these transition risks are continuously monitored and assessed by internal stakeholders and network of operators. Given the nature of its operations as an aircraft charter broker, Apollo Jets is indirectly exposed to the impact of constantly evolving regulations. More information about how risks are monitored and managed can be found in the Risk Management section.



[2] The scenario assumptions are based on the International Energy Agency's 2022 World Energy Outlook and sector-specific projections and plans

Table 2. Summary of the selected transition risks, and their potential impacts and risk levels under two time horizons under a business as usual and a 1.5°C scenario.

Hazard	Scenario	High-level impact	US	
			2030	2050
Customer preferences and behaviours	BAU	Although demand for air travel is expected to grow in the medium and long term, in advanced economies the pace of growth is expected to be lower. Additionally, the increase of alternative, more sustainable transport modes such as high-speed rail which will provide increased land-based connectivity at reduced travel times, is expected to decrease air travel demand in advanced economies.		
	1.5°C			
Air-flight tickets market	BAU	Increased carbon tax-related policies could lead to a decrease in air-flight ticket demand. In advanced economies, carbon pricing schemes to cover emissions from the airline sector in domestic and international flights are expected to increase ticket prices, especially for short routes. Likewise, carbon prices for CO2 emissions per mile travelled could drive a decrease in demand for air travel, especially for non-frequent travellers.		
	1.5°C			
Policy changes	BAU	The US has ambitious aviation decarbonisation targets that are likely to be supported by stronger policy measures, as evidenced by future mandatory participation in the CORSIA global offsetting scheme.		
	1.5°C			

Risk

Very Low | Low | Moderate | High | Very High

Opportunity

Very Low | Low | Moderate | High | Very High

04 Risk Management

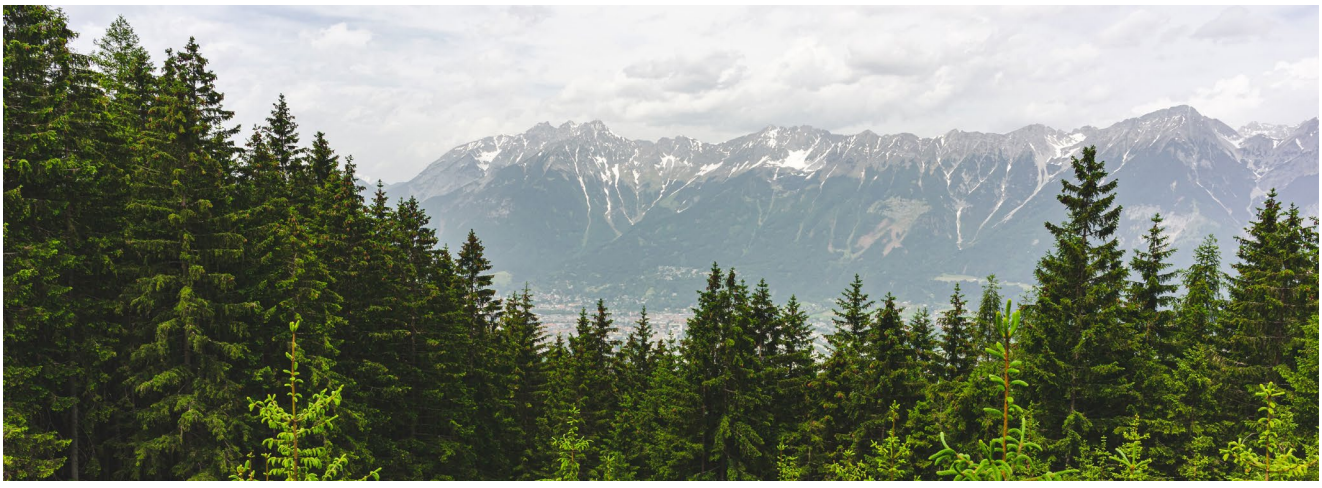
This section explores how climate-related risks and opportunities are detected, assessed, and integrated into Apollo Jets' risk management processes.

In order to assess the future changes and impacts of physical and transition R&O, scenario analysis was conducted following a four-step approach. Firstly, a long list of possible climate-related risks and opportunities was prepared, taking into account key hazards previously identified for Apollo Jets and other Vista companies, assessing any relevant updates in the landscape and reviewing the latest aviation publications. Secondly, company-specific data including historical records and financial impacts of past events was taken into account to narrow down which R&O are most likely to impact Apollo Jets in the future. Thirdly, a working session was prepared with key Vista stakeholders with oversight of operations across all companies, including members from the Sustainability, Finance, and Operations departments, to confirm the short list and align on prioritisation and perceived impact to the company. The final step involved the assessment of the key risks using scenario analysis.

The Vista Operations team actively manages physical risks associated with meteorological events as part of their day-to-day operations, undertaking daily reviews of weather conditions and communicating any potential risks to the duty manager. The pilots also conduct risk assessments, deciding whether to involve the maintenance team and take precautionary measures to protect the aircraft. For example, when strong wind gusts pose a threat to grounded aircraft, adjustments are made to prevent damage, such as reaching out to the maintenance team. Extreme events, such as severe flooding at critical airports, can translate into a reduction of chartered flights and, if detected, are escalated to the Executive Committee (EXCO) for further action.

To monitor risks that may affect flights, Apollo Jets' aircraft operators that are part of the Vista group have implemented a Flight Data Monitoring (FDM) programme, which uses digital flight data from routine operations to identify, quantify, assess, and address operational risks. By automatically detecting risk events, the company can gather accurate and objective safety data, mitigating the chances of significant incidents or aircraft damage. The collected data is analysed to identify patterns and trends, supporting information reported by the flight crew and aiding in incident investigations, such as turbulence occurrences during flight routes. For a long term understanding of Apollo Jets' physical risk exposure, the company takes into account the results of the scenario analysis undertaken following the TCFD recommendations.

Any developments and changes in regulations are assessed and informed to the COO and any relevant department, such as Billing, Finance, or Operations. One additional measure to assess Apollo Jets' evolving exposure to transition risks is to collaborate with South Pole, an external climate services provider, in the identification and analysis of any new risks. The goal of this ongoing process is to fully integrate climate-related risks and opportunities into Apollo Jets' internal processes.



Risk Management

When a chartered flight belongs to a Vista company, the following process to identify, assess, and manage risks is followed by the individual company. Otherwise, Apollo Jets arranges safety checks that comply with Vista's safety standards.

01
Risk identification

Risk can be climate-related, or involve equipment, procedures, safety, etc.

02
Risk evaluation

The likelihood and severity of the risk is assessed. If the risk if found to be within the Vista company safety performance criteria, it is accepted, if not, actions are taken to reduce it.

03
Risk mitigation

Action are taken to mitigate the risk.

04
Risk monitoring

Overseen by the EXCO, if action was taken, the mitigation actions continue to be monitored and reviewed to ensure their effectiveness.

Figure 2. Risk management process

05 Metrics and Targets

Starting in 2022, Apollo Jets has undertaken assessments of greenhouse gas (GHG) inventories, adhering to the recommendations outlined in 'The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition' (GHG Protocol), alongside the accompanying 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'.

In line with best practices, Apollo Jets reports its Scope 1, Scope 2 and Scope 3 emissions.

- Scope 1: Emissions directly generated from sources owned or controlled by the company
- Scope 2: Emissions generated by the generation of purchased electricity
- Scope 3: Emissions indirectly generated as a result of the activities of the company from sources that the company does not own or control

Apollo Jets' total carbon footprint for the calendar year 2022 was calculated to be 69,753 tonnes of carbon dioxide equivalent (tCO2e). Both direct and indirect emissions were measured, and a breakdown by scope (Scope 1, Scope 2 and Scope 3) can be seen in Table 3.

Scope 3 has the highest contribution to the overall GHG emissions, accounting for 99.5% of the total footprint, followed by Scope 2 with 0.04% and Scope 1 with 0.01%.

Table 3. Total emissions for Scopes 1, 2, and 3 for Apollo Jets in the calendar years 2021 and 2022, in thousands of tCO2 eq

GHG Scope	2021	2022
Scope 1	.004	.004
Scope 2	0.1	.03
Scope 3	2.8	69.7
Total	**2.9**	**69.7**

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