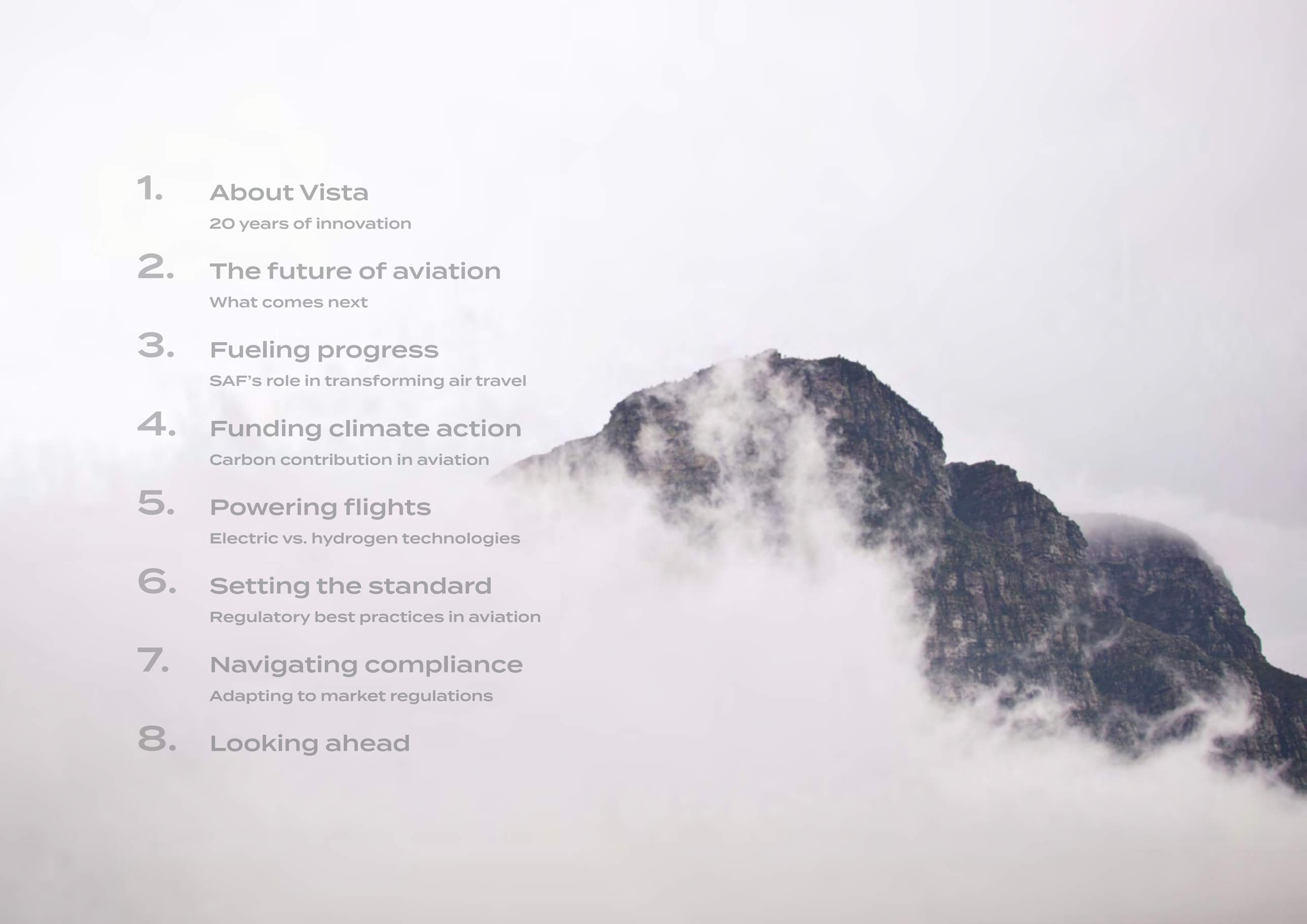
VISTA

20 YEARS OF FLIGHT

Shaping the Future of Aviation

south pole

Sustainability Strategy Paper 2024



ABOUT VISTA

20 years of innovation

20 years of innovation

Vista Global Holding's (Vista)[1] subsidiaries provide worldwide business flight services. A global group headquartered at the DIFC in Dubai, Vista integrates a unique portfolio of companies offering asset free services to cover all key aspects of business aviation: guaranteed and on demand global flight coverage; subscription and membership solutions; trading and management services; and cutting-edge mobility technology. The Group's mission is to lead the change to provide clients with the most advanced flying services at the very best value, anytime, anywhere around the world. Vista's knowledge and understanding of all facets of the industry deliver the best end-to-end offering and technology to all business aviation clients, through its VistaJet and XO branded services and duly licensed carriers. Vista is not a direct air carrier and does not operate or charter flights. More Vista information and news at www.vistaglobal.com.

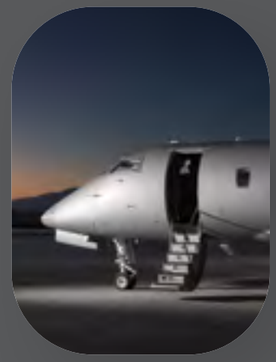
As Vista celebrates 20 years of industry leadership, it is committed to providing the best possible solutions for business aviation clients. With a passionate global team of 4,000 experts[2], Vista is dedicated to shaping the future of business aviation for the next two decades and beyond.

[1] Vista Global Holding Limited ("Vista") does not own or operate any aircraft. All flights are performed by FAA-licensed/DOT-registered EASA or U.S. certified Vista group direct air carriers and/or partner operators. Vista holds non-controlling minority stakes in GMJ Air Shuttle and Talon Air.
[2] Vista headcount covers all employees ultimately working for Vista and its subsidiaries on a prevalent basis, including third-party contractors.

XO

CHARTER MEMBERSHIP

XO offers unmatched flexibility when chartering private aircraft, with no upfront investment, instant booking and the ability to earn up to 4% loyalty credit on every journey. XO Members enjoy priority access to a global fleet of aircraft, without blackout days.



VISTAJET

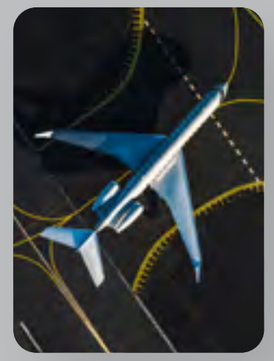
GUARANTEED PROGRAM

A smart alternative to ownership and fractional flying – VistaJet offers clients guaranteed access to an entire fleet of aircraft while paying only for the hours they fly. Since 2004, it has flown corporations, governments and private clients to over 187 countries on its innovative Program membership.

VISTA
AIRCRAFT MANAGEMENT

AIRCRAFT MANAGEMENT

Join the world's leading fleet of aircraft – and leverage global charter opportunities to maximize the benefits of ownership. Vista Advantage Members enjoy a comprehensive aircraft management service that caters to the needs of owners from a unique, streamlined product that optimizes efficiency for aircraft owners.



THE FUTURE OF AVIATION

The climate crisis is changing the way we live and work, impacting businesses worldwide.

A sincere belief in better

Aviation stands as one of the most carbon-intensive and challenging sectors to decarbonise due to its inherently global nature and the complexities involved in reducing its environmental impact. The drive for sustainability in aviation is fueled by regulatory requirements, consumer expectations, and the sector's commitment to doing what is right. Governments and international bodies are implementing stricter emissions standards, while travellers are increasingly prioritising sustainability-driven options. This convergence of regulatory requirements and consumer preferences is pushing the industry towards more sustainable practices.

Founded in 2004, Vista revolutionised business aviation by pioneering a new way to fly: offering access to a fleet of global aircraft without the responsibilities of owning an aircraft. To date, Vista passengers have flown to over 2,700 airports in 96% of the world's countries and territories, making it the first and only global aviation company.

Innovating the industry for 20 years through continuous investment in people, technology and infrastructure, Vista believes its corporations play a vital role in mitigating climate change and protecting the planet. This belief underpins its commitment to incorporating environmental initiatives across its global operations and leading the conversation around environmental stewardship in private business aviation. Vista's environmental initiatives are rooted in a strong belief that every action taken today shapes our collective tomorrow, underscoring the urgency to act decisively in line with the global climate agenda.

Aviation accounts for 2.5% of global CO^2 emissions, but it has contributed around 4% to global warming to date. It will become one of the world's largest emitting sectors by 2050.

Our World in Data, 2024

Setting a high standard for the industry

With increasing pressure on the aviation sector from customers, regulators, and investors to take environmental responsibility, Vista takes a leadership position by adopting methods and technologies that contribute positively to the future of aviation.

Supporting Sustainable Aviation Fuel (SAF)

Depending on the technology and feedstock used, SAF can reduce CO^2 emissions on average by 80% compared to traditional jet fuel. Vista has set an ambitious target to transition towards the use of SAF across its fleet and has already secured large volumes of SAF with more in the pipeline.

Carefully selected Carbon Credits

On a voluntary basis, Vista purchases carbon credits on behalf of their clients, supporting verified climate protection projects that positively impact local communities.

Leading with transparent Environmental Reporting

Vista is committed to transparency in their efforts to decarbonise their operations. Every year they record and publish information relating to their carbon footprint in VistaJet's Greenhouse Gas (GHG) accounting report[3], as well as providing climate related financial disclosures in line with the Task Force on Climate-Related Financial Disclosures (TCFD).[4]

TCFD GREENHOUSE GAS PROTOCOL

3.1M TONS

3,140,200 tons of carbon contribution to date

43M LITRES

43 million litres of blended SAF purchased to date*

[3] VistaJet Greenhouse gas (GHG) accounting report (2022)
[4] VistaJet TCFD Report (2023)

*This figure is based on a 25% blend

FUELING PROGRESS

SAF’s role in transforming air travel

The way forward

Sustainable Aviation Fuel (SAF) is crucial for the future of aviation, serving as a key pathway to decarbonisation.

What is sustainable aviation fuel (SAF) and what makes it sustainable?

SAF is a ‘drop-in’ fuel that can be used as a direct substitute for traditional fossil fuel - paraffin. To ensure that manufacturers do not need to redesign engines or aircraft, and that fuel suppliers and airports can use existing fuel delivery systems, SAF must have the same qualities and characteristics as conventional jet fuel, and needs to be certified by ASTM International[5] as safe for use in aircrafts. Currently, SAF can be safely blended with conventional jet fuel up to a 50% limit, with the potential for higher blends in the future.

There are two types of SAF: biofuel and e-fuel

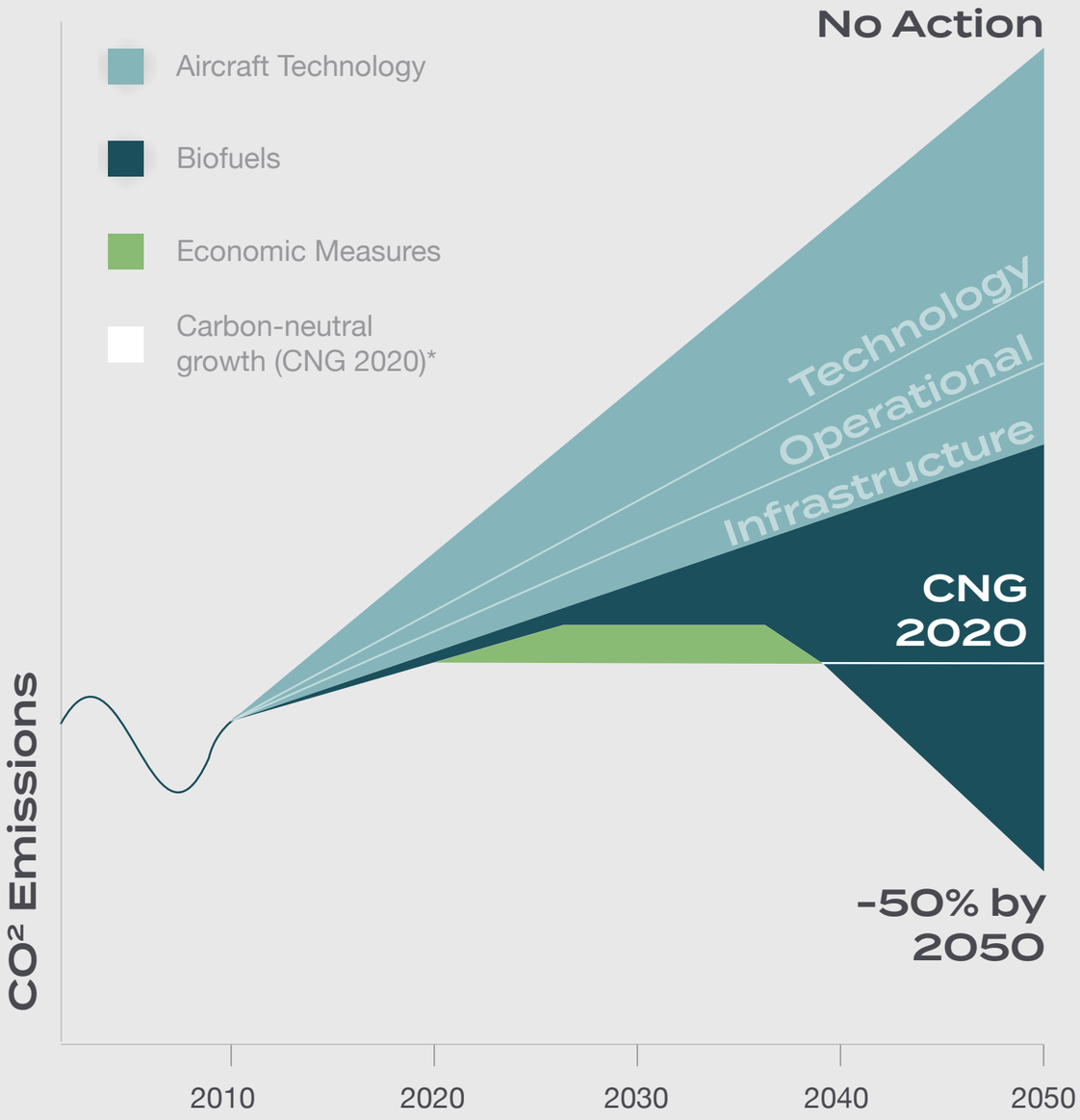
1. Aviation biofuel, also known as BAF (bio-aviation fuel), is a fuel produced from biomass, such as vegetable oils (e.g. palm oil or soybean oil), animal fats, sugar, starch, and certain algae. A study by the European Parliament[6] estimates that 80% of SAF needs in the near future could be met by biofuel, produced from vegetable oils, used cooking oils, tallow, etc using HEFA (Hydroprocessed Esters and Fatty Acids) technology.
2. E-fuels are produced with the help of electricity from renewable energy sources, water and CO^2 from the air. This type of SAF can also be produced using hydrogen, capturing carbon dioxide, and using renewable electricity to create synthetic fuel. This process is increasingly viewed as a primary future source of SAF, as CO^2 provides an abundant and easy-to-acquire feedstock for alternative fuels, compared to current ingredients of used fats, oils and greases or solid waste biomass.

SAF is therefore more sustainable not because it reduces the immediate CO^2 emissions from the aircraft’s engine, but because of its significantly lower carbon footprint over the entire lifecycle of the fuel, from production to end use. Unlike traditional fossil fuels, which release carbon that has been locked away for millions of years and add new CO^2 to the atmosphere, SAF is produced from renewable resources that are already present in the environment or utilising processes that can reduce overall greenhouse gas emissions.

[5] ASTM International, formerly known as American Society for Testing and Materials, is a standards organisation that develops and publishes technical standards for a wide range of products including SAF and jet fuel specification
[6] European Parliamentary Sustainable Aviation Fuels Research (2020)

CONTRIBUTIONS TO THE AVIATION INDUSTRY'S EMISSIONS REDUCTION GOALS

According to a 2024 IATA study[7], out of all CO^2 transition pathways projects, SAF will contribute the most to reducing emissions by 2050, making it a central component in the fight against climate change.



* ICAO's aspirational goal set in 2013: Net CO^2 emissions after 2020 to remain constant compared to 2020

How do we ensure high-integrity SAF?

High-integrity SAF is produced in a way that prioritises environmental and social responsibility. The International Sustainability and Carbon Certification (ISCC) is an independent multi-stakeholder initiative and leading certification system for SAF that supports sustainable, fully traceable, deforestation-free and climate-friendly supply chains. Similarly, the RSB's CORSIA Certification outlines the sustainability requirements of SAF production from bio-based and advanced feedstocks, enhancing long-term environmental and social outcomes.

These certifications aim to ensure that SAF is produced in accordance with strict requirements, including sustainability in feedstock, traceability of sustainable materials through the supply chain, and verified reduction of GHG emissions.

A robust SAF accounting framework, based on trusted chain-of-custody approaches, is also needed to ensure a cost-effective and environmentally efficient way to incentivise the scaling up of all technologies, feedstocks, methods, and approaches required for reducing lifecycle greenhouse gas emissions across the SAF supply chain. The development and adoption of accounting and reporting mechanisms for SAF will require active collaboration among stakeholders across the supply chain, corporate users, and regulators.

[7] IATA Aviation Net Zero CO^2 Transition Pathways Comparative Review (2024)

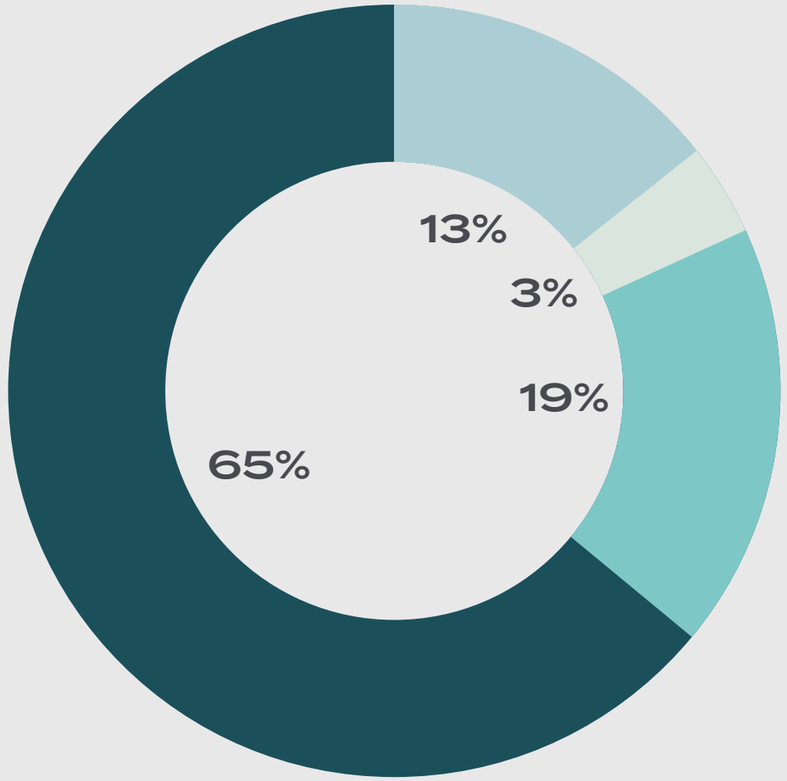
What are the current obstacles to adopting SAF?

Aviation requires between 25% and 30% of the total renewable fuel production capacity to meet SAF demands. However, SAF's share of overall renewable fuel production is projected to increase only from 3% this year to 6% in 2024[8]. This allocation limits SAF supply and keeps prices high due to the limited availability of sustainable feedstocks and the ongoing development of new production technologies.

The main challenge with SAF is producing large quantities at an affordable price. Currently, SAF costs are 120%–700% higher than fossil-based jet fuel costs[9]. However, the SAF being used today, and the focus of Vista's efforts, is primarily waste-based, leveraging bio feedstocks to create a positive environmental impact. While waste-based bio feedstocks are crucial, the growing demand for these limited feedstocks across the sectors means we must also explore e-fuels and other alternatives.

[8] IATA SAF annual review (2024)
[9] Journal of Cleaner Production - Sustainable aviation fuel technologies, costs, emissions, policies, and markets: A critical review (2024)

CONTRIBUTION TO ACHIEVING NET ZERO CARBON IN 2050



[12] IATA Global Outlook for Air Transport (2024)

The state of sustainable aviation fuel (SAF) in 2023

MORE THAN 490,000 FLIGHTS

300+ MILLION LITRES PRODUCED*

2016: 8 million litres — 2025: ~5 billion litres

7 TECHNICAL PATHWAYS

2016: 4 pathways — 2025: 11 pathways

57 OFFTAKE AGREEMENTS**

40 publicly announced SAF offtake agreements and 17 non-binding

130+ RENEWABLE FUEL PROJECTS

announced publicly by more than 85 producers across 30 countries

70% AVERAGE CO^2 REDUCTION

2016: ~60% reduction — 2025: ~80% reduction

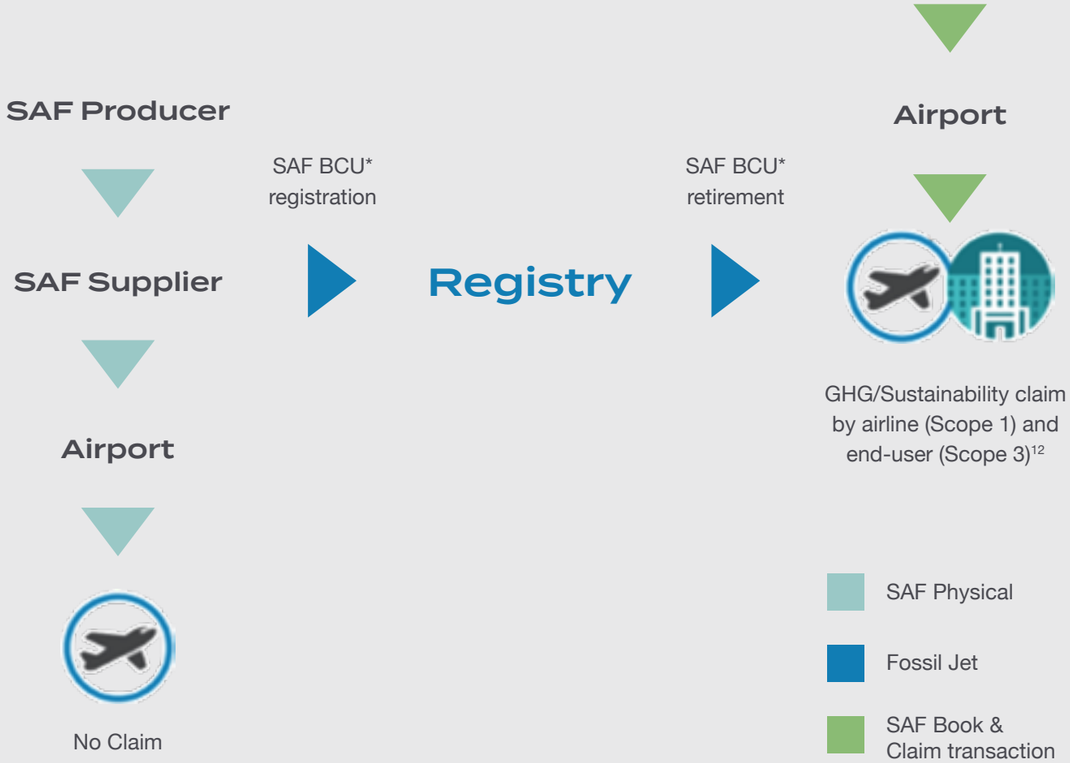
* in 2022
**since 2022
Source: IATA 2025 estimates

How do we scale up SAF?

Scaling up SAF production to meet ambitious goals requires significant multi-stakeholder collaboration. As more governments make bold pledges to decarbonise the aviation sector, and private industry players set aggressive targets, the momentum for SAF adoption continues to grow.

Beginning in 2025, aviation fuel supplied to EU airports must contain 2% SAF, with targets rising to 6% by 2030, 32% by 2040, and 70% by 2050.[11]

The global commitment, including over 100 countries pledging to triple renewable energy capacity by 2030 at the COP28 summit in Dubai, also signals strong progress. With increased government and regulatory support, the stage is set for a dramatic rise in demand for SAF and the expansion of SAF production facilities.



[11] European Parliament RefuelEU aviation initiative (2023)
[12] RSB Book & Claim System (2023)

* 1 Book & Claim Unit (BCU) = 1 MT of neat, certified product

Book and claim is designed to efficiently scale up SAF deployment by allowing companies, including airlines, to purchase SAF without being physically connected to a SAF supply site. This mechanism addresses the limited initial supply of SAF versus growing demand, enabling purchases regardless of geographical location. While customers may not technically use sustainable fuels for their flights or shipments, their purchases demonstrate market demand and support global supply development.

This allows companies to buy SAF where it is most competitively produced and obtain the associated CO^2 emissions credits.

By fostering an environment where supply chains are optimised for sustainability, and ensuring consistent emission reductions throughout the year, book and claim empowers operators to meet both financial and sustainability goals effectively. It is a reliable, in-sector carbon emissions reduction tool that can accelerate SAF adoption.

Vista - leading the Way

Vista has set an ambitious target to transition towards the use of SAF across all aircraft in the Vista Members' fleet and has already secured large volumes of SAF with more in the pipeline.
We only source SAF that is certified by the International Sustainability and Carbon Certification (ISCC).
Currently, we are using biogenic SAF produced from used cooking oil.

257,408
Litres of blended SAF in 2022

1,533,621
U.S. gallons of blended SAF contracted in 2023

13,986,515
Litres of blended SAF in 2024

27,308,235
Litres of blended SAF in 2025

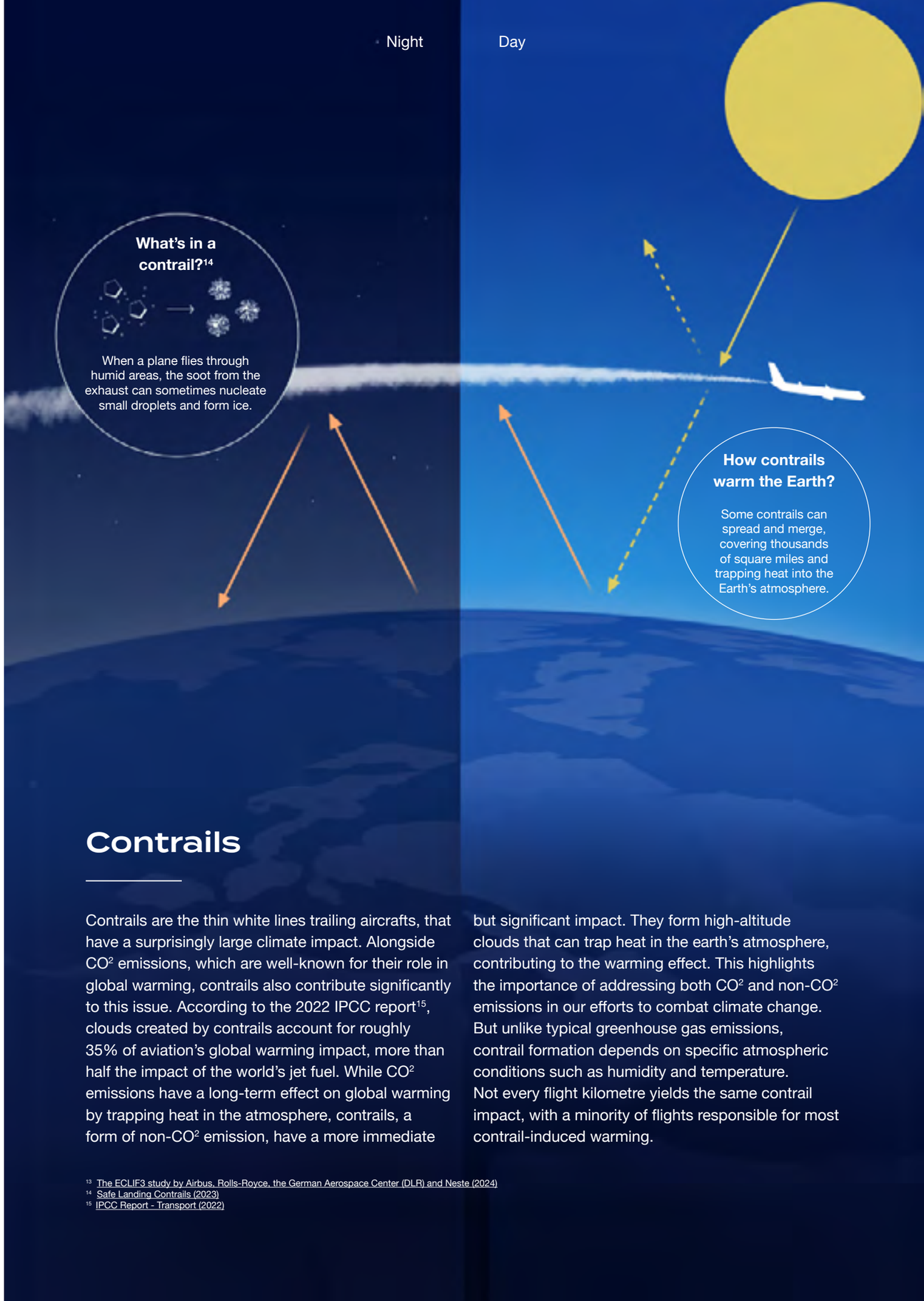
43,085,779
Litres of blended SAF* contracted to date

* Blended SAF is a mix of conventional jet fuel with fuel that is produced from sustainable feedstocks, also known as "neat SAF". Since 2023, all our blended SAF has a minimum mix of 25% neat SAF.

What are non-CO^2 emissions?

CO^2 emissions undeniably affect the sustainability of aviation, but the industry's total climate impact extends beyond CO^2 alone. Non-CO^2 emissions, such as contrails, have a climate impact comparable to CO^2. A recent in-flight study[13] with an Airbus A350 using 100% SAF demonstrated that SAF can reduce the warming effect of contrails. Recognising this, the European Commission is beginning to explore potential regulations aimed at addressing the climate effects of these lesser-known emissions.

The European Commission established a monitoring, reporting, and verification (MRV) system for non-CO^2 aviation effects, which requires aircraft operators in the EU to report these effects starting from January 1, 2025. This new system reflects a growing recognition of the impact of non-CO^2 emissions, such as contrails, on climate change.



Contrails

Contrails are the thin white lines trailing aircrafts, that have a surprisingly large climate impact. Alongside CO^2 emissions, which are well-known for their role in global warming, contrails also contribute significantly to this issue. According to the 2022 IPCC report[15], clouds created by contrails account for roughly 35% of aviation's global warming impact, more than half the impact of the world's jet fuel. While CO^2 emissions have a long-term effect on global warming by trapping heat in the atmosphere, contrails, a form of non-CO^2 emission, have a more immediate but significant impact. They form high-altitude clouds that can trap heat in the earth's atmosphere, contributing to the warming effect. This highlights the importance of addressing both CO^2 and non-CO^2 emissions in our efforts to combat climate change. But unlike typical greenhouse gas emissions, contrail formation depends on specific atmospheric conditions such as humidity and temperature. Not every flight kilometre yields the same contrail impact, with a minority of flights responsible for most contrail-induced warming.

[13] The ECLIF3 study by Airbus, Rolls-Royce, the German Aerospace Center (DLR) and Neste (2024)
[14] Safe Landing Contrails (2023)
[15] IPCC Report - Transport (2022)

How AI is helping to reduce aviation's impact

By combining weather, satellite and flight data, AI can predict when and where contrails are likely to form – which can then be used to adjust the altitudes of flights to avoid contrail formation.

In 2023, Google collaborated with American Airlines and Breakthrough Energy to leverage these AI-based tools to prove that contrail avoidance is possible in normal operations. The experiment[16] was deemed successful as it led to meaningful cross-organisational learnings and demonstrated a 54% reduction in contrail formation. This collaboration also illustrates that AI is uniquely positioned to accelerate contrail avoidance as a scalable sustainability solution that can mitigate 35% of aviation's climate impact.

[16] Breakthrough Energy (2023)

FUNDING CLIMATE ACTION

Contributing to emission reduction projects

Funding climate action

The urgency in addressing our climate crisis means the world cannot rely on just one climate solution. We need everyone within the sector to introduce sustainability into their operations. In addition to using SAF, investing in emission reduction activities beyond direct operations, such as through certified carbon credits, can be a powerful and immediate climate action for aviation companies and customers.

Research found that companies using a material amount of carbon credits typically reduce their emissions around 2 times faster than those that do not. This demonstrates that carbon credits are not merely a “nice-to-have” but a powerful and necessary tool for achieving rapid decarbonisation.

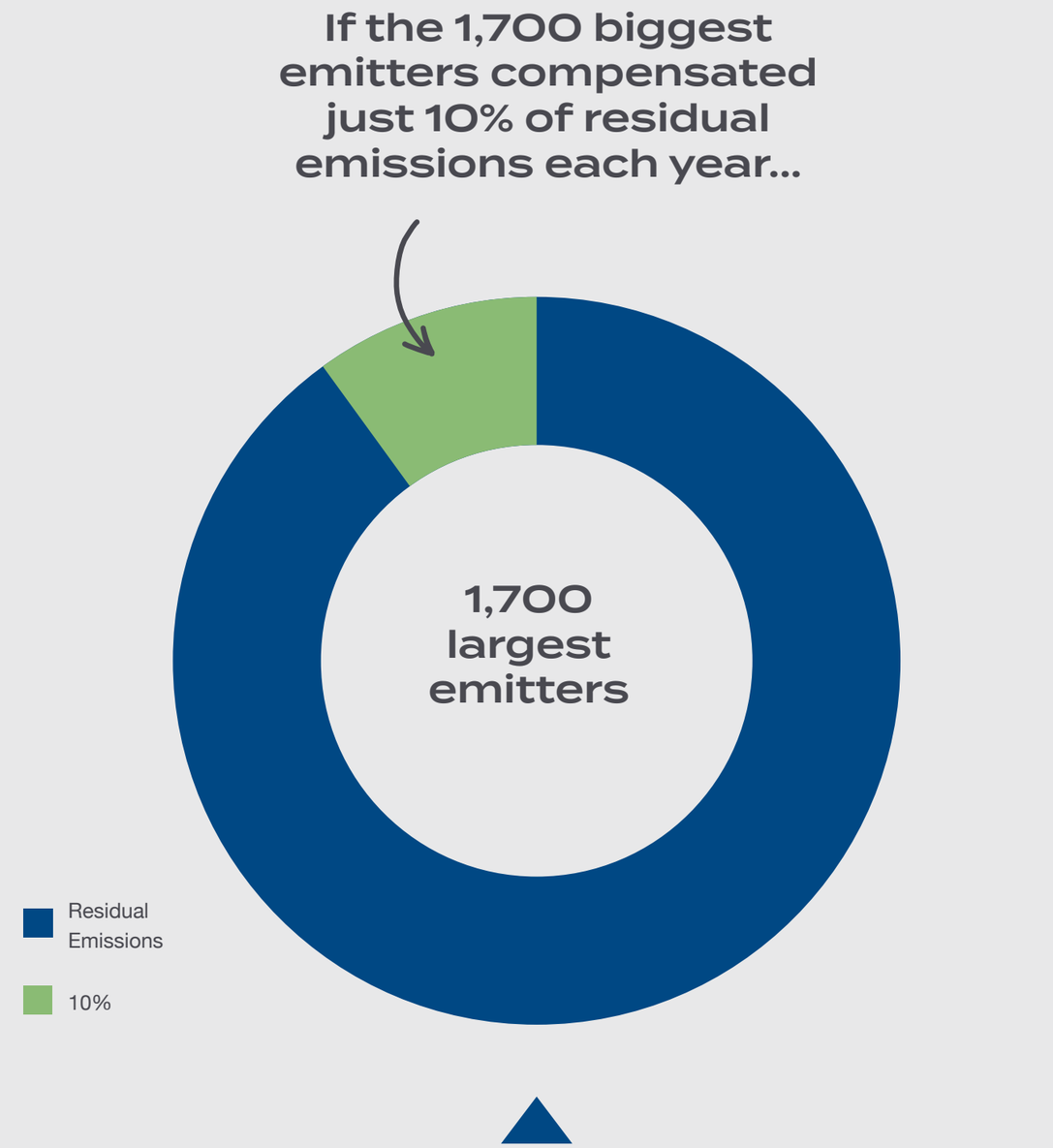
Research[17] has found that companies using a material amount of carbon credits typically also reduce their emissions around 2 times faster than those that do not.

[17] Trove Research (2023)

Contribute to climate protection

Nature-based solutions that help protect our forests, grasslands, wetlands, and oceans provide essential ‘breathing room’ as we tackle the decarbonisation of our economy, support vital ecosystem services, biodiversity, access to fresh water, improved livelihoods, healthy diets, and food security.

Done right, the voluntary carbon market (VCM) can deliver much-needed finance, technical capacity, and significant sustainable development benefits that can help countries reach their goals, and transition the world to the low-carbon future that it needs.



[18] We Mean Business Coalition 2023

Sources: We Mean Business Coalition

HOW ARE CARBON CREDITS MEASURED?

One carbon credit is equivalent to 1 tonne of CO^2 reduced or removed from the atmosphere through an emission reductions project, no matter where around the world.

Carbon standards and certification

Working with the world's leading climate company South Pole, Vista ensures that the climate protection projects it supports adhere to internationally recognised standards and where applicable are audited regularly by independent third-party organisations to ensure the additionality and environmental integrity of projects.

American Carbon Registry

The American Carbon Registry (ACR), a nonprofit enterprise of Winrock International, has 18+ years of experience in the development of rigorous science-based carbon offset standards and methodologies as well as operational experience in carbon offset project registration, verification, oversight and offset issuance.

CLIMATE ACTION RESERVE

The Climate Action Reserve (CAR) establishes high quality standards for North American carbon offset projects, oversees independent third-party verification bodies, issues carbon credits generated from such projects and tracks the transaction of credits over time in their publicly-accessible registry system.

UN-REDD PROGRAMME

REDD+ stands for "Reducing emissions from deforestation and forest degradation". The '+' stands for additional forest-related activities that protect the climate, namely sustainable management of forests and the conservation and enhancement of forest carbon stocks.

SOCIALCARBON®

The Social Carbon Standard was developed to strengthen social co-benefits of carbon offsetting projects and enhance the active participation of stakeholders. Developed by a partnership of NGOs, The Climate Community & Biodiversity Standard aims to stimulate land-based carbon reduction activities. Both are additional VCS standard labels.

The Clean Development Mechanism (CDM) is a program that allows projects in non-Annex I countries under the Kyoto Protocol (i.e low-income developing countries, and emerging economies) to issue Certified Emission Reductions (CERs), which can be traded in both compliance and voluntary carbon markets.

Gold Standard®

Established by WWF, The Gold Standard is endorsed by more than 80 NCOs. UN agencies use the Gold Standard for the development of their own carbon mitigation and sustainable development projects. Gold Standard is now also certifying SDGs.

Verified Carbon Standard

The Verified Carbon Standard (VCS) developed by Verra is the world's most widely-used voluntary greenhouse gas reduction programme, with over a thousand projects. They have collectively reduced or removed more than 200 million tons of carbon and other GHG emissions from the atmosphere.

What makes a good climate protection project?

The key is in the detail.

High-quality carbon credits adhere to a strict set of standards. These standards are previously approved by organisations like The International Carbon Reduction and Offsetting Accreditation (ICROA). These can be checked by ensuring the projects are registered with a third-party internationally-recognised verification standard, such as the Gold Standard, Verra's Verified Carbon Standard (VCS), Social Carbon and Climate, Community and Biodiversity Standards (CCBS), or standards verified by the UNFCCC.

Further, The Integrity Council for the Voluntary Carbon Market (ICVCM) has published the Core Carbon Principles (CCPs) as a benchmark for high-integrity carbon credits, raising the bar for high quality attributes such as additionality and permanence of each climate protection project methodology.

Vista is committed to supporting climate protection projects that meet exceptional quality standards and hold additional environmental and social certifications. As part of their voluntary contributions, they invest in carbon credits on behalf of clients that adhere to the highest environmental standards. Aligning with industry best practice, Vista also supports the International Civil Aviation Organization (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) as an effective transitional measure to stabilise net emissions from international aviation.

[19] According to the ICROA best practice guide, to qualify for credits, projects must adhere to these principles. These are upheld by internationally recognised and ratified standards that provide a consistent and robust framework.

Real

Proven to have genuinely taken place.

Additional

The project must not be able to be built or operate without the revenue from carbon credits.

The project must go beyond regulatory requirements.

Measurable

Quantifiable, using recognised measurement tools against a credible emissions baseline.

Adjustments must be made for uncertainty and leakage.

Verifiable

An independent third-party auditor must verify the emissions reductions.

The auditor must be accredited under one of the ICROA-approved standards in the sector in which the project is taking place.

Permanent

Credits must represent permanent emission reductions and removals for 100 years.

Where projects carry a risk of reversibility at minimum, adequate safeguards must be in place.

Unique

Only one carbon credit can be associated with a single reduction or removal of 1 tonne of CO^2, no "double counting".

Carbon credits must be stored and retired in an independent registry.[19]

Climate projects

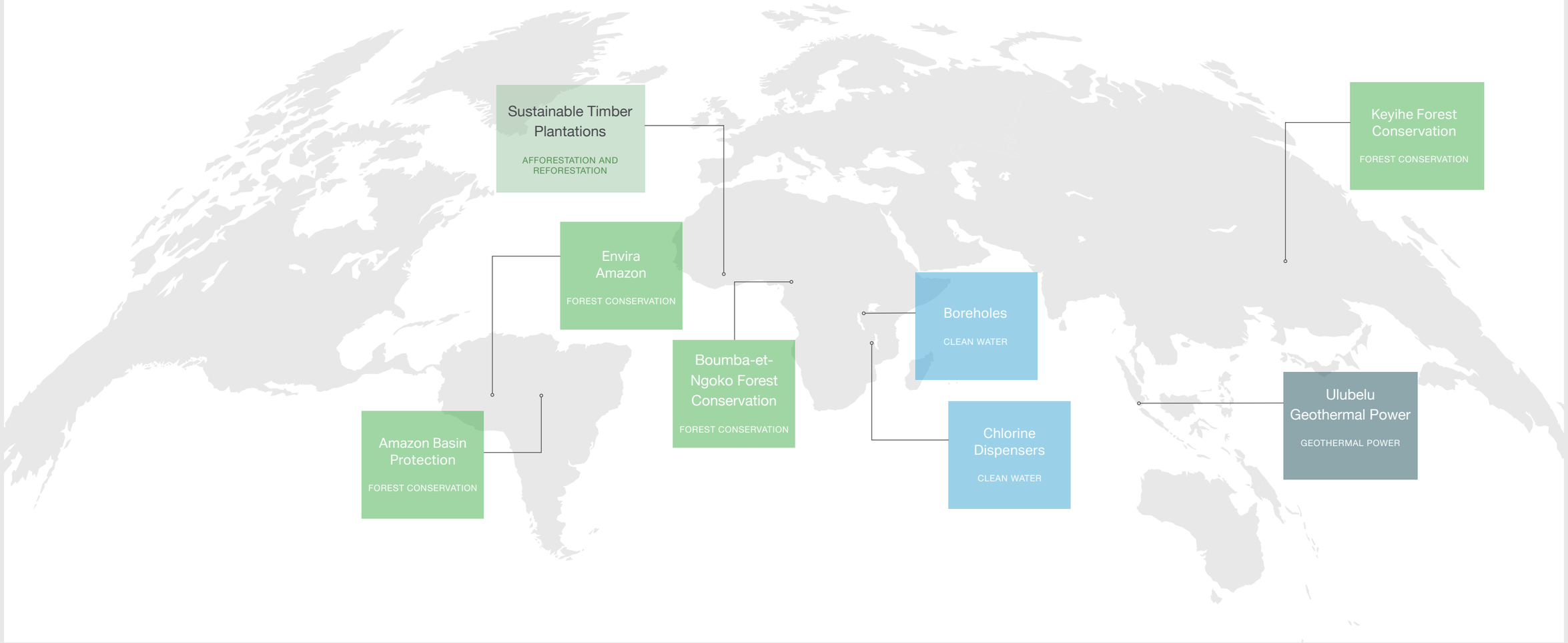
Vista funds climate projects that are situated around the world. Some of these projects focus on supporting afforestation, reforestation, and conservation, protecting hectares of forest and land from deforestation and degradation.

AFFORESTATION AND REFORESTATION

FOREST CONSERVATION

CLEAN WATER

GEOTHERMAL POWER



Climate projects

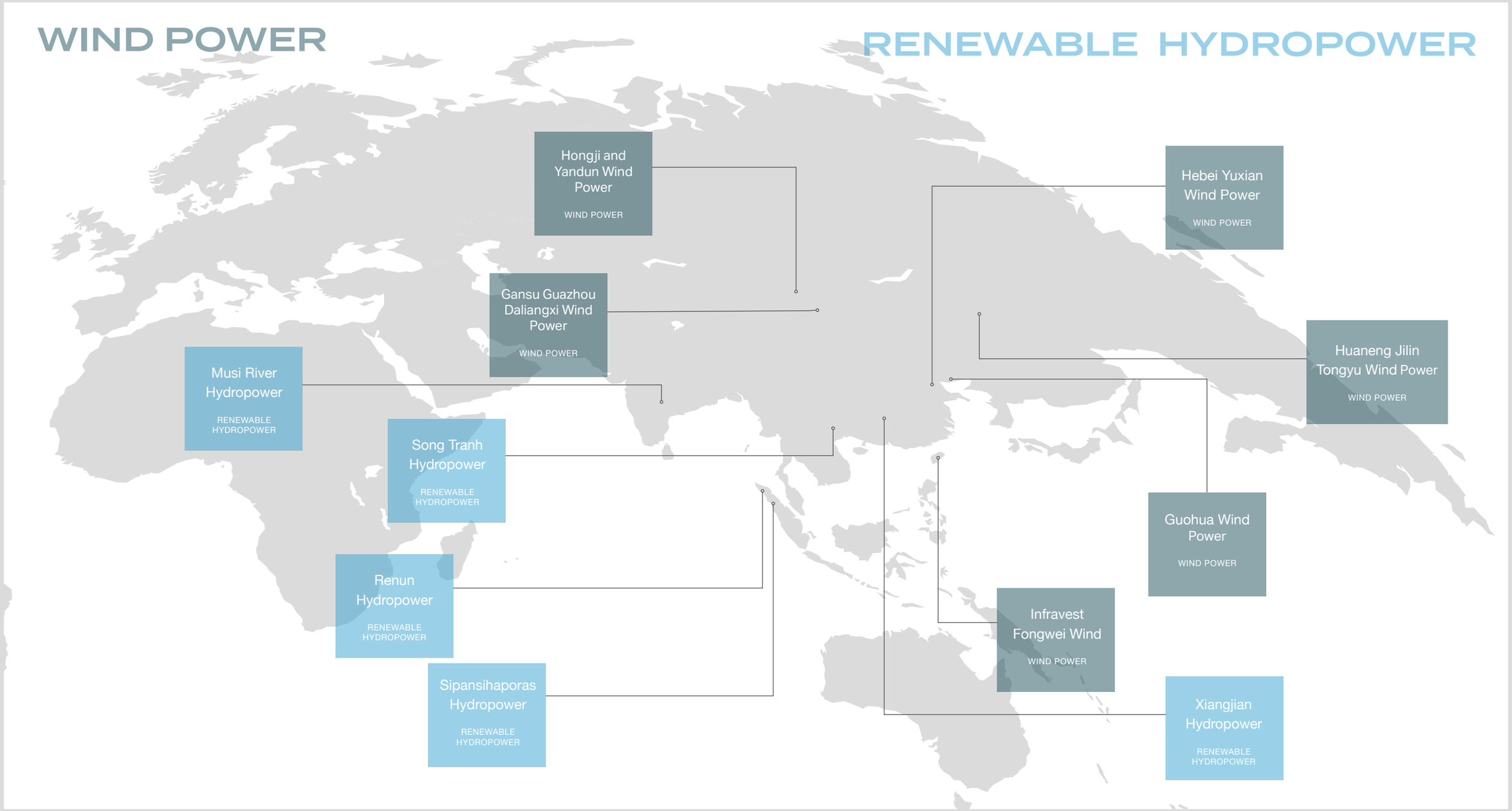
Some help to mitigate millions of tonnes of CO^2 and contribute towards sustainable development opportunities, from improving education to healthcare and job-seeking, while others generate renewable energy resources, feed green energy into the national grid, and power the community with clean energy.

EFFICIENT COOKSTOVES

WASTE-TO-ENERGY

Climate projects

These highlights are just the beginning for Vista, as it remains dedicated to ongoing investment in climate projects, with many more initiatives to come.




POWERING
FLIGHTS
Electric and hydrogen
technologies

What about electric?

Electric vehicles have been on our roads for years, so can we replicate that for aircraft with motors powered by lithium-ion batteries instead of fuel? Recent advances in battery technology have enabled the production of incredibly fast electric vehicles. However, one of the major hurdles electric planes need to overcome is the ability to fly larger aircraft over long distances. This challenge arises because today's lithium-ion and other batteries simply don't offer the same energy density as fuel-powered engines. Powering a large commercial aircraft for long distances would require several heavy batteries, which could account for as much as 60% of the plane's total weight, compared to just 30% when using jet fuel[19]. This power-to-weight issue means that planes at the forefront of the zero emissions race can only transport small groups of people on short flights and currently seems to be a desired solution in terrains like Norwegian fjords or across islands.

Additionally, there is the infrastructure required to run electric aircraft. Electric cars have been around for years, yet it is still harder and more time-consuming to charge an electric car than to refuel a petrol or diesel one. Just like a car, electric aircraft will require a charging infrastructure that is both powerful and efficient, especially considering the relatively tight flight schedules of airlines. Currently, a standard aircraft takes 45 minutes to an hour to fully refuel and can run for up to 21 hours on a single tank, depending on various factors.

And hydrogen?

Hydrogen holds significant potential in the energy sector, but major obstacles remain in aviation. Only hydrogen produced using renewable energy sources is truly sustainable, whereas most of the hydrogen in use today is made using coal and gas. One opportunity is that burning hydrogen in a jet engine would result in only water vapour emissions, almost entirely eliminating carbon-related emissions, including sulphur, particulate matter, and nitrogen oxides.

However, the architecture of aircraft would need to change considerably to accommodate the larger tanks required for hydrogen flight. New aircraft designs would be necessary and could potentially allow for innovations such as blended wing body aircraft, which might offer aerodynamic advantages. Nevertheless, the downside could be the time involved in certifying radically new aircraft, along with potentially substantial costs to redesign and certify new aircraft and operational infrastructure.

[20] MIT Technology Review (2022)

Which will we see first?

Both electric and hydrogen-powered aircraft hold promise but face significant challenges. Hydrogen-powered aircraft will require substantial changes to global airport infrastructure. The bulk of the spending will not lie within the sector. It instead relies on the wider development of the ‘green hydrogen’ economy[21], which is developing in parallel.

Battery power also has limitations, particularly with the advancements needed in battery technology and the size required for large aircraft. Andreas Klöckner of the German Aerospace Center (DLR) estimates that a functional electric large aircraft won't be developed until at least 2040.

There is no silver bullet for decarbonising aviation, but these emerging technologies could complement the use of SAF in conventional aircraft, paving a practical path towards a low carbon aviation industry in the years to come.

[21] Transport & Environment (2023)

SETTING THE STANDARD

Regulatory best practices in aviation

Transparency and reporting

Financial statements were once the primary means for companies to engage with stakeholders and convey their corporate strategy. However, in recent years, environmental, social, and governance (ESG) topics have gained prominence, prompting investors and stakeholders to consider not only a company's financial performance, but also its social and environmental impact.

Greenhouse gas (GHG) accounting

The first step in carbon accounting is asking which emissions sources do we need to track to accurately measure our carbon footprint in line with industry best practices. An emissions profile helps an organisation understand the business activities contributing to their carbon footprint and identifies the financial and operational data needed for this measurement.

In the aviation sector, the breakdown of emissions between scopes can vary based on factors like operational efficiency, aircraft type, routes flown, and efforts to reduce emissions through fleet modernisation, fuel efficiency improvements, and investment in sustainable aviation fuels.

Airlines can employ different methodologies for calculating emissions. For example, the Greenhouse Gas (GHG) Protocol is typically used as the basis for the calculation of an airline's total emissions footprint.

SCOPE 1 EMISSIONS

Scope 1 emissions are direct emissions from sources owned or controlled by the airline, such as aircraft engines during flight, ground support equipment, and airline-owned vehicles. In aviation, the majority of scope 1 emissions come from jet fuel. For most airlines, scope 1 emissions are the largest part of their carbon footprint.

SCOPE 2 EMISSIONS

Scope 2 emissions are indirect emissions associated with the purchase of electricity, heat, or steam consumed by the airline. This includes emissions from power plants that supply electricity to its offices, hangars, warehouse and storage facilities. Scope 2 emissions typically make up a smaller portion of the overall carbon footprint for airlines.

SCOPE 3 EMISSIONS

Scope 3 emissions are indirect emissions from sources not owned or directly controlled by the airline but associated with its activities. For airlines, scope 3 emissions typically include emissions from the production of fuel used for flights, the consumption of fuel used by aircrafts that the airline does not own but sells tickets for, production of goods and services purchased by the airline, and employee commuting.

Every year Vista records and publishes information relating to their carbon footprint in the VistaJet Greenhouse Gas (GHG) accounting report.

Task Force on Climate-Related Financial Disclosures (TCFD)

Created in 2017 and spearheaded by Mark Carney and Michael Bloomberg and endorsed by more than 4800 organisations, the Task Force on Climate-Related Financial Disclosures (TCFD) outlines the best practice for disclosure of climate change information in the areas of governance, strategy, risk management and metrics and targets.

As of October 2023, leading companies with a combined market capitalization of nearly $30 trillion[22], across all industries, disclosed climate information following the TCFD guidelines. The Task Force's recommendations provide a foundation to improve investors' and others' ability to appropriately assess and price climate-related risk and opportunities.

[22] TCFD (2023)

Core elements of recommended climate-related financial disclosures

GOVERNANCE

The organisation's governance around climate-related risks and opportunities.

STRATEGY

The actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.

RISK MANAGEMENT

The processes used by the organisation to identify, assess, and manage climate-related risks.

METRICS AND TARGETS

The metrics and targets used to assess and manage relevant climate-related risks and opportunities.[23]

Vista first started its TCFD reporting in 2021. Over the following years, consistent with its growth, it has expanded the scope of the climate analysis and report, including disclosures relevant to the extended Vista network, including operators and other affiliated entities.

An industry leader with a global reach, Vista remains committed to better understanding its climate risks and opportunities, integrating these into its strategy, and increasing resilience to the future challenges presented by climate change.

[23] TCFD Recommendations (2017)

Corporate Sustainability Reporting Directive (CSRD)

The Corporate Sustainability Reporting Directive (CSRD) is a regulatory framework introduced by the European Commission in November 2022 as part of Europe's Green Deal commitment. It marks a significant milestone for more transparent sustainability reporting practices across industries, including the aviation sector.

As a result of increased reporting requirements, aviation companies will be incentivised to improve their sustainability practices. This could involve investing in more fuel-efficient planes, adopting SAF, or implementing waste reduction programs, ultimately helping to reduce the industry's environmental footprint.

The EU Sustainability Reporting Standards (ESRS) developed by the European Financial Reporting Advisory Group (EFRAG) has a set of 12 draft ESRS that companies must follow. It outlines how and what information companies need to report to European regulators in order to comply with CSRD.

Vista is prepared to align with the most up-to-date standards to report on their social and environmental performance and CSRD requirements.

EU SUSTAINABILITY REPORTING STANDARDS

ESRS 1
General requirements

ESRS 2
General disclosures

ENVIRONMENT

ESRS E1
Climate change

ESRS E2
Pollution

ESRS E3
Water and marine

ESRS E4
Biodiversity and ecosystems

ESRS E5
Resource use and the circular economy

SOCIAL

ESRS S1
General requirements

ESRS S2
Workers in the value chain

ESRS S3
Affected communities

ESRS S4
Consumers and end users

GOVERNANCE

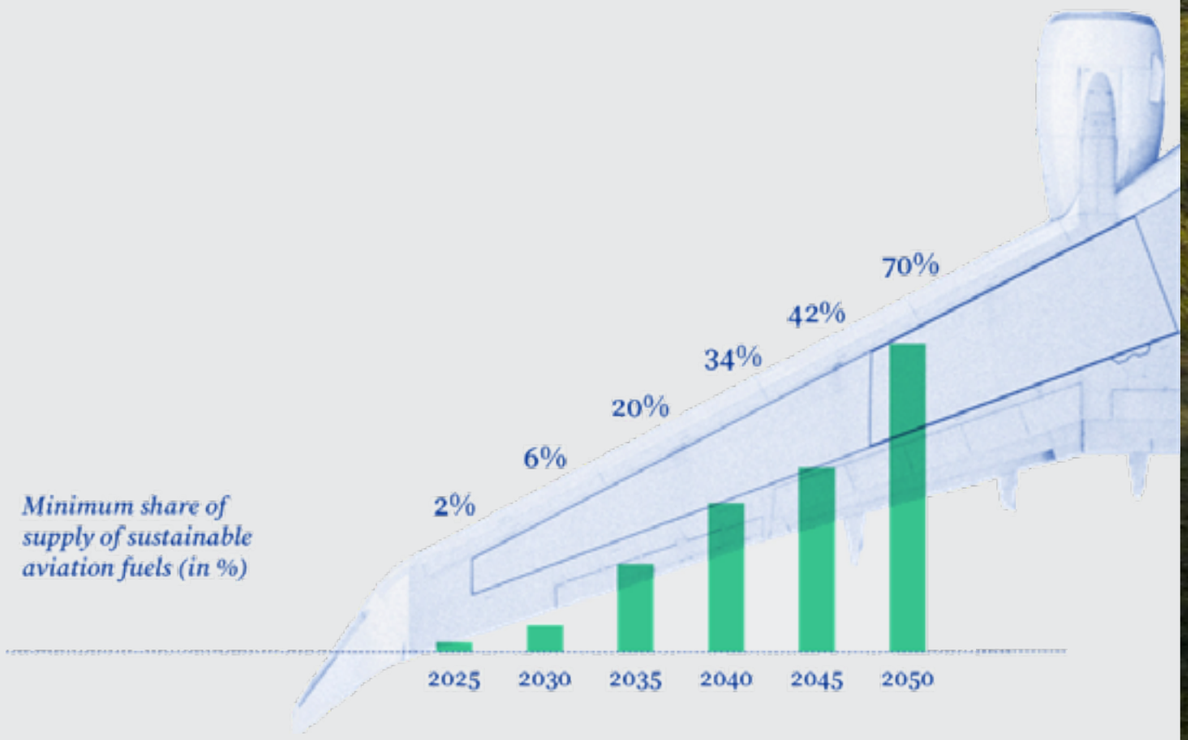
ESRS G1
Business conduct

Source: European Sustainability Reporting Standards, European Comission

Fit for 55 – The EU's plan for a green transition

The 'Fit for 55' package is a set of proposals put forward by the European Commission in July 2021 to help EU member states decarbonise the European economy[24]. The goal of the package is to help the EU achieve its climate goals and transition to a more sustainable, low carbon economy, with aviation playing a big part on how this will impact air transport, and specifically the important role SAF will play.

Within this, the ReFuelEU aviation regulation will oblige aircraft fuel suppliers at EU airports to gradually increase the share of sustainable fuels (notably synthetic fuels) that they distribute.



[24] European Union Fit for 55 (2023)

Boosting the uptake of SAF in air transport

The Commission requires aviation fuel suppliers to blend increasing levels of SAF with conventional jet fuel taken on-board aircraft at EU airports. Commencing in 2025, aviation fuel suppliers must ensure that all fuel made available to aircraft operators at EU airports contains a minimum share of SAF (and a minimum sub-share of synthetic aviation fuels from 2030 onwards), which will increase over time. Aircraft operators must ensure that the yearly quantity of aviation fuel uplifted at a given EU airport is at least 90% of their yearly aviation fuel required. This is intended to avoid "tankering" by airlines where they overfill aircraft at airports with cheaper fuel.

The importance of genuine action

The aviation industry is very much in the public eye.

Public scrutiny is both necessary and beneficial for continued evaluation and transparency. In the past few years, media has reported several cases of environmental groups accusing companies of “greenwashing”. Such claims have led to specific regulations and consumer protection lawsuits in the United States, Europe, and beyond. Unfortunately, where individual cases have turned into a pattern of blanket industry attribute, they can misrepresent the actual progress of the industry.

Consumer protection

In April 2024, the European Commission announced that it had launched action, alongside the EU consumer authorities, against 20 airlines over misleading greenwashing practices. This follows a series of EU legislative proposals aimed at protecting consumers from greenwashing claims, including updates to the Unfair Commercial Practices Directive (UCPD) and the Consumer Rights Directive (CRD). These new rules ban unverified generic environmental claims such as “environmentally friendly”. The Directive on Green Claims sets out minimum requirements for businesses to substantiate, communicate, and verify their green claims. The Commission expects airlines and other industries to use environmental claims responsibly.

Setting the example

At the same time, across the United States, Australia, New Zealand, a recent survey[25] found that many companies are going quiet on ‘green’ goals, otherwise known as ‘greenhushing’. Whilst corporate greenwashing has always been a challenge, the pendulum has swung so far the other way that now even climate-conscious companies are greenhushing.

However, keeping quiet about climate action out of caution can set progress back and slow down the momentum for true change. While environmental claims must be backed by robust data so as not to mislead stakeholders, it is equally important that climate leaders continue to set a good example for others to follow.

Companies taking genuine action should be confident to communicate their successes and their lessons learned, and encourage others to follow their lead. All companies across every sector must pick up the pace, turning net zero ambition into tangible climate action.

[25] South Pole Net Zero Report (2024)

NAVIGATING COMPLIANCE

Adapting to market regulations

Requirements for business

When it comes to compulsory market-based measures, the aviation industry is subject to two schemes. Unlike voluntary offsets, these measures are requirements that businesses need to comply with in their operating regions.

1. European Union's Emissions Trading System (EU ETS)

The EU ETS Directive, the legal framework of the ETS, was first adopted in 2003 as a policy instrument to meet the legally-binding emission target from the 1997 Kyoto Protocol. It is a cornerstone instrument of the EU's policy framework to combat climate change and reduce GHG emissions cost-effectively.

In light of the European Green Deal, in 2021 the European Commission proposed reforms to the EU ETS to align the system with the updated 2030 climate target of at least 55% net emission reductions compared to 1990 levels. The new 2030 target for the EU ETS is a cut of GHG by 62% compared to 2005 (previously: 40% by 2030 compared to 1990 levels).[26]

Other Emissions Trading Schemes

The UK ETS replaced the UK's participation in the EU ETS on 1 January 2021. The aviation routes covered by the UK ETS include UK domestic flights, flights between the UK and Gibraltar, the UK and Switzerland and flights departing the UK to European Economic Area states conducted by all included aircraft operators, regardless of nationality.

Swiss ETS is a cap-and-trade system designed largely in accordance with the same principles and rules governing the EU Emissions Trading System. It regulates a total of 56 CO^2-intensive companies from the cement, chemicals and pharmaceuticals, refineries, steel, paper, district heating and other sectors. The newest addition to Swiss ETS are carbon emissions from certain aircraft movements.

[26] Clean Energy Wire (2023)

COMPULSORY EMISSIONS TRADING SCHEMES

Businesses may be part of a 'cap and trade' scheme. The total amount of greenhouse gases that may be emitted each year is determined at a governmental level according to agreed national targets.

This 'cap' sets the limit on allowances that can be created each year, and it reduces over time until a final annual emissions target is met, such as the UK's net-zero by 2050.

VOLUNTARY OFFSETTING

Businesses not covered by schemes such as those described above or have ambitious targets to go above and beyond compliance, may wish to address the amount of greenhouse gases that they emit on a voluntary basis. They can do this themselves or by buying carbon credits from others - as a way to direct funding towards climate protection projects which reduce an equivalent amount of CO^2 in another area.

2. Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

The Paris Agreement is a legally-binding international climate treaty adopted by 196 countries at the UN Climate Change Conference in Paris in December 2015[27]. It aims to keep the global temperature rise below 2°C above pre-industrial levels and to strive to limit it to 1.5°C. The agreement focuses on the emissions and actions that countries can take, including domestic aviation emissions. However, emissions from international aviation are not covered by the Paris Agreement. Instead, these are reported and addressed separately by the International Civil Aviation Organisation (ICAO).

To support the goals of the Paris Agreement, the ICAO launched CORSIA in 2016. CORSIA aims to address international aviation emissions by offsetting any increase in emissions above a set baseline using carbon credits.

To comply with CORSIA, the international aviation sector has several options (baskets of measures):

- The surrender of eligible carbon credits
- The consumption of sustainable aviation fuel (SAF)
- Improved ground operations, air traffic management, and infrastructure and the deployment of more fuel-efficient aircraft

[27] UNFCCC (2016)

PRESENT

How CORSIA has affected aviation

BASELINE PERIOD (2019-20)

All aircraft operators with international emissions above 10,000t CO^2 per year must monitor, report, and verify fuel consumption and CO^2 emissions data for all international flights, irrespective of routes.

Humanitarian, medical and firefighting operations as well as aircraft with less than 5,700 kg of Maximum Take Off Mass are exempt[28].

VOLUNTARY PILOT PHASE (2021-23)

All aircraft operators operating routes between any state that volunteered to participate in CORSIA are subject to the offsetting requirements.

In practice, it means that aircraft operators need to buy carbon offsets from other sectors to compensate for any growth in their own emissions post-2020. Alternatively, they can use lower carbon fuels considered eligible under CORSIA.

VOLUNTARY PHASE 1 (2024-26)

As of Jan 2024, 126 states[29], representing 77% of the international aviation activity, volunteered to participate in CORSIA Phase I.

Similar requirements apply as in the voluntary pilot phase.

[28] ICAO (2023)
[29] ICAO CORSIA States (2023)
[30] With exclusion of countries with low aviation activity and Least Developed Countries, Small Island Developing States, and Landlocked Developing Countries, unless they volunteer to participate

FUTURE

How CORSIA will affect aviation

MANDATORY PHASE (2027)

Starting from 2027, offsetting requirements become mandatory for aircraft operators flying routes between almost all ICAO member states[30] (aircraft exemption applies). This means that the vast majority of international flights will be subject to offsetting requirements of CORSIA.

CORSIA REVIEW (2032)

ICAO decides whether the scheme should be continued after 2035 and, if so, how it should be improved.

PHASE 2 ENDS (2035)

Emission trading or carbon tax?

An emissions trading system (ETS) is a market-based instrument designed to reduce GHG emissions. The government sets a cap on total emissions in specific sectors and issues allowances within this limit. Companies in these sectors must hold one allowance for every tonne of emissions they produce. These allowances can be received for free from the government or purchased in government-organised auctions.

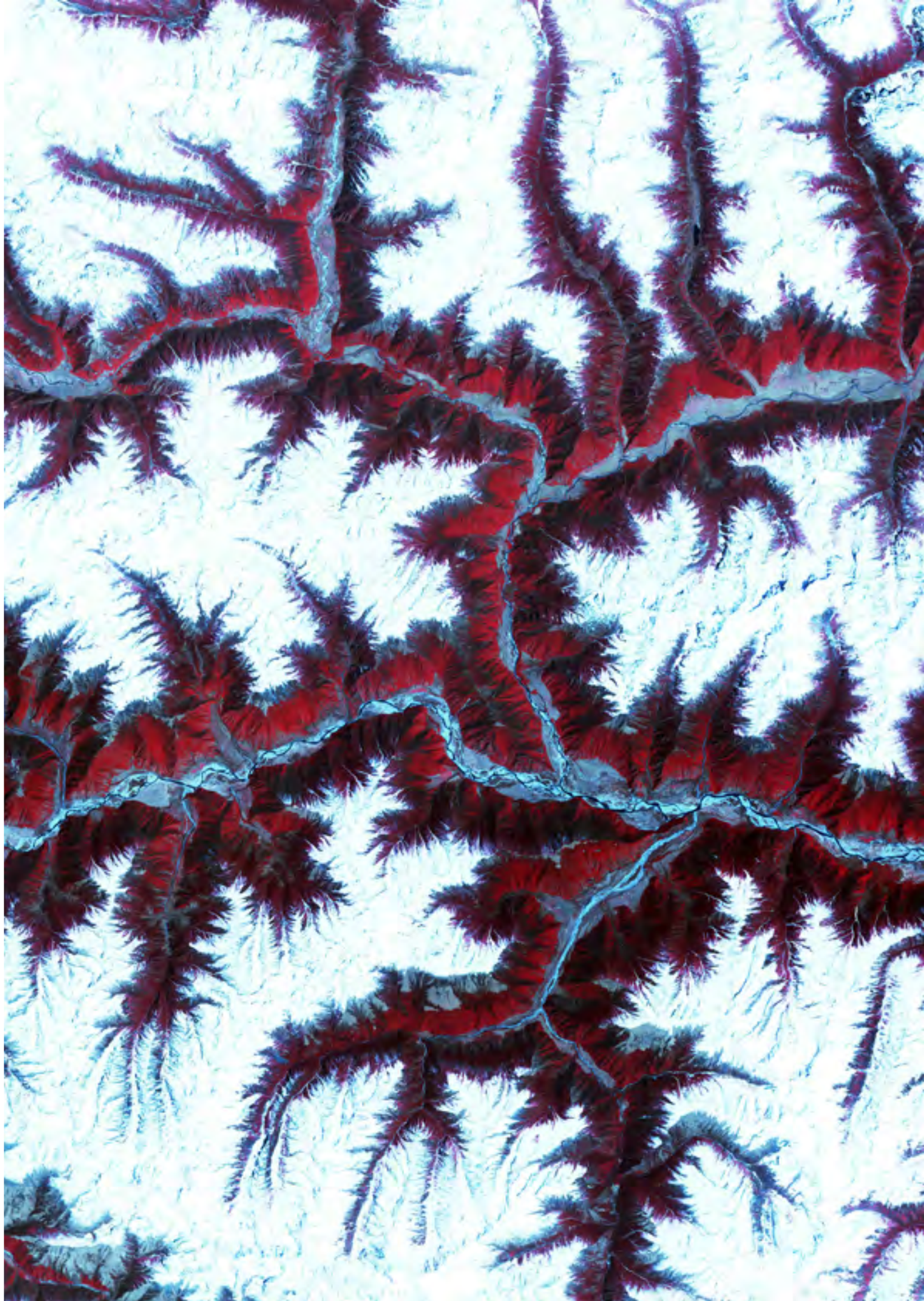
Similarly, a carbon tax sets a fixed tax rate that entities must pay for every tonne of emissions they release. Both ETSs and carbon taxes follow the ‘emitter pays’ principle, imposing an explicit price on carbon. This pricing mechanism encourages producers and consumers to internalise the social cost of GHG emissions, making low carbon alternatives more attractive, altering consumption patterns, and supporting low-carbon investments.

An ETS sets a cap on total emissions, ensuring a specific mitigation outcome, while the carbon price fluctuates based on market dynamics. This means the carbon price in an ETS can be higher during economic booms and lower during downturns. In contrast, a carbon tax offers price certainty but does not guarantee a specific mitigation outcome.

Environmentally-focused taxes, such as CO^2 or non-CO^2 taxes for aviation, serve as examples of these mechanisms in practice. In recent years, several states have introduced or indicated that they plan to introduce carbon emissions taxes and/or ticket taxes applicable to international flights.

Key tax and emission regulations for business jet operators

In the quest for a sustainable future, the aviation industry faces mounting pressure not only to offset its carbon footprint voluntarily but also to comply with a growing array of environmental aviation tax and emission regulations. These regulations, while varied in their specifics, share certain commonalities: they often allocate part or all of their proceeds to environmental purposes and/or aim to incentivise aircraft operators to reduce greenhouse gas emissions and noise pollution. Many other aviation tax schemes exist in Europe and around the world which are not listed here, as they do not meet any of the two criteria above. Their primary purpose is to generate revenue for state or local governments. FCC Aviation has provided an overview of the regulations that focus on environmental goals and highlight the main obligations that aircraft operators need to be aware of.



TAXATION

AUSTRIAN TRANSPORT LEVY

Description: Imposed on commercial and private flights departing from major Austrian airports. The tax rate ranges from 12 to 30 EUR per passenger, depending on the final destination. Reporting and payment are conducted both monthly and annually to the revenue agency and airport operators. Aircraft operators based outside of the EU are required to appoint a representative.

Green by design: To incentivise passengers to switch to rail transportation, a higher tax rate is applied to very short flights.

ITALIAN NOISE TAX

Description: Levied on commercial and private flights to and from certain Italian airports. The tax amount varies based on the airport, aircraft characteristics, and the time of take-off or landing. Collected by the airport operator or handling agent through monthly or quarterly invoices.

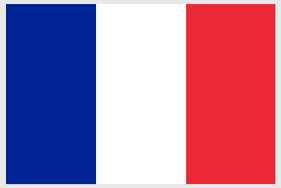
Green by design: Designed to impose higher charges on noisier aircraft. The proceeds are used to finance acoustic monitoring systems, implement noise abatement measures, and, where appropriate, compensate residents living near the airport.

PORTUGUESE CARBON TAX

Description: Up to 3,000 EUR per flight, based on the distance traveled and the seating capacity of the aircraft. Applies to both commercial and private flights departing from Portugal. Reporting and payment are done monthly, with non-EU operators mandated to appoint a local representative.

Green by design: All-electric aircraft are exempt. The revenue generated is allocated to an environmental fund used to make public transportation greener.

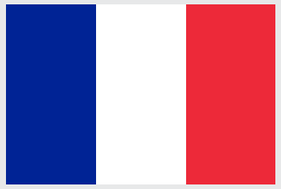
FRENCH NOISE TAX



Description: Levied on commercial and private departures from major French airports. It ranges from 1 to 400 EUR per departure, depending on the airport of departure, aircraft characteristics, and time of departure. Reporting and payment are conducted on a monthly or quarterly basis, depending on the level of tax liability.

Green by design: The tax proceeds are primarily used to provide aid to local residents and to finance noise abatement projects. The noise tax is higher for noisier aircraft and late departures.

FRENCH ECO TAX



Description: The French Eco Tax (éco-taxe or éco-contribution) is an environmental contribution added to the existing French solidarity tax, levied on commercial flights departing from France. The tax rate varies based on the passenger's final destination and class of travel, ranging from 1.50 to 18 EUR per passenger.

Green by design: The proceeds from the Eco Tax are used to invest in greener transportation infrastructure.

CATALONIA'S NOX TAX

Description: Levied on commercial flights originating from Catalonia, Spain. The tax amount is based on the emissions of nitrogen oxides (NOx) during the landing and take-off cycle. Reporting and payment are conducted on an annual basis.

Green by design: The tax is higher for aircraft with higher NOx emissions.

HUNGARIAN EXTRA PROFIT TAX

Description: Applied to commercial flights originating from Hungary. The tax rate per passenger depends on the final destination, seating capacity, and the aircraft's carbon dioxide emissions during the landing and take-off cycle. The necessary information for calculating the tax is gathered monthly by the ground handling agent and tax is paid via the handling invoice.

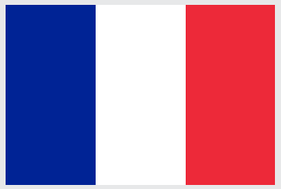
Green by design: The tax increases for aircraft with higher CO^2 emissions.

EMISSIONS

UK EMISSIONS TRADING SCHEME

Description: The UK ETS replaced the EU ETS for routes previously covered prior to Brexit. It is largely modeled after the EU ETS, but unlike the CH ETS, the UK ETS functions independently, resulting in a separate compliance process for operators subject to both schemes. Non-exempt operators are required to report emissions from UK domestic flights and flights departing from the UK to the European Economic Area (EEA) and Switzerland.

FRENCH OFFSETTING SCHEME



Description: Since 2022, aircraft operators participating in the EU ETS are also required to participate in the French Offsetting Scheme if their emissions from domestic flights within France exceed 1,000 tons of CO^2 per year. Operators must offset 100% of their French domestic emissions in addition to complying with the EU ETS, which already requires them to purchase and surrender EU allowances for the same flights.

Green by design: The French Offsetting Scheme finances eligible emissions reduction and removal projects through the purchase of offsets. At least 50% of the offsets must come from projects located within the European Union.

REFUEL EU AVIATION

Description: Since 2024, Refuel EU Aviation mandates that aircraft operators conducting at least 500 commercial flights from EU airports report fuel usage annually. Additionally, operators must ensure that, on average, 90% of their trip and taxi fuel is uplifted at the EU departure airport across all departures within the year.

Green by design: The regulation is designed to prevent fuel tankering, a practice where aircraft carry excess fuel to avoid refueling at certain airports, thereby reducing unnecessary emissions.

EU EMISSIONS TRADING SCHEME (EU ETS)

Description: All commercial and non-commercial aircraft operators with flights to, from, or within the European Economic Area (EEA) that exceed a certain exemption threshold are required to report their carbon emissions and surrender EU allowances to cover these emissions on an annual basis. Starting January 1, 2025, they must also report non-CO^2 aviation effects.

Green by design: The EU ETS is a cap-and-trade system that limits the total amount of greenhouse gases that can be emitted, aligning with the EU's climate targets. This cap is gradually reduced each year, promoting a steady decrease in emissions over time. By placing a price on carbon, the system encourages operators to reduce their emissions. If they are unable to achieve reductions, they must purchase EU allowances, leading to emissions reductions in other industries where it can be done more cost-effectively. Additionally, operators can claim emission reductions for the use of qualifying Sustainable Aviation Fuels (SAF).

CARBON OFFSETTING AND REDUCTION SCHEME

Description: Since 2024, Refuel EU Aviation mandates that aircraft operators conducting at least 500 commercial flights from EU airports report fuel usage annually. Additionally, operators must ensure that, on average, 90% of their trip and taxi fuel is uplifted at the EU departure airport across all departures within the year.

Green by design: CORSIA is an offsetting scheme, differing from cap-and-trade systems such as the EU, UK, or CH ETS. In cap-and-trade systems, operators must pay for all emissions from reportable flights. In contrast, CORSIA requires operators to offset only the portion of emissions that exceeds 2019 levels.

SWISS EMISSIONS TRADING SCHEME (CH ETS)

Description: The CH ETS mirrors the design of the EU ETS, with the primary difference being the reporting scope. While aircraft operators under the EU ETS must report emissions for flights within the EEA and from the EEA to Switzerland and the UK, the CH ETS encompasses Swiss domestic flights, as well as flights from Switzerland to the EEA and the UK. The two systems are fully integrated, enabling participating operators to engage with a single competent authority and maintain one registry account.

LOOKING AHEAD

Join us on this journey

Aviation is a global business. Addressing climate change is like solving a puzzle, where multiple pieces fit together to complete the picture. When the world unites on safety standards, regulations, and sustainability, we can move faster and more efficiently, making significant progress more quickly. Meeting ambitious aviation targets will require a collective effort beyond the responsibility of airlines alone.

Vista is committed to making aviation better and bringing everyone on board this critical journey. Every player within the global travel industry has a responsibility to address environmental impact and sustainability.

With increased collaboration among all parties involved, the aviation sector can achieve our goals even faster and exceed expectations. Everyone has a part to play.

Join us on this climate journey today.

Business cannot wait, and neither can the world. This means changing the way the aviation sector operates to benefit not only flying customers, but the entire global community. The industry must step up to combat climate change and its impacts today — it's the right thing to do, and we all have to act now.

Founder and Chairman of Vista
Thomas Flohr

More Vista information and news is available at www.vistaglobal.com.

This document has been developed with the assistance of South Pole. South Pole is the world's leading carbon project expert and climate consultancy. Since 2006, South Pole has been a trusted partner and advisor to governments, public sector organisations, and leading businesses on their decarbonisation journeys. South Pole serves over 1,000 clients across the world, and its global team of experts has helped many Fortune 500 businesses implement comprehensive strategies that help build resilience and turn climate action into long-term business opportunities. In line with its mission to deliver climate impact at scale, South Pole has used the power of markets to help channel climate finance to over 850 projects in more than 50 countries across the globe. To date, these projects have helped reduce over 200 million metric tonnes of CO^2 emissions, accelerated low-carbon transformations across several sectors, and provided measurable benefits to communities vulnerable to climate change. The business is supported by world-class investors, including Temasek's GenZero, Lightrock, Corisol, and Salesforce Ventures. South Pole is a social enterprise recognised by the World Economic Forum's Schwab Foundation, and committed to becoming a B Corp globally across all of its local entities. For more information, visit www.southpole.com.


VISTA