

CORSIA: Navigating ② the complex path 중 to ♀ decarbonisation in international aviation

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OUTTING AVIATION POLLUTION - WORLD WIDE FUND FOR NATURE (WWF)

"If the entire aviation sector were a country, it would be one of the top 10 carbon-polluting nations on the planet."

As global air traffic continues to rise, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) aims to stabilise emissions at 2019 levels.

The scheme will play a pivotal role in the decarbonisation of the international civil aviation industry as it incentivises airlines to reduce emissions, invest in cleaner and more efficient technologies, adopt Sustainable Aviation Fuels (SAFs), and only offset any surplus or excess emissions through carbon credits.

This paper provides an overview of CORSIA's key requirements and offers practical guidance for aviation industry professionals who are navigating this complex regulatory framework.

The authors have focused in particular on how airline operators can use carbon credits to help meet their compliance obligations and why it is so important to take action now.

### 02.



The International Civil Aviation Organization (ICAO) established the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) in 2016 to monitor and reduce emissions from international aviation.

CORSIA is a global market-based measure that complements the broader package of measures that is helping the ICAO to achieve its aspirational goal of carbon-neutral growth from 2020 onwards.

The scheme includes allowing airline operators to use CORSIA Eligible Emissions Units (CEEUs) to offset their  $CO_2$  emissions.

### 2.1 Phases of implementation

The international standards for implementing CORSIA were adopted as an Annex to the Chicago Convention, requiring all 193 ICAO Member States to comply and all airlines to report their annual CO<sub>2</sub> emissions starting on the 1st of January 2019.

As Figure 1 shows, CORSIA consists of three phases: the Pilot Phase (2021-2023), the First Phase (2024-2026), and the Second Phase (2027-2035). Participation in CORSIA is voluntary during the Pilot and First Phase and becomes mandatory during the Second Phase.

Figure 1: Phases of CORSIA implementation

|  | PILOT PHASE FIRST PHASE   |           |      | SECOND PHASE |   |      |      |      |      |      |      |      |      |
|--|---|-----------|------|--------------|---|------|------|------|------|------|------|------|------|
| 2019 2020  | 2021 2022 2   | 2023 2024 | 2025 | 2026         | 2027  | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 |
|  | VOL   | UNTAF     | ŶŶ   |              |   |      | N    | ЛАМ  | DAT  | ORY  |      |      |      |
| Monitoring,<br>reporting and<br>verification<br>to set the | States are volunteering to be part of the scheme from 2021 to 2026.   |           |      |              | LDCs, SIDS, LLDCs and States that have less than 0.5% of air traffic are exempt (although they can still volunteer).  |      |      |      |      |      |      |      |      |
| BASELINE   | Operators flying routes between volunteering<br>States will offset emissions based on the average CO₂<br>growth of the aviation sector. |           |      |              | Operators will offsetOffset obligations shiftOffset obligations shiftbased on average CO2to include over 20% ofto be over 70% based ongrowth of the sector.individual operator growth.individual operator growth. |      |      |      |      |      |      |      |      |

Inspired by <u>Aviation: Benefits Beyond Borders infographic</u>

### 10,000 Strain tonnes



is the annual threshold requiring airlines to monitor, report and verify their international CO<sub>2</sub> flight emissions since January 2019.

Source: <u>IATA</u>

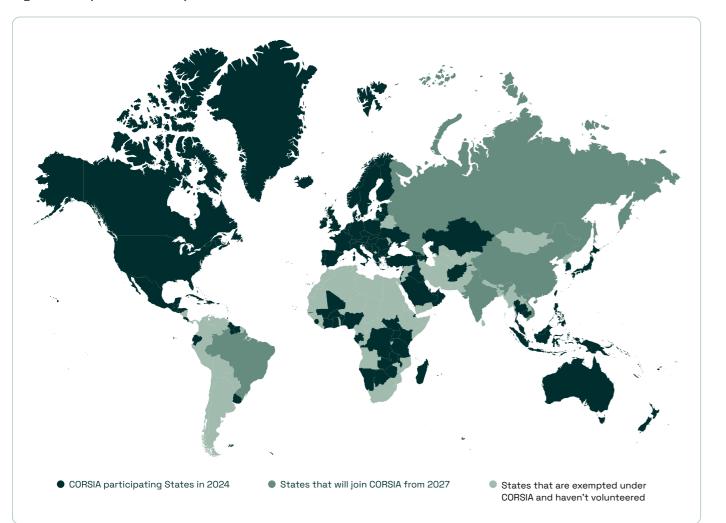
The First Phase of CORSIA began this year (2024), with a total of 126 ICAO Member States voluntarily committing to the scheme and initiating compliance.

Exemptions in the Second Phase are only granted to Least Developed Countries (LDCs), Small Island Developing States (SIDS), Landlocked Developing Countries (LLDCs), and nations with a minimal share of international aviation activities.

### 2.2 How the scheme applies to airlines

CORSIA applies solely to international civil scheduled flights. The scheme defines international flights as those taking off in one country and landing in another, regardless of the operator's nationality or the airspace used. CORSIA does not apply to airline operators with a Maximum Take-Off Weight (MTOW) of 5,700 kg or less or to operators whose annual  $CO_2$  emissions from international aviation do not exceed 10,000 tonnes. Figure 2 shows the general level of adherence to CORSIA by the time the scheme enters its mandatory Second Phase in 2027. Most of the international civil aviation operations will be covered under the scheme, with mandatory provisions to enforce the terms of the agreement. This has already sparked some interesting market actions. For example, despite Brazil adhering to CORSIA being mandatory from 2027, it has already published domestic regulations to operationalise the scheme, with provisions about reporting and penalties for regulated entities.

Figure 2: Map of CORSIA implementation



Inspired by CORSIA fact sheet, IATA, May 2024

### 2.3 Baseline

The CORSIA baseline, which is used to determine airline offsetting requirements under the agreement, was originally set as the average of 2019 and 2020 emissions. Because the COVID-19 pandemic in 2020 caused a dramatic drop in air transport demand to less than half of 2019 levels, the ICAO Council decided in June 2020 to use only 2019 emissions as the baseline for this period, as 2020 emissions were not "business as usual" (BAU).

At its 41st Assembly in 2022, the ICAO set a more ambitious baseline of 85% of 2019 emissions for the period from 2024 to the end of the scheme in 2035 (First Phase and Second Phase).

For any year from 2021 onwards, the international aviation  $CO_2$  emissions covered by CORSIA that exceed the baseline level represent the sector's offsetting requirements for that year. Only  $CO_2$  emissions (no other greenhouse gas (GHG) emissions) are taken into consideration and are determined based on fuel consumption.



### 2.4 Compliance

The main aim of CORSIA is to foster actual decarbonisation within the civil aviation industry by incentivising it to adopt practices that ultimately release fewer emissions into the atmosphere (see column 1 in Figure 3).

Recognising the technological and operational challenges to decarbonising the industry, CORSIA provides airline operators with two further options to address their offsetting requirements – the use of CORSIA Eligible Fuels (CEFs) and the use of CORSIA Eligible Emissions Units (CEEUs) (see columns 2 and 3 in Figure 3).

Airline operators will need to consider all three options and take a portfolio approach. With an imbalance between the supply and demand of CEEUs, they must take action now in order to secure the supply of carbon credits for the future.

### 03. OFFSET EMISSIONS

Purchase carbon credits to offset the surplus emissions that cannot be reduced in other ways (CEEUs).

> The CORSIA baseline is 85% of 2019 emissions for the 2024-2035 period.

### **CORSIA Eligible Fuels (CEFs)**

While this paper focuses primarily on CORSIA Eligible Emissions Units (CEEUs), it is important to note that many airline operators have targets and plans to rely on Sustainable Aviation Fuels (SAFs) that may well be CORSIA Eligible Fuels (CEFs).

There is, however, a general perception that with competing regulations demanding the use of SAFs (e.q. the EU Emissions Trading System (ETS) and UK SAF mandate), the supply of CEFs is expected to be insufficient to fulfil the needs of the aviation industry for CORSIA.

- In 2022, SAF production was less than 0.1% of global jet fuel consumption and represented around 300 million litres
- In 2023, SAF production doubled to 600 million litres, representing around 0.2% of global jet fuel use
- In 2024, SAF production is on track to triple, reaching 1.9 billion litres (1.5 million tonnes), which would account for 0.53% of aviation's fuel needs

Despite this limited supply, SAF is expected to play a crucial role in aviation's future, potentially contributing around 65% of the emission reductions needed to reach net zero by 2050.

The current data reveals that there are only five Carbon Dioxide Removal (CDR) projects related to SAFs, all of which are active but not registered.

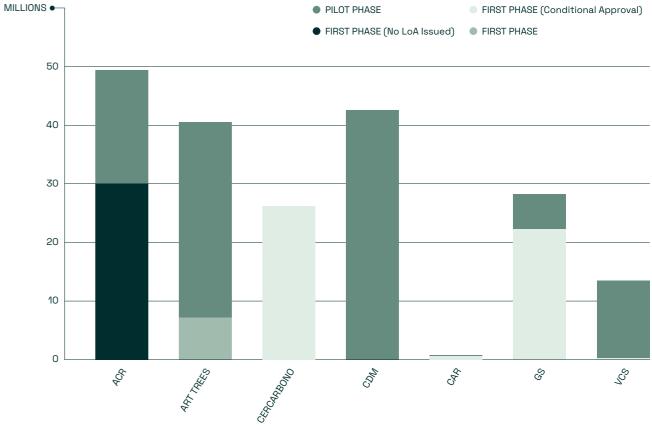
### **CORSIA Eligible Emissions Units (CEEUs)**

CORSIA allows airline operators to meet their obligations by using CEEUs but this should be the last option. The eligibility requirements are currently high, with very few projects fulfilling all conditions, and many analysts expect the supply of CEEUs under CORSIA to be veru limited.

To gualify as a CEEU in the First Phase, an emissions unit must be generated under a programme recognised by the ICAO. These units must be registered and issued by a designated registry and should satisfy specific eligibility criteria, including vintage (how old the carbon credit is), unit type, sectoral and methodological requirements, additional co-benefit requirements, and attestation to the avoidance of double claiming.

By October 2024, several large standards, including Verra's Verified Carbon Standard (VCS), Gold Standard (GS), American Carbon Registry (ACR), Architecture for REDD+ Transactions (ART TREES), Climate Action Reserve (CAR), and Global Carbon Council (GCC), had received full approval from the ICAO.







The most recently-approved standards mark a significant milestone for CORSIA as they are expected to enable a substantial increase in the supply of CORSIA credits. They collectively represent thousands of registered offset projects and will likely enhance market liquidity if, and only if, these credits end up being aligned with Article 6 and properly adjusted with the host countries' emission balance. A wider range of options for sourcing credits means there are enabling conditions for airlines to meet their compliance obligations.

From an airline's perspective, the inclusion of these standards programmes offers a strategic opportunity for portfolio diversification as well as opportunities to channel investments into regions previously underserved by carbon finance and support a broader range of emissions reduction activities globally. Having access to more methods and registries in different regions gives airline operators more investment options and, at the same time, makes these more secure and resilient.

Airline operators should strongly consider pairing up with experienced project developers, such as EcoSecurities, which have expertise across diverse market mechanisms, so that they can implement carbon projects today and secure supply for tomorrow. Given the typical carbon project cycle (design, validation, registration, Monitoring, Reporting and Verification (MRV), and credit issuance), it may take 18 months or more for CEEUs to become available. Early action is critical to ensure that airlines meet their future obligations, particularly as demand for high-quality CEEUs will only increase.

As Figure 4 shows, significant volume will be available from the approved CORSIA standards - e.g. GS (23 million), ACR (30 million) and ART TREES (7.1 million) for the First Phase. It is worth mentioning that the 7.1 million credits from ART TREES come from one single project in Guyana, having obtained a Letter of Authorisation (LoA) from the host country (where the reduction activities took place). In other words, these credits are the only ones immediately available for CORSIA retirement.

### 2.5 Reporting of emissions

Under the Monitoring, Reporting and Verification (MRV) System, airline operators monitor CO<sub>2</sub> emissions using approved methods. In some cases, they may use ICAO's CO<sub>2</sub> Estimation and Reporting Tool (CERT) for simplified monitoring. The annual emissions reports must be verified by independent, accredited bodies, ensuring compliance with standards such as ISO/IEC 17029:2019 and ISO 14065:2020 before submission to the State.

Airline operators participate in an offsetting scheme with both sectoral and individual components. While the individual component starts during the Second Phase of CORSIA (2027-2035), operators must offset the sector-wide increase in emissions until then. Offsetting is based on a three-year compliance cycle, requiring annual reporting but demonstrating compensation every three years.

### 2.6 Corresponding adjustments

Corresponding adjustments (CAs) are made to the host country's emissions balance to avoid double counting and, thus, double claiming of emissions reduction.

The issue of double claiming under CORSIA can potentially arise when emission units used by airline operators are also claimed by host countries for their Nationally Determined Contributions (NDCs) or other uses.

To mitigate this, the ICAO requires crediting programmes to publicly share Letters of Authorisation (LoAs) from host countries confirming they will not use CEEUs for their NDC compliance. CEEUs originate from GHG reduction activities within countries (hosts) participating in the Paris Agreement (PA). These emissions are reflected within each country's GHG inventory, which is reported under the PA, so CAs need to be applied.

CAs are a crucial element for ensuring environmental integrity at the NDC level and other mechanisms that expressly require it, such as CORSIA. It is a process mandated by the UNFCCC as per the Article 6 rulebook and established and rolled out by each host country where CEEUs originate. All credits in the First and Second Phases of CORSIA will therefore need to have CAs applied to them.

The ICAO has recently reaffirmed the importance of corresponding adjustments (CAs) in maintaining the integrity of CORSIA. Several standards, including BioCarbon ISFL, Cercarbono, the World Bank's Forest Carbon Partnership Facility (FCPF), and Thailand's Premium VER Programme (Premium T-VER), are conditionally approved for the First Phase, pending confirmation that they will implement measures to prevent double claiming of emissions reductions.





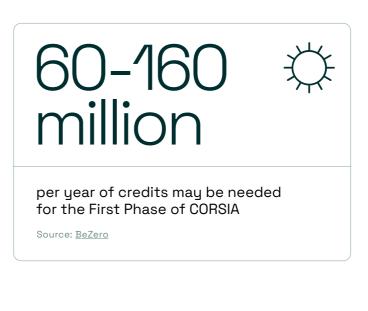
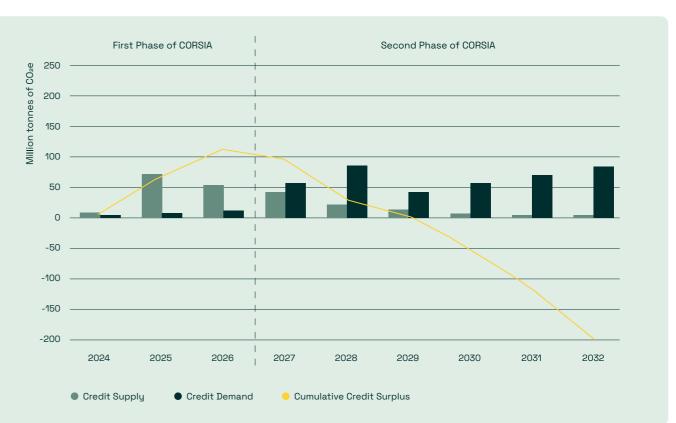


Figure 5: Expected demand outstripping supply by 2030



Inspired by Abatable infographic, 2024

### After October 2024

As noted in section 2, four more standards were fully approved in October 2024, which significantly increases the potential supply of credits available under CORSIA.

The approval of four new standards - Verra's Verified Carbon Standard (VCS), Gold Standard (GS), Climate Action Reserve (CAR), and Global Carbon Council (GCC) -

### Up to October 2024

The landscape of carbon credit standards under CORSIA presented significant challenges. Only two standards -ACR and ART TREES - had received full approval as eligible credits. Together, they issue approximately 23 million credits annually, which falls far short of the 60-160 million per year of credits needed for the First Phase alone (see this blog).

Figure 5 shows market conditions without new credit supplies coming online. Before more standards were approved in October 2024, demand for CORSIA credits was expected to outstrip supply in the Second Phase of the scheme (between 2029 and 2030) (see this blog).

is a major milestone for CORSIA as they collectively represent thousands of registered offset projects. This development can enhance market liquidity (if credits are aligned with Article 6 requirements) and provide airlines with a wider range of options for sourcing credits to meet their obligations. The inclusion of these new standards not only benefits airlines by increasing credit availability but also promotes greater geographical diversification of carbon projects.

As international civil aviation continues to grow (albeit unevenly following the COVID-19 pandemic), initial market estimates anticipate that demand for CORSIAaligned emission reduction units between 2017 and 2030 may range from 280-480 MtCO<sub>2</sub>. When considering the airline operators that have already been actively reporting on their CO<sub>2</sub> emissions, the top 10 operators subject to offsetting requirements under CORSIA amount to a yearly 90 MtCO<sub>2</sub>, with one single airline operator requiring 15 MtCO<sub>2</sub>e in credits to offset. To put this in context, the entire Voluntary Carbon Market (VCM) retired only 174 MtCO<sub>2</sub> in 2023, well below the lower end of the potential estimated demand. These numbers were extracted from the CORSIA registry.

### **3.1** Approved standards

One of the ways the supply-demand imbalance might be alleviated is by the high expected issuances from ART TREES' jurisdictional projects. According to estimates from the Environmental Defense Fund (EDF) and MSCI Carbon Markets, up to 300 million tons of annual supply could come from jurisdictional projects registered under the ART TREES standard by 2030 six times the current demand for REDD credits.

Additionally, following the full approval of Verra, GS, CAR and GCC in October 2024, these standards combined could potentially supply an additional 100 million credits per year, significantly boosting the supply.

Five other standards remain conditionally approved for the First Phase, including: BioCarbon ISFL, Cercarbono, the FCPF. Isometric, and the Premium T-VER Programme (Thailand).

Before the announcement from the ICAO in October 2024, only around 3.5% of the total amount of credits available from approved standards (ACR and ART TREES) were eligible CEEUs. Even though one of the American standards (ACR) has more CEEUs to offer in the First Phase of CORSIA, Guyana's ART TREES credits are the only ones that are currently eligible.

ACR focuses on more varied methodologies, including forestry, agriculture, and industrial projects, while ART TREES specialises in JREDD+ projects (which are not the VCS REDD+ projects), so the issuance of CEEUs may vary according to these standards. As ACR has a broader scope, there is potential for more credits across diverse sectors to be issued, whereas ART's issuance is concentrated in jurisdictional forest conservation.



### **3.2** Article 6 of the Paris Agreement

The main potential source countries for CORSIA credits will be those with established Article 6 policy frameworks and with the capacity to report according to the PA requirements. On top of this, the host country should have a robust pipeline of initiatives and opportunities within the methodologies and standards approved by CORSIA. Identifying the main potential source of CORSIA credits therefore involves a dual analysis - a) the host

### **3.3 Sustainable Aviation Fuels**



### of travellers think that governments should offer incentives for airlines to use SAFs

Source: IATA

In line with the fact that SAFs are a type of CEF, supply is currently also insufficient to meet the sector's needs and demand is high. The scarcity of SAFs is exacerbated by significant competition for high-quality SAFs, driven by various regulatory frameworks such as FuelEU Maritime, the EU Emissions Trading System (EU ETS), and the UK ETS. These frameworks create additional demand for SAFs.

Looking ahead, the supply of SAFs is expected to increase as production technologies advance and new facilities come on board. However, the pace of this growth may not be sufficient to keep up with the rapidly increasing demand. This ongoing imbalance between supply and demand will likely continue to drive up prices and intensify competition for high-quality SAFs. Airline operators must navigate this market carefully, balancing their immediate compliance needs and strategically planning for SAF investment to ensure future availability and affordability.

country's policy alignment with Article 6 and b) the technical feasibility of CORSIA-eligible activities.

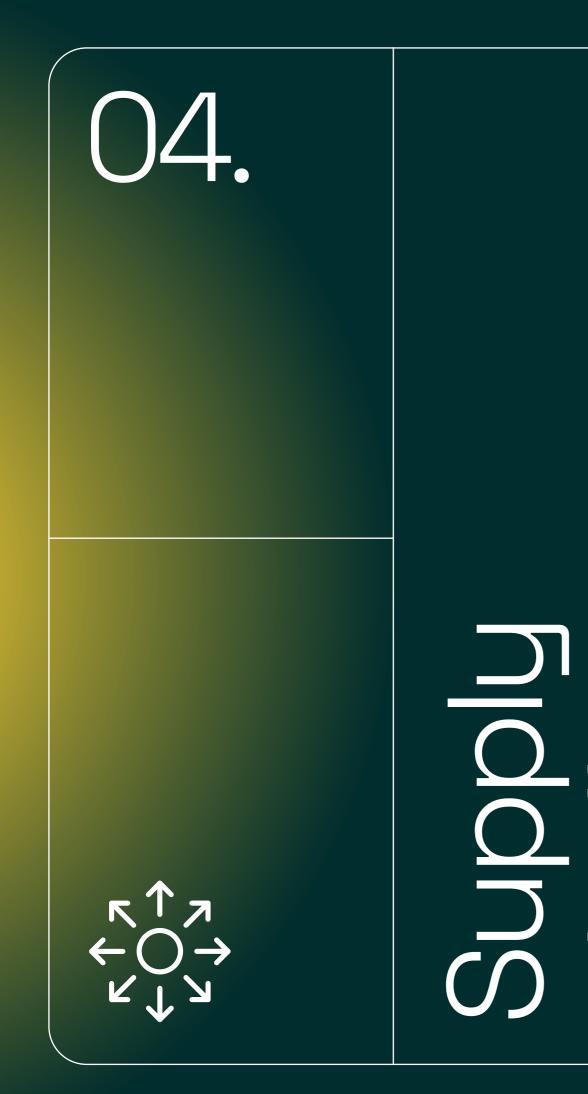
To date, there are approximately <u>91 agreements</u> concerning Article 6.2 and host countries are starting to issue LoAs for different initiatives under PA's mechanisms. With the Article 6 rulebook finalised at COP29 in November 2024, this may further enable the development of Article 6 cooperation.

П

According to a recent IATA survey, there is considerable public backing for SAFs. Around 86% of travellers think that governments should offer incentives for airlines to use SAFs. Additionally, the production of SAFs should be the top priority for leading oil corporations, according to the majority (86%) of air passengers.

### Examples of airline operators investing in SAFs:

- In July 2024, <u>United Airlines</u> became the first airline to secure SAFs for operations at Chicago's O'Hare International Airport.
- California has partnered with <u>Airlines for Americas (A4A)</u> to increase the state's Sustainable Aviation Fuel (SAF) supply to 200 million gallons by 2035. This initiative aims to significantly boost the availability of SAF in the state.
- <u>Air France-KLM</u> has signed an agreement with TotalEnergies for the supply of SAF produced in France. This deal will see Air France-KLM receive 2.3 million litres of SAF over a three-year period, contributing to the airline's efforts to reduce its carbon footprint.



As mentioned in section 2, double counting in CORSIA's First Phase must be avoided. In other words, airlines must

### 4.1 Current challenges with Letters of Authorisation

Even if credits meet the ICAO criteria, they cannot be used under CORSIA without CAs and a Letter of Authorisation (LoA). This letter is issued by the country where the emissions reductions took place and assures that corresponding adjustments (CAs) will be applied.

### Figure 6: Challenges with Letters of Authorisation

| • 01<br>Case-by-case<br>approach                 |  |
|--|--|
| • 02<br>Lack of clarity                          |  |
| • 03<br>Technical and<br>administrative capacity |  |
| • 04<br>Recognition and<br>prioritisation        |  |
| • 05<br>Stakeholder<br>coordination              |  |

Source: EcoSecurities, November 2024

not claim that emissions reductions under CORSIA also contribute to the host country's targets under the PA.

Many host countries are currently building their capacity for engaging with Article 6, to apply CAs and the frameworks for issuing LoAs that bind them to these adjustments. This creates challenges in obtaining LoAs and achieving full eligibility for carbon credits under CORSIA. Figure 6 shows the current key challenges with LoAs.

Host countries issue LoAs to projects individually, which can significantly delay processes and the availability of credits, and create further uncertainty.

Uncertainty exists regarding the LoA issuance process, corresponding adjustments, the number of units required to meet NDCs, and the need for LoAs for CORSIA compliance.

Countries need significant human and financial resources, as well as infrastructure, to issue LoAs and assess their NDC compliance.

Some countries may not fully recognise their role in CORSIA's implementation or may not have prioritised authorising emissions units for CORSIA use.

The involvement of multiple stakeholders (e.g. governments, project developers, carbon crediting programmes, and airlines) complicates coordination and standardisation efforts.

### 4.2 Broader challenges and future considerations

CORSIA also faces uncertainties regarding how the PA mechanisms will integrate with the VCM and potentially limit the availability of necessary carbon credits. As more crediting programmes aim for CORSIA eligibility, the substantial demand may highlight the urgent need for host countries to develop and implement Article 6 Frameworks that allow the issuance of LoAs and the application of corresponding adjustments.

Additional questions arise about whether CORSIA's limited timeframe (2021-2035) and the stringency of its baseline align sufficiently with the ambitious climate goals outlined in the PA. National policies, such as emissions trading systems and aviation-specific taxes, could further complicate and undermine CORSIA's effectiveness in reducing emissions. Moreover, the decentralised nature of carbon offsetting initiatives offered by many airlines poses a challenge to the consistent implementation of CORSIA across the industry. Despite these challenges, a cost analysis by <u>IATA</u> suggests that the financial impact of CORSIA offsetting may be less significant for aviation compared to fuel price volatility. And there are positive developments, such as Guyana's authorisation of units for CORSIA and the growing support from international market and legal experts, indicating a path forward for overcoming these barriers (find out more in this <u>report</u>).

### 4.3 Risks of revocation

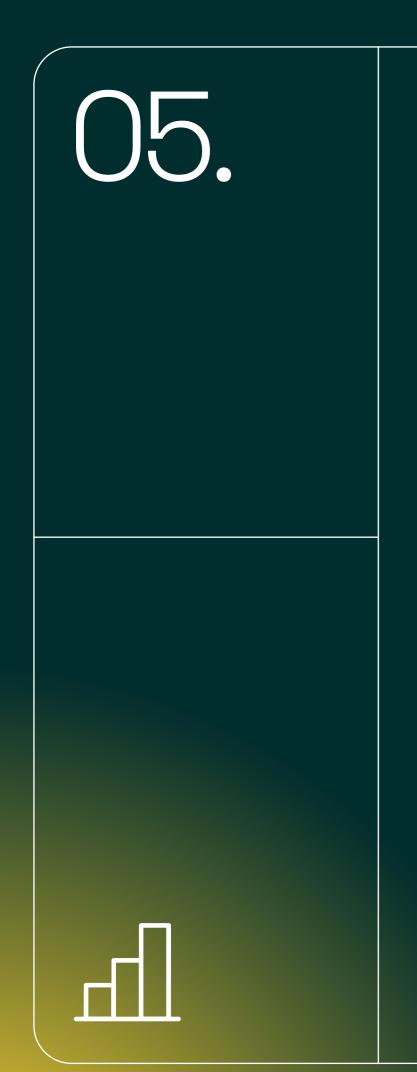
The supply side (mainly project proponents and developers operating under CORSIA) may face risks concerning regulatory uncertainty and revocation of authorisation for CAs. An untimely revocation of credits would therefore make them ineligible for use in the First and Second Phases of CORSIA due to issues of double counting and, thus, double claiming.

Under the current <u>ICAO</u> decision, if a host country revokes authorisation, "the programme, or proponents of the activities it supports, must fully compensate for, replace, or otherwise reconcile double-claimed mitigation associated with units used under CORSIA, which the host country's national accounting focal point or designee initially attested would not be double claimed". While this regulatory uncertainty has been improved with the finalisation of the Article 6 rulebook, stating that credits already transferred should not be affected by revocation, it is still left to the host countries for each cooperative approach to implement this guidance. While COP29 provided a level playing field for addressing changes to authorisations, host countries still have the discretion to apply this guidance locally at various degrees of flexibility.

Due to this burden of risk imposed on the supply side, several of the main carbon standards that used to be under conditional approval (mainly CAR and Verra) have expressed frustration. Groups such as Kita, Nippon Export and Investment Insurance (NEXI), and MIGA are developing new insurances against revocation to minimise the potential risks.







## S S J M L



As CORSIA transitions to its compliance phase, countries where airline operators are based are implementing laws to enforce its application. Differing national, regional, and international policies could create confusion for companies participating in CORSIA, however.

For instance, the recent internalisation of CORSIA by the <u>Brazilian Civil Aviation Agency (ANAC)</u> raises significant concerns due to the low penalty for failing to retire corresponding units, set at R\$ 50.00 (approximately US\$ 9.28), plus the request for retirement of a valid unit.

CORSIA can be combined with mechanisms covering specific international flight emissions. For instance, the EU ETS covers international flights within the EU member countries and excludes CORSIA's international aviation portion. While CORSIA cancellation obligations apply to international flights to and from third countries participating in CORSIA (i.e. nations that are not members of the European Economic Area), these flights are exempt from the <u>EU ETS</u> (e.g. a flight from the UK to Paraguay). When developing local regulations for CORSIA, countries need to set correct and balanced incentives and penalties in a manner to enable and unlock climate finance flows into CORSIA eligible carbon projects. Penalties and other indications, if established below minimum prices to finance high-quality GHG reduction/removal carbon credits, can be detrimental to the market scale-up and put the airline industry on a critical path.

### 06.



### PEDRO CARVALHO, HEAD OF POLICY AND MARKETS, ECOSECURITIES

"The aviation industry must navigate the challenges of CORSIA with strategic foresight and proactive engagement to meet their environmental responsibilities, ensuring the sustainability of their operations and their long-term survival."

CORSIA represents a significant step forward in the global effort to mitigate CO<sub>2</sub> emissions from international aviation but the scheme faces numerous challenges and uncertainties.

The current landscape of carbon standards is now more promising as Verra, Gold Standard, CAR, and GCC have recently received full approval from the ICAO Council. This is expected to enable a significant increase in the supply of CORSIA-eligible credits (CEEUs).

Other positive developments include the expected increase in issuances from ART TREES jurisdictional REDD+ projects and the creation of of new insurance products against the risk of revocation by groups like Kita, which offer a pathway to mitigate some of the regulatory risks.

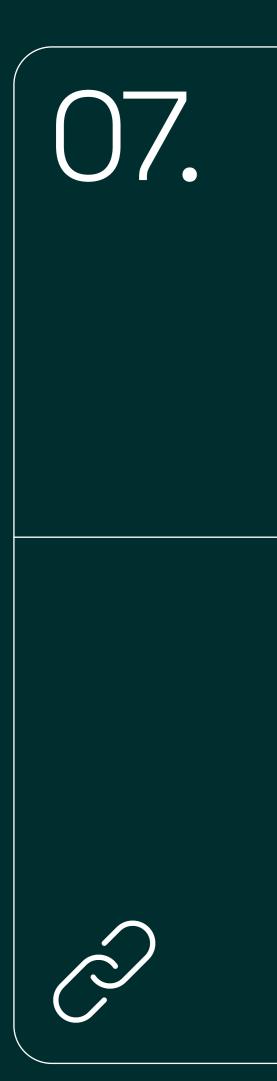
Challenges remain, however, particularly regarding the issuance of Letters of Authorisation (LoAs) by host countries to prevent double claiming of emission reductions. Initiatives such as the recently announced Multilateral Investment Guarantee Agency (<u>MIGA</u>) LoA template are welcomed to provide market harmonisation and support its growth.



CORSIA must also be understood within the broader context of international regulations and policies. The ongoing development of rules for Articles 6.2 and 6.4 and the need to apply CA and emit LoAs adds layers of complexity and uncertainty. The EU ETS introduces additional complexity as it imposes higher surrender obligations than CORSIA, leading to different compliance requirements for flights.

Penalties for non-compliance with CORSIA also vary significantly by country. Many Member States that are participating in the First Phase have not fully integrated CORSIA's offsetting requirements into their domestic laws, resulting in unclear penalties and enforcement mechanisms.

Airlines should not wait for this situation to escalate they must act now to secure available credits and build long-term emissions reduction strategies to mitigate future risks with experienced project developers like EcoSecurities, which was the first project developer to present a carbon reduction project in 2004 for the Clean Development Mechanism (CDM).



## **NAC**

As it may take 18 months or more for CEEUs to become available, early action is critical. Here are our recommended next steps for airline operators.

### 01

Optimise operational efficiencies

02

Secure supplies of SAFs

### 03

Talk to a project developer about investing in a carbon project

04

Explore carbon removal technologies

Implementing measures to improve fuel efficiency and reduce emissions from operations is essential for minimising offsetting requirements. Airlines should continue to invest in new technologies and operational practices that promote greater fuel efficiency.

While SAFs are currently limited in supply, they offer a crucial pathway for reducing emissions and meeting CORSIA obligations. Airlines should proactively engage with SAF producers and explore long-term agreements to ensure future availability.

Investing in carbon projects can generate highquality CORSIA-eligible credits and contribute to a diversified offsetting portfolio. Collaborating with experienced developers like EcoSecurities can provide access to a wide range of project opportunities and ensure alignment with broader sustainability goals.

While still in its early stages, carbon removal technology offers a promising avenue for achieving net zero emissions. Airlines should stay informed about the latest developments in this field and consider investing in carbon removal projects to complement their emissions reduction strategies.



EcoSecurities is a global leader in climate solutions, harnessing the power of nature, technology, and finance to accelerate decarbonisation efforts worldwide. With nearly three decades of experience, EcoSecurities excels in developing nature-based solutions, carbon dioxide removals (CDR) and energy and industrial transition projects.

### **Useful EcoSecurities resources**

|              | 10-step guide to purchasi<br>in climate projects 🗔      |
|--------------|---|
| $\checkmark$ | The case for carbon offse aviation emissions 🗔          |
|              | Carbon credits a 'catalyst<br>method to offset emission |

To date, EcoSecurities has deployed over \$1 billion in climate finance, generating more than 400 million carbon credits across 700 projects in 45 countries. The company collaborates closely with leading standard setters, governance bodies, and membership organisations to maximise the impact and integrity of carbon markets through diverse methodologies and protocols.

• Discover more at <u>ecosecurities.com</u>

sing carbon credits and investing

ets as an interim solution for

st' for climate action, not just a ons 🗩

## 09.

# D S S S D D

- Carbon credit a tradable unit that is used to offset CO<sub>2</sub> emissions by supporting climate projects
- **Carbon markets –** trading systems in which carbon credits are sold and bought
- CORSIA Eligible Emissions Units (CEEUs) these are units that meet the CORSIA Emissions Unit Eligibility Criteria (EUC) and are approved by the ICAO Council
- CORSIA Eligible Fuels (CEFs) these include CORSIA Sustainable Aviation Fuels (SAFs) and CORSIA Lower Carbon Aviation Fuels (LCAFs)



- Lower Carbon Aviation Fuels (LCAFs) fossil-based aviation fuels that meet the CORSIA Sustainability Criteria
- Letter of Authorisation (LoA) a written declaration by the host country to commit to apply Corresponding Adjustments when applicable
- Nationally Determined Contributions (NDCs) a plan by each country under the Paris Agreement that confirms how it will reduce GHGs
- Sustainable Aviation Fuels (SAFs) renewable or waste-derived aviation fuels that meet the CORSIA Sustainability Criteria

