

# Potential Implementation Deficit May Reduce CORSIA-Driven Offset Demand

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14 May 2026

## KEY FINDINGS

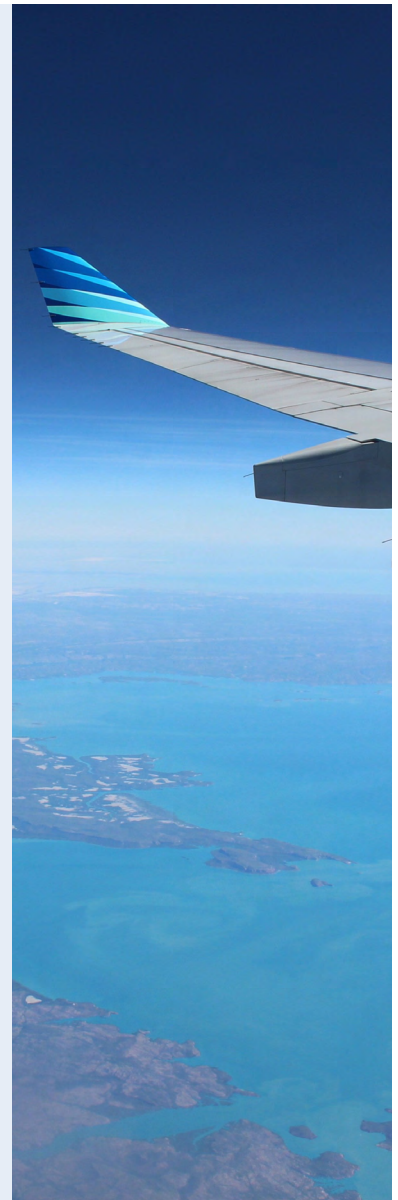
CORSIA's mandatory implementation phase begins in 2027 and could potentially create high demand for CORSIA-eligible offsets. However, significant uncertainty remains regarding the transposition and enforcement of CORSIA obligations within national regulatory frameworks, which may impact the scheme's ultimate effectiveness.

The transposition of CORSIA rules into national law concerning MRV and offsetting obligations remains fragmented and incomplete. Many countries with significant aviation emissions have not yet adopted relevant laws and procedures.

Enforcement measures vary considerably, with some countries imposing fines (E.U., New Zealand) and operating restrictions (E.U., Japan), while other countries have no enforcement measures (U.S.) or rely solely on voluntary action (U.A.E.).

The EU is likely to adopt additional eligibility requirements for CORSIA-eligible offset, limiting eligible offset categories. While only HFLD and certain cookstove credits have so far been identified as potentially ineligible, there is a risk that restrictions will be extended to other offset classes, such as nature-based carbon credits.

Without broader participation and credible enforcement, there is a material risk that CORSIA's much-anticipated compliance market may ultimately struggle to fully lift off. Such an outcome would not only weaken demand for carbon credits. It would also represent a significant missed opportunity for the world's first global sectoral carbon market mechanism to demonstrate that coordinated international action can effectively mobilize support for global climate objectives.



## A. CORSIA: GETTING READY FOR 2027

The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) – adopted by the International Civil Aviation Organization (ICAO) in 2016<sup>1</sup> – is ICAO’s response to international civil aviation’s contribution to climate change. It is the first global market-based mechanism designed to apply to an entire industry sector. The goal of CORSIA is modest by design: rather than reducing carbon dioxide (CO<sub>2</sub>) emissions from international civil aviation, it seeks to provide for carbon-neutral growth of the aviation industry by addressing the annual increase in total CO<sub>2</sub> emissions.

Instead of advocating for a completely decarbonized aviation sector, CORSIA offers options to offset and compensate CO<sub>2</sub> emissions. The scheme requires airlines to purchase and cancel CORSIA Eligible Emissions Units (EEUs) to offset any increase in global CO<sub>2</sub> emissions from international aviation above a set baseline of 2019 emissions levels. Airlines can also use CORSIA eligible fuels to reduce their emissions offsetting requirements. In October 2022, ICAO tightened the scheme compared to the original design by setting 85% of 2019 emissions as CORSIA’s emissions baseline from 2024 until the end of the scheme in 2035.<sup>2</sup> From 2027 – after a voluntary pilot (2021–23) and first phase (2024–26) – participation in CORSIA will become mandatory for most ICAO member states.<sup>3</sup>

Many carbon market actors expect that CORSIA will generate large and sustained demand for carbon credits once Phase 2 (2027–2035) begins. This expectation is supported by ICAO’s Committee on Aviation Environmental Protection (CAEP), which finds that CORSIA could create a cumulative offset demand of 980–1,500 mtCO<sub>2</sub>e in the period 2024–2035.<sup>4</sup>

However, the limited implementation progress of CORSIA in national jurisdictions thus far, the lack of enforcement measures, and what seems to be limited government willingness to hold airlines accountable for their emissions may result in aggregate demand for carbon credits being significantly lower than current projections suggest.

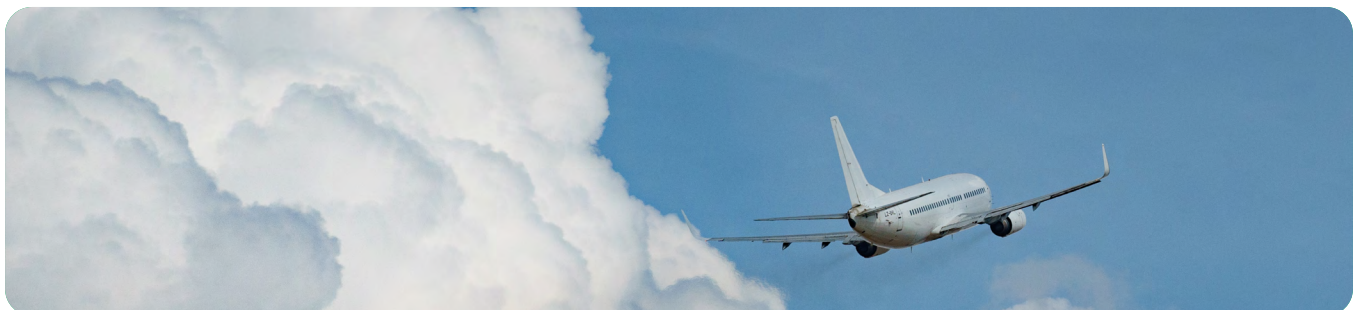
## B. THE IMPLEMENTATION OF CORSIA AND OFFSET DEMAND

### I. Transposition into national law

*Whether and how CORSIA will be implemented by an ICAO member state depends on the political will and ambition of such member state.*

In 2019, ICAO issued ‘international standards and recommended practices and procedures’ (SARPs) that guide the implementation of CORSIA by ICAO member states. ICAO SARPs operate under a “comply or notify differences” model rather than constituting strictly binding obligations. Although States are expected to conform to Standards, these do not have direct effect and must be implemented through domestic measures. Where compliance is impracticable or not achieved, Article 38 of the Chicago Convention requires States to notify ICAO of any differences, thereby preserving transparency while tolerating a degree of regulatory divergence.<sup>5</sup>

Only once the relevant SARPs are transposed into national law, CORSIA will be binding on airlines. How CORSIA will be implemented depends on the national elaboration of the relevant rules and procedures. Box 1 provides a snapshot of the CORSIA rules that have to be transposed into national law.



<sup>1</sup> ICAO Assembly Resolution A39-3 (2016)

<sup>2</sup> ICAO (2024), CORSIA Handbook.

<sup>3</sup> Exemptions apply to Least Developed Countries, Small Island Developing States, Landlocked Developing Countries and states with a very small share of international aviation activity.

<sup>4</sup> ICAO Council (2025). Interim Assessments in Support of the 2025 CORSIA Periodic Review. [https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/CORSIA%20Periodic%20Review/CAEP\\_Inputs-to-2025-CORSIA-periodic-review-C234.pdf](https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/CORSIA%20Periodic%20Review/CAEP_Inputs-to-2025-CORSIA-periodic-review-C234.pdf).

<sup>5</sup> ICAO (2023), Annex 16 to the Convention on International Civil Aviation, Environmental Protection, Volume IV – CORSIA, ix.

### Box 1: Essential elements in Annex 16 Vol. IV to be transposed into national law

2. **Applicability and scope:** CORSIA applies to international civilian flights by airlines emitting over 10,000 tCO<sub>2</sub> annually from aircraft with a maximum certified take-off mass above 5,700 kg between participating states. Member states must define criteria to determine whether an airline falls under their enforcement obligations and how specific international flights are attributed to airlines.
3. **MRV Provisions:** Airlines must be required to monitor and record fuel use, to create a state-approved Emissions Monitoring Plans and submit a verified Emissions Report. Member states must compile operator data and submit various reports to ICAO, and provisions enabling independent third-party verification need to be outlined.
4. **Offsetting requirements:** Airlines must be obliged to offset emissions above the CORSIA baseline and include the ICAO approved formulas to form the basis of the member states' annual calculation of the airlines' final CO<sub>2</sub> offsetting requirements.
5. **CORSIA EEU:** Airlines must be required to cancel CORSIA EEUs, to be defined and legally recognized in domestic legislation as those listed in the ICAO document "CORSIA EEUs"<sup>6</sup> compliant with "CORSIA EEU Eligibility Criteria"<sup>7</sup>, in a quantity equal to their final offsetting obligation. The cancellation must be recorded within a registry designated by a CORSIA EEU Programme and become publicly visible. Airlines must submit a copy of a verified EEU Cancellation Report to the state.

## II. Full participation and timeline implementation

*Major jurisdictions hosting large international airlines have not participated in the voluntary phases, and so far, a limited number of participating jurisdictions have fully implemented CORSIA's offsetting obligations.*

As of 2026, 130 states are participating in CORSIA on a voluntary basis.<sup>8</sup> As only flights between participating states are subject to CORSIA offsetting obligations, the mechanism applies only if both the origin and destination states participate in the scheme. While Turkey, the United Arab Emirates (U.A.E.) and the United States of America (U.S.) have participated in the voluntary phases, major aviation hubs such as China, India and Russia have refrained from doing so.<sup>9</sup> The U.S. – which had the highest offsetting requirements during the first phase<sup>10</sup> – has however not enacted

federal legislation to legally enforce CORSIA offsetting obligations and is unlikely to take enforcement measures given the current administration's rejection of any climate policy or measure. Similarly, if China and India do not implement the scheme, the effectiveness of the offsetting mechanism would be reduced  $\pm 15\%$  and  $\pm 5\%$ , respectively.<sup>11</sup> The lack of implementation of CORSIA by these countries with growing civil aviation hubs would significantly reduce the demand for offsets.

In sum, while most member states have adopted administrative procedures covering CORSIA measurement, reporting, and verification (MRV) requirements, only a small number of countries have enacted laws that establish explicit, binding national obligations to offset emissions and are backed by enforcement measures and penalties. See Box 2 for examples how countries have incorporated CORSIA SARPs into national law.

<sup>6</sup> ICAO (2024). ICAO Document: CORSIA Eligible Emissions Units. [https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/CORSIA\\_EEU\\_Oct2024.pdf](https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/CORSIA_EEU_Oct2024.pdf).

<sup>7</sup> ICAO (2024). CORSIA Emissions Unit Eligibility Criteria. [https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/ICAO\\_Document\\_09.pdf](https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/ICAO_Document_09.pdf).

<sup>8</sup> ICAO (2026). CORSIA States for Chapter 3 State Pairs. <https://www.icao.int/CORSIA/corsia-states-chapter-3-state-pairs>.

<sup>9</sup> IATA (2026). Offsetting CO<sub>2</sub> Emissions with CORSIA. <https://www.iata.org/en/programs/sustainability/corsia/>.

<sup>10</sup> ICAO (2025). CORSIA Central Registry (CCR): Information and Data for Transparency Part III: Total Annual CO<sub>2</sub> Emissions and Information for Aeroplane Operators for reporting year 2024. <https://www.icao.int/CORSIA/CCR>

<sup>11</sup> Fangyu Cao et. al. (2026). Uncertainty in CORSIA: assessing impacts of BASIC's withdrawal on carbon offsetting. Transportation Research Part A: Policy and Practice. Vol. 209. <https://doi.org/10.1016/j.tra.2026.105009>

### III. Enforcement

*If airlines can delay or avoid compensating for their emissions without effective sanctions, compliance demand for carbon credits remains highly uncertain.*

Even where CORSIA requirements are transposed into national law, they may not be effective. Enforcement of CORSIA offsetting requirements depends on penalties set by domestic law. These currently vary widely, are often weak, and, in some cases, are completely absent. For example, the U.A.E. stated that it will not impose fines on airlines and instead considers reputational exposure to be a sufficient trigger for airlines to comply.<sup>12</sup> In the U.K., consultations on a draft law<sup>13</sup> that defines binding offsetting obligations on airplane operators and proposes penalties and enforcement concluded in February 2025.<sup>14</sup> However, no consultation response has been issued, nor has the Amendment been laid before Parliament.

The European Union (E.U.), New Zealand, and Japan, in contrast, have established binding and strongly enforceable regimes. For example, EU law requires the transposition of the following penalties into domestic law: financial penalties of 100 EUR per ton of CO<sub>2</sub> not covered by surrendered allowances/units, alongside the continued obligation to surrender the missing units in the following year, the publication of a list of non-compliant airlines, and operating restrictions.<sup>15</sup>

Taken together, these divergent approaches to enforcement suggest that actual compliance demand under CORSIA may depend less on the formal existence of offsetting obligations and more on the political willingness and legal ability of individual jurisdictions to impose and enforce meaningful penalties on non-compliant airlines.

### C. ADDITIONAL CONSIDERATIONS (AND COMPLICATIONS)

#### I. Alignment with national or regional carbon pricing systems

*National carbon pricing schemes must be aligned with CORSIA in areas of potential overlap.*

National provisions implementing CORSIA affect existing national or regional carbon pricing schemes, which may need to be amended to avoid double counting.<sup>16</sup> The E.U. has addressed this by implementing both schemes in parallel: the block's Emissions Trading System (ETS) applies to flights within the European Economic Area (E.E.A.), the U.K., and Switzerland,<sup>17</sup> while CORSIA applies to extra-E.E.A. flights.<sup>18</sup> Similarly, Japan updated its domestic Japan GHG Emissions Reduction/Removal Certificate Scheme (J-Credit) to align with CORSIA requirements and establish a procedure for authorization of the use and retirement of J-Credits for CORSIA associated offsetting.<sup>19</sup> With increasing uptake of carbon pricing instruments globally, jurisdictions implementing CORSIA alongside these systems will require regulatory adjustments to ensure compatibility between domestic and international systems and avoidance of double counting of emission reductions and offsets.<sup>20</sup>



<sup>12</sup> Alejandra Padin-Dujon (2026). CFME26: UAE will not rely on fines to enforce CORSIA, aviation official says, <https://carbon-pulse.com/475319/>

<sup>13</sup> United Kingdom, Air Navigation (Carbon Offsetting and Reduction Scheme for International Aviation) (Amendment) Order, 2025.

<sup>14</sup> C.f. United Kingdom, Implementing the Carbon Offsetting and Reduction Scheme for International Aviation, CORSIA: Consultation, 2024.

<sup>15</sup> Directive 2003/87/EC (EU ETS Directive), Article 16 (2) and Article 16 (3)

<sup>16</sup> C.f. United Kingdom, Department for Transport, Implementing the Carbon Offsetting and Reduction Scheme for International Aviation, 2025.

<sup>17</sup> European Union Member States and three European Free Trade Association (EFTA) countries—Iceland, Liechtenstein, and Norway.

<sup>18</sup> Directive (EU) 2023/958 of the European Parliament and of the Council of 10 of May 2023 amending Directive 2003/97/EC as regards aviation's contribution to the Union's economy-wide emission reduction target and the appropriate implementation of a global market-based measure, OJ L 130/115, 10 May 2023, paragraph 30.

<sup>19</sup> Japan, Japan Greenhouse Gas Emission Reduction/Removal Certification Scheme (J-Credit Scheme): Implementation Outline Ver. 8.4., 2025. [https://japancredit.go.jp/english/pdf/01\\_youkou\\_english.pdf](https://japancredit.go.jp/english/pdf/01_youkou_english.pdf)

<sup>20</sup> World Bank. 2025. State and Trends of Carbon Pricing, 2025. Washington, DC: World Bank. DOI: 10.1596/978-1-4648-2255-1.

## II. Limitation of credit eligibility

*Countries can also limit the available supply of carbon credits by unilaterally deciding to restrict the eligibility of CORSIA-compliant carbon credits.*

In April 2026, information about the E.U. Commission considering restrictions on carbon credit eligibility was leaked to the press.<sup>21</sup> While the E.U. has a history of defining additional quality criteria for compliance use of carbon credits dating back to the Kyoto Protocol era, the news of further restrictions has created additional insecurity about the prospects for eligible supply and its impact on demand. Based on this leaked document, High Forest, Low Deforestation (HFLD) forest carbon credits may be ineligible on the basis that such projects may not satisfy additionality requirements, raising concerns that further restrictions on nature-based solution credits may apply. In addition, the document suggests excluding credits sourced from certain cookstove projects that apply outdated methodologies allowing for use of inflated fractions of non-renewable biomass.

Unilateral eligibility restrictions by major jurisdictions such as the E.U. would lead to increasing fragmentation of the CORSIA market, reducing fungibility across credit categories and creating separate tiers of compliance value between universally eligible credits and credits accepted only in less restrictive jurisdictions.

## D. CONCLUSION

The success of CORSIA as a driver of large-scale offset demand may depend less on ICAO's formal framework than on the willingness of member states to transpose, enforce, and operationalize the scheme through strong, binding, and enforceable domestic legislation. As CORSIA's mandatory participation phase in 2027 approaches, the current implementation landscape remains fragmented, with limited participation by major aviation markets, incomplete transposition of offsetting obligations into national law, weak/absent enforcement mechanisms, and diverging approaches to credit eligibility. These developments point to a likely delay in offset sourcing from the sector, reducing carbon finance flows to project developers and limiting investment in mitigation activities that CORSIA was intended to help support.

For market participants, this suggests that regulatory implementation risk – rather than aggregate ICAO demand projections alone – will become a key determinant of future market value. The commercial viability and pricing of CORSIA-eligible credits is therefore not only affected by ICAO approval status; evolving national enforcement practices, jurisdiction-specific eligibility rules, and the degree to which major aviation states are prepared to impose meaningful compliance obligations on airlines will all affect future pricing.



<sup>21</sup> Theodora Stankova, New EU Draft Rules Could Disqualify Almost All Existing CORSIA Phase 1 Credits, Carbonherald, <https://carbonherald.com/new-eu-draft-rules-could-disqualify-almost-all-existing-corsia-phase-1-credits/>, Published: 22 April 2026.

## Box 2: Examples for CORSIA SARPs implementation into national law

CORSIA is implemented in **the EU** through Directive 2023/959/EC and Directive (EU) 2023/958, which amend the Emissions Trading Directive. The EU legal framework provides for the transposition into national law and administrative procedures. For example, Germany implements CORSIA obligations through amendments to the emissions trading law and regulations concerning MRV processes in aviation, while France amended its Environmental Code.

The implementation of CORSIA in the EU creates additional complications through its potential overlap with the EU ETS. Currently, only intra-European Economic Area (EEA) flights are within the scope of the EU ETS, while CORSIA applies to extra-EEA flights. However, this limitation over coverage was decided to be temporary. By July 2026, the Commission will assess whether CORSIA's contribution towards achieving the objectives of the Paris Agreement is sufficient or if the geographical scope of the EU ETS should be extended to extra-EEA flights. Considering previous controversies around the extension of the EU ETS to non-EU flights, the Commission may just extend the exemption. Yet, regulatory uncertainty remains. A delegated regulation sets out the detailed rules for implementing CORSIA MRV requirements and for emissions unit cancellation reports.

**New Zealand** amended its Civil Aviation Act in 2023 to give effect to CORSIA's MRV requirements and offset unit cancellation obligations, including a section on penalties in the form of fines up to \$250,000 for airlines that fail to comply with the regulations. **Japan** chose to transpose the CORSIA's MRV requirements by adopting an Ordinance for Enforcement of the Civil Aeronautics Act, an administrative act by the Ministry of Land, Infrastructure, Transport and Tourism. Japan added CORSIA MRV compliance as a requirement for gaining a certificate needed by airlines to operate internationally and allows for the withdrawal of business licenses in case of non-compliance. **Brazil** fully transposed CORSIA's SARPs into national regulation through National Civil Aviation Agency Resolution No. 743/2024 and Ordinance No. 15,007/2024, which set MRV requirements and obligations to reduce and offset emissions that exceed the CORSIA baseline for Brazilian airlines operating internationally. The resolution also specifies fines for non-compliance. **South Africa** participated in the Assistance, Capacity Building and Training on CORSIA but has not adopted a regulatory framework. The South African Civil Aviation Authority has published guidelines in February 2026, which establish obligations for airlines to comply with CORSIA's MRV and offsetting framework.

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