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CORSIA AND ARTICLE 6: UNLOCKING THE DEMAND POTENTIAL FOR CARBON CREDITS WITH CORRESPONDING ADJUSTMENTS IN A FRAGMENTED MARKET

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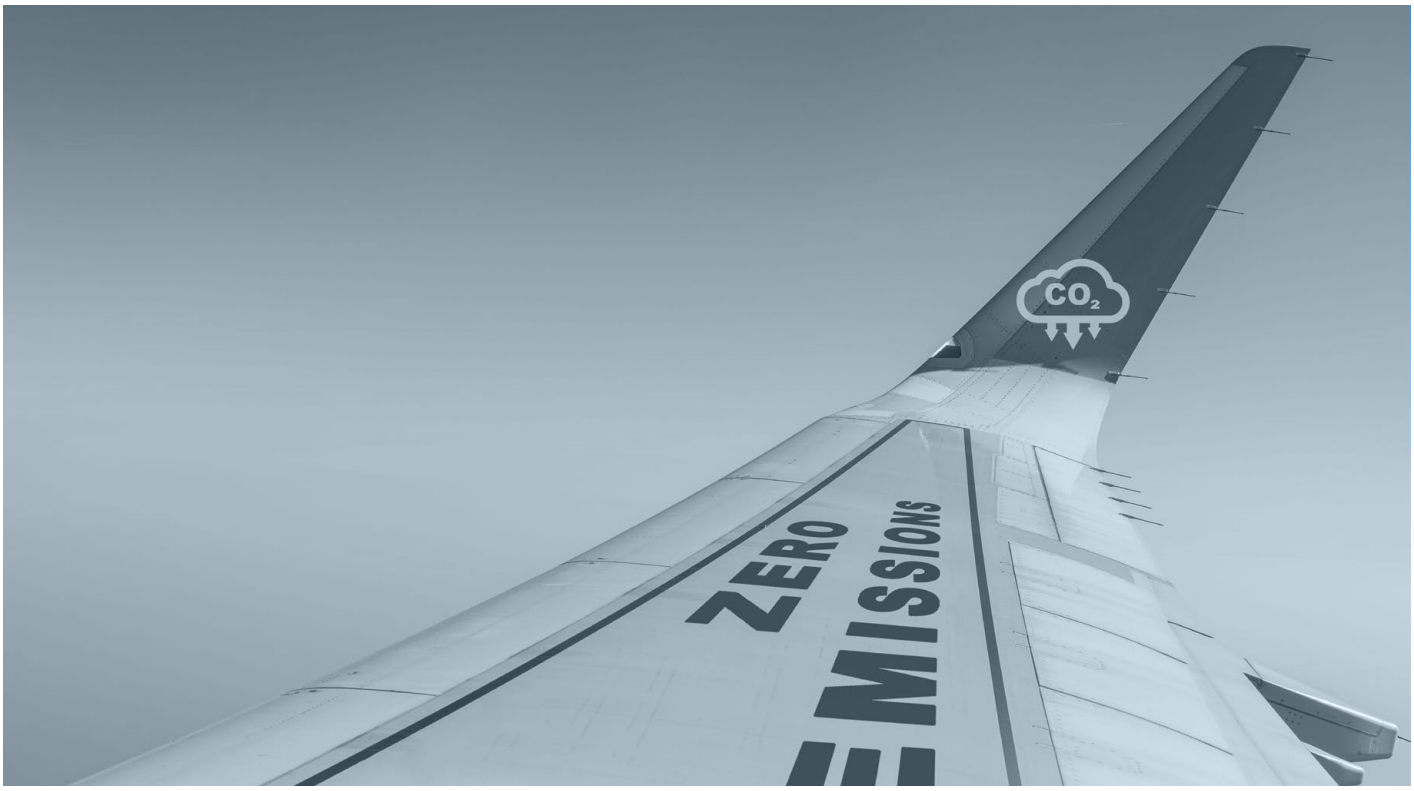
Synopsis

As international aviation works toward its commitment to net zero emissions by 2050, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is emerging as a major driver of demand for carbon credits. However, its ability to absorb a significant volume of eligible emission units with corresponding adjustments under Article 6 of the Paris Agreement remains uncertain. Regulatory ambiguity, market fragmentation, and implementation challenges at the international and national level are creating significant obstacles that must be addressed to unlock CORSIA's full potential.

This paper examines how CORSIA can serve as a catalyst for scaled demand in the carbon market while identifying evolving barriers that may limit its impact. It first explores the demand potential of CORSIA by analyzing how the aviation sector's offsetting obligations could drive the purchase of Article 6-compliant credits and why corresponding adjustments are crucial to maintaining the integrity of credits used under the scheme. The discussion then turns to the market and implementation challenges that hinder the supply of eligible credits. These include potential misalignment between the Article 6 mechanisms and CORSIA, the complexity of programme and methodology eligibility criteria, government capacity constraints, and overall market fragmentation. Special attention is given to the role of the International Civil Aviation Organization (ICAO) Technical Advisory Body (TAB) and the broader regulatory landscape, including the intersection between CORSIA, UNFCCC guidelines, national and regional emissions trading systems, and voluntary carbon markets.

Recognizing these challenges, the paper explores potential pathways to greater market cohesion. It highlights the need for more explicit eligibility rules within CORSIA in the context of Article 6, more vigorous capacity-building efforts to support government implementation, and coordinated measures to address market fragmentation. The paper concludes by offering specific recommendations for ICAO, national governments, and market stakeholders to create a more integrated, transparent, and scalable market for eligible emission units with corresponding adjustments, ensuring that CORSIA's implementation aligns effectively with guidelines developed for Article 6 of the Paris Agreement (Article 6 Guidelines).[1]

[1] UNFCCC (n.d.). Article 6 - Cooperative Implementation.



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1 The Opportunity – CORSIA as a Demand Catalyst

The ICAO developed and launched CORSIA to serve as a market-based mechanism to cap, reduce and offset the growth of international aviation emissions, adopting a baseline of 85 percent of 2019 levels from 2024 to 2035.[2] CORSIA is being implemented in phases, beginning with a voluntary Pilot Phase (2021-2023), followed by the First Phase (2024–2026) and a mandatory phase (2027–2035). This phased approach is designed to create sustained demand for high-integrity carbon credits.

Potential Scale of Demand

CORSIA is poised to have a significant impact on carbon credit demand. According to a report by MSCI,[3] cumulative demand for CORSIA-eligible carbon credits from airlines during Phase I (2024–2026) is projected to range between 106 and 137 million tons of CO_2 equivalent ($MtCO_2e$). The International Air Transport Association (IATA) estimates a broader range of 64 to 162 million units for the same period.[4] As compliance obligations expand in Phase II (2027–2035), demand is expected to rise substantially, reaching between 502 and 1,299 $MtCO_2e$.[5]

For context, in 2023 global issuance of carbon credits across independent, international, and governmental crediting programmes totaled 372 million units.[6] These figures highlight CORSIA's nascent role as a key driver of global carbon credit transactions.

However, political factors—particularly the change in government in the United States and subsequent shift in US policies—could impact demand in the coming years, a challenge further explored in the next section.

[2] IATA (December 2024). CORSIA Fact Sheet.
[3] MSCI (22 November, 2024). CORSIA: Costs and Implications for the Airline Industry.
[4] Jaclyn Foss (8 January 2024). Navigating the Aviation Industry's transition to CORSIA Phase 1. CFP Energy
[5] Note 3 above.
[6] World Bank (n.d.). State and Trends of Carbon Pricing Dashboard. Retrieved 25 January 2025.

A key factor shaping CORSIA's demand dynamics is the role of corresponding adjustments

CORSIA's Role in Scaling Article 6 Markets

A key factor shaping CORSIA's demand dynamics is the role of corresponding adjustments (CAs) under Article 6 of the Paris Agreement. Corresponding adjustments—which CORSIA requires—ensure emission reductions are not double-counted by the host country and the entity purchasing the credit, enhancing the environmental integrity and credibility of CORSIA-eligible credits. It is effectively an accounting mechanism between a host country (in which an emission reduction or removal is generated) and an acquiring country or entity to ensure only one party claims the benefit of the emission reduction or removal. However, this mechanism also represents a major supply-side constraint, as host countries must authorize transfers and deduct emission reductions from their Nationally Determined Contributions (NDCs).

The World Bank's State and Trends of Carbon Pricing 2024 report[7] underscores the urgency of expanding the supply of credits with corresponding adjustments, stating that "*a substantial increase in the supply of correspondingly-adjusted credits will be necessary within the next four years*" to meet CORSIA's demand. However, the report also highlights uncertainty in the availability of such credits, as few governments have yet established the institutional frameworks and capacity needed to process authorizations and comply with Article 6 reporting requirements.[8]

As a result, CORSIA's effectiveness as a demand catalyst depends on its own crediting rules and the active participation of airlines, host jurisdictions, and the broader development of the Article 6 carbon market. Strengthening institutional capacity and regulatory alignment will ensure a steady and scalable supply of eligible credits.

2 Key Challenges with CORSIA

While CORSIA represents a significant step forward in addressing aviation emissions, its implementation is fraught with challenges that could limit or even undermine its effectiveness. These challenges range from uncertainty around credit eligibility and market fragmentation to political risks and structural barriers in applying corresponding adjustments under Article 6 of the Paris Agreement. Addressing these issues will be critical to ensuring the long-term credibility and functionality of CORSIA.

Uncertainty Around Eligibility

One of the most pressing concerns with CORSIA is the uncertainty about which programmes in the market will meet its eligibility requirements. Key milestones were reached in the last quarter of 2024, with ICAO approving the independent programmes Gold Standard, Verra, Global Carbon Council, and Climate Action Reserve—in addition to the two already approved programmes: American Carbon Registry (ACR) and Architecture for REDD+ Transactions (ART TREES)—to supply credits during Phase I (2024-2026)[9] and the publication of specific methodology exclusions for the six approved crediting programmes.[10] However, these criteria currently only apply to the first phase of CORSIA. The lack of long-term clarity—an inherent challenge in emerging carbon markets like CORSIA—creates uncertainty for investors and credit suppliers, making it difficult to plan for sustained participation and credit issuance beyond the first phase.

Further complicating eligibility is the role of Article 6 reporting and procedural elements, such as Letters of Authorization (LOAs), Initial Reports, Annual Reports, and Biennial Transparency Reports. These are critical in determining whether corresponding adjustments have been properly made. The administrative complexity of these processes could deter participation or create bottlenecks in project approval and credit issuance. Fast adaptation and more precise guidance on future phases from ICAO will be crucial to maintaining trust and compliance.

Another potential supply-side constraint is the limited availability of risk insurance products tailored to carbon credit projects. ICAO has made it clear that the emission unit programmes are accountable for the integrity of units generated and the avoidance of double claiming (not airline operators).[11] In this context, ICAO's TAB has acknowledged that such insurance products may assist the programme in meeting this obligation. However, the TAB emphasized that '*third-party guarantees/insurance are not strictly necessary to prevent double-claiming*' as it only assesses emissions unit programmes (albeit ICAO has provided guidance on the procedures programmes should have in place if seeking to utilize such insurance products).[12]

[7] World Bank. 2024. State and Trends of Carbon Pricing 2024. © Washington, DC: World Bank. http://hdl.handle.net/10986/41544 License: CC BY 3.0 IGO.
[8] Note 7 above, page 47.
[9] Velev, Vasil (1 November 2024). ICAO Approves Four Programs for CORSIA Eligibility. Carbon Herald.
[10] ICAO (28 October 2024). CORSIA Eligible Emissions Units. 12th Edition.
[11] ICAO Technical Advisory Body (August 2024). TAB Assessments and Recommendations on Applications and Procedural Updates.

As acknowledged by ICAO, whilst the market is capable of meeting emissions unit integrity requirements in the absence of insurance, independent programmes are seeking to incorporate the utilization of such products. For instance, the World Bank's Multilateral Investment Guarantee Agency (MIGA), the only insurance provider approved by Gold Standard to date for CORSIA credits,[13] has introduced an insurance solution to seek to address the requirements of ICAO concerning the integrity of emissions units. Still, its operational scale remains small and does not cover the market's entire demand.

Under Gold Standard's guideline for the eligibility of verified emission reductions for CORSIA's first phase, the project developer must provide:

1. Evidence that a host country has applied a corresponding adjustment for the Gold Standard Verified Emission Reductions (GS-VERs) through its Biennial Transparency Report to the United Nations Framework Convention on Climate Change (UNFCCC). This requires a copy of the Biennial Transparency Report or a link to information in the Article 6 Database where the host country's application of a corresponding adjustment can be traced to the GS-VERs. Access to the former report is beholden to it being prepared by the host country. As for the Article 6 Database, UNFCCC's Centralized Accounting and Reporting Platform (CARP) already accepts and displays countries' Initial Reports, Cooperative Approaches and Letter of Authorization. Additionally, the Article 6.4 Supervisory Body agreed to launch an interim registry during its first meeting of 2025, which is still under development.[14]
2. A guarantee that in the event of the retirement of GS-VERs in the absence of a corresponding adjustment, any GS-VERs eligible for use under CORSIA shall be replaced with an equivalent volume of CORSIA-eligible units. Under this option, the project developer must sign a Deed of Undertaking concerning such replacement units. The project developer must also hold an approved insurance policy to support this undertaking. The aforementioned approved MIGA policy provides 'breach of contract' coverage if a host country has provided a Letter of Authorization but fails to provide a corresponding adjustment for the GS-VERs in accordance with a commitment to do so.[15]

As of COP29, MIGA had only recently launched its first carbon credit risk insurance product, with just one company—a Kenya-based clean cooking utility, Koko Networks—close to having its credits underwritten following an application in Q2 2024.[16] Given the limitations in the number of insurance providers and the ability to process projects at scale, there is a gap in insurance coverage, which can potentially exacerbate issues in the market over credit integrity and risk exposure.

Without broader participation from private insurance providers, as noted by Natalia Dorfman, CEO of carbon credit insurer Kita, '*there will inherently be an insurance bottleneck*.'[17] At the same time, project owners should also have a role in mitigating risk by carefully selecting appropriate insurance coverage, but they require more options to do so effectively.

Market Fragmentation

CORSIA operates within the broader voluntary carbon market landscape that remains highly fragmented, with multiple programmes and methodologies eligible across programmes (in contrast to a regulated compliance market). Despite ICAO's effort to centralize eligibility requirements, diverse interpretations of credit integrity and differing national approaches to Article 6 carbon markets continue to create discrepancies.

The flexibility as to what constitutes a 'high integrity' or 'high quality' offset within the voluntary market has, on the one hand, fostered innovation in the evolving development of the carbon markets. On the other hand, the lack of homogeneity also means that there is no universal understanding of what constitutes a high-quality offset. This further complicates market operations, potentially leading to inefficiencies and arbitrage between compliance-driven and voluntary credit markets. ICAO seeks to address the matter of integrity through the development of its eligibility requirements.

However, with ICAO's current assignment of accountability for ensuring credit integrity to independent carbon crediting programmes and not the UNFCCC's Article 6.4 mechanism as the ultimate standard setter, each programme can apply its approach within ICAO's guidelines. This is understood to be due to the lengthier time it has taken to agree with the Article 6.4 mechanism guidelines (which are subject to multilateral processes). However, if Article 6.4 emission reduction units are ultimately not recognized under CORSIA, the resulting divergence in standards could hinder long-term interoperability between CORSIA and emerging Article 6 markets.

[12] Note 10 above.
[13] Gold Standard (9 December 2024). Eligibility of Gold Standard VERs for use under CORSIA's First Phase (2024-2026). Retrieved 8 February 2025.
[14] Article 6 Implementation Partnership (23 February 2025). Summary of the 15th meeting of the Article 6.4 Supervisory Body (SBM 015).
[15] Note 13 above.
[16] Quantum (13 December 2024). Insurance poses another bottleneck for Corsia credit supply.
[17] Natalia Dorfman (December 2024). LinkedIn Post.

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Challenges in Implementing Corresponding Adjustments

As already highlighted, one of the most complex structural barriers in CORSIA is the implementation of corresponding adjustments under Article 6 of the Paris Agreement. While corresponding adjustments enhance the credibility of carbon credits by ensuring emissions reductions are not double-counted, their application in practice has proven difficult and slow due to:

- **Limited government capacity** to process and authorize corresponding adjustments, including all required institutional arrangements.
- **Timeline misalignment** between governments and market actors—while project developers operate on commercial timelines, many governments still need to define their Article 6 strategies. Furthermore, emission reduction or removal projects have longer investment horizons than NDC cycles (5 years) and political cycles.
- **Evolving role of the Article 6.4 crediting mechanism**—it remains uncertain whether projects registered under the Paris Agreement's centralized Article 6.4 mechanism will be eligible for CORSIA or if demand will be mainly from government-to-government transactions. As an aside, we note the potential for Article 6.4 emission reduction units to play an important role in offsetting hard-to-abate emissions as part of corporate voluntary or mandatory energy transition plan reporting. Ultimately, if Article 6.4 credits do not find a market beyond specific sovereign buyers, this could undermine the mechanism's viability.

Political Uncertainty: the ripple effects of US climate policy

On 20 January 2025, President Trump signed an executive order to initiate the US withdrawal from the Paris Agreement for a second time. Citing 'economic efficiencies' without providing evidence, nor referencing the economic evidence in support of addressing climate change,[19] the order sought to be effective 'immediately' upon the provision of a written notification to the Secretary General of the United Nations.

However, the provisions of the Paris Agreement (of which the United States is still a party) provide that '*at any time after three years from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement by giving written notification to the Depository.*'[20] Furthermore, any such written notification shall only take effect '*upon expiry of one year from the date of receipt by the Depository of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal.*'[21] Accordingly, at approximately eight weeks into the second term of President Trump, the international community still has the balance of the year to consider whether the foreshadowed US withdrawal will be the same or different to the last withdrawal by the US from the Paris Agreement and to implement any required mitigation, or strategic opportunities, associated with this decision.

The latest proposed withdrawal from the Paris Agreement reflects a recurring pattern in US climate policy, which at this early stage is consistent with previous shifts experienced by the international community under both the Paris Agreement[22] and its predecessor the Kyoto Protocol.[23]

18 The White House, Office of the Press Secretary. (20 January 2025). Putting America First in International Environmental Agreements: Executive Order.

19 See for instance, UN Environment Programme (21 February 2025) With new climate plans, countries could supercharge growth, fight poverty, say experts (accessed 7 March 2025).

20 Article 28(1) of the Paris Agreement. It is noted the United States accepted the Paris Agreement on 20 January 2021.

21 Article 28(2) of the Paris Agreement.

22 The schedule of signatories to the Paris Agreement includes the following notation for the US: 'On 3 September 2016, the Government of the United States of America deposited its instrument of acceptance of the Agreement…. On 4 November 2019, the Government of the United States of America notified the Secretary-General of its decision to withdraw from the Agreement which took effect on 4 November 2020 … On 20 January 2021, the Government of the United States of America deposited its instrument of acceptance of the Agreement…'.

23 For the history of the entry into force of the Kyoto Protocol see P Sands, Principles of International Environmental Law (2003) Cambridge University Press at 376.

Only this time, the environmental impacts of delayed climate action are being more clearly experienced both from a human and economic perspective[24] and a 1.5 degree increase in global temperatures was reached in 2024.[25]

Before the announcement, US airlines had been expected to account for nearly a quarter of CORSIA's projected demand in Phase I, needing up to 40 million credits, equivalent to 22 percent to 30 percent of the total forecasted global demand.[26]

The proposed withdrawal of the US from the Paris Agreement is distinct from the continued participation of US airline operators in CORSIA. However, the withdrawal:

1. potentially exacerbates the complexities for US airline operators in obtaining eligible emission units with corresponding adjustments under the Paris Agreement if the US is no longer a party to the Paris Agreement.[27] As a result, it reinforces the need for the flexibility instilled in cooperative approaches under Article 6.2 of the Paris Agreement to encompass unilateral authorization under the Paris Agreement for the purposes of CORSIA;
2. effectively rules out the US from the business opportunity of being a host country for generating emission reduction or removal units with corresponding adjustments;[28] and
3. introduces uncertainty over enforcement mechanisms. Under current rules, penalties for non-compliance fall to the applicable participating country with respect to its airline carriers, meaning that if the US government refuses to enforce CORSIA compliance, participation could shift from a mandatory requirement to a voluntary commitment by individual airlines.[29]

However, precedent suggests that major US carriers will likely continue to participate. When President Trump announced the first withdrawal from the Paris Agreement in June 2017, all major US airlines voluntarily committed to CORSIA before its pilot phase in 2021.[30]

Furthermore, the requirements of CORSIA expressly contemplate an operator of a non-participating Party is still required to comply with CORSIA offsetting requirements for flight routes between two participating States.[31]

[24] See for instance, Report of Governor Newsom's Strike Force on Addressing Wildfire Risk and Achieving Safe, Reliable, Affordable Energy that Meets California's Clean Energy Goals (12 April 2019) which predates the January 2025 wildfires in California (accessed 7 March 2025).

[25] M Poynting, E Rivault and B Dale (10 January 2025) World's hottest year: 2024 first to pass 1.5C warming limit, BBC.

[26] Abatable (12 January 2025). The voluntary carbon market in 2024 – 11 key takeaways from Abatable.

[27] P Gourlay (25 January 2025). US airlines to carry big demand for Phase 1 CORSIA credits « Carbon Pulse (accessed 7 March 2025).

[28] Fastmarkets (23 January 2025) US withdrawal Paris Agreement raises questions, CORSIA credit.

[29] Note 28 above.

[30] McMahon, Jeff (29 May 2019). All Major U.S. Airlines Commit To UN Climate Plan Outside of Paris Agreement. Forbes.

[31] ICAO, Frequently Asked Questions (accessed 12 March 2025).

Potential Outcomes of a US Exit from CORSIA

A hypothetical US withdrawal from CORSIA could have far-reaching implications, particularly in the European Union, which has historically advocated for stronger climate action in aviation. The European Commission is set to review CORSIA's effectiveness in 2026.[32]

In the context of the pending review, the European Commission has highlighted that the EU ETS was originally intended to apply to 'emissions from flights from, to and within the European Economic Area (EEA) – the EU Member States, plus Iceland, Liechtenstein and Norway…The EU, however, decided to temporarily limit the scope of the EU ETS to flights within the EEA to support the development of [CORSIA]'.[33] This limitation has been extended until 2027, hence the pending review by July 2026.

The EU has indicated the review will consider 'whether more action is required for flights to and from Europe, in line with criteria set in the EU ETS Directive…Alternatively, the proposal could be to maintain the intra-European scope if CORSIA is strengthened and has a high level of global participation and implementation.'[34]

The current EU extension recognizes the Pilot and First Phase of CORSIA and coincides with the commencement of the mandatory phase of CORSIA in 2027. The EU has stated, '[a]fter this date, departing flights from the EEA to states not implementing ICAO's CORSIA scheme would be included in the EU ETS'.[35]

If CORSIA is deemed insufficient by the EU, the EU may opt to bring all international flights between the EEA and third-party countries under the EU ETS by 2027. This scenario mirrors the EU's current approach to the Carbon Border Adjustment Mechanism (CBAM), where it moved forward with unilateral action after assessing that existing international measures were inadequate to combat climate change.

As a result, such a move would further fragment global carbon markets, create regulatory uncertainty for airlines operating across multiple jurisdictions, and diminish the opportunity CORSIA presents as the largest compliance market under Article 6.

However, the position regarding international aviation will be particularly nuanced, given the current geopolitical environment.[36] Beyond the EU, the position of the US in respect of CORSIA could be relied upon by other countries.[37]

Accordingly, it is timely to recall that the Chicago Convention on International Civil Aviation was signed by 52 States on 7 December 1944, before the end of World War 2 and subsequently ratified by 5 March 1947 (Chicago Convention).[38] In more recent times, the international standards for implementation of CORSIA were adopted as an Annex to the Chicago Convention.[39] The principles upon which the Chicago Convention was founded include the promotion of cooperation between nations and peoples and the development of international civil aviation in a safe and orderly manner. Those principles continue to remain relevant to this day, particularly in the context of international implementation of CORSIA.

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31 ICAO, Frequently Asked Questions (accessed 12 March 2025).

32 European Commission (n.d.). Reducing emissions from aviation. Retrieved 3 February 2025.

33 Note 32 above.

34 Note 32 above.

35 Note 32 above.

36 See also N Ferris (1 March 2025) ANALYSIS: Growing uncertainty around CORSIA participation leaves EU in a quandary « Carbon Pulse (accessed 7 March 2025).

37 Note 35 above. See also Greenfield, Patrick (13 November 2024). Argentina withdraws negotiators from Cop29 summit. The Guardian.

38 ICAO (n.d.) Convention on International Civil Aviation - Doc 7300 (accessed 12 March 2025).

39 Note 1 above.

3 Overcoming Barriers and CORSIA's role

Clarifying Rules and Article 6 Alignment

A well-functioning carbon market relies on regulatory clarity, stability and fungibility, particularly in sectors like international aviation, where compliance frameworks must accommodate multiple jurisdictions and stakeholders. ICAO plays a central role in setting clear eligibility criteria for CORSIA-compliant credits, ensuring that airlines and crediting programmes operate with a shared understanding of the rules.

One of the key areas requiring clarification is how CORSIA will align with the updated Article 6 guidelines finalized at COP29. The last ordinary ICAO Council session of 2024 concluded just days before COP29 began, on 8 November 2024.[40] With the further agreement on the Article 6 rules reached at COP29, ICAO has an opportunity to confirm its position on the Article 6.4 international carbon market and the potential for further integration between CORSIA and Article 6 of the Paris Agreement. This alignment is critical given the role of corresponding adjustments in preventing double counting of emission reductions and maintaining the integrity of global climate commitments by countries and corporations.

A crucial yet unresolved issue is whether CORSIA will align with the UNFCCC's methodology standard under Article 6.4.[41] This standard is designed to ensure that carbon crediting mechanisms contribute to the ratcheting up of NDCs, reinforcing the long-term ambition of the Paris Agreement. However, none of the crediting programmes currently eligible under CORSIA are required to adhere to this methodology standard, creating a potential misalignment between CORSIA's offsetting approach and the broader Paris Agreement vision. Given that Article 6 is built on the principle of aligning market mechanisms with evolving NDCs, ensuring that CORSIA follows this trajectory should be a cornerstone of its future design.

The ICAO TAB has publicly indicated it will assess the Article 6.4 mechanism 'as soon as the mechanism is operational.'[42] As of the date of this article, no specific timeframe has been provided for ICAO's assessment.

Building Capacity for Governments and Developers

Sustained capacity-building efforts are urgently required to prepare governments for participation in Article 6. In particular, for applying corresponding adjustments, as the process is time-intensive and requires long-term institutional strengthening. Proper application of corresponding adjustments requires regular reporting to the UNFCCC—including initial reports, annual reports, and Biennial Transparency Reports (BTR).

ICAO's Assistance, Capacity Building, and Training (ACT-CORSIA) programme, established in July 2018, has been instrumental in supporting countries in implementing CORSIA. The ACT-CORSIA Buddy Partnerships have provided targeted training to CORSIA Focal Points and delivered capacity-building activities to 136 participating states. As a result, 99 percent of global 2023 CO_2 emissions were reported through the CORSIA Central Registry (CCR), demonstrating the program's effectiveness.[43] However, further alignment with Article 6 capacity-building initiatives would be strategic to ensure alignment between CORSIA and the Article 6 guidelines and effective interoperability between CORSIA and the emerging Article 6 markets, including capacity building for government reporting to the UNFCCC.

Additionally, various actors—including multilateral organizations, regional partnerships, and private initiatives—can support readiness efforts. Institutions such as the Global Green Growth Institute (GGGI), UNEP and development banks are already providing technical assistance and funding for capacity development through established programs such as Supporting Preparedness for Article 6 Cooperation (SPAR6C), the Carbon Transaction Facility, and the Partnership for Market Implementation.

Reducing Fragmentation and Building Cohesion

Greater coordination among the UNFCCC, governments, ICAO, and market participants is necessary to align CORSIA with Article 6 of the Paris Agreement. One example of ongoing alignment efforts is the UK Department for Transport consultation on CORSIA implementation, which closed on 24 February 2025.[44] The consultation sought to explore interoperability between CORSIA and the UK Emissions Trading Scheme (ETS), which covers only domestic aviation but may be extended to international flights. Additionally, the draft Air Navigation (Carbon Offsetting and Reduction Scheme for International Aviation) (Amendment) Order 2025 proposes a fine of £100 per tonne of CO_2e for non-compliance,[45] serving as a strong enforcement tool to enhance compliance.

40 ICAO (n.d.). ICAO Council 233rd Session. Retrieved 10 February 2025.

41 UNFCCC (9 October 2024). Standard: Application of the requirements of Chapter V.B (Methodologies) for the development and assessment of Article 6.4 mechanism methodologies.

42 R Manuell (12 February 2025) ICAO to assess Paris crediting mechanism units for CORSIA once time is right -TAB chair « Carbon Pulse (accessed 8 March 2025).

43 ICAO (December 2024). CORSIA Newsletter, December 2024.

44 UK Department of Transport (February 2025). Open consultation: Implementing the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

45 UK Department of Transport (December 2025). Draft Air Navigation (Carbon Offsetting and Reduction Scheme for International Aviation) (Amendment) Order 2025, article 58A.

Standardizing national registry systems could further facilitate seamless tracking and reporting of emissions reductions, reducing administrative burdens and improving transparency across jurisdictions. However, this approach would only be effective if these national standards and registries become CORSIA-approved. Establishing a clear pathway for such approval could enhance market cohesion and reduce the ongoing fragmentation between compliance-driven and voluntary crediting mechanisms.

Recent efforts by China and Thailand illustrate the complexities of this process. Both countries have submitted their national carbon crediting programmes—China's Certified Emission Reduction Scheme and Thailand's Voluntary Emission Reduction Programme—for TAB's assessment.[46] While China's programme was approved for the 2021–2023 pilot phase with multiple exclusions, it has yet to be approved for the first phase of the compliance period (2024–2026).[47] Meanwhile, Thailand's programme has been deemed conditionally eligible for the compliance phase, pending further actions to meet CORSIA requirements.[48]

In contrast, Ghana presents a different challenge. Unlike China and Thailand, Ghana's framework for international carbon market participation is based on pre-approved methodologies, including those from the Clean Development Mechanism (CDM).[49] While emission reductions from new projects in Ghana following CDM methodologies are technically not CDM credits, they can be issued under the Ghana Carbon Registry if they comply with national guidelines. One expected pathway is for these projects to eventually transition to the Article 6.4 mechanism. If CDM methodologies are incorporated into Article 6.4, ICAO could assess their eligibility under CORSIA. This scenario underscores the need for greater clarity on the eligibility of projects seeking to participate under the Article 6.4 mechanism. It highlights the broader challenge of ensuring alignment between national frameworks and international carbon markets.

The Path Forward for ICAO

As part of its evolving role, ICAO's TAB is reviewing applications from emissions unit programmes approved in the first phase of CORSIA to determine their eligibility for the mandatory second phase (2027-2029).[50] It is important for ICAO to clarify requirements beyond the immediate term, to enable participants and investors to plan for Phase 3 of CORSIA.

46 ICAO (2024). CORSIA Eligible Emissions Units Informal Summary Table (accessed 10 March 2025).

47 Note 46 above.

48 Note 46 above.

49 Environmental Protection Agency of Ghana (December, 2022). Ghana's framework on international carbon markets and non-market approaches.

50 ICAO (2025). Technical Advisory Body 2025 Assessment Cycle.

To enhance harmonization and stakeholder engagement, ICAO should proactively communicate and coordinate with relevant actors, including the UNFCCC.

To enhance harmonization and stakeholder engagement, ICAO should proactively communicate and coordinate with relevant actors, including the UNFCCC. Ongoing stakeholder dialogue and engagement will be crucial for mitigating the risks of fragmentation, given the current geopolitical environment.

The ongoing ICAO Council session, which started on March 10, and is expected to conclude on April 4, 2025,51 presents a key opportunity to analyze alignment with the Article 6.4 mechanism or otherwise set clear expectations on when the timing for that assessment is likely to occur. During this session the Council will also review TAB's recommendations from the Fall 2024 assessment,52 making it an opportune moment to discuss the integration of CORSIA into broader global climate policy frameworks and to request TAB to consider potential recommendations for alignment and collaboration with the PACM Technical Review Team.

ICAO to prepare to respond to the EU review

Given the pending EU review and political uncertainty as a result of the change in government in the US, it is also an opportune time for ICAO to demonstrate its ongoing work with stakeholders, including airline operators, on initiatives to reduce emissions within the aviation sector, including in the context of fuel-efficient aircraft design and operations, sustainable aviation fuels, measures to address non-CO_2 emissions which otherwise impact climate change and other research and development initiatives.

The recent announcement of the ICAO Finvest Hub, which seeks to establish pathways for funding sustainable aviation projects, is an example of a mechanism to foster innovation in the decarbonization of the aviation industry.[53] The ICAO Finvest Hub received support for its creation through a letter of intent signed by representatives from Airbus, Boeing, the International Power-to-X Hub and GenZero.

The implementation of such initiatives in a manner that coexists effectively with the EU ETS will be relevant to the EU's assessment of CORSIA.

4 Conclusion

With limited national buyer governments driving demand in Article 6 markets, CORSIA presents a critical opportunity to scale demand for high-integrity carbon credits. However, realizing this potential requires addressing key challenges, including uncertainty around credit eligibility, regulatory fragmentation, barriers to implementing corresponding adjustments, and geopolitical risks that may impact airline participation and policy stability.

To fully leverage CORSIA's role in the decarbonization of international aviation, ICAO, governments, and market actors must work collaboratively to enhance regulatory clarity, strengthen market integrity, and ensure clear communication on CORSIA's contributions to climate goals. Governments, particularly in credit-supplying countries, will need sustained capacity-building to establish transparent and efficient mechanisms for issuing corresponding adjustments. Meanwhile, carbon credit developers and investors should continue to push for regulatory stability and explore financial risk mitigation tools, such as insurance mechanisms, to further foster market confidence and liquidity.

Clarifying CORSIA's position regarding the Article 6.4 mechanism will be important in defining its integration with broader carbon markets. Subject to ICAO's assessment, greater alignment between CORSIA and Article 6

51 ICAO (n.d.). ICAO Council 234th Session. Retrieved 6 February 2025.

52 ICAO (2025). 2025 TAB Work Programme. Retrieved 13 February 2025.

53 ICAO, ICAO establishes global platform to secure financing for aviation sustainability projects (accessed March 8, 2025); N Pandey (13 February 2025) ICAO establishes platform to fund initiatives that decarbonise aviation « Carbon Pulse (accessed 8 March 2025).

markets could provide regulatory certainty, enhance process efficiencies, and facilitate the delivery of eligible emission units. Proactive coordination between ICAO, the UNFCCC, and other carbon market governance bodies will be essential to minimizing regulatory uncertainty, improving market transparency, and ensuring long-term stability.

While the recent shift in the US administration has potentially tempered the fanfare in respect of initiatives to address climate change and sustainability more broadly, businesses continue to assess climate-related risks and opportunities and have strategies in place to address such risks and opportunities. In this context, international cooperation in the aviation sector, including in the context of CORSIA, fosters certainty for the industry itself which mitigates the risk of political uncertainty. Furthermore, international cooperation mitigates other risks, including:

1. inadequate or absent voluntary or mandatory transition plans for airline operators;
2. public and shareholder actions for alleged failures to address the risks of climate change;
3. stranded assets as technological advancements enhance within the industry; and
4. not meeting consumer demand for options in respect of addressing the risks of climate change.

As ICAO convenes its 234th Council session from 10 March to 4 April 2025, it presents an opportunity to address structural and regulatory barriers, clarify policy direction, and reinforce the integrity of the global carbon market. In this context, ongoing integration with the Article 6 markets and complementing the EU ETS ambitions for the aviation sector will be important linkages. CORSIA remains in a unique position to be a catalyst for scaling market-based climate solutions and as such to be an important instrument for decarbonizing international aviation.

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