

The CORSIA: ICAO's market based measure and implications for Europe

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On October 6th, Member States of the International Civil Aviation Organisation (ICAO) agreed on an offsetting scheme to compensate for emissions growth from 2020 levels. The new scheme, called the Carbon Offset and Reduction Scheme for International Aviation (CORSIA), falls short of achieving the goal of carbon neutral growth in 2020 (CNG2020), let alone aviation's fair share of the Paris Agreement goal of limiting warming to 1.5 degrees. Much remains to be done to ensure that CORSIA becomes a functioning offsetting scheme, and further efforts are needed regionally and nationally to adequately address aviation's climate impact.

This paper explains the effects of ICAO's offsetting scheme, how it compares to other market-based measures, the risks that must be addressed and recommendations for maintaining European ambition for climate measures in the aviation sector.

Aviation is responsible for 2% of CO₂ emissions, almost 5% when adding non-CO₂ effects like contrails and NO_x emissions. The sector is projected to quadruple its emissions by 2050, equivalent to around 20% of the global carbon budget.

What is the CORSIA?

In 2013, at its 38th Assembly, ICAO set a goal of limiting net emissions growth from 2020 levels (CNG2020). Many measures were initially on the table including a cap-and-trade scheme similar to the EU Emissions Trading System, but industry and states eventually decided on an offsetting scheme to reach the goal through emission reduction projects in other sectors. At the 39th ICAO Assembly, Member States adopted a resolution creating the CORSIA. The CORSIA is the first climate agreement to address an entire sector and an important political signal from the aviation industry that has, until now, avoided addressing the issue of climate change. With this in mind, it is important to examine if the CORSIA is effective and sufficient to address aviation emissions?

Effectiveness of the CORSIA

The CNG2020 goal that the CORSIA aims to reach is not compatible with a 2 degree scenario, let alone a 1.5ⁱ. The CORSIA allows the aviation sector to expand its pollution and its portion of the global carbon budget. Even with improvements in aircraft technology and air traffic management aviation is expected to take up 20% of the global carbon budget by 2050ⁱⁱ.

Because of its phased implementation with voluntary participation up until 2027 and non-participation of opposed states, **it is already clear that the CORSIA will not reach even this insufficient goal.** According to estimates, only around three quarters of emissions above 2020 levels for the entire length of the scheme (2021-2035) will be covered by the CORSIA.

Recommendation: Increase ambition to go beyond the insufficient goal of CNG2020 the CORSIA must be accompanied by additional action.

Offsetting is a zero-sum game

Offsetting does not reduce emissions, it merely compensates for emissions growth somewhere else. For each additional ton of CO₂ emitted, offsetting reduces that ton in another location, a zero-sum exercise that balances out the carbon entering the atmosphere.

However, if the reduction lacks environmental integrity (does not represent a full ton of emission reduction), there is an overall increase of emissions in the atmosphere. Specific guidelines for environmental integrity (even those included in the Paris Agreement) were omitted from the resolution to be deliberated later in less transparent technical meetings. As an offsetting scheme, the CORSIA has been referred to by industry as their “license to grow”ⁱⁱⁱ, which is unacceptable if the aviation sector is to contribute its fair share to the global effort to avoid dangerous climate change.

Putting the CORSIA into perspective:

- The scheme is voluntary until 2027.
- The goal of CNG2020 will allow emissions to go unaddressed until 2020 before further growth is compensated by carbon credits from climate projects.
- The CNG2020 goal is not compatible with the 1.5 degree goal of the Paris Agreement.
- The CNG2020 goal has not been met. Because of country exemptions and reservations only ¾ of the goal will be achieved. That represents around 25% of total international traffic being regulated for the lifetime of the measure between 2021-2035.
- The types of eligible credits, oversight and registry provisions have yet to be defined.

Timeframe for implementation

The adopted resolution provides only a very basic outline of the CORSIA system and will require a great deal more technical elaboration before it is implemented. Essential elements such as registries, rules for the monitoring, reporting and verification of emissions and the criteria for offset credits have yet to be agreed on. Policies for registry establishment must be agreed by 2018, while operationalisation of the centralized ICAO registry must be assured by 1 January 2021. Monitoring, reporting and verification (MRV) and emissions unit criteria (EUC) will be agreed as standards and recommended practices, or SARPs, which must be approved in 2018 before being translated into national policy.

Recommendation: maintain pressure with existing domestic legislation for the aviation sector to mandate much needed action pre-2020.

Risks around the CORSIA and climate ambition in the aviation sector

The details of the CORSIA have yet to be worked out. Many rely on the system to be a solution for the sector, but many risks need to be addressed in the CORSIA and further ambition must be pursued elsewhere for the sector to adequately tackle its emissions.

The importance of the environmental integrity of offsets used: Currently, the exact types of credits eligible for use in the CORSIA is unknown. UNFCCC credits will be eligible provided that they meet additional quality criteria that are currently being debated on the technical level. This will be essential for avoiding poor CDM and JI credits that have been proven to not represent real emission reductions. An even bigger potential risk would be to allow credits from the voluntary market that have varying standards and limited transparency.

Recommendation: Limit eligible CDM and SDM credits for use in the CORSIA by screening them with additional quality criteria that removes harmful project types.

Lack of international oversight: Finally, the rules of an offsetting mechanisms should be overseen by a centralized independent body free of direct conflicts of interest. That means that those buying the offsets, and those developing the offsets, both of whom have an interest in weaker rules should have limited influence on the rulemaking process. Without centralised oversight the enforcement of rules and correction of defective areas of the market mechanism will be hard to enact. For the CORSIA, the regulatory framework and governance of the measure is in the hands of the Member States, meaning states must adopt national policies on essential elements of the measure, like emissions unit criteria (EUC) and monitoring, reporting and verification (MRV). This could lead to patchy compliance and enforcement measures worldwide.

Recommendation: Europe should provide lessons learned from using offsets, notably in the EU ETS, to establish robust MRV, registry, and EUC criteria for the CORSIA.

Key Recommendations for the CORSIA and further action in Europe:

Additional European action is needed to reach Paris climate goals

The CORSIA goal of offsetting emissions above 2020 levels is not compatible with a 1.5 degree pathway and must be accompanied by additional ambition in the sector on the European level. This must include a phase out of subsidies, **continued inclusion of aviation in the EU ETS and increased funding for research and development** for dramatic technical improvements and efficiency gains. Nothing prevents Europe from going beyond ambition in ICAO, which can only be seen as a floor for climate action.

Maintain pre-2020 ambition in the European aviation sector

With so little known about the mechanisms for implementation of the CORSIA until the 2019 ICAO Assembly, and because the CORSIA will not take effect until 2021, Europe should maintain and enhance existing legislation on the aviation sector to encourage much needed action pre-2020. Ambitious climate policy is needed until more is known about the essential elements of the CORSIA at the 2019 ICAO triennial Assembly.

Only UNFCCC credits with high environmental integrity should be available for compliance

To prevent a myriad of disparate offset standards, only UNFCCC CDM and SDM credits should be eligible for use in the CORSIA provided they are screened by additional quality criteria that removes harmful project types.

ICAO standards cannot be allowed to undermine environmental integrity in Europe

Lessons learned from registry and MRV establishment as well as past experience with offset quality criteria under the EU ETS should feed into the discussion on these aspects of the CORSIA. Europe must ensure that measures around compliance and enforcement, particularly on MRV and EUC, are at least equally as stringent as current rules for offsets under the EU ETS. At a minimum, EU airlines should be held to European standards on offset eligibility.

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ⁱ Aviation and Climate Change - The Continuing Challenge, Alice Bows-Larkin, Sarah L.Mander, Michael B. Traut, Kevin L. Anderson, and F. Ruth Wood
https://www.researchgate.net/publication/303446744_Aviation_and_Climate_Change-The_Continuing_Challenge

ⁱⁱ <https://www.carbonbrief.org/aviation-consume-quarter-carbon-budget>

ⁱⁱⁱ <http://www.iata.org/pressroom/pr/Pages/2013-06-03-05.aspx>