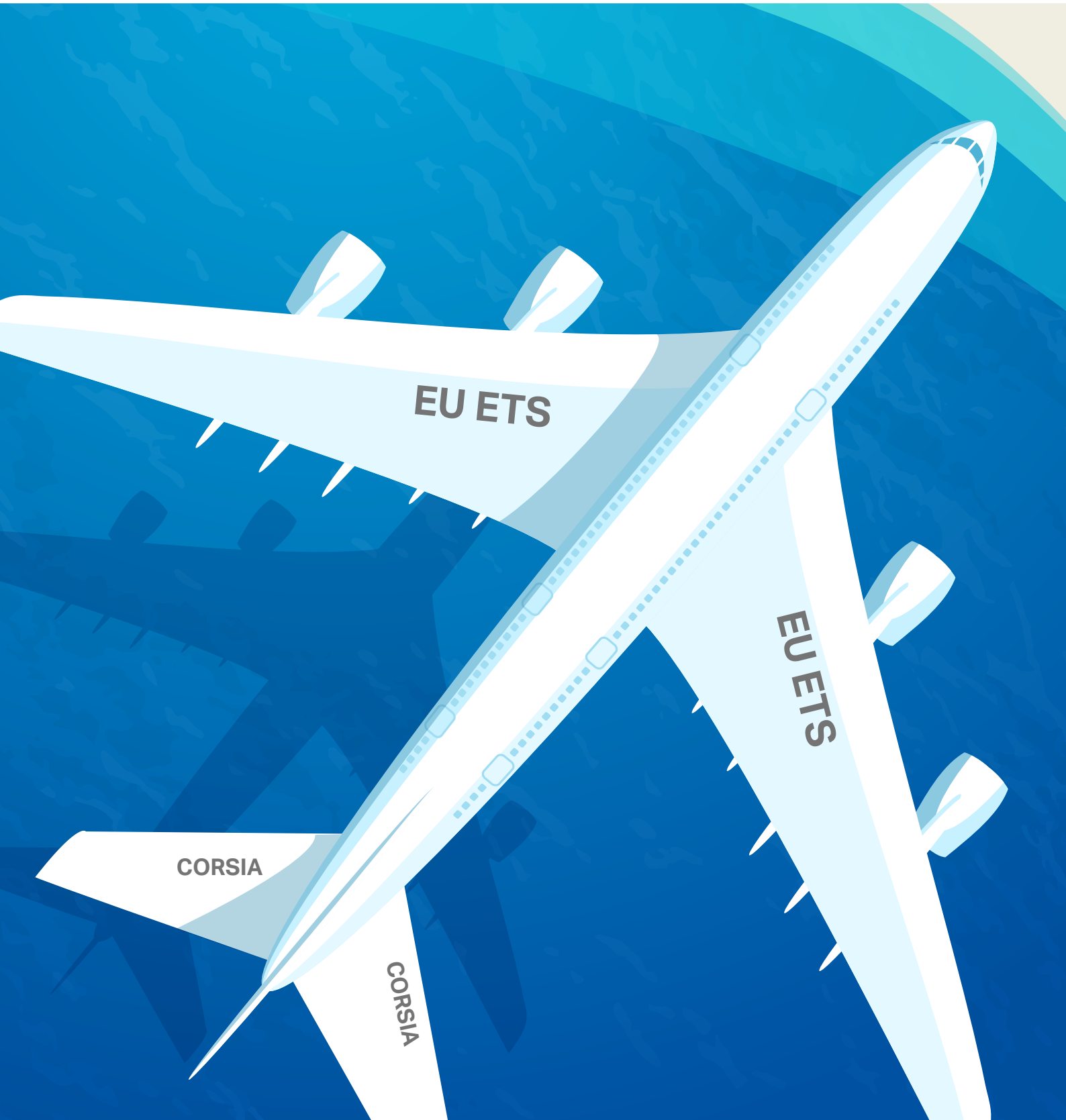
Addressing aviation emissions under the EU Emissions Trading System

Carbon Market Watch Policy Brief - March 2017



Executive summary

In February 2017, the European Commission presented a legislative proposal regarding coverage of aviation emissions by the EU's Emissions Trading System (EU ETS). In response to the offsetting agreement reached in the International Civil Aviation Organisation (ICAO) in October of 2016, the Commission proposes to cover only intra-European flights with the EU ETS and to exclude flights entering and leaving Europe.

The response to CORSIA must not undermine the achievement of domestic EU climate targets. When the EU set its climate targets, it included the emissions of flights within and leaving from Europe in the EU ETS. This means that if outgoing international flights are excluded from Europe's emission cuts, other sectors need to do more to achieve the EU's climate targets in a cost-effective manner.

To adequately address these emissions, the ICAO offsetting agreement - the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) - must be at least as environmentally effective as the EU ETS to replace flights currently covered by the European measure. Currently, the measure is inadequate as it has an aspirational goal of "Carbon Neutral Growth" from 2020 levels, and thus will not actually reduce aviation emissions nor will it address emissions below the 2020 level. It should therefore not replace the EU ETS for flights entering and leaving Europe, unless its ambition is raised.

The decision to integrate the CORSIA into EU climate policy will be informed by a Commission report. With no public access to ICAO deliberations on the CORSIA and no criteria to assess the effectiveness of the measure, more information is needed to inform post-2020 discussions. The report must include recommendations from ICAO's Committee on Aviation and Environmental Protection (CAEP) and clear criteria to allow for a comparison of the effectiveness of EU ETS and CORSIA.

Furthermore, the EU gives 85% of aviation allowances to the industry for free. This amounts to the EU losing an estimated €600 million euros in the last 3 years. These giveaways mean that less money is available for climate friendly investments and research.

It is now up to Members of the European Parliament and EU Member States to live up to their commitments under the Paris climate change agreement by making airlines contribute in line with other sectors while protecting Europe's prerogative to take the lead, as the Paris Agreement says developed countries should.

The following recommendations can put aviation on track to do its fair share to address climate change:

- **Include international flights in the EU ETS to protect EU climate targets.**
- **Require full transparency of information on the CORSIA** by demanding that all deliberations on the CORSIA by ICAO's Committee on Aviation and Environmental Protection (CAEP) be made public.
- **Compare CORSIA ambition with that of the EU ETS to determine adequate scope in 2019.** Clear criteria should be set out to compare the environmental efficacy, as well as regulatory and compliance strength of both measures.
- **Increase aviation's contribution to climate finance.** Revenues should be used for research and development to reduce aviation's climate impact and for international climate finance.

Introduction

Globally, the International Civil Aviation Organization (ICAO) was tasked with addressing pollution from international aviation, while states and regions address domestic emissions. In October of 2016, ICAO created a global offsetting scheme called the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). On 3 February 2017, the European Commission responded to ICAO's offsetting scheme by publishing a proposal on how to treat aviation emissions under the EU Emissions Trading System (EU ETS).

This briefing explains the contribution of aviation to climate action, analyses the Commission's proposal and provides recommendations for improvement.

European climate leadership for aviation emissions

ICAO was tasked to address international aviation emissions in 1996. After years of inaction, Europe expanded coverage of the EU Emissions Trading System (EU ETS) to cover European domestic emissions as well as the emissions of flights entering and leaving the EU in 2012. This level of coverage is the equivalent of 35% of global aviation emissions for the period 2017-2020.

However, airlines and states, notably the US and China, protested the decision. In the face of this pressure, Europe reduced the scope of flights to cover only those within Europe until 1 January 2017, when it would assess if ICAO had agreed on a measure ambitious enough to replace it.

Does the CORSIA adequately address climate change?

The CORSIA will start in 2021 but is not mandatory until 2027. Unlike the ETS, the measure does not promote emission reductions, as its "aspirational goal" is only that of "carbon neutral growth from 2020 levels" allowing unlimited growth in the sector and leaving emissions below 2020 levels completely unaddressed. The scheme calls on airlines to buy offset credits for a portion of pollution above 2020 levels to compensate for part of future growth. The quality of these offset credits determines the environmental effectiveness of the scheme. ICAO has not yet published rules to determine offset quality and the process to establish the rules is not public.

CORSIA	**EU ETS**
Unlimited Growth	Absolute Cap
Nothing for emissions below 2020 level	Covers all EU aviation emissions
Only 25% of all global aviation emissions	
Completely based on offsetting	No offsettings after 2020
Unknown offset quality	Current negative list, only UNFCCC credits from LDCs
Voluntary until 2027	Mandatory
No enforcement	Penalties for non compliance

ICAO Standards and Recommended Practices (SARPs) will set the regulatory framework and governance of CORSIA which are then implemented and enforced through national law. SARPs address elements including emissions unit criteria and monitoring, reporting and verification. As states can disagree with SARPs (file a difference) or choose to implement only a portion of them, this could lead to patchy enforcement and a relevant risk of competitive distortion[1]. There are no penalties for non-compliance.

Lastly, information on the rules and guidelines for the CORSIA is not readily available. There is only one official NGO observer to the ICAO process, the International Coalition for Sustainable Aviation (ICSA), but information on CORSIA cannot be publicly distributed because of non-disclosure agreements required to work in technical groups. This differs drastically in terms of stakeholder participation and transparency of carbon market developments under the UNFCCC. There is currently no process for public consultation on any element of the market measure and recommendations for offset quality and registries have not been made public.

The problems with offsetting

Offsetting compensates for growth in that for each additional ton of aviation pollution, an offset reduces a ton elsewhere, a zero-sum exercise. However, if the reduction project lacks environmental integrity (does not represent a full ton of emissions) or would have happened without the offset purchase (non-additionality), growth is not effectively compensated and there is an overall increase of greenhouse gases in the atmosphere. These environmental problems as well as negative social repercussions from offsetting projects[2] have marred offset project development leading to civil society organizations to call for new offsetting schemes to have safeguards such as strong additionality requirements, a cutoff year for eligible offsets to exclude outdated rules, and negative lists to avoid harmful project types.

The EU aviation proposal

In response to the international offsetting scheme agreed to in ICAO, the Commission made a proposal regarding the treatment of aviation emissions under the EU ETS. Officially, the exemption of emissions from flights entering and leaving Europe from the EU ETS expired on 1 January 2017. The Commission has proposed to extend this exemption indefinitely, but to continue to cover domestic emissions from flights within Europe.

From 2012 to 2020, the EU ETS does not promote emission reductions in the aviation sector through a declining cap. Airlines receive about 85% of the allowances under this threshold for free. The Commission now proposes to bring the pace of aviation emissions reductions in line with the efforts of other sectors covered by the EU ETS. This means that the cap on aviation emissions declines by 2.2% each year from 2021 onwards.

The proposal further includes a review clause to assess the details of CORSIA implementation in Europe starting in 2021, however the proposal does not lay out the exact elements of the review nor the date by which the review will be published.

1. https://ec.europa.eu/clima/sites/clima/files/transport/aviation/docs/gmbm_legal_study_en.pdf
2. http://carbonmarketwatch.org/barro-blanco-communities-flooded-despite-rejected-agreement-ngos-ask-for-withdrawal-of-cdms-registration/

What is aviation's contribution to EU ambition?

All sectors are expected to contribute to achieving Europe's climate target of 20% CO_2 reductions by 2020 and at least 40% CO_2 reductions by 2030[3]. The Commission analysis that provided the scientific basis for the EU's climate targets assumed that the emissions from flights both within and departing from Europe would be covered by the EU ETS. This means that if outgoing international flights are to be excluded from Europe's emission reductions, other sectors would need to do more to still achieve the EU's climate targets in a cost-effective manner.

Analysis by the European Commission[4] assumes that because of growth beyond the number of allowances for aviation, airline operators need to buy 49 million EU allowances (representing 49 Mt of CO_2 emissions) each year to meet the sector's ETS targets in the 2021-2030 period. Excluding international aviation to only covers intra-EU flights reduces that demand to only 23 Mt of CO_2 emissions per year. This means that the Commission's proposal increases the surplus in the EU ETS by **260 million tonnes.** In terms of the cap, the Commission's proposal reduces ETS coverage by approximately **2.1 billion tonnes** compared a full scope scenario[5]**.**

The Commission has calculated[6] that if the EU ETS would continue to apply to both intra-EU and international flights, this would generate over 2,060 Mt of emissions reductions while the CORSIA alone would only encourage around 1,350 Mt reductions.

Figure below: Percentage of global international aviation emissions covered with different policy options

3. EU INDC http://www4.unfccc.int/submissions/INDC/Published%20Documents/Latvia/1/LV-03-06-EU%20INDC.pdf
4. The Impact Assessment accompanying the proposal for a 2030 Climate and Energy Framework, https://ec.europa.eu/clima/sites/clima/files/swd_2017_31_en.pdf , p. 32
5. Calculations based on information from Commission Impact Assessment Data assuming a 2.2 Linear Reduction Factor
6. https://ec.europa.eu/clima/sites/clima/files/swd_2017_31_en.pdf, p. 30-31

Assessing the CORSIA in 2019 to decide on post-2020 ambition

The extent to which the CORSIA is integrated into the EU ETS requires clear information on developments in ICAO. The Commission proposes to report on "relevant ICAO standards or other legal instruments as well as on domestic measures taken by third countries to implement the global market-based measure". The measure must be held up against clear criteria to determine its environmental integrity and overall strength as a climate instrument.

ICAO standards, issued in the form of Standards and Recommended Practices (SARPs), will be used to define the rules of the CORSIA such as offset quality and registry obligations. The ICAO Council is scheduled to set these SARPs in the second half of 2018, after which states translate them into national law.

Beyond the SARPs, recommendations are made in several technical working groups[7] within the Committee on Aviation Environmental Protection (CAEP) in ICAO to get the CORSIA up and running. There has been no process to consult the public regarding these deliberations. The recommendations that CAEP makes relating to the CORSIA are also relevant to the Commission report to the Parliament and European Council. Only with this information, Europe can transparently compare essential elements of the market measure to the EU ETS.

Special treatment for aviation: exemptions and preferential subsidies

Airlines have so far enjoyed privileged exemptions from climate action which distorts competition between transport modes in several ways :

- The aviation industry is exempt from many forms of taxation. In Europe, flight tickets are for example not subject to Value Added Tax (VAT) and the use of kerosene is not taxed while other fuels are. The absence of VAT and a kerosene tax has amounted to an 27-39 billion indirect subsidy for the aviation sector[8].

- The aviation sector enjoys other public subsidies including for airport expansion.

- While European trains and road transport are subject to decreasing climate targets under the EU ETS and the Effort Sharing Regulation, the aviation sector currently does not have to reduce its emissions.

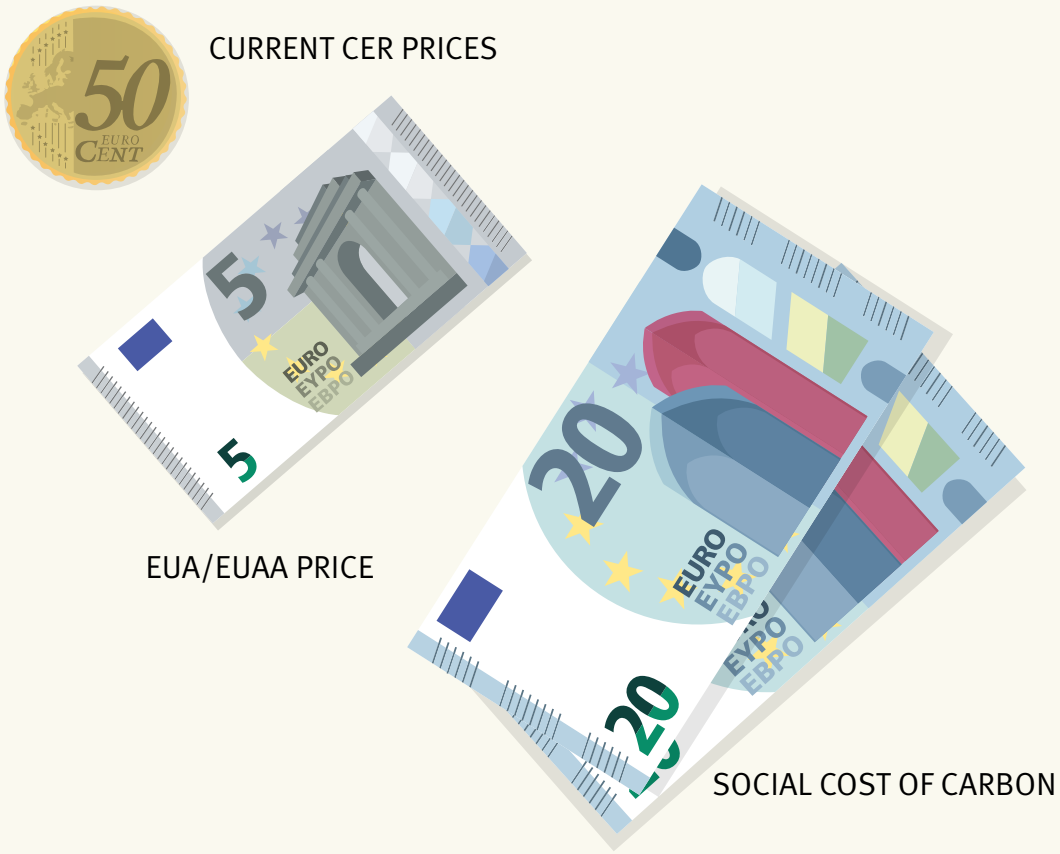
Aviation's exclusion from climate responsibility compared to other sectors and favorable tax treatment should be taken into consideration with any consideration of the burden to the industry under the CORSIA and the EU ETS.

The cost of pollution

International regulations do not currently ask airlines to pay a cent for their climate impact, which the International Council on Clean Transportation (ICCT) calculates to cost the world around $700 billion from 2021 to 2035.

A recent study estimated that a carbon price of EUR 40 per tonne of CO2 emitted[10] is required to drive investments towards cleaner modes of energy and transport. This is much higher than the expected carbon price under both the CORSIA and the EU ETS. The CORSIA will use offset credits and references the eligibility of UN Clean Development Mechanism offsets that have an average cost of 0.31 EUR[11]. The price of EU ETS allowances (currently at 5.80 EUR) is higher than the price of offset credits but still much below the social cost of carbon (see image below).

7. http://www.icao.int/ENVIRONMENTAL-PROTECTION/Pages/CAEP.aspx
8. http://cedelft.eu/publicatie/estimated_revenues_of_vat_and_fuel_tax_on_aviation/1401, Absence of 20% VAT equates to an over 7 billion EUR subsidy per year and absence of a fuel tax equates to a 20-32 billion EUR subsidy per year
9. http://www.theicct.org/blogs/staff/brother-can-you-spare-three-cents-climate
10. http://www.cedelft.eu/news/403/Press_release_-_Paris_climate_accord_requires_an_economic_turn-around%2C_investment_of_2%25_GDP_annually_needed/
11. http://www.carbonplace.eu/info-commodities-CER, price from 24 February 2016
12. http://www.eea.europa.eu/publications/trends-and-projections-EU-ETS-2016, p. 22, assuming a 5.80EUR EUA price for 2016



Additionally, under the EU ETS, airlines receive 85% of aviation allowances for free which amounts to an over 600 million euro subsidy from 2014-2016[12]. Free allocation is meant to safeguard the competitiveness of industries in the EU, but since all operators, including foreign carriers, are treated the same on routes under the EU ETS, there has been no proof of competitive distortion.

How aviation funds can contribute to solutions

Currently, it is up to EU member states to determine the use of revenues generated by the 15% of allowances auctioned to aviation companies. From 2014 to 2016, auctioned aviation allowances generated slightly over 100 million EUR in revenues under the EU ETS. Auctioning all allowances to aircraft would have raised an additional 600 million EUR that could have been invested in climate projects.

Two areas of research can benefit from funding in particular:

1. Innovative solutions to decarbonize transport
2. Research on the impact of non-CO_2 effects of aviation (NOx, sulfate aerosols and contrails -the clouds that form from airplane engines under certain temperatures and altitudes-) that can add to the warming effect of greenhouse gases.

Additionally, as flying is the most carbon intense form of transport that only the richest people in the world can afford, a portion of the ETS funds should be used for international climate finance for vulnerable developing countries through the United Nations Green Climate Fund (GCF).

Key recommendations to put aviation on track to do its fair share to address climate change:

Include international flights in the EU ETS to protect EU climate targets

The ICAO offsetting scheme will only start in 2021 and will remain voluntary until 2027. Its ambition for "carbon neutral growth" will moreover not reduce emissions as only pollution growth needs to be offset. At least up until the time that the CORSIA is implemented, the EU ETS should continue to cover both intra-EU and international flights. The pace of aviation emission reductions should moreover be brought in line with the efforts of the other sectors covered by the EU ETS to avoid undermining the EU's 2020 and 2030 climate targets.

Compare the relative ambition of the CORSIA and the EU ETS to determine an adequate scope in 2019

The ICAO offsetting scheme should only replace the EU ETS if its environmental integrity and ambition level are equivalent to EU measures. The European Commission should therefore conduct a review in 2019 and compare the two systems for flights leaving or arriving in Europe. The CORSIA and EU ETS should be measured against clear criteria on environmental and regulatory effectiveness meaning the review must compare essential elements of the market measure to the EU ETS such as:

- Adequacy of the target in relation to the 1.5° C goal of the Paris Agreement
- Enforceability and penalties for non-compliance
- Processes for public input and stakeholder consultations
- Stringency of offset quality criteria [13]

Require full transparency of information on the CORSIA

Currently, information on CORSIA credit quality, MRV and registries is not publicly disclosed and there are no channels for public input. The Commission should report to the European Parliament and European Council on CORSIA progress in ICAO's Committee on Aviation and Environmental Protection (CAEP) and make public all CAEP-approved recommendations needed to assess the CORSIA's effectiveness.

Increase aviation's contribution to climate finance

The EU ETS polluter pays principle should be followed by auctioning all allowances to the aviation sector from 2017. Revenues should be earmarked for research on decarbonization of transport, non-CO_2 effects of aviation emissions and climate finance for vulnerable developing countries through the Green Climate Fund (GCF). The revenue generated under the EU ETS is a clear advantage compared to the ICAO scheme.

Carbon Market Watch

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13. http://carbonmarketwatch.org/wp-content/uploads/2015/10/Aviation%E2%80%99s-Credibility-on-Environmental-Integrity_Oct_Web_final1.pdf