

## 【欧州】【Common】

# Aviation - Gas Emissions: European Commission's study on CORSIA supports revision of EU-ETS for aviation

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### 【概要 : Summary】

Aviation is an important transport means for the mobility of people in the EU, its economy and further regional development. However, at the same time it is responsible for an increase in the GHG emissions and other externalities. Therefore, in 2012, the EU introduced an emission trading scheme for the aviation sector's GHG emissions.

Since the aviation sector's GHG emissions were excluded from the 2015 Paris Agreement, the International Civil Aviation Organisation (ICAO) had taken over the responsibility for introducing GHG emission reduction measures for the international aviation sector. The ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) starts in 2021 with a first voluntary pilot phase, followed by the voluntary first phase from 2024 to 2027. Only as of 2027, CORSIA will become mandatory.

Meanwhile, the aviation sector's GHG emissions are expected to further increase in the next decades, although the on-going COVID-19 pandemic causes a current decline in air traffic.

Meanwhile, the EU prepares for the transposition of the CORSIA scheme's rules, which will make a review the EU-ETS for aviation necessary. The EU-ETS for aviation covers all commercial and non-commercial aircraft operators' CO<sub>2</sub> emissions within the European Economic Area (EEA) until

2023. This revision also includes decisions on CORSIA's relation to the EU-ETS, which could have a large impact on the setup and stringency of regulation of aviation emissions. In fact, considering the revision of the EU-ETS for aviation, there are controversies regarding the effectiveness of the ICAO's CORSIA scheme for reducing GHG emissions in aviation. This is of particular importance because the EU needs to achieve significant reductions of GHG emissions also in the transport sector and aviation for achieving the European Green Deal's 2050 net-zero carbon emissions target.

The European Commission commissioned a study for assessing the ICAO's CORSIA scheme regarding its ambition compared to the EU-ETS for aviation, its environmental integrity, and the quality of its offset credits, among several other topics. The aim of this study is to support the European Commission's review of the regulation of EU-ETS for aviation under different policy options for the EU-ETS and CORSIA implementation, among others. The results of the study underline that in several aspects the CORSIA scheme is less ambitious than the EU-ETS for aviation. They support the European Commission's review of the regulation on aviation emission trading under the EU-ETS Directive in order to meet the European Green Deal's target of carbon neutrality by 2050.

## 【記事 : Article】

### 1. The EU' s measures to tackle CO<sub>2</sub> emissions in aviation

In 2017, direct emissions from aviation accounted for 3.8% of the EU' s total CO<sub>2</sub> emissions and created 13.9% of the emissions from transport, making it the second biggest source of transport GHG emissions after road transport, according to the European Commission data. Since technical improvements, fleet replacement, and increased operational efficiency cannot offset the steady increase of CO<sub>2</sub> emissions due to air traffic increase, CO<sub>2</sub> emission reduction measures have to be considered for the aviation sector.

Due to the decade-long inaction of the International Civil Aviation Organisation (ICAO) to introduce GHG emission reduction measures for international aviation, the EU introduced the EU-ETS for aviation in 2012. Initially, the EU-ETS for aviation in Directive 2008/101/EC on reducing emissions from aviation included also international aviation. However, due to increased resistance of third country airlines and their governments and to support the ICAO' s efforts to develop a global market-based mechanism for reducing CO<sub>2</sub> emissions, the EU eventually agreed to limit the scope of the EU-ETS for aviation to the European Economic Area (EEA). Under the EU-ETS for aviation, all commercial aircraft operators, and non-commercial aircraft operators with significant emissions, are accountable for their emissions from flights within the EEA, based on Regulation No. 421/2014 and Regulation (EU) 2017/2392. In light of the adoption of the ICAO' s CORSIA scheme, the EU also decided to maintain the current limitation of the EU-ETS to intra-EEA flights until 31 December 2023, and to prepare for the implementation of the global CORSIA market-based measure as of 2021 by reviewing the EU-ETS for aviation.

### 2. The ICAO' s CORSIA scheme

Meanwhile, due to the introduction of the EU-ETS

for aviation and the adoption of the 2015 UNFCCC Paris Agreement, which does not cover the aviation sector' s GHG emissions, the ICAO had been under pressure to come up with some ambitious international GHG emission reduction scheme.

At the ICAO' s 39th General Assembly, ICAO member states adopted the finalised global MBM for the international flight emissions. The ICAO decided to introduce the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), starting with a voluntary pilot phase in 2021. The CORSIA scheme' s voluntary pilot phase from 2021 to 2023 will be followed by an also voluntary first phase, from 2024 to 2026. Thereafter, the mandatory phase will follow from 2027 to 2035 with a mandatory participation of all states, but some exemptions will remain for Least Developed Countries (LDCs).

From 2021, airlines will need to start offsetting the growth in emissions from the routes between states, which have volunteered to participate in CORSIA' s pilot phase.

### 3. The shortcomings of the CORSIA scheme

The ICAO CORSIA scheme is criticised for several shortcomings and weaknesses which could hamper its impact on the CO<sub>2</sub> emissions. Whereas the EU-ETS was binding since its introduction in 2012, the CORSIA scheme will become mandatory only from 2027 onwards. Individual governments will still have to act on their own to put the agreement' s limits into effect. The CORSIA scheme will be mandatory for five years in total and the scheme would also have to be reviewed in 2032. This creates a lot of uncertainties and room for both, ambitious individual targets but also the failure to achieve the set targets. It would also have negative effects on the airlines' planning of measures for GHG emission reduction, as airlines might need more long-term certainty for introducing emission reduction measures or more efficient aircraft.

Furthermore, the CORSIA scheme works with carbon

offsets that allows airlines to offset their growing CO<sub>2</sub> emissions in projects outside the aviation industry, whereas the EU-ETS for aviation works with emissions allowances, that would favour CO<sub>2</sub> emissions reduction within the aviation industry. The offsetting is widely considered a false solution to climate change as it merely shifts emission reductions from one sector to another without a real CO<sub>2</sub> emission reduction within the aviation sector. The offsetting would allow the airlines to even increase their GHG emissions while offsetting them with inadequate and cheap carbon offsets.

Buying an offset means buying a credit that has been verified as having reduced CO<sub>2</sub> emissions elsewhere and there is the danger that the carbon-offset programmes lack of environmental integrity and probably do not contain any essential environmental safeguards.

These internationally recognised carbon offsets under the CORSIA scheme could also be used for double counting, which means that an airline could use offsets for covering its CO<sub>2</sub> emissions, using the same emission reduction measure that a country uses for meeting its own obligations under the Paris agreement. The key to avoiding this “double-counting” would be that countries, where the airlines’ emission reduction takes place, commit to not count these emission reductions towards their own targets.

However, some countries and in particular Brazil have rejected to avoid this double counting. An assessment of offsetting will be difficult, because it will be challenging to prove if the carbon mitigation projects’ CO<sub>2</sub> emission reduction has been correctly estimated, among others. Therefore, the ICAO’s CORSIA scheme’s mitigating climate change effects will rest on the environmental effectiveness of the offsets being used. Due to these weaknesses in the ICAO’s CORSIA scheme, it probably will only achieve a carbon natural growth (CNG) in the 2020-2035 period, at best.

As a result, the EU-ETS for aviation is considered being superior to the ICAO’s CORSIA and the EU intends to continue the application for intra-EEA flights. Regarding the CORSIA scheme’s shortcomings, the European Commissioner for transport, Adina Vălean, pointed out that it was important for the EU to participate in the CORSIA scheme in order to be at the forefront and to have an influence on the CORSIA scheme’s standards and its future improvements. However, the EU-ETS for aviation should be continued.

#### 4. The EU’s way forward with the ICAO’s CORSIA and the EU-ETS for aviation

Regarding the voluntary participation in the CORSIA’s pilot phase as of 1 January 2021, “The Council Decision (EU) 2020/954 of 25 June 2020 on the position to be taken on behalf of the European Union within the International Civil Aviation Organization as regards the notification of voluntary participation in the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) from 1 January 2021 and the option selected for calculating aeroplane operators’ offsetting requirements during the 2021-2023 period” settled the EU Member States’ participation in the CORSIA from the start of its voluntary phase as of 1 January 2021.

However, regarding the EU’s further way forward, a potential new controversy regarding the ICAO’s CORSIA scheme could arise, due to the need to significantly reduce GHG emissions in order to achieve not only the Paris Agreement’s commitments but also the European Green Deal’s target of net-zero carbon emissions by 2050. Furthermore, while the EU-ETS for aviation is projected to reduce GHG emissions towards the EU’s targets, the CORSIA scheme allows airlines to purchase carbon offsets to reduce emissions elsewhere while maintaining their own high GHG emissions. This could lead to an increase of the GHG emissions in the EU’s aviation sector, as the air traffic is predicted to further increase,

despite the currently visible sharp reduction of air traffic due to the COVID-19 pandemic. Based on the requirement in the EU law and in order to prepare the necessary revision of the EU-ETS for aviation regarding the CORSIA scheme's application, the European Commission commissioned a study of CF Consulting, Air Transportation Analytics, NewClimate Institute, et.al. entitled "Assessment of ICAO's global market-based measure (CORSIA) pursuant to Article 28b and for studying cost pass-through pursuant to Article 3d of the EU ETS Directive" of September 2020. However, the study results were withheld by the Commission for several months. One of the reasons why the study was not published immediately could be the fact that the study confirms the weak rules for the purchase of CO<sub>2</sub> certificates under the ICAO's CORSIA scheme. The study again underlines the concerns regarding the quality of the carbon offsets of the CORSIA scheme. It is almost impossible to verify whether offsetting projects deliver additional CO<sub>2</sub> reductions or whether they are double counted by countries as part of their climate change mitigation policy. Furthermore, the study criticises that the idea of the CORSIA scheme is not to reduce the number of flights or the quantity of kerosene an aircraft consumes. The study criticises that the CORSIA in fact allows the airlines to buying their way out of their own CO<sub>2</sub> emission debt. The study also states that it is "questionable whether the carbon offsets actually deliver emissions reductions" since "none" of the approved offsetting programmes meet all the required criteria. It is almost impossible to verify whether offsetting projects deliver additional CO<sub>2</sub> reductions or whether they would have been taken by countries anyway as part of climate change mitigation policy. On the other hand, the EU-ETS for aviation currently includes all flights within the EEA, but not flights in and out of the region. This is the part in which the CORSIA scheme would handle some of the CO<sub>2</sub> emissions of these international

flights. Furthermore, the study points out the problem with the price and oversupply of offsets, since the CORSIA scheme will have an oversupply of cheap (less than €1) carbon offset credits. According to the study's findings, CORSIA seems to be unlikely to alter the direct climate impact associated with air travel.

Furthermore, decisions on CORSIA's relation to the EU-ETS in terms of the interaction between their respective coverage are still pending. These decisions could have a large impact on the setup and efficiency of GHG emission reduction in aviation, both within the EEA and between the EEA and third countries.

Moreover, the ICAO's decision to change the CORSIA baseline due to the COVID-19 pandemic, will hardly provide any financial incentives for the airlines to reduce their CO<sub>2</sub> emissions. It is even cheaper to buy credits rather than using clean fuels, meaning there is no incentive to decarbonise the aviation sector.

The study concludes that participating in CORSIA and leaving all international aviation as defined by ICAO outside the scope of the EU-ETS, which would also include the intra-EEA flights, would weaken the EU's climate policy targets, like the European Green Deal target of climate neutrality by 2050. If the EU participated in CORSIA and replaced parts, or all of its existing measures on reducing GHG emissions for aviation, including the EU-ETS for aviation, it would be difficult for the aviation sector to sufficiently contribute to the 90% reduction in transport emissions required by the European Green Deal, according to the study.

Finally, the study recommends ending the indirect subsidies of the aviation sector by the current tax exemptions. The EU could at least end the exemption from VAT and kerosene taxes on intra-EEA flights. Only with such clear price signals, the right incentives could be created to find alternative fuels to replace kerosene.

Considering the results of this study, it will be interesting to follow-up the EU's revision of the EU-ETS for aviation to make the aviation sector participate in the CORSIA scheme on the one hand and to achieve a sufficient CO<sub>2</sub> emission reduction in aviation in order to achieve climate neutrality by 2050 on the other hand.

Meanwhile, the European Commission is expected to release the 'ReFuel EU' regulation proposal in the coming weeks. It will require airlines to use a set percentage of low-carbon sustainable aviation fuels, such as e-fuels and biofuels, in their fuel mix, in a bid to reduce CO<sub>2</sub> emissions.

## 5. Conclusion

The CORSIA scheme allows airlines to purchase carbon offsets to reduce their growing CO<sub>2</sub> emissions outside the aviation industry. However, the double counting of offsets should be avoided, and airlines should not be allowed to offset their CO<sub>2</sub> emissions by using the same emission reduction measure that a country uses for meeting its own obligations under the Paris Agreement. Therefore, the impact CORSIA will have on mitigating climate change will rest on the environmental effectiveness of the offsets used. The EU-ETS for aviation is considered to be more effective to reduce GHG emissions in aviation, however, also this scheme is not flawless. Under the EU-ETS for aviation, the airlines still receive a large number of pollution permits for free, which does not motivate the airlines to increase their efforts to reducing GHG emissions. Taxes on kerosene and air tickets are considered being meaningful measures for reducing GHG emissions in aviation. However, rather than entering the process of introducing new tax schemes in the aviation industry, it would help in short-term to put a price on all pollution permits for airlines within the EU-ETS.

However, at the moment, the aviation sector suffers of the COVID-19 pandemic and this could lead to an even louder call of the airlines to

discontinue the EU-ETS for aviation and to replace it with the CORSIA scheme as the only future emission reduction scheme for aviation.

However, in order to reach its own climate target by 2050, the EU will have to further significantly reduce its CO<sub>2</sub> emissions, in particular in the transport sector and also in aviation. Therefore, the EU-ETS for aviation needs to be reviewed, not only for aligning it with the ICAO's CORSIA scheme but also for achieving a GHG emission reduction in the aviation sector.

In this context, the ICAO's CORSIA scheme should rather complement the EU-ETS for aviation and create coverage of the GHG emissions of international flights at global level, where the EU-ETS for aviation has no coverage. It will need the EU-ETS for aviation and the CORSIA scheme in parallel as well as strong technological developments in the aviation sector in order to support the GHG emission reduction towards the 2050 climate neutrality target.

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