

Emissions trading in aviation

Global emissions from civil aviation amounted to around 918 million tonnes of carbon dioxide (CO₂) in 2019, an increase of 29 percent since 2013. In the long term, a global annual increase of three to four percent is expected in aviation after overcoming the COVID 19 pandemic. In addition, there are further emissions and atmospheric processes at flight altitude which include nitrogen oxide emissions and their effect on ozone, or the formation of condensation trails or clouds caused by aircraft. These non-CO₂ effects, as they are called, have an additional climate impact which is about twice as strong as that of CO₂.



Aviation in the European Emissions Trading System (EU ETS)

Across the EU, aviation is responsible for more than three percent of greenhouse gas emissions. Emissions trading provides a cap and a price on CO₂ emissions for aviation and this gives aircraft operators (airlines and business jet operators) more incentives for technical and organisational improvements. At the same time, emissions trading reduces distortions between modes of transport: commercial air transport is the only sector not paying tax on fuel and international flights are exempt from VAT. This puts road and rail transport at a competitive disadvantage. In addition, rail has already been subject to emissions trading due to the use of fossil fuels to generate electrical energy either by rail itself or bought in. Since 2010, aviation has therefore been included in the EU ETS, which in principle covers about one third of global

CO₂ emissions from civil aviation. The overall objective of inclusion was to enable aviation to make an appropriate contribution to meeting the 1.5°C target. Aircraft operators must report their emissions annually to the competent authorities (in Germany, DEHSt). From 2012, aircraft operators have also had to surrender an emission allowance for each tonne of CO₂ reported. Most aircraft operators have received a certain number of free allowances upon application based on their transport performance in 2010. As of 2025, aircraft operators will also have to record and report the non-CO₂ effects they cause, without any levy obligation to begin with. The European Commission is obliged to submit a proposal for a levy obligation by the end of 2027.

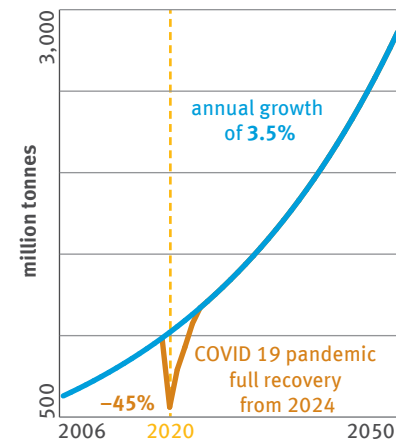
Scope

Principally, all flights taking off or landing in the European Economic Area (EEA) are covered. Exceptions exist for certain aircraft (less than 5,700 kg maximum take-off weight), certain types of flights (e.g. rescue and research flights) and for operators with low total annual emissions (less than 10,000 tonnes of CO₂ for commercial aircraft operators

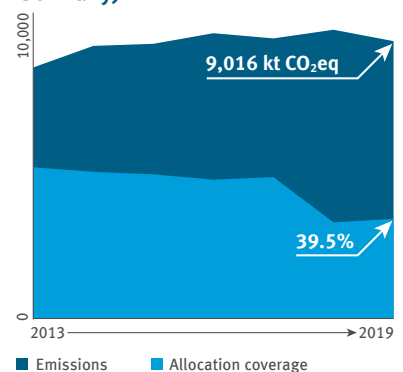
and less than 1,000 tonnes of CO₂ for non-commercial aircraft operators).

For 2012 to 2026, the reporting and surrender obligation was essentially limited to intra-EEA flights, i.e. flights that take off and land on the territory of the EEA. In this context, the term “reduced scope” is also used.

CO₂ emissions from civil aviation



Ratio of allocation to emissions in the reduced scope (aircraft operators administered by Germany)



Linking with the Swiss Emissions Trading System

On 01/01/2020, the agreement on linking the Swiss emissions trading systems with the EU entered into force. This concludes a process that has taken almost ten years. Switzerland is the first country to successfully link its greenhouse gas emissions trading system with the EU emissions trading system. The linking means that emissions from flights from the EEA to Switzerland

are subject to reporting and surrendering obligations under the EU ETS, while those flights from Switzerland to the EEA and within Switzerland are subject to reporting and surrendering obligations under the Swiss ETS. However, an aircraft operator is administered by only one state for both systems.

Exit of the United Kingdom from the EU

Due to Brexit, from 01/01/2021, the United Kingdom of Great Britain and Northern Ireland no longer participated in the EU ETS. However, due to the trade agreement between the EU and the United Kingdom, flights from

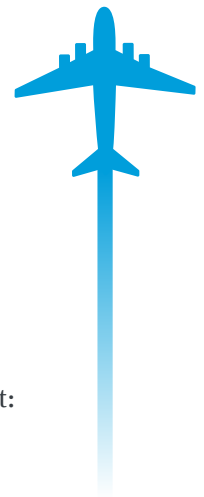
the EEA to the United Kingdom will continue to be covered by the EU ETS. Flights from the United Kingdom to the EEA and within the United Kingdom are covered by the UK ETS.

ICAO activities for global emissions trading

At its 39th Assembly in autumn 2016, the International Civil Aviation Organisation (ICAO) adopted a market-based measure to limit CO₂ emissions from international aviation. CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation) provides the ability to offset CO₂ emissions through project credits (“offsets”) in order to achieve CO₂-neutral growth in international aviation from 2020 onwards (see Factsheet “*Climate protection in aviation – CORSIA and EU ETS*”). Since 01/01/2019, aircraft operators from all ICAO

Member States are required to monitor their CO₂ emissions from international aviation under CORSIA.

For aircraft operators based in the European Economic Area (EEA), for which DEHSt is responsible within CORSIA, the 2019 emissions report was the first CORSIA reporting carried out in addition to EU ETS reporting.



Outlook

On 14/07/2021, the European Commission presented a series of legislative proposals as part of the “Fit for 55” package, which are intended to align energy and climate policy instruments with the new climate target of reducing emissions by at least 55% compared to 1990 levels by 2030. This also includes proposals

for aviation. A detailed presentation of these proposals and information on the further political process can be found at: www.umweltbundesamt.de/dokument/aenderungen-im-luftverkehr-ets-corsia (Only available in German)

FACTS AND FIGURES

Reduction targets: –3% (2012) and –5% (from 2013) compared to the 2004–2006 average emissions (baseline), i. e. the cap remains constant at 97% or 95% of the baseline until 2020, linear reduction factor of 2.2% p. a., from 2021, from 2024 4.3 % p. a., from 2028 4,4% p.a.

EU reduction target in absolute terms: Baseline: 221.4 Mt CO₂ 2012 cap: 214.8 Mt CO₂ 2013–2020 cap: 210.4 Mt CO₂, from 2021 linear reduction factor of 2.2% p. a., from 2024 4.2 % p. a.

Participants in aviation emissions trading: Approx. 4,800 international aircraft operators from more than 150 countries, of which almost 480 have Germany as the competent authority. Many of them are currently exempted from emissions trading obligations due to low activity.

Free allocation: 85% of the 2012 cap, 82% of the cap from 2013 onwards according to the EU Commission’s Europe-wide uniform benchmark (2012: 0.6797 allowances per 1,000 tonne-kilometre; from 2013: 0.6422 allowances per 1,000 tonne-kilometre); in 2018 the free allocation for aircraft operators administered by Germany covered about 38% of their CO₂ emissions

Reserve: Max. 3% of allowances from 2013 onwards, one-off allocation from it in 2016

Auctioning quota: 15% of the cap certificates

Reduced scope: The free allocation will be replaced by auctioning of all emission allowances allocated to aviation from 2026.

