

Common - Follow up actions on Paris Agreement, COP 21/ Aviation - Gas emissions: ICAO's Technical Advisory Body (TAB) to start assessment of emissions unit programmes based on the CORSIA emissions unit criteria

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【概要 : Summary】

The CO₂ emissions of international aviation are projected to further increase by 300-700% until 2050, according to the International Civil Aviation Organization (ICAO). One of the main problems regarding the sustainability in the aviation sector is that it lacks of alternatives to currently used propulsion systems or biofuels to significantly reduce CO₂ emissions. The ICAO's inaction for more than a decade to introduce CO₂ emission reduction measures in aviation led to the EU's unilateral action to introduce the EU-ETS for aviation in 2012.

However, finally, at the ICAO's 39th general assembly, measures to reducing the GHG emissions from international aviation were agreed. On 6 October 2016, the ICAO's general assembly agreed on imposing some action to reduce GHG emissions in aviation. The ICAO's Carbon Offsetting Scheme for International Aviation (CORSIA) was set up and new ICAO measures to address international aviation's environmental impact were agreed at the Committee on Aviation Environmental Protection (CAEP)'s meeting in February 2019. The CAEP agreed on the requirements for Sustainability Certification Schemes (SCS) and a process to evaluate and recommend a list of eligible SCS, which will certify fuels against the CORSIA sustainability criteria. Moreover, CAEP recommended the rules and procedures for the Technical Advisory Body (TAB). The TAB will develop recommendations on

the list of eligible emissions unit programmes. Emissions units would be eligible based on the emissions units' criteria, for the compliance use under the CORSIA, for presentation to the ICAO Council. It has to adjust its work, if needed, in the light of any developments of work by the Council, with technical contribution of CAEP, in any reviews of the emissions unit criteria, which are set out in the ICAO CORSIA Implementation Elements. The TAB will also undertake any other tasks instructed by the ICAO's Council.

【記事 : Article】

1. The aviation sector's GHG emissions
Direct CO₂ emissions from aviation accounted for about 2.4% of global energy-related CO₂ emissions in 2018. By 2020, global international aviation emissions are projected to be around 70% higher than they were in 2005 and according to the International Civil Aviation Organization (ICAO), the GHG emissions of aviation could grow by 300-700% until 2050. In 2018, domestic and international flights emitted about 895 million tonnes of CO₂ (MtCO₂). Although CO₂ emissions are supposed to decline in line with global climate goals, aviation emissions have still increased by 26% since 2013, and the sector's growth is continuing, with passenger numbers projected to double to 8.2 billion in 2037. Forecasted improvements in aircraft fuel efficiency of around 1-2% per year are considered

being too small to offset the expected traffic growth of around 5% per year. Depending on efficiency improvements and new technologies, such as supersonic jets or urban mobility aircrafts, the aviation sector's GHG emissions could even further increase.

2. ICAO's CORSIA scheme

Since the EU introduced the EU-ETS for aviation in 2012, for reducing GHG emissions from aviation, the ICAO came under pressure to consider measures to reduce the GHG emissions from international aviation in order to avoid the introduction of more unilateral measures at regional level. On 6 October 2016, the ICAO's 39th general assembly reached an agreement to address international aviation emissions and agreed on imposing some action to reduce GHG emissions in the aviation sector. The ICAO's Carbon Offsetting Scheme for International Aviation (CORSIA) was agreed by 192 countries within the ICAO and is seen as a significant measure to tackle the aviation sector's rapidly growing CO2 emissions.

In 2019, airlines and business aircraft operators in all ICAO member states have started to monitoring and reporting their GHG emissions from international flights. This data will form part of the baseline of CO2 emissions for the CORSIA scheme from which growth can be measured. The baseline from January 2021 will be calculated as the average of 2019 and 2020 emissions.

The CORSIA scheme is scheduled to start in 2021 with a first voluntary pilot phase, followed by the voluntary first phase from 2024 to 2027. From 2027 to 2035, the mandatory second phase will follow for most ICAO member states, with only exemptions for some small emitters. In 2032, the ICAO will review the CORSIA scheme and decide whether the scheme should be ended, extended or improved for the period after 2035. While the participation is on a voluntary base on the first two stages of CORSIA, the reporting stage for GHG emissions is mandatory once a country has decided to join CORSIA at whatever stage.

Under the EU's CO2 emission reduction measure EU-ETS for aviation, intra-EEA flights are covered and the

system should lead to a reduction of CO2 emissions in aviation. However, CO2 emissions from the aviation sector have risen by 26% since 2012. One of the main problems under the EU-ETS for aviation is that the airlines receive a large number of pollution permits for free. This situation does not incentivise CO2 emission reduction measures.

The CORSIA scheme will allow airlines to offset their growing CO2 emissions by means of carbon saving projects outside the aviation industry. Buying an offset means buying a credit that has been verified as having reduced CO2 emissions elsewhere. At the end of each three-year phase of CORSIA, participating airlines will be required to buy offsets for emissions growth above 2020 levels for each of the previous three years. Accordingly, airlines will be required to offset their emissions from the CORSIA's three-year pilot stage by the end of January 2025.

As of mid-January 2019, 78 countries, representing three-quarters of international flights have volunteered to participate in this initial pilot phase. This includes the US, Australia, Canada, Saudi Arabia, Japan, the UK and many other EU countries. Although there was some criticism by the EU regarding CORSIA, it can be expected that the EU will continue its support for the scheme, as it is the only existing measure at international level. However, the CORSIA scheme is only expected achieve a carbon natural growth (CNG) in the 2020–2035 period.

3. The ICAO's Technical Advisory Body (TAB)

Some new ICAO measures to address aviation's environmental impact globally were agreed at the Committee on Aviation Environmental Protection (CAEP)'s meeting on 15 February 2019. The updated ICAO environmental trends on CO2 agreed by CAEP form the basis for the ICAO environmental policies at the next 40th Assembly in September 2019. Regarding the CORSIA scheme, agreement was reached on the means to calculate and claim the benefits coming from the use of sustainable aviation fuels reducing airlines' offsetting requirements. The CAEP also agreed on the requirements for Sustainability Certification

Schemes (SCS) and a process to evaluate and recommend a list of eligible SCS, which will certify fuels against the CORSIA sustainability criteria. Moreover, the CAEP recommended the rules and procedures for the Technical Advisory Body (TAB), which was set up by the ICAO Council to evaluate the eligibility of emissions units for use in CORSIA. This TAB has the mandate to make recommendations to the Council on the eligible emissions units for use by the CORSIA.

Offsetting programmes will be able to apply to ICAO's TAB for consideration of their eligibility in CORSIA and the TAB recommends to the Council the eligible emissions units for use by the CORSIA. In March 2019, the ICAO Council approved the Emissions Unit Criteria, to be used by the TAB and established the TAB. The 19 members of the TAB are experts appointed by their States and approved by the ICAO Council. The ICAO is inviting emissions unit programmes to apply for assessment against the CORSIA criteria by the ICAO Council's TAB. Furthermore, the ICAO Council approved the Terms of Reference (TOR), which indicate the tasks of the TAB.

The TAB will develop, in a transparent manner, recommendations on the list of eligible emissions unit programmes (and potentially project types) whose emissions units would be eligible based on the emissions units criteria, for the compliance use under the CORSIA, for presentation to the Council. It has to adjust its work, if needed, in light of any developments by the ICAO Council, with technical contribution of CAEP. It will also undertake any other tasks as instructed by the Council.

In order to apply for assessment against the CORSIA criteria by the ICAO Council's TAB, emissions unit programmes had to complete the application and submit it by 12 July 2019. Regarding the Programme Application, as an initial step, ICAO invited the emissions unit programmes to apply for assessment against the CORSIA emissions unit criteria by the TAB. The TAB will assess the emissions unit programmes (and potentially project types) against the emissions units criteria, applying as a starting point the CAEP Programme Testing Group's procedures and guidelines.

In August, the TAB is due to start its assessment of applied-for programmes against the adopted emissions unit criteria, with the aim of making recommendations to the ICAO Council for decision-making on eligible units by February 2020. Eligible offset credit programmes are required to deliver credits that represent emissions reductions, avoidance or sequestration. The programmes must address the design elements including clear methodologies and protocols, and their development process, scope considerations, offset credit issuance and retirement procedures among others.

4. Outlook and way forward

In the early years of CORSIA, the number of offsets each airline needs to buy will depend on the entire global industry's emissions growth since 2020, rather than any change in that individual airline's CO₂ emissions.

The requirement to offset emissions will be divided among airlines in proportion to the total CO₂ emissions of that company, referred to as the "sectoral" component of CORSIA. Initially, this could lead to a situation in which larger airlines with bigger CO₂ emissions will have to offset a greater share of global emissions growth than they are directly responsible for. From 2030 onwards, this approach will gradually change to one based on each airline's individual rate of growth. From 2030-2032, 20% of offsets will be calculated according to this "individual" approach, with the remaining 80% calculated by the "sectoral" approach. In 2033-2035 period, the proportion of offset requirements based on the "individual" approach will increase to 70%.

The CORSIA offset definition is a crucial aspect to making the scheme credible and if offsets are allowed even when they do not result in genuine and additional emissions reduction, then the scheme will be undermined.

The CORSIA TAB will be tasked with assessing, which emissions unit programmes can be included and the TAB will also need to take into account the final rules decided on the voluntary market mechanisms of the

Paris Agreement.

Generally, the CORSIA scheme is only seen as a starting point to a really significant long-term reduction of global aviation's GHG emissions. However, CORSIA is backed by the aviation industry, as it will help to avoid the introduction of more regional, unilateral CO₂ emission reduction schemes. However, the criticism with CORSIA, in particular regarding the possible lack of high-quality offsets remains. According to the International Council on Clean Transportation (ICCT), the CORSIA scheme and its offsets could achieve a modest reduction of the net climate impact of international aviation up to 2035, but only if high-quality offsets are used and those offsets are not double counted and the regulators will comply with strict offsetting standards.

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