Impact of COVID-19 on Aviation and Climate Action
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SYNOPSIS
In light of the COVID-19 pandemic and its impact on the global aviation sector, the 220th Council of the International Civil Aviation Organisation (ICAO) has made a series of important climate related decisions. These new “safeguards” are put in place to adapt the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)’s baseline in line with COVID-19 related concerns from the airline industry. This policy brief gives an overview of CORSIA’s genesis and its intended outcomes. It will also describe the importance of this ICAO development related to CORSIA, and other aspects of aviation climate policy.

KEY POINTS
• Originally, the CORSIA baseline calculation was agreed to be an average of 2019 and 2020 emissions. The ongoing and unprecedented COVID-19 crisis has seen a precipitous drop in demand for air transport of more than half compared with 2019.
• While the International Air Transport Association (IATA) remains committed to reducing net emissions to half of 2005 levels by 2050, CORSIA is a vital step in that direction, enabling carbon-neutral growth that will stabilise net emissions from international aviation at 2019 levels (580 MT CO$_2$e).
• Biofuels offer an alternative to offsetting, but entails potential environmental trade-offs.
• While the new CORSIA safeguards provides leeway for airlines to weather the impacts of COVID-19, the parcelling out of international aviation and shipping emissions to respective UN specialised bodies could prove to be less than ideal. This could perpetuate the fragmentation of international climate policy.

INTRODUCTION
On 30 June 2020, the 220th Council of the International Civil Aviation Organisation (ICAO) made important decisions by revising the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) in light of the ongoing COVID-19 pandemic. CORSIA is the first ever global market-based measure being applied for any industry sector, and is the aviation industry's main contribution towards climate policy.

ICAO Council President Salvatore Sciacchitano noted that the Council States made a “measured assessment” and had come to the “most reasonable solution available given our current and very extraordinary circumstances”. Safety concerns around COVID-19 and worldwide travel restrictions have significantly lowered international aviation operations, traffic and emissions in 2020.

The original CORSIA baseline was to be taken from the average of 2019 and 2020 emissions levels, and keeping to this would mean that the CORSIA baseline would be severely reduced. The industry’s collapse amid the pandemic therefore affects the sector’s ability to meet the much lowered CORSIA offsetting baseline, especially in light of its recovery plans. As a result, the Council resorted to paragraph 16 of Assembly Resolution A40-19—the so-called “safeguard provision”—to relieve airlines of economic burden and to operationalise this decision during CORSIA’s pilot phase (2021-2023). This “safeguard” will apply to relevant CORSIA documents referenced in the CORSIA
Standards and Recommended Practices, and will impact the calculation of the baseline, selection of an operator’s emissions for pilot phase, and threshold for new entrants. This policy brief gives an overview of CORSIA’s genesis and its intended outcomes. It will also describe the importance of this ICAO development related to CORSIA, and other aspects of aviation climate policy.

ANALYSIS

Role of ICAO in Aviation Climate Action

Since the adoption of the Kyoto Protocol in 1997, the role of managing and mitigating international aviation emissions have been assumed by the International Civil Aviation Organisation (ICAO), a specialised agency of the United Nations (UN). The Paris Agreement, addresses emissions from countries and is silent on international transport emissions, including aviation emissions. There is a long history to ICAO’s attempts to erect a framework for international aviation emissions. The trigger for CORSIA was the European Union (EU) announcement of its intention to include all flights originating or landing in EU airports into its emissions trading scheme (EU ETS). This move finally motivated ICAO member states to agree to a global plan for emissions mitigation in exchange for the EU restricting the implementation of its ETS to flights that operate within the EU. Notably, a fuel tax was previously ruled out on the basis of the ICAO Council Resolution of 14 December 1993, which took the position that Article 24 of the 1944 Chicago Convention on International Civil Aviation requires that states provide aviation fuel to aircraft on international routes on a duty-free basis.

ICAO has a two-pronged approach to GHG emissions mitigation. Apart from CORSIA, it also intends for the introduction of operational and technological improvements in airports and aircraft to contribute to the overall aim to achieve a plateauing of international aviation emissions at 2019 levels. CORSIA will begin with a pilot phase (2021-2023), after which it will enter into its first phase (2024-2026), and second phase (2027-2035). As of 30 June 2020, 88 States, representing 76.82 per cent of international aviation activity, have voluntarily offered to participate in CORSIA from its outset from 2021. The more States join CORSIA, the more emissions are covered by the scheme. From 2024, it is mandatory for all ICAO member states to participate in CORSIA in the second phase, save for Least Developed Countries, Small Island Developing States, Landlocked Developing Countries and States which represent less than 0.5 per cent of international revenue tonne kilometres (RTKs), which refers to the traffic generated by carrying one metric tonne of cargo or passenger load for a distance of one kilometre by air for reward/revenue.

CORSIA is comprised of two parts: a carbon offset obligation on airlines, and a programme to encourage the adoption of biofuels by reckoning the emissions avoided with the use of selected biofuels to reduce airlines’ offsetting requirements. The offsetting requirements will initially be based on the airline’s RTK between CORSIA participant states and the gross increase in international aviation emissions as a sector. Only from 2030 onwards will the airline’s individual emission growth be factored in. Initially, this will be 20 per cent of each airline’s offsetting requirements, increasing to 70 per cent in 2033. On a related note, the International Air Transport Association (IATA), the industry body for airlines with 296 member airlines from 120 countries covering 82 per cent of global air traffic, has committed to achieving 50 per cent reduction of emission levels by 2050 from a baseline of 2005 levels and this level currently remains unchanged despite the CORSIA baseline update.

COVID-19, CORSIA and the Carbon Market

Unlike an ETS, CORSIA does not accredit individual projects to generate carbon credits. Rather, airlines are expected to source credits from carbon credit standards organisations, including the four largest standards as identified by the World Bank in its State and Trends of Carbon Pricing 2020 report, namely Verra, Gold Standard, Climate Action Reserve, and the American Carbon Registry. The fifth approved standard for the first phase of CORSIA is the China GHG Voluntary Emission Reduction Program, an agency under the Chinese government, and currently supplies carbon offsets for provincial and municipal ETS schemes in China. The sixth and final accredited standards organisation is the Kyoto Protocol’s Clean Development Mechanism.
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The inclusion of the CDM has worried some observers even before COVID-19 struck, that it would flood the market with old credits and undermine its effectiveness. ICAO has since limited the eligibility of credits to projects which begin issuing credits in 2016 or later. Ecosystem Marketplace, a non-profit organisation based in Washington, DC focused on increasing transparency and providing reliable information for ecosystem services and payment schemes, in their March 2020 Insights Brief estimated that the CDM would supply 168 MT CO2e and the others a combined 401 MT CO2e. These 569 MT CO2e of credits would still outstrip the pre-COVID-19 estimated demand for the initial three-year pilot phase, which is 104 MT CO2e.

On 13 May 2020, IATA shared new analysis that the sector’s total passenger traffic, calculated in RPKs, will fall to 24 per cent of 2019 levels in 2021 in their Baseline Scenario. This is 32 per cent lower than IATA’s October 2019 Air Passenger forecast for 2021. However, in their Pessimistic Scenario, global RPKs in 2021 could be 34 per cent lower than 2019 levels and 41 per cent below their previous forecast for 2021. This baseline emission level has been estimated by ICAO in its 2019 Global Environmental Trends report as being 555 MT CO2e. However, reports of CORSIA’s demise may have been greatly exaggerated. Firstly, on 10 June, CBL Markets, a global exchange for environmental commodities, forecasted that demand for credits in the CORSIA compliance market will recover by 2023, using a 2019-only baseline. In this optimistic scenario, the CORSIA pilot phase would be an extended exercise in accounting for airline emissions.

However, the road to recovery is long, and the depressed aviation market’s emission levels would likely remain below 2019 levels in 2020, 2021, and 2022. This might draw in some fence-sitting countries to join CORSIA in addition to the 68 countries that have indicated willingness to participate in the pilot phase, since it becomes a no-loss scenario. Allowing national civil aviation authorities to familiarise themselves with their duties in ensuring compliance by airlines is no bad thing either. It may engender more confidence in CORSIA down the road. Secondly, if the aviation sector remains depressed beyond 2023, this would simply mean lower emissions levels overall. While this might render CORSIA pointless, the overall result is that emission levels would remain below 2019 levels.

That being said, if the original baseline of 2019-2020 was retained, this would have the effect of bringing down the baseline even further, by almost a quarter. This would no doubt accelerate the decarbonisation of the aviation sector. However, it may also result in the premature and irreversible loss of aviation services, especially to less-profitable and remote locations such as some small island developing states (SIDS) and landlocked developing countries (LLDCs). For these countries and communities, international surface transport options (road, rail, or sea) are limited, impractical, or non-existent, and aviation remains their lifeline. This would not directly achieve IATA’s commitment to halving the aviation sector’s emissions but over the longer term, it was always intended that real emission reductions would be achieved by switching the entire aviation sector to biofuels, which is lower in carbon footprint than jet fuel. ICAO’s own estimates posit up to 63 per cent reduction in emissions from a baseline of 2015 by 2050 if this switch is completed. The International Energy Agency’s Sustainable Development Scenario (SDS) published in March 2019 anticipated biofuels reaching around 10 per cent of aviation fuel demand by 2030, and close to 20 per cent by 2040. On 9 July 2020, on the eve of the IEA Clean Energy Transitions Summit held virtually, IATA called for the IEA to prioritise investment in sustainable aviation fuel (SAF) to help power aviation’s contribution to the post-COVID-19 recovery.

Biofuels, Climate Change and Wider Environmental Impacts

CORSIA’s second part, the certification of CORSIA Eligible Fuels (CEF), allows airlines to use selected biofuels to reduce their emission offset obligations. CEFs are required to meet three criteria: (1) fuel generated from a biofuel feedstock with life cycle emission values ascertained by ICAO’s Committee on Aviation Environmental Protection (CAEP); (2) use a fuel conversion process compliant with the international standards ASTM 7566 and ASTM 1655; (3) received sustainability certification from an ICAO-recognised body as complying
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with ICAO’s CEF standards. The main points of concern lie in criteria (1) and (3). In the former, 16 types of feedstock meet the requirement, including wastes from agriculture and forestry residues, municipal solid waste (MSW), used cooking oil, and tallow. The generation of biofuels from waste products is not particularly controversial and will likely lead to overall emission reductions without significant negative environmental impact. Other feedstocks are derived from food crops and other agricultural products may compete for land, drive deforestation, and accelerate land use changes to generate monocultures that could have severe impacts on biodiversity and ecosystem services.

While no certification schemes have been identified yet, ICAO has set out the criteria that CEFs and certification schemes purporting to certify biofuels as CEFs must meet. For the non-waste feedstock, ICAO expects them to be produced using “low land use change risk practices”. This is to be done either by increasing yields of existing crops or by growing these feedstock crops on non-arable or severely degraded lands. They must also have “little risk for displacement of services from that land onto different and equivalent amounts of land elsewhere.” As for MSW-based biofuels, ICAO assumes some form of material separation, adopting four broad categories in the calculation of mitigation outcomes: paper and textiles; wood and straw; food waste and sewerage sludge; and other organic waste. Further, MSW-based biofuel can be assessed at lower emission levels if additional steps are taken to recycle plastics and metals from the MSW. Properly done, MSW-based biofuels could generate several co-benefits at once, including mitigating GHG emissions and promoting a circular economy.

CONCLUSION
While CORSIA may not be sufficient to get the global aviation industry to Paris Agreement-compliant levels, nothing prevents individual countries and economic regions such as the EU from further imposing carbon offsetting requirements on the 2019 baseline emission values on domestic and intra-regional flights, possibly by mandating the purchase of more CORSIA-compliant carbon offset units to reach net neutrality. This could be justified on the basis of adherence to the Paris Agreement’s 1.5°C target, which calls for a global net-zero of GHG emissions by 2050. Neither ICAO nor IATA have promised that the international aviation sector will meet that target.

In the longer term however, the parceling out of international aviation and shipping emissions to the UN specialised bodies could prove to be less than ideal given the uneven nature with which COVID-19 impacts will be felt, resulting in recovery plans that could impede effective climate action. However, UNFCCC negotiations on bringing back this topic in-house remain fraught, with the Arab Group and India expressing serious concerns about the lack of due respect for the principles and provisions of the UNFCCC in ICAO and IMO measures and are adamantly opposed. This will perpetuate the fragmentation of international climate policy.

WHAT TO LOOK OUT FOR
- The Pilot Phase of CORSIA from 2021-2023, where countries will participate on a voluntary basis.
- Further analysis and review of CORSIA, that will be forwarded as a recommendation to the next ICAO Assembly in 2022.

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Key words: COVID-19, Aviation, Climate Change, CORSIA

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