International Civil Aviation Organization

A41-WP/472[1]
EX/220
30/08/22

WORKING PAPER

ASSEMBLY — 41ST SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection – International Aviation and Climate Change

ENHANCING ENVIRONMENTAL SUSTAINABILITY: IMPORTANCE OF SUSTAINABLE AVIATION FUELS

(Presented by International Partners for Aviation Development, Innovation and Sustainability (iPADIS))

EXECUTIVE SUMMARY

The achievement of the medium-term aspirational goal of keeping the global net carbon emissions from international aviation from 2020 at the same level and the proposed long-term aspirational goal (LTAG) of net-zero carbon emissions by 2050 requires rapid reduction and elimination of in-sector emissions. Sustainable aviation fuels (SAF) offer perhaps the best potential of meeting LTAG in the near future.

SAF is an encouraging avenue for States especially developing countries to diversify their economy, broaden their technical knowledge and expertise, and advance national technological development while effectively contributing to the reduction of aviation emissions. However, the rapid development and deployment of SAFs require political will, enabling policies and economic incentives by Governments.

Action: The Assembly is invited to:

a) note the information in this paper;
b) urge ICAO, member States, regional organisations and the aviation industry to accord greater priority to SAF development and deployment; develop and harmonise global, regional and national policies on SAF; as well as collaborate with non-governmental and civil society organisations in sensitising governments and societies on the benefits of SAF; and
c) request ICAO to strengthen its collaboration with donor States, development partners, financial institutions producers and distributors of SAFs and other relevant stakeholders to facilitate capacity building, access to financing and technology transfer to enable States develop their SAF industry, including through public and private partnerships and joint ventures.

Strategic Objectives:	This working paper relates to Strategic Objective – *Environmental Protection*.
Financial implications:	The activities referred to in this paper should be undertaken from the resources available in the 2023 – 2025 Regular Budget and/or from extra budgetary contributions as guided by the ICAO Business Plan 2023-2025.
References:	A41-WP/369, *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change*

[1] English, Arabic, Chinese, French, Russian and Spanish versions provided by iPADIS.

1. INTRODUCTION

1.1 Climate change is an existential challenge to our planet and every nation and global economic sector must do their part to limit the impact of greenhouse gas emissions on the climate. A key objective of iPADIS is therefore the promotion of sustainable development of aviation and advocacy for environmental sustainability and reduction of the negative impact of the growth of aviation on climate change.

1.2 As the aviation industry recovers from the impact of the COVID-19 pandemic, the contribution of air transport to global carbon emissions and its negative impact on climate change is again expected to grow. iPADIS therefore commends ICAO's sustained leadership and focus on the global aspirational goals for the international aviation sector of improving fuel efficiency by 2 per cent per annum and a collective medium-term global aspirational goal of keeping the global net carbon emissions from international aviation from 2020 at the same level.

1.3 iPADIS further supports consideration by this Assembly of a collective long-term aspirational goal (LTAG) for international aviation of net-zero carbon emissions by 2050 as outlined in A41-WP/369, *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change*.

2. DISCUSSION

2.1 Aviation is a key driver of global trade and tourism and a major direct and indirect contributor to nations' Gross Domestic Product (GDP). Continuing access to the socio-economic benefits of aviation is important to all the nations and peoples of the world. For developing countries such as the small island developing States (SIDS) and landlocked developing countries (LLDCs), for example, air transport connectivity is an existential requirement for their prosperity and socio-economic integration in the world and ultimately the attainment of their sustainable development goals (SDGs). However, most SIDSs and LLDCs are also very vulnerable to rising ocean levels, floods, soil erosion, scorching heat waves, droughts, desertification and other consequences of global warming.

2.2 The ICAO Council with the support of its technical bodies and the Secretariat has undertaken tremendous work in all aspects of the basket of measures to address climate change including aircraft technology CO_2 emissions standards; operational improvements; sustainable aviation fuel (SAF) and implementation of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

2.3 The success of ICAO's efforts on environmental protection ultimately depends on global cooperation where no country is left behind in having equitable access to participate in air transport and to develop its civil aviation sector, and where every ICAO member State is encouraged and supported to contribute its part to the attainment of global environmental objectives.

2.4 iPADIS applauds ongoing research and the development of zero emission propulsion systems using innovative sources of energy in air transport such as hydrogen and renewable electricity. iPADIS also welcomes current emphasis on the promotion of lower carbon aviation fuel (LCAF) technologies. However, iPADIS believes that SAF offers best potential of meeting LTAG in the immediate future.

2.5 Firstly, the safety of flights using SAF is proven. Secondly as an emerging sector, SAF offers broader attainable opportunities for new entrants. SAF is an encouraging avenue for States especially developing countries to diversify their economy, broaden their technical knowledge and expertise and advance their technological development while effectively contributing to reduction of aviation emissions

and attainment of the LTAG. If LCAF is a low hanging fruit for developing and emerging economies with robust oil and gas industries, SAFs should be of interest especially to the non-oil producing countries.

2.6 Concerns are often expressed regarding the impact of SAFs on food security arising from the use of arable land to grow some crop-based feedstocks as well as protection of biodiversity. However, there are now many proven fuel conversion pathways based on a wide variety of other feedstocks including non-food crops, agricultural residues and biomass, residue lipids, municipal and industrial wastes. Many feedstocks are best grown on fallow, arid lands that otherwise are not good for crops production.

2.7 Several feasibility studies have demonstrated that most ICAO member States can participate in and benefit from development and deployment of SAFs in a socially responsible and ecologically friendly manner including in the production of feedstocks and the refining, storage, and distribution of SAFs. What is required from any government to benefit from the SAF emerging sector is political will as well as enabling policies and economic incentives.

3. CONCLUSION

3.1 iPADIS urges ICAO, member States and the aviation industry to accord greater priority to SAF development and deployment. ICAO and the regional organisations should intensify high-level engagements towards the development of harmonised global, regional and national policies on SAF. In this regard collaboration with non-governmental and civil society organisations will be extremely helpful in sensitising Governments and societies on the benefits of SAF.

3.2 As air transport is an end user of SAF, effective collaboration with other relevant sectors pertinent to production and global distribution of SAFs is of critical importance. ICAO should collaborate with donor States, financial institutions and development partners to facilitate capacity building, access to financing and technology transfer for developing States. States should avail themselves of the many available green funding sources, public and private partnerships and joint ventures to develop their SAF industry.

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