



ASSEMBLY — 42ND SESSION

EXECUTIVE COMMITTEE

Agenda Item 16: Environmental Protection – International Aviation and Climate Change

INITIATIVES TO SUPPORT ICAO'S LONG-TERM
ASPIRATIONAL GOAL (LTAG)

(Presented by Oman)

EXECUTIVE SUMMARY

This working paper reviews key initiatives to support the Long-Term Aspirational Goal (LTAG) well aligned with the International Civil Aviation Organization (ICAO) basket of measures, and with full active engagement in international cooperation with ICAO and relevant stakeholders

Action: The Assembly is invited to:

- a) take note of the content of this working paper;
- b) encourage ICAO to continue to support the periodic review and update of State Action Plans , offering technical tools and guidance that facilitate the tracking of progress, knowledge exchange, and alignment with global environmental goal;
- c) emphasize the importance of strengthening support mechanisms for Member States—particularly developing countries—by enhancing access to financial resources, technical assistance, and capacity-building initiatives necessary for the effective implementation of LTAG-related measures;
- d) recognize the urgency of cross-regional airspace optimization to reduce the environmental footprint of aviation, while enhancing safety, efficiency, and capacity over high seas;
- e) request ICAO planning and implementation regional group (PIRG)s with the support of ICAO Regional Offices to initiate and coordinate cross-regional initiatives supporting air traffic management (ATM) harmonization;
- f) urge ICAO to facilitate access to international climate finance (e.g. Green Climate Fund (GCF), Global Environment Facility (GEF) and private investment particularly for Sustainable Aviation Fuel (SAF) infrastructure and research and development (R&D)) and;
- g) encourage ICAO to promote stronger regional collaboration frameworks that facilitate the alignment of policies, regulatory approaches, and technical capabilities among Member States, thereby enhancing collective efforts toward sustainable aviation and more effective implementation of global environmental goals.

Strategic Goals:	This working paper relates to the Strategic Goal – <i>Aviation is Environmentally Sustainable</i> .
Financial implications:	
References:	

1. INTRODUCTION

1.1 At its 39th Session in 2016, the International Civil Aviation Organization (ICAO) Assembly reaffirmed its global aspirational goal for carbon-neutral growth from 2020 and recognized the work to explore a long-term global aspirational goal for the sector in light of the 2° C and 1.5° C temperature goals of the Paris Agreement.

1.2 While, the ICAO Assembly Resolution A41-21 in October 2022 agreed to a collective global Long-term Aspirational Goal (LTAG) of net-zero carbon emissions from international aviation by 2050, the expectation from LTAG's scenarios that a drop-in Sustainable Aviation Fuel (SAF) will play a significant role in the mitigation of aviation CO₂ emissions using the existing global fleet will reach 55% of the formulated scenario, where the technology-design, operations, and market-based measures (CORSIA) will ensure the rest of the value.

2. OMAN VISION 2040 AND THE NET ZERO PLAN 2050

2.1 In its pursuit of a sustainable future, Oman has established ambitious objectives through Oman Vision 2040. This strategic framework aspires to create a diversified, knowledge-driven economy, foster a prosperous society, and ensure environmental sustainability. A central pillar of this vision is the advancement of renewable energy solutions aimed at reducing reliance on traditional fossil fuels.

2.2 Moreover, the principal mandate of the Omani Civil Aviation Authority (CAA) is to promote the development of the civil aviation industry in a sustainable and environmentally friendly manner. Therefore, Oman's civil aviation industry plays an important role, and it is experiencing accelerated growth in the national transportation system.

2.3 Thus, Oman fully supports the essential role of ICAO to achieve the global aspirational goal (LTAG) of net-zero carbon emissions from international aviation by 2050.

3. STATE ACTION PLANS TO REDUCE CO₂ EMISSIONS FROM INTERNATIONAL AVIATION

3.1 The development and implementation of State Action Plans is fundamental to achieving the Long-Term Aspirational Goal (LTAG) of net-zero emissions, serving as a cornerstone for sustainable aviation development by integrating economic growth, environmental protection, and social consideration through advancements in technology, operational improvements, alternative fuels, and market-based measures.

3.2 Regular updates to the State Action Plan, facilitated through continuous coordination among government, industry stakeholders, and relevant partners involved in action plan development, are essential to maintain its alignment with evolving national and global objectives, and to ensure its continued effectiveness.

3.3 Continuous review and sustained support are critical to driving the effective implementation of the State Action Plan, fostering continuous improvement, enabling progress tracking, and ensuring alignment with ICAO's global environmental objectives.

3.4 Oman will continue to actively collaborate with ICAO to periodically update its State Action Plan, while emphasizing the importance of capacity-building, knowledge-sharing, and the provision of support to ensure effective and inclusive implementation.

4. IMPLEMENTATION OF BASKET OF MEASURES FOR SUSTAINIBLE AVIATION

4.1 Technology:

4.1.1 The national carriers are playing a leading role in advancing fuel efficiency initiatives and are actively pursuing developments in aircraft technology to support Oman's broader sustainability objectives. As part of their strategic priorities, efforts have been directed toward the phased replacement of aging aircraft—previously averaging 10 years in service—with newer models incorporating lightweight composite materials and fuel-efficient engines. This transition is aimed at reducing fuel consumption and, by extension, lowering carbon dioxide (CO₂) emissions from aviation operations.

4.2 Operations

4.2.1 Several operational measures have been implemented and continue to be applied. These measures include the use of minimized or reduced flap settings during take-off and landing, limiting the use of thrust reversers, and adopting single-engine taxiing procedures. Specifically, pilots perform reduced-engine taxi on arrival by shutting down at least one engine immediately after landing. These practices expected to improve operational efficiency while reducing fuel consumption.

4.2.2 The implementation of advanced Air Traffic Management (ATM) systems—incorporating automated technologies such as new ground and communication infrastructure, enhanced navigational aids, and reliable surveillance systems covering the entire Oman Flight Information Region—has contributed to improved operational efficiency. These advancements will result in an estimated fuel savings of approximately 10%, thereby supporting the reduction of carbon emissions within the aviation sector.

4.2.3 The Strategic Project for Omani Airspace Named “Ajwaa” aims to achieve the highest standards of safety, security, and environmental protection within Oman's airspace. Key objectives include enhancing the connectivity of air routes, improving air navigation systems, and streamlining operational procedures between Oman and neighbouring countries' airspaces. Additionally, the project focuses on elevating the safety and efficiency of air navigation services while ensuring financial sustainability and increasing navigation revenues. By optimizing air traffic management and route efficiency, this initiative directly contributes to reducing fuel consumption and lowering carbon emissions, thereby supporting Oman's broader commitment to sustainable aviation and environmental stewardship.

4.2.4 Optimization of operations is considered as a fundamental pillar of the ICAO basket of measures. The maximum benefit of those operations relates to major flows of traffic crossing national, regional and inter-regional airspaces. Enhancing those operations does not require major technology breakthroughs, neither major investments, but strong coordination and leadership by States and by ICAO.

4.2.5 Challenges in cross-regional airspace management is seen in the growing complexity of air traffic operations over the high seas and across regional FIRs presents challenges related to airspace structures, operational procedures, and coordination. Differences in separation minima, inconsistent ATM practices, and fragmented decision-making processes result in inefficiencies and increased controller workload.

4.3 **Sustainable and lower carbon aviation fuels:**

4.3.1 Significant efforts have been made to explore the national opportunities for the production and use of sustainable and lower-carbon aviation fuels, along with the associated challenges and opportunities, in addition to possible policy options that could be adopted within Oman in this regard.

4.3.2 Effective policy coordination, enhanced access to financing, harmonizing standards and frameworks, and the accelerated deployment of relevant technologies are vital to ensure fair and efficient access to cleaner aviation fuels.

4.4 **CORSIA**

4.4.1 Oman maintains its strong commitment to CORSIA, having joined the initial phase (2024–2026). In coordination with relevant stakeholders, Oman is proactively engaged in raising awareness about emissions offsetting mechanisms while simultaneously identifying opportunities for local projects that can generate carbon credits. These efforts aim to not only support environmental objectives but also to maximize the associated economic benefits for Oman.

4.4.2 Maintaining a unified global market-based measure to address international aviation emissions, ensuring a stable supply of eligible emission units, and promoting ongoing capacity-building, technical support, and international cooperation—particularly in developing States—alongside regular reviews, is essential to ensure effective CORSIA implementation and contribute to achieving ambitious climate goals.

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