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EXECUTIVE COMMITTEE

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

TAKING A COMPREHENSIVE APPROACH TO CAPACITY BUILDING FOR AVIATION SUSTAINABILITY

(Presented by Singapore)

EXECUTIVE SUMMARY

The adoption of the International Civil Aviation Organization (ICAO)'s Long-Term Aspirational Goal (LTAG) of net-zero carbon emissions by 2050 is a pivotal milestone for international aviation. However, countries have different baselines in terms of institutional readiness, policy maturity, access to technologies and financing. A structured Assistance, Capacity-building and Training for LTAG (ACT-LTAG) programme will be critical to ensure that all States are supported in developing decarbonisation strategies aligned with ICAO goals and principles.

This paper proposes that ICAO introduce a structured ACT-LTAG programme, building on the Assistance, Capacity-building and Training for Carbon Offsetting and Reduction Scheme for International Aviation (ACT-CORSIA) and Assistance, Capacity-building and Training for Sustainable Aviation Fuels (ACT-SAF) programmes, while expanding support to new areas such as State Action Plan development, capacity building for cleaner aviation fuels deployment, climate finance literacy, and building institutional readiness. It also outlines how regional platforms such as the Asia Pacific Sustainable Aviation Centre (APSAC) can play a complementary role in delivering targeted, fit-for-purpose capacity building programmes that address regional challenges and priorities to support ACT-LTAG programme.

Action: The Assembly is invited to:

- recognise that achieving LTAG requires a structured and inclusive global assistance framework tailored to States' varying capacities and needs.
- request ICAO to establish a structured ACT-LTAG programme that builds on ACT-CORSIA and ACT-SAF, working with regional platforms to enhance delivery of support to achieve LTAG; and
- support the inclusion of a new paragraph 16 *quater* in the update of Assembly Resolution A42-21 to formalise ICAO ACT-LTAG programme.

<i>Strategic Goals:</i>	This working paper relates to Strategic Goal – <i>Aviation is Environmentally Sustainable</i> .
<i>Financial implications:</i>	Not applicable.

<i>References:</i>	Assembly Resolution A41-21, <i>Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate Change</i>
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1. INTRODUCTION

1.1 The implementation of the International Civil Aviation Organization (ICAO)'s Long-Term Aspirational Goal (LTAG) is a shared global endeavour, but its success hinges on equipping all States with the knowledge, tools, and institutional capacity to act. As the aviation sector continues to grow, particularly in emerging regions, it is essential that States are supported in transitioning to more sustainable pathways. However, States differ widely in terms of institutional readiness, policy maturity, access to technologies and financing. These disparities mean that while the LTAG is a collective global goal, the pathways toward it will be nationally determined and context-specific.

1.2 ICAO has taken important steps in this direction through the Assistance, Capacity-building and Training for Carbon Offsetting and Reduction Scheme for International Aviation (ACT-CORSIA) and Assistance, Capacity-building and Training for Sustainable Aviation Fuels (ACT-SAF) programmes. We should build on these efforts by formalising a broader and more structured Assistance, Capacity-building and Training for LTAG (ACT-LTAG) programme. At the same time, regional platforms can play an important complementary role to achieve LTAG in a manner that recognises regional needs.

2. NEED FOR A STRUCTURED ACT-LTAG FRAMEWORK

2.1 The implementation of LTAG will require States to act across many areas, including the production and use of cleaner aviation fuels, improvements in air traffic management, adoption of low-emission technologies, and access to climate financing. For many States, this presents an opportunity not only to bridge knowledge gaps but also to strengthen internal policy coordination, build robust regulatory regimes, improve access to data and expertise, and enhance their ability to mobilise climate financing.

2.2 To support this transition, ICAO should establish a consolidated ACT-LTAG programme as a structured and comprehensive framework. ACT-LTAG would unify existing initiatives such as ACT-CORSIA and ACT-SAF, while expanding support to help States develop coherent national aviation decarbonisation strategies aligned with LTAG. It should be anchored on ICAO's guidance on the development of State Action Plans, while allowing for flexibility in scope, pace, and modalities based on national circumstances. A well-structured ACT-LTAG initiative should also foster cross-regional collaboration through mechanisms such as buddy partnerships and promote a shared understanding of key knowledge domains through a global taxonomy, common reference materials, and standard training toolkits. ICAO should also collaborate with regional platforms and centres of excellence to deliver targeted support tailored to regional contexts and State-specific needs, in line with the No Country Left Behind initiative.

3. KEY ELEMENTS OF ACT-LTAG

3.1 A central component of the proposed ICAO ACT-LTAG is the expansion of ACT-SAF. Given that SAF is expected to contribute the largest share of emission reductions under LTAG, ICAO should provide robust capacity-building support on SAF lifecycle methodologies, sustainability criteria, and emerging carbon accounting frameworks. Scaling knowledge of these frameworks globally among all State will be critical to scaling SAF adoption and ensuring environmental integrity of SAF deployment.

3.2 ACT-LTAG should also introduce a structured approach to supporting State Action Plan development. This may include enhanced guidance documents, diagnostic tools for needs assessments, and an analysis of Action Plans to identify areas for targeted support. The ICAO Secretariat has already

developed an updated *Guidance on the Development of State Action Plans: Toward LTAG Implementation* (Doc 9988), which provides detailed guidance on preparing, implementing, and monitoring State Action Plans. The Secretariat has also rolled out online submission platforms, organised training workshops, and provided technical assistance to help States strengthen their plans. Building on this foundation, ACT-LTAG can systematise and scale up this support, drawing on lessons from other ICAO initiatives such as the Global Air Navigation Plan to enable progressive and flexible implementation pathways for States at different levels of readiness.

3.3 Another important area is helping States understand the evolving landscape of climate financing. Many States may be unfamiliar with the types of funding instruments available, eligibility requirements, and the expectations of different funding bodies. ICAO ACT-LTAG can strengthen States' institutional knowledge of climate finance mechanisms, improving climate finance literacy, and raising awareness of the enabling conditions that support successful access to climate finance. This would complement the ICAO Fininvest Hub's role in facilitating partnerships between aviation sustainability projects and investors worldwide.

3.4 Capacity building must be at the heart of ICAO ACT-LTAG. Without strengthened institutions, technical expertise, and robust policy frameworks, States will find it difficult to transition from aspiration to action. ACT-LTAG is envisioned to fill this gap, offering States a pathway to progressively build the competencies and systems needed in their governments and industry to contribute to global climate action. A key aspect is identifying and addressing the domains where States face the greatest barriers to progress. These are the areas where capacity building can have the most immediate and transformative impact.

3.5 Possible Capacity-Building Programmes

3.5.1 A range of capacity-building programmes can be considered, combining both technical assistance and training, to support States in developing their sustainable aviation strategy. Technical assistance includes providing tailored advice that helps States adapt existing policy options to fit their unique national contexts. Additionally, expert consultancy services can be offered to help developing States initiate and nurture their SAF ecosystems effectively.

3.5.2 Developing expertise in **cleaner aviation fuels** is a key capacity-building priority given their potential to significantly reduce aviation's carbon footprint and generate new economic opportunities. Policy makers must be able to conduct life-cycle assessments and understand land use change methodologies to design frameworks to mobilise sustainable feedstock to support production of cleaner aviation fuels such as SAF. Furthermore, policy makers will need support in implementing robust **carbon accounting** mechanisms for the transparent and consistent validation of transactions and claims involving cleaner aviation fuels and their environmental benefits. Finally, policy makers must also understand how to design **market-activation and climate financing** instruments to attract new capital and investors.

4. ROLE OF THE ASIA PACIFIC SUSTAINABLE AVIATION CENTRE

4.1 The Asia Pacific Sustainable Aviation Centre (APSAC) was established to build capabilities to advance sustainable aviation through policy research, collaboration, and capacity building. By bringing together public and private expertise, APSAC serves as a platform for delivering tailored support to States as they align with ICAO's LTAG. APSAC's policy research targets critical areas such as cleaner aviation fuels, carbon accounting, carbon market development, and climate financing. Equally important is APSAC's commitment to capacity building, which it advances through tailored technical assistance, specialized training, and fostering a common understanding of essential concepts and terminology in aviation decarbonization across the region. These efforts directly support ICAO ACT-LTAG programme

by strengthening States' ability to implement their national LTAG strategies and by fostering greater alignment with ICAO objectives.

4.2 APSAC is supported by a strong team of industry stakeholders, with its Advisory Council comprising partners from the aviation, energy, and climate financing sectors. The Chief Executive Officer is an industry veteran with over 30 years in the aviation industry, including Singapore Airlines and IATA. This deep expertise and extensive network position APSAC to be both a delivery partner for ICAO ACT-LTAG in the region and a source of thought leadership on Asia Pacific-specific pathways to sustainable aviation.

5. APSAC's UPCOMING CAPACITY-BUILDING INITIATIVES

5.1 APSAC will soon launch its first course, "*Growing Aviation Sustainably*" to provide foundation knowledge of aviation's environmental challenges and introduce decarbonisation options across airport operations, airline practices, and air traffic management. Designed for aviation authorities, industry, and policymakers, it reflects ICAO ACT-LTAG's emphasis on structured and comprehensive training tailored to diverse roles within the sector.

5.2 In addition, APSAC will convene a series of State Engagement Workshops tailored to the specific needs and policy contexts of requesting States. These workshops aim to promote whole-of-State engagement by bringing together stakeholders from the aviation authority, other government agencies, and the private sector. The workshops will facilitate cross-sectoral dialogue, inter-agency coordination, and policy alignment. They will also serve as platforms for needs assessments, knowledge exchange, and peer learning – core objectives envisioned under ACT-LTAG.

5.3 To ensure the success and relevance of these initiatives, APSAC actively invites collaboration from States. States may provide expert speakers and share national experiences and case studies. APSAC also encourages States to co-develop future training offerings and support curriculum development. These joint efforts will support ACT-LTAG while strengthening regional ownership and cooperation.

6. CONCLUSION

6.1 A structured and inclusive ICAO ACT-LTAG programme, building on ACT-CORSIA and ACT-SAF programmes, will provide a much-needed framework to consolidate and extend ICAO's support efforts to States as they chart pathways to net-zero. Regional platforms such as APSAC can also translate ACT-LTAG's objectives into practical approaches through tailored technical assistance, structured training, and collaboration. ICAO can leverage such regional platforms to scale up delivery of ACT-LTAG, enhance regional ownership, and ensure that ACT-LTAG remains relevant to national and regional contexts.

6.2 To support these goals, Singapore proposes that the establishment of ACT-LTAG be reflected in the update of Assembly Resolution A42-21: *Consolidated statement of continuing ICAO policies and practices related to environmental protection — Climate change*. It is recommended that this be inserted as a new paragraph **16 quater** in the Resolution, following the existing provisions on ACT-SAF.

6.3 The following wording is proposed for inclusion in the update of A42-21:

"Requests the Council to establish an ICAO Assistance, Capacity-building and Training for the Long-Term Aspirational Goal (ACT-LTAG) programme as a structured and comprehensive framework to support States in developing national State Action Plans aligned with the LTAG; to build on existing initiatives such as the ACT-CORSIA and ACT-SAF programmes; and to

collaborate with regional platforms to deliver targeted, practical support tailored to regional contexts and State-specific needs, in line with the No Country Left Behind initiative.”

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