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AGENDA ITEM 7: AVIATION AND ENVIRONMENT

ACI APAC & MID PROGRAMMES AND TOOLS SUPPORTING AIRPORT CLIMATE ACTION

Presented by Airports Council International

SUMMARY

This paper outlines Airports Council International Asia-Pacific & Middle East (ACI APAC & MID)'s approach to supporting airports in strengthening climate resilience, reducing carbon emissions and progressing towards Net Zero carbon emissions, in line with ICAO and global climate goals. It presents core climate tools available to airports, a structured Net Zero Roadmap Programme, and an Airport Carbon Accreditation (ACA) Incentive Programme targeted at small airports in developing economies.

The paper explains how climate risk assessment and maturity tools, a Regional Climate Dashboard and tailored Net Zero roadmaps can be used together to guide investment and operational decisions, and how ACA incentives can remove financial and technical barriers to first-time Airport Carbon Accreditation for small airports. States are invited to take note of this approach and to encourage airports under their jurisdiction to make use of these tools and programmes, so that climate action in the Asia-Pacific is credible, inclusive and aligned with ICAO and ACI's climate change initiatives.

ACI APAC & MID PROGRAMMES AND TOOLS SUPPORTING AIRPORT CLIMATE ACTION

1. INTRODUCTION

1.1 The aviation industry currently contributes approximately 2% of global CO_2 emissions, with a higher overall climate impact when non-CO_2 effects are considered. Airports are actively implementing mitigation measures, such as transitioning to renewable energy sources and adopting advanced carbon management systems, to reduce their climate impact and support the global goal of achieving net zero carbon emissions by 2050. At the same time, airports across the Asia-Pacific and Middle East regions are already experiencing climate-related events including extreme heat, intense rainfall and storm events causing severe operational disruptions, which affect infrastructure, service provision and operational continuity.

1.2 In the Asia-Pacific and Middle East (APAC & MID) regions, 32 States have pledged carbon-neutral or net zero carbon emissions goals through their Nationally Determined Contributions (NDCs) under the Paris Agreement. While these commitments are increasing, not all airports have publicly available or detailed roadmaps outlining their pathways to net zero carbon emissions, and many are still at early stages in systematically assessing climate hazards, impacts and vulnerabilities. Airports are therefore expected to contribute to States' long-term decarbonisation objectives while also managing mounting physical climate risks.

1.3 The Intergovernmental Panel on Climate Change (IPCC) has urged governments to prioritise adaptation to mitigate severe climate change effects, with its Sixth Assessment Report emphasising that "accelerated implementation of adaptation actions would reduce projected losses and damages for humans and ecosystems". At COP28 in Dubai, States agreed on targets for the Global Goal on Adaptation and its framework, which will guide countries in developing and implementing adaptation plans, including impact, vulnerability and risk assessments. By 2030, all Parties (including companies) are expected to conduct assessments of climate hazards, climate change impacts and exposure to risks and vulnerabilities and to use the outcomes to inform their plans, policies and strategies. Airports must act.

1.4 ACI Asia-Pacific & Middle East (ACI APAC & MID) has long recognized the strategic importance of climate adaptation. In 2022, the regional office published the "Tendering Guides for Climate Resilience Planning for Asia-Pacific and Middle East Airports" which aimed to build on airport operators' understanding of climate risk. To further strengthen these efforts, ACI APAC & MID launched a comprehensive 18-month regional study in January 2025 titled "The Study on Climate Change Adaptation Approach for APAC & MID Airports," which has since been completed. Additionally, the ACI APAC & MID provides the Green Airports Recognition (GAR) initiative to acknowledge sustainability achievements and share best practices on targeted environmental topics each year. Notably, the Green Airports Recognition 2026: Climate Change Adaptation theme recorded an impressive number of submissions, reflecting strong, proactive climate resilience efforts across the industry.

1.5 In parallel with these adaptation efforts, ACI APAC & MID actively support airport decarbonisation through the Airport Carbon Accreditation (ACA) program, the ACA Incentive Programme, and the Net Zero Roadmap Programme. Currently, over 100 airports in the region are certified under Airport Carbon Accreditation. To further advance this goal, ACI APAC & MID initiated the "Net Zero Roadmap: Decarbonise Your Airport Programme" in 2023. Following a successful pilot phase in 2024–2025, the program officially launched in May 2026 to provide airports with tailored, hands-on roadmaps toward net-zero emissions.

1.6 This paper presents the key findings and final outcomes of the climate adaptation approach study and introduces the Climate Risk Assessment Guideline, Climate Risk Maturity Check Tool, Climate Risk Assessment Tool and their supporting guidance, together with a monitoring dashboard that summarises airport and regional climate risk profiles. It also outlines the Net Zero Roadmap Programme, Airport Carbon Accreditation and related initiatives, and highlights how this combined set of tools and programmes can support States and airport operators in advancing both

climate resilience and decarbonisation at airports in the Asia-Pacific region.

2. DISCUSSION

2.1 Climate Risk Assessment Tools for Airports

2.1.1 **ACI APAC & MID Climate Adaptation Study**

a) ACI APAC & MID recognises the importance of consistent, transparent methods for assessing climate risks at airports of different sizes and capacities. To address this need, ACI APAC & MID developed the following guideline and tools under the Study on Climate Adaptation Approach for APAC & MID Airports

2.1.2 **Climate Risk Assessment Guideline**

a) The Climate Risk Assessment Guideline provides a structured approach to identify climate hazards, assess their impact on airport infrastructure and services, and prioritise adaptation actions.

2.1.3 **Climate Risk Maturity Check Tool**

a) The Climate Risk Maturity Check Tool assesses an airport's readiness to manage climate risks across governance and leadership, risk assessment processes, data and information management, monitoring and reporting, and integration into decision-making.
b) Pilot results from 47 airports across Asia, Pacific and Middle East regions show substantial variation in maturity, with Pacific airports generally more advanced, Asian airports moderate and Middle East airports at earlier stages, indicating the need for tailored capacity-building and knowledge exchange.

2.1.4 **Climate Risk Assessment Tool**

a) The Climate Risk Assessment Tool offers a practical template for recording hazards, risk ratings and adaptation options, and was piloted with 16 airports.
b) Pilot results from 16 airports across Asia, Pacific and Middle East regions show that extreme heat, extreme rainfall and storms generate most high and extreme risks, that around 58% of identified climate-related risks affect airport infrastructure and service provision, and that risk severity increases over time across near-, mid- and long-term horizons.

2.1.5 **Regional Climate Dashboard**

a) A Regional Climate Dashboard aggregates outputs from submitted maturity and risk assessment tools, providing both individual airport and regional views of climate risk profiles and maturity levels.
b) The dashboard allows airports to benchmark their position against regional data and enables ACI APAC & MID to identify common risks, systemic vulnerabilities and priority areas for support.

2.1.6 By adopting these tools, airports are better equipped to integrate climate resilience into master plans, safety management systems and business continuity planning, and to inform discussions with regulators and other stakeholders.

2.2 ACA Incentive Programme for Small Airports

2.2.1 Airport Carbon Accreditation (ACA) is the only institutionally-endorsed, global carbon management certification programme for airports, providing a common framework with seven progressive levels of accreditation: Level 1 (footprint measurement), Level 2 (carbon management and reduction), Level 3 (third-party engagement), Level 3+ (offsetting for direct emissions), Level 4 (transforming airport and partner operations for absolute reductions), Level 4+ (compensation of residual emissions with recognised offsets) and Level 5 (Net Zero balance for Scope 1 and 2 with active management of key Scope 3 sources). Globally, more than 600

airports in 97 countries are now accredited, including over 100 airports in the Asia-Pacific and Middle East regions. In APAC & MID specifically, 102 airports across 20 countries are accredited, handling around 1.4 billion passengers a year, which means approximately 37% of the region's passenger traffic is now covered by ACA airports. To help smaller airports in developing economies overcome financial and technical barriers to joining the programme, ACI APAC & MID has developed an ACA Incentive Programme to promote decarbonisation by fully sponsoring the initial Airport Carbon Accreditation.

2.2.2 The Programme is structured over a 12-month period to provide:

- Full coverage of fees for the first ACA cycle, including application fees, consulting support to establish carbon baselines and third-party verification costs.
- A Master Consultant (ACI World Business Partner) responsible for guiding participating airports through ACA application, level selection (primarily Level 1), data collection, implementation of minimum requirements and verification.
- This Programme is designed to support small airports that may face financial and technical barriers to joining ACA, and to create national examples that can encourage wider participation.

2.3 Net Zero Roadmap Programme

2.3.1 ACI APAC & MID has established a Net Zero Roadmap Programme as an on-demand service to support airports in developing tailored, robust decarbonisation strategies towards Net Zero carbon emissions. The Programme was piloted successfully with three diverse airports (Riyadh, Cebu and Bahrain) between 2024 and 2025 and is being launched more widely from May 2026.

2.3.2 Under this Programme, each participating airport develops a Net Zero Roadmap using a common structure that is tailored to its local context and ambition level. Each airport net zero roadmap typically includes:

- Executive summary and clearly stated objectives.
- Background information, including global, national and airport-specific climate context and key stakeholders.
- Detailed carbon footprint, projections and key performance indicators.
- Findings and observations per emission source area, such as energy use, on-site vehicles, buildings and ground operations.
- Recommendations and measures per area, prioritised by abatement potential, cost and feasibility.
- Pathways to Net Zero, target setting and emissions trajectories with interim milestones.
- A high-level CAPEX plan and timeline for major investments, which pilot airports identified as critical to securing Board-level support.
- Offsetting information as a residual measure, an implementation plan and a proposed pathway within Airport Carbon Accreditation, including recommended suppliers where relevant.

2.3.3 Feedback from the pilot airports indicates that the Programme provides strong project management, high-quality roadmaps and valuable onsite assessments, while also highlighting areas for improvement such as ensuring consultants have regional regulatory knowledge, and clarifying data requirements.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

a) Note the tools and programmes developed by ACI APAC & MID to support airport climate resilience and decarbonisation, including the Climate Risk maturity check tool, Climate Risk assessment guideline and Tool, Regional Climate Dashboard,

Net Zero Roadmap Programme and ACA Incentive Programme and,

b) Recommend States to encourage airports to participate in the ACI APAC & MID Net Zero Roadmap and complimentary Climate Maturity Check Tool and Climate Risk Assessment Tool to strengthen aviation preparedness and long-term resilience.

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Executive Summary

ACI APAC & MID PROGRAMMES AND TOOLS SUPPORTING AIRPORT CLIMATE ACTION

This paper outlines Airports Council International Asia-Pacific & Middle East (ACI APAC & MID)'s consolidated approach to support airports in the Asia-Pacific to strengthen climate resilience, reduce carbon emissions and progress towards Net Zero in line with ICAO and global climate goals. It first presents Climate Risk Assessment Guideline and Tools and a Regional Climate Dashboard that together provides a consistent basis for assessing climate hazards, impacts and vulnerabilities at airport and regional level. The paper then introduces the ACA Incentive Programme, which builds on Airport Carbon Accreditation to fully sponsor the initial ACA cycle for selected small airports in emerging and developing economies, helping them overcome financial and technical barriers to structured carbon management. Finally, it outlines the Net Zero Roadmap: Decarbonise Your Airport Programme, an on-demand service providing tailored decarbonisation roadmaps that integrate targets, measures and high-level CAPEX plans to support airport-level Net Zero pathways. The Conference noted these efforts and invited States to encourage airports under their jurisdiction to use and support these tools and programmes as practical mechanisms to advance climate adaptation, Net Zero carbon emission objectives in the Asia-Pacific regions.