



ICAO

International Civil Aviation Organization

The Tenth Meeting of the Aerodromes Operations and
Planning Sub-Group (AOP/SG/10)

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Agenda Item 7: Airport Environmental Initiatives

OUTCOMES OF ICAO ENVIRONMENTAL PROTECTION ACTIVITIES RELEVANT TO AOP/SG

(Presented by the SECRETARIAT)

SUMMARY

This paper presents recent ICAO environmental protection activities relevant to the work of the AOP/SG. It highlights ICAO activities related to climate change adaptation and resilience for airports, climate risk assessment and adaptation planning, climate-related impacts on airport operations, State Action Plans, sustainable aviation fuels (SAF), and the ICAO Green Airports Seminar 2026. The paper also encourages continued consideration of environmental sustainability and climate resilience in aerodrome planning and operations.

1. INTRODUCTION

1.1 ICAO continues to advance activities supporting environmental protection in international aviation, including climate change adaptation and resilience. Airports are recognized as important stakeholders in these efforts due to the potential effects of climate change on airport infrastructure, operations and service continuity.

1.2 ICAO has developed guidance and supporting materials to assist States and aviation stakeholders in assessing climate-related risks and improving resilience. These activities include guidance on climate change risk assessment, adaptation planning and airport resilience, and are relevant to several AOP/SG work areas, including aerodrome planning, operational continuity and emergency preparedness.

2. DISCUSSION

Climate Adaptation and Resilience for Airports

2.1 ICAO recognizes that climate change may affect aviation infrastructure and operations through higher average and extreme temperatures, changing precipitation patterns, increased intensity of storms and sea level rise. These impacts may affect airport infrastructure, operational continuity and airport services.

2.2 To support States and aviation stakeholders, ICAO has published guidance on climate change risk assessment, adaptation and resilience. The guidance provides information on conducting climate risk assessments, identifying vulnerabilities, developing adaptation plans and implementing measures to improve resilience to climate-related risks. It is intended for use by airports, aircraft

operators, air navigation service providers and States. [[Climate Change Risk Assessment, Adaptation and Resilience](#)]

Climate Change Impacts on Airport Operations

2.3 ICAO has identified climate-related hazards that may affect airport infrastructure and operations, including extreme heat, flooding, severe weather events and storm damage. These hazards may affect runways, terminals, utilities and other airport infrastructure, potentially resulting in operational disruptions and reduced service continuity.

2.4 The increasing focus on climate resilience reflects the need for airports to understand potential vulnerabilities and consider measures that improve preparedness for future climate conditions.

Support for Airport Adaptation Initiatives

2.5 ICAO guidance emphasizes the importance of climate risk assessment and adaptation planning as key steps in identifying vulnerabilities and improving resilience. ICAO encourages States and aviation stakeholders to assess climate-related risks affecting aviation infrastructure and operations and to support appropriate adaptation activities. [[ICAO Climate Adaptation Synthesis Report](#)]

2.6 These activities support improved understanding of climate-related risks and assist decision-making relating to airport infrastructure, operations and long-term resilience planning.

State Action Plans

2.7 ICAO continues to support the development and implementation of State Action Plans (SAPs) on aviation CO₂ emissions reduction. With the adoption of ICAO's Long-Term Global Aspirational Goal (LTAG) and the ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies, State Action Plans have become even more critical. State Action Plans provide a framework through which States voluntarily report information on actions and measures that contribute to reducing emissions from international aviation. ICAO provides guidance, tools, capacity-building activities and technical assistance to support States in the preparation, submission and implementation of their Action Plans. Airport infrastructure, operational improvements and environmental initiatives may assist States in identifying opportunities from State Action Plans. [[State Action Plans \(SAP\) and Assistance](#)]

Sustainable Aviation Fuels

2.8 ICAO continues to promote the development and deployment of sustainable aviation fuels (SAF) as an important element of efforts to reduce CO₂ emissions from international aviation. ICAO facilitates cooperation among States, industry and other stakeholders and provides information, assistance and tools to support SAF development and implementation. [[Sustainable Aviation Fuels \(SAF\) Programme](#), [ICAO Global Framework for SAF, LCAF and Other Aviation Cleaner Energies](#), and [Finvest Hub](#).]

2.9 The increasing deployment of SAF has implications for airports because airport infrastructure and operational arrangements may support the use and distribution of aviation fuels. ICAO has identified airports as important stakeholders in broader efforts supporting aviation decarbonization and cleaner energy initiatives.

ICAO Green Airports Seminar 2026

2.10 ICAO will host the ICAO Green Airports Seminar 2026 in Cairo, Egypt, on 29-30 October 2026. The Seminar will provide a platform to advance green and climate-resilient airports and to support implementation-focused action on aviation environmental objectives. The event will bring

together States, airport operators, airlines, air navigation service providers and other stakeholders. [[ICAO Green Airports Seminar 2026](#) and [ICAO Green Airports Seminar 2026 Programme](#)]

2.11 The first day of the Seminar will focus on airport decarbonization, operational and infrastructure measures to reduce emissions, airport energy systems, integrated environmental performance, and the role of airports in supporting sustainable aviation fuels (SAF), lower carbon aviation fuels (LCAF) and cleaner energy.

2.12 The second day will focus on climate adaptation and resilience, including strengthening critical infrastructure, maintaining operational continuity, implementation approaches, financing and partnerships.

Relevance to AOP/SG Activities

2.13 ICAO environmental protection activities related to climate adaptation, resilience and sustainable airport development are relevant to AOP/SG activities concerning aerodrome planning, aerodrome operations, infrastructure development, operational continuity and emergency preparedness. ICAO activities relating to State Action Plans and sustainable aviation fuels are also relevant to airports as important stakeholders in aviation environmental initiatives and airport sustainability efforts. Continued consideration of environmental protection matters within AOP/SG activities may assist in raising awareness of relevant ICAO guidance, tools, programmes and events supporting sustainable and resilient airport operations.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) note ICAO activities related to climate change adaptation and resilience for airports, including guidance on climate risk assessment and adaptation planning;
- c) note ICAO activities supporting State Action Plans and the development and deployment of sustainable aviation fuels (SAF), and their relevance to airport sustainability initiatives;
- d) encourage States and aerodrome operators to consider climate-related risks and relevant ICAO guidance when planning and implementing airport resilience and adaptation activities; and
- e) promote participation in the ICAO Green Airports Seminar 2026.

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