

**61ST CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGION**

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AGENDA ITEM 7: AVIATION AND ENVIRONMENT

**ADVANCING SUSTAINABLE AIRPORT OPERATIONS
THROUGH RESOURCE EFFICIENCY DISCUSSION FOCUS**

(Presented by the Republic of the Philippines)

INFORMATION PAPER

SUMMARY

The paper highlights the importance of advancing sustainable airport operations through efficient resource management to support aviation growth while minimizing environmental impacts. It emphasizes practical initiatives such as energy efficiency, water conservation, sustainable infrastructure, waste reduction, and green procurement to improve operational efficiency, reduce costs, and lower carbon emissions. The paper underscores that resource-efficient practices can be tailored to airports of varying sizes without compromising safety or service quality. It also promotes alignment with ICAO's environmental objectives through responsible airport planning and operations. Finally, the paper encourages regional cooperation and the exchange of best practices to strengthen sustainable airport development across the Asia-Pacific Region

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1. INTRODUCTION

As the aviation industry grows, airports have an increased responsibility to operate sustainably. Airports serve as gateways to communities and play a key role in managing resources responsibly and reducing aviation's environmental impacts. Member States are encouraged to adopt practical, sustainable measures to improve efficiency, minimize resource use, and reduce greenhouse gas emissions in line with ICAO's environmental objectives.

2. DISCUSSION

For airports in the Asia and Pacific Region, especially regional and domestic facilities, resource efficiency is a practical and cost-effective way to enhance environmental performance. Integrating sustainable practices into planning, operations, and maintenance improves resilience, lowers costs, and supports environmental goals without compromising safety or service quality. As airports consume large amounts of electricity, water, fuel, and construction materials, optimizing resource use reduces environmental impacts and supports long-term financial sustainability.

Energy efficiency is a key area. Using energy-efficient lighting, smart energy management, and renewable sources such as solar power can significantly reduce electricity use and operational costs. Many airports now include energy-efficient equipment and facility upgrades in modernization programs, lowering carbon emissions while maintaining reliable operations. Sustainable infrastructure development is also essential.

Airport facility design should follow environmentally responsible principles by maximizing natural light and ventilation, improving energy performance, and using sustainable materials. Addressing environmental concerns in development projects enhances long-term operational resilience and minimizes environmental impact throughout the facility's life cycle.

Airports require significant water for terminal operations, aircraft support, landscaping, and fire protection. Implementing water conservation, rainwater harvesting, leak detection, and water-efficient fixtures can substantially reduce usage without compromising operational readiness.

Solid waste management is a significant environmental challenge for airports. Waste is generated from terminals, commercial areas, maintenance, and offices. Implementing waste segregation, recycling, material recovery, reducing single-use plastics, and promoting responsible disposal supports cleaner airports and aligns with national waste management policies.

Sustainable purchasing is an important aspect of resource efficiency. Airports can support environmental sustainability by applying green procurement when acquiring equipment, vehicles, office supplies, and maintenance materials. Using eco-friendly products, energy-efficient equipment, and sustainable suppliers promotes responsible consumption and advances broader environmental objectives.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to note the information contained in this Paper.