

**60TH CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

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AGENDA ITEM 8: CAPACITY DEVELOPMENT AND
IMPLEMENTATION

**ADVANCING AVIATION TRAINING CAPACITY AND SUSTAINABILITY
IN PAKISTAN: A GREEN CURRICULUM APPROACH**

(Presented by Pakistan Civil Aviation Authority)

SUMMARY

This paper highlights the importance of integrating environmental sustainability into Pakistan's aviation training ecosystem, in alignment with ICAO's Long-Term Aspirational Goal (LTAG) and the Global Aviation Training (GAT) strategy. It proposes a roadmap for green curriculum development aimed at strengthening human capital and aligning national training frameworks with global and regional environmental objectives.

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1. INTRODUCTION

1.1 As the aviation sector advances toward decarbonization under ICAO's Long-Term Aspirational Goal (LTAG) to achieve net-zero carbon emissions by 2050, developing a future-ready workforce is critical. In alignment with ICAO's Global Aviation Training (GAT) strategy and the Asia-Pacific Environmental Action Plan (2023–2025), this paper examines the current status and outlines the future potential for integrating green competencies into Pakistan's aviation training framework.

2. DISCUSSION

2.1 Pakistan is now advancing its efforts to incorporate environmental sustainability into national aviation training curricula. Efforts are underway to evolve aviation training curricula through the integration of green competencies, including modules on sustainable aviation fuels (SAF), climate resilience, and environmentally responsible operational practices. This progressive shift supports Pakistan's alignment with global frameworks such as CORSIA and strengthens its contribution to regional sustainability goals led by the ICAO Asia-Pacific Office

2.2 Environmental training has become a fundamental component of future-focused aviation systems, with direct implications for safety, efficiency, and international compliance. Several exemplary global models provide a blueprint for integration:

- ICAO's Trainair PLUS Environmental Training Packages, which provide scalable, competency-based solutions adaptable to diverse national regulatory contexts.
- EASA's Sustainable Aviation Roadmap, offering structured guidance on embedding sustainability in training reforms.
- The Singapore Aviation Academy's Green Aviation Programme, which supports regional capacity-building through executive education.

2.3 These initiatives demonstrate that sustainability-focused training can be effectively integrated into existing frameworks while remaining adaptable to specific regulatory and operational environments.

2.4 In alignment with these global trends, Pakistan proposes the development of a National Green Curriculum Framework. This framework will embed sustainability across all aviation training streams, including Pilots, Air traffic controllers, Aircraft maintenance engineers and Airport and ground operations personnel. This initiative reflects Pakistan's strategic vision to modernize aviation education and ensure alignment with international environmental objectives.

2.5 As part of this initiative, Pakistan welcomes regional collaboration and proposes partnerships for:

- Joint curriculum development and resource-sharing.
- Capacity-building exchanges with accredited regional training organizations.
- A phased implementation strategy for cross-border recognition and accreditation of training programs delivered by Pakistan's institutions under the endorsed mechanisms.

Phase I	Integration of green modules & Instructor upskilling through partnerships with ICAO Trainair PLUS Centres and international environmental training providers
Phase II	Stakeholder engagement, including the Ministry of Climate Change, higher education institutions, and other training organizations, to ensure nationwide alignment.

2.6 Key anticipated outcomes of this effort include:

- Enhanced compliance with ICAO's LTAG and CORSIA frameworks.
- Strengthened regional environmental performance in aviation.
- Expanded green economy employment pathways for underrepresented groups.
- Greater regional cohesion in the pursuit of sustainable aviation goals.

2.7 Developing Asia Pacific states in general and Pakistan in particular seeks the continued support in establishing a cooperative framework for accreditation and recognition of green aviation training. This shall accelerate capacity development within the region and contribute meaningfully to the Asia-Pacific region's collective efforts toward a more sustainable and resilient aviation sector.

3. ACTION BY THE CONFERENCE

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

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