

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

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**AGENDA ITEM 8: CAPACITY BUILDING AND
IMPLEMENTATION**

**ADVANCING ICAO ASIA AND PACIFIC PRIORITIES THROUGH
TECHNICAL COOPERATION, KNOWLEDGE SHARING AND HUMAN
CAPACITY DEVELOPMENT**

(Presented by The Republic of Indonesia)

SUMMARY

This paper highlights how technical cooperation, knowledge sharing, and human capacity development contribute to advancing ICAO Asia and Pacific (APAC) priorities. Recognizing that the effective adoption of emerging technologies depends on capable institutions and a skilled aviation workforce, the paper draws on Indonesia's experience to illustrate how these initiatives can strengthen Member States' implementation capabilities, foster regional cooperation, and support the ICAO No Country Left Behind (NCLB) initiative in advancing safe, secure, sustainable, and efficient aviation across the Asia-Pacific Region.

ADVANCING ICAO ASIA AND PACIFIC PRIORITIES THROUGH TECHNICAL COOPERATION, KNOWLEDGE SHARING AND HUMAN CAPACITY DEVELOPMENT

1. INTRODUCTION

1.1. The aviation sector is entering a new era shaped by rapid technological advancement, digital transformation, and increasing expectations for safe, secure, sustainable, and efficient air transport. Emerging technologies, including digital aviation systems, automation, data-driven decision-making, advanced air navigation solutions, and innovative environmental technologies, are transforming the way aviation is regulated, managed, and operated. These developments underscore the importance of ensuring that Member States possess not only the necessary technologies, but also the institutional capabilities and skilled workforce required to implement them effectively.

1.2. In this context, technical cooperation, knowledge sharing, and capacity development have become essential enablers for achieving ICAO's Strategic Objectives. Strengthening institutional capability, developing competent aviation professionals, and promoting regional collaboration are critical to supporting the effective implementation of ICAO Standards and Recommended Practices (SARPs) and enabling Member States to harness emerging technologies in support of safer, more secure, sustainable, and efficient aviation.

1.3. Across the Asia and Pacific Region, Member States have contributed to these objectives through a range of collaborative mechanisms, including technical secondments, professional training, expert deployment, institutional partnerships, and technical assistance. These approaches complement ICAO's implementation support activities by facilitating knowledge transfer, strengthening institutional capabilities, and promoting greater regional cooperation in line with the ICAO No Country Left Behind (NCLB) initiative.

1.4. This paper discusses how these collaborative approaches can strengthen Member States' implementation capabilities in support of ICAO Asia and Pacific (APAC) priorities. Drawing on practical experiences from Indonesia, it illustrates how technical cooperation, knowledge sharing, and competency development can support the effective implementation of ICAO programmes while fostering a smarter, safer, more secure, sustainable, and efficient aviation system across the region.

2. DISCUSSION

Recognizing that technological innovation can only deliver lasting benefits when supported by competent aviation professionals, strong institutions, and effective regional collaboration, Indonesia has pursued a comprehensive approach that combines technical cooperation, professional training, expert deployment, and knowledge sharing. These complementary approaches strengthen the implementation of ICAO programmes, enhance Member States' institutional and human resource capabilities, and support their readiness to address evolving aviation challenges, including those arising from technological advancement.

2.1 Technical Secondments for Regional Implementation Support

2.1.1. Technical secondments provide an effective mechanism for strengthening ICAO's regional implementation capability by supplementing specialized expertise in priority technical areas and supporting the delivery of implementation assistance to Member States.

2.1.2. As an illustration of this approach, Indonesia has supported the ICAO Asia and Pacific Regional Office since 2021 through the secondment of technical experts in environmental protection, climate change, air transport, and Performance-Based Navigation (PBN). Indonesian aviation professionals have served in ICAO regional positions, including Environment and Climate Change Regional Officer (P-3), Technical Assistance/Air Transport Officer (P-3), and Regional Officer, Performance-Based Navigation (P-4). Working alongside ICAO regional teams, these experts have contributed to implementation support missions, technical advisory services, regional workshops, and the development of regional capacity-building projects.

2.1.3. Through this technical cooperation, Indonesia and the ICAO Asia and Pacific Regional Office

have also developed the APAC DGCA Conference Action Items Tracker Portal to streamline the monitoring of regional commitments. Following the migration of historical data from the 59th DGCA Conference, the platform is ready for States to update the implementation status of the 59th and 60th Conference Action Items. The dedicated platform organizes commitments under the seven pillars and replaces manual spreadsheet-based processes with a continuous, year-round monitoring mechanism. The secondment contributions have also supported the preparation of the ICAO Asia Pacific Priority Programme Catalogue for Donors 2025–2027, facilitating the identification and coordination of regional capacity-building priorities and potential donor support.

2.1.4 These outputs demonstrate how technical secondments can generate practical institutional outcomes beyond the provision of technical expertise, including strengthened regional coordination, knowledge sharing, capacity-building support, and systematic monitoring of implementation commitments. This experience demonstrates the value of technical secondments in strengthening ICAO's regional implementation capability and supporting the advancement of ICAO APAC priorities

2.2 Fellowship and Training Programmes

2.2.1 Fellowship and professional training programmes play an important role in developing competent aviation professionals and strengthening Member States' capacity to implement ICAO SARPs.

2.2.2. As an illustration of this approach, Indonesia has participated in ICAO's Developing Countries Training Programme (DCTP) since the signing of Management Service Agreement between ICAO Secretary General and Head the Agency of Human Resource Development Agency on Transportation, Ministry of Transportation, Republic of Indonesia on 5 May 2021 followed by the signing of MoU between President of the Council of ICAO and Minister for Transportation of the Republic Indonesia on 18 October 2022. As of 2026, Indonesia has provided fellowship opportunities to 318 participants from 88 ICAO Member States. The programmes cover a broad range of technical and managerial disciplines, including Safety Management Systems (SMS), aviation training management, air cargo safety, Performance-Based Navigation (PBN), aviation economics, CORSIA implementation, and instructor development.

2.2.3. These programmes strengthen the competencies of aviation professionals, support the effective implementation of ICAO SARPs, and promote knowledge sharing and regional cooperation in addressing evolving aviation challenges.

2.3 ICAO-Qualified Instructors and Subject Matter Experts

2.3.1. ICAO-qualified instructors and subject matter experts play an important role in facilitating knowledge transfer, sharing operational experience, and promoting the harmonized implementation of ICAO SARPs across Member States.

2.3.2. As an illustration of this approach, Indonesia contributes to ICAO's global training activities through its pool of ICAO-qualified instructors and subject matter experts. In the field of airworthiness, an Indonesian ICAO-qualified instructor has supported ICAO Global Aviation Training activities since 2025 by delivering the ICAO Government Safety Inspector – Airworthiness (GSI-AIR EN) training programme. The programme brings together airworthiness inspectors from various ICAO Member States across different ICAO regions, enabling participants to benefit from Indonesia's practical expertise and experience in airworthiness oversight. The instructor is also qualified as a Senior Instructor, enabling him to conduct On-the-Job Training Instructor (OJTI) assessments under the ICAO training framework. This provides an important mechanism for developing and qualifying new instructors, who can subsequently contribute to the training and competency development of aviation personnel. Through this multiplier effect, the availability of qualified instructors can be expanded to support the continuous development of aviation professionals and further enhance civil aviation safety across the Asia and Pacific region and beyond.

2.3.3. Indonesia also contributes expertise in aviation security through an Indonesian aviation security instructor who has served as an ICAO trainer in various regional and international capacity-building activities since 2018. These have included the ICAO Airport Security Supervisor Course, ICAO Security Culture Workshop, and ICAO National Civil Aviation Security Quality Control Programme

(NCASQCP) Workshop. These activities have involved participants from various ICAO Member States across different ICAO regions, providing opportunities to share operational practices, technical knowledge, and regulatory approaches in aviation security.

2.3.4 In addition to its contribution through ICAO-qualified instructors, Indonesia also provides Subject Matter Experts (SMEs) to support ICAO technical assistance activities. Indonesian SMEs who are qualified Auditors have had opportunities to participate in ICAO Combined Action Team (CAT) missions, supporting the delivery of Technical Assistance Missions to Member States based on their respective needs and priorities. Through their participation in CAT missions, Indonesian SMEs contribute to the implementation of the No Country Left Behind (NCLB) initiative by sharing relevant knowledge, experience, and practices with beneficiary States. Their expertise supports the strengthening of personnel competencies, safety oversight capabilities, and the identification and addressing of implementation gaps, while fostering regional cooperation and capacity-building in civil aviation across the Asia and Pacific region and beyond.

2.3.5. Collectively, these contributions facilitate knowledge sharing, strengthen professional competencies, and promote the consistent implementation of ICAO SARPs across Member States.

2.4 Environmental Technical Assistance

2.4.1 Environmental capacity building and technical assistance play a vital role in supporting Member States in implementing ICAO environmental programmes and advancing sustainable aviation. These collaborative initiatives strengthen institutional and technical capacities in key areas, including the development and implementation of State Action Plans (SAPs), the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), Sustainable Aviation Fuel (SAF), cleaner energy initiatives, and other environmental priorities.

2.4.2 In collaboration with ICAO APAC through SAP workshops and training, these efforts have supported a number of Member States, particularly across the Asia and Pacific Region, in preparing, updating, and submitting their State Action Plans to ICAO, including Bangladesh, Bhutan, the Cook Islands, Fiji, Kiribati, the Maldives, Pakistan, Papua New Guinea, the Philippines, Samoa, the Solomon Islands, Sri Lanka, Thailand, Tonga, and Viet Nam. Through the State Action Plan Buddy Programme, Indonesia also assisted Timor-Leste in preparing and submitting its first State Action Plan to ICAO. By supporting these initiatives, Indonesia has contributed to strengthening Member States' institutional and technical readiness for environmental programmes, while advancing the implementation of ICAO's Long-Term Aspirational Goal (LTAG) and promoting the adoption of innovative technologies and sustainable solutions for a smarter and greener aviation sector across the region.

2.4.3 In addition, under the ACT-CORSIA Buddy Partnerships, Indonesia, as a Supporting State, has delivered CORSIA training and technical assistance to its Buddy States, including Fiji, Samoa, the Solomon Islands, and Vanuatu. By implementing this initiative, Indonesia tailors its support to the needs of the requesting States and supports CORSIA implementation across the Pacific region.

2.4.4 Complementing these efforts, Indonesia has further supported environmental capacity building through the deployment of an environmental expert to the Waste Management Project (F6U2501). The project strengthens airport waste management systems through capacity building, the sharing of best practices, and the provision of technical advice on waste management procedures.

2.4.5 Collectively, these initiatives enhance regional readiness to implement ICAO environmental programmes, contribute to the achievement of ICAO's Long-Term Aspirational Goal (LTAG), and advance sustainable aviation across the Asia and Pacific Region.

2.5 ICAO Global Aviation Training and TRAINAIR PLUS

2.5.1 ICAO Global Aviation Training (GAT) and the TRAINAIR PLUS Programme provide internationally recognized frameworks for developing competent aviation professionals through competency based training and standardized learning programmes. These initiatives support Member States in strengthening aviation competencies and promoting the consistent implementation of ICAO SARPs.

2.5.2 As an illustration of this approach, Indonesia supports the ICAO GAT Strategy through the Center for Human Resources Development on Civil Aviation (CHRDCA), which has maintained its recognition as an ICAO TRAINAIR PLUS Platinum Training Centre of Excellence (TCE) since 2022. Indonesia has developed several Member-ICAO Training Packages (M-ITPs) and Standardized Training Packages (STPs). More than 1,000 aviation professionals have successfully completed these ICAO-standardized training programmes, while several training packages developed by Indonesia have also been delivered by other ICAO Member States, demonstrating their international relevance, quality, and practical applicability. These achievements reflect Indonesia's growing role as a regional contributor to ICAO Global Aviation Training through the development of internationally recognized competency-based learning programmes and the sharing of aviation expertise across the Asia-Pacific Region.

2.5.3 Through these efforts, ICAO GAT and the TRAINAIR PLUS Programme contribute to strengthen aviation competencies, promoting the sharing of standardized training programmes, and fostering regional cooperation in developing a competent aviation workforce.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) note Indonesia's experience and contributions to regional aviation capacity building as part of collaborative efforts supporting ICAO APAC priorities;
- b) request Member States/Administrations, in collaboration with the ICAO APAC Regional Office, to expand technical secondment programmes in strategic areas such as Safety Management, Air Navigation Services, including PBN and AIM, Environment, and Air Transport, to strengthen regional implementation support and help bridge critical implementation gaps across the Asia and Pacific Region. Such programmes could be supported through flexible cost-sharing arrangements, voluntary contributions from capable States on a rotational basis, or other mutually agreed financial and operational mechanisms, with progress continuously monitored through the multiyear DGCA Conference Action Items Tracker;
- c) encourage Member States, with the support of ICAO Global Aviation Training, to harness the expertise of TRAINAIR PLUS Training Centres to develop Member ICAO Training Packages (M-ITPs) on digital transformation and emerging technologies, with the aim of strengthening the competencies of aviation professionals and ensuring alignment with regional aviation priorities; and
- d) encourage Member States, with the support of the ICAO APAC Regional Office, to provide targeted technical assistance for the development and updating of State Action Plans (SAPs) and the implementation of CORSIA. This initiative aims to increase the number of Member States in the region that submit their initial or updated SAPs, with implementation progress, outcomes, and key milestones monitored and reported annually through the existing ICAO reporting mechanisms at each DGCA Conference.

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