60th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS

Sendai, Japan
28 July - 1 August 2025

AGENDA ITEM 4:   AIR NAVIGATION

ENHANCING REGIONAL INTERCONNECTIVITY AND ATM EFFICIENCY THROUGH APAC CRV

(Presented by Bangladesh)

SUMMARY

Effective, reliable and secure communication is essential for the efficient management of Air Traffic Management (ATM) and in the achievement of regional interoperability. The ICAO Asia/Pacific Common Regional Virtual Private Network (APAC CRV) project offers a unified platform that facilitates the seamless exchange of ATM data among States and service providers in the region.

This paper presents Bangladesh's proposal to join the APAC CRV network, highlighting the anticipated benefits of improved operational efficiency, cost reduction, and enhanced regional collaboration in ATM.

**ENHANCING REGIONAL INTERCONNECTIVITY AND ATM EFFICIENCY
THROUGH APAC CRV**

1.   INTRODUCTION

1.1   CRV is a critical enabler of next-gen aviation communication, ensuring secure, efficient, and harmonized data exchange between air traffic systems worldwide. The CRV project, established under the ICAO Asia/Pacific Seamless ATM Plan, aims to replace legacy point-to-point communication systems with a secure, scalable, and cost-efficient virtual network. This network supports critical Air Traffic Management (ATM) communications, including AIDC, AMHS, VoIP, and surveillance data exchanges among Flight Information Regions (FIRs).

1.2   While Common Regional Virtual Private Network (CRV) in the APAC Region refers to a secure, shared data communication network designed to facilitate seamless and standardized information exchange between air traffic management (ATM) systems, Bangladesh is yet to become a member.

1.3   Currently, Bangladesh operates multiple bilateral communication links that are resource-intensive and do not fully interoperate with regional systems. By integrating with the CRV, Bangladesh will modernize its CNS/ATM infrastructure, enhancing regional interoperability and aligning with ICAO's Global Air Navigation Plan (GANP).

2.   DISCUSSION

2.1   **Benefits of CRV Participation for Bangladesh**

Participation in the Common Regional Virtual Private Network (CRV) offers the following strategic advantages for Bangladesh:

a) Improved Inter-FIR Coordination: Enables faster and more reliable data exchange with adjacent Flight Information Regions (FIRs), thereby enhancing situational awareness and coordination efficiency. With the integration of ADS-C (Automatic Dependent Surveillance-Contract) improving tracking over the Bay of Bengal and remote areas will be possible.

b) Cost Efficiency: Utilization of a shared network infrastructure leads to reduced long-term maintenance and connectivity expenses through economies of scale. This will also have positive effect on fuel & time Savings in optimized routes (e.g., shorter trajectories via CRV-enabled dynamic airspace management) thus lower operating costs air carriers.

c) Enhanced ATM Services: Facilitates the implementation of automated data exchange (AIDC), surveillance data sharing, and supports the transition to future digital ATM applications. Its seamless Cross-Border Communication will enable secure, real-time data exchange between Bangladesh and neighboring ANSPs (e.g., India, Thailand, Singapore), reducing delays and optimizing flight routes.

d) Strengthened Cybersecurity: Centralized network monitoring and adoption of standardized protocols improve the resilience and security of ATM communications.

e) Regional Harmonization: Ensures alignment with ICAO APAC regional initiatives, fostering seamless cross-border airspace operations and interoperability.

f) Disaster Resilience: Secure CRV links ensure uninterrupted ATC communication during natural disasters (e.g., cyclones).

g) Lower Carbon Emissions: Efficient routes reduce fuel burn, supporting Bangladesh's sustainability goals.

2.2	**Implementation Roadmap**

Bangladesh proposes a phased implementation plan for integration into the CRV network, as outlined below:

a) Assessment and Technical Evaluation (2024): Undertake a comprehensive feasibility study and define system requirements in alignment with CRV standards.

b) Procurement and Infrastructure Upgrade (2025): Procure CRV-compliant systems and transition from existing legacy communication infrastructure.

c) Testing and Interconnection (2026): Conduct interoperability testing and coordinate inter-FIR connections with neighboring States and the designated CRV service provider.

d) Operational Integration (2027): Achieve full operational deployment of CRV-based communication services across ATM systems.

2.3	**Regional Cooperation and Support**

Bangladesh recognizes the value of regional collaboration in ensuring the successful implementation of the CRV initiative. The State welcomes technical assistance and knowledge-sharing from early CRV-adopting States to leverage the best practices and lessons learned. Bangladesh also supports the organization of ICAO-led regional workshops and capacity-building programmes aimed at enhancing technical readiness and fostering harmonized implementation across the Asia/Pacific region.

**3.	ACTION BY THE CONFERENCE**

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

— END —