



1.3 The initiative responded to findings from the ICAO State of Global Aviation Safety Report (2025 Edition) and regional safety assessments identifying human factors and inconsistent CRM application as key contributors to accidents and serious incidents.

1.4 The Meetings recognised the importance of regulatory and training harmonisation and agreed for APRAST to continue technical coordination.

1.5 Since that time, the CHTF has progressed through a structured, multi-stakeholder development process and has now completed the Harmonised CRM Manual.

2. DISCUSSION

2.1 Development of the Harmonised CRM Manual

2.1.1 The Harmonised CRM Manual has been developed through a series of structured engagements involving:

- Civil aviation regulators from the Asia Pacific region;
- AAPA member airlines and other operators;
- An aircraft manufacturer (OEM);
- An academic institution;
- An approved training organisation (ATO); and
- The Flight Safety Foundation.

2.1.2 The development process included multiple review cycles, surveys and technical discussions to ensure alignment with operational realities and regulatory frameworks.

2.2 Scope and Content of the Manual

2.2.1 The Manual provides a harmonised framework covering:

- CRM training across initial, recurrent, command, instructor, and joint training contexts;
- Alignment with ICAO competency-based training and assessment (CBTA) and evidence-based training (EBT) principles;
- Integration of Threat and Error Management (TEM);
- Promotion of CRM as an integrated behavioural and operational component within CBTA and EBT systems, supported through TEM principles that enhance operational resilience and safety performance;
- Behavioural observation and competency mapping methodologies;
- Particular emphasis on observable behavioural markers, instructor calibration, and consistency in behavioural assessment methodologies to support greater reliability and standardisation across operators and training organisations;
- Instructor standards and qualification considerations;
- Oversight and implementation guidance for regulators and operators; and
- Relevant ICAO provisions and guidance material, including ICAO Annex 1, Procedures for Air Navigation Services – Training (PANS-TRG, Doc 9868), the

ICAO Manual of Evidence-based Training (Doc 9995), ICAO competency-based training principles, and applicable ICAO human performance and human factors guidance material.

2.2.2 The Manual is designed to:

- support consistency in CRM training delivery;
- strengthen behavioural competency assessment;
- improve instructor calibration, behavioural observation consistency and standardisation; and
- facilitate cross-recognition and mutual understanding across States and operators.

2.3 Key Outcomes and Benefits

2.3.1 The Harmonised CRM Manual represents a regionally coordinated approach to strengthening human performance defences through:

- improved consistency in CRM training and assessment;
- enhanced alignment between regulators, operators, and training organisations;
- better integration of CRM within CBTA and EBT frameworks;
- support for addressing human factors within ICAO GASP high-risk categories; and
- the development of proactive safety cultures and strengthened human performance defences through more consistent CRM implementation and behavioural competency assessment practices across the Region.

2.3.2 The initiative also provides a platform for:

- continued sharing of best practices;
- development of scenario-based training resources; and
- greater regional alignment without imposing prescriptive implementation requirements.

2.4 Implementation Approach

2.4.1 The Manual is intended as a **guidance framework**, allowing flexibility for:

- national regulatory adaptation;
- operator-specific implementation; and
- integration with existing training systems.

2.4.2 Implementation is expected to be progressive and scalable, recognising differing levels of maturity across States and organisations. The implementation approach recognises varying levels of regulatory maturity, operational complexity, instructor capability, and training infrastructure across the Asia Pacific region. Accordingly, phased implementation, capacity-building initiatives, and continued regional collaboration will be important to support sustainable and effective adoption.

2.4.3 Continued coordination through APRAST will support:

- sharing of implementation experience;

- identification of challenges and good practices; and
- refinement of guidance where necessary.

2.5 Current Status

2.5.1 The Harmonised CRM Manual represents a significant regional collaborative milestone in advancing harmonised CRM principles and human performance training across the Asia Pacific Region. The Manual has been:

- completed following extensive multi-stakeholder review and technical coordination;
- endorsed in principle by participating regulators, airlines, an OEM, academia, an ATO, and the Flight Safety Foundation; and
- positioned for broader regional consideration, implementation, and continuous improvement based on operational experience and emerging safety trends.

2.5.2 The CHTF has fulfilled its primary objective of developing the Manual and may continue to serve as a platform for:

- implementation support; and
- future updates based on operational evidence.

3. ACTION BY THE MEETING

3.1 The Harmonised CRM Manual is intended to serve as a living regional guidance framework that may evolve over time in response to operational experience, emerging safety risks, advancements in training methodologies, and continued collaboration among States and industry stakeholders.

3.2 The Meeting is invited to:

- a) Note the completion of the Harmonised CRM Manual developed by the CRM Harmonisation Task Force;
- b) Recognise the collaborative effort involving regulators, airlines, the OEM, academia, the ATO, and the Flight Safety Foundation;
- c) Encourage States and industry stakeholders to:
 - review and consider appropriate usage of the Harmonised CRM Manual;
 - align national and organisational CRM frameworks, where appropriate;
- d) Encourage continued sharing of implementation experience, data, and best practices through APRAST mechanisms;
- e) Support continued regional coordination under APRAST to monitor implementation progress and identify opportunities for further harmonisation.

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Attachment: CRM Harmonisation Manual Complete:

https://www.dropbox.com/scl/fi/o23hl6zu12u8ncpx6o6y4/CRM_Harmonisation_Manual_Complete_v1.0.docx?rlkey=uj4rqfek57kasm4xesfhzd6lu&st=y7e01psh&dl=0

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