

INTERNATIONAL CIVIL AVIATION ORGANIZATION



**FINAL REPORT OF THE FIFTH MEETING OF THE ASIA/PACIFIC AIRPORT
COLLABORATIVE DECISION MAKING TASK FORCE (APA-CDM/TF/5)**

VIDEO TELECONFERENCE, 15 to 17 JUNE 2020

The views expressed in this Report should be taken as those of the
Meeting and not the Organization

Approved by the Meeting

and published by the ICAO Asia and Pacific Office, Bangkok

CONTENTS

INTRODUCTIONiv

Seminar and Meetingiv

Attendanceiv

Officers & Regional Office.....iv

Opening of Meetingiv

Documentation and Working Languageiv

Draft Conclusions, Draft Decisions and Decisions of APA-CDM/TF – Definitionsiv

List of Decisions and Draft Conclusions/Decisions..... v

REPORT ON AGENDA ITEMS..... 1

Agenda Item 1: Adoption of Agenda..... 1

Agenda Item 2: Review Outcomes of Related Meetings/Seminars 1

Agenda Item 3: State A-CDM Planning and Implementation Updates 3

Agenda Item 4: Interoperability of A-CDM with ATFM and Aircraft Operator systems 4

Agenda Item 5: Integration of A-CDM with ATFM 5

Agenda Item 6: APAC A-CDM Implementation Plan 6

Agenda Item 7: Any Other Business..... 6

Agenda Item 8: APA-CDM/TF Task List..... 6

Agenda Item 9: Date and Venue of Next Meeting..... 7

Closure of Meeting 7

APA-CDM/TF/5
Contents

APPENDICES

Appendix A:	List of Participants	A-1
Appendix B:	List of Working and Information Papers	B-1
Appendix C:	APA-CDM/TF Terms of Reference	C-1
Appendix D:	Proposed Amendment to APA-CDM/TF Terms of Reference	D-1
Appendix E:	APA-CDM/TF/5 Task List	E-1

INTRODUCTION

APA-CDM/TF/5 Meeting

1.1 The Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5) was held as a video teleconference from 15 to 17 June 2020.

Attendance

2.1 The meeting was attended by 104 participants from 16 States/Administrations and 5 International Organizations including Australia, Cambodia, China, Hong Kong China, Fiji, India, Indonesia, Japan, Lao PDR, Malaysia, Nepal, Philippines, Republic of Korea, Singapore, Thailand, United States, Civil Air Navigation Services Organisation (CANSO), International Air Transport Association (IATA), International Federation of Air Line Pilots' Associations (IFALPA), International Federation of Air Traffic Controllers' Associations (IFATCA) and ICAO.

2.2 The list of participants is provided at **Appendix A** to this report.

Officers & Secretariat

3.1 Mr. George Tak Yuen Wong, Chairperson of APA-CDM/TF, presided over the meeting, Dr. Punya Raj Shakya, Regional Officer Aerodromes and Ground Aids, ICAO Asia and Pacific Office, was the Secretariat for meeting. The meeting was supported by the ICAO Regional Officers, Mr. Shane Sumner (RO/ATM) and Mr. Steven Ka Ho Pang (RO/AGA).

Opening of Meeting

Opening Addresses

4.1 Mr. George Tak Yuen Wong, Chairperson of the APA-CDM/TF and Dr. Punya Raj Shakya, Regional Officer Aerodromes and Ground Aids, ICAO Asia and Pacific Office, welcomed the participants of the meeting.

Documentation and Working Language

5.1 The working language of the meeting and all documentation was English. There were nine (9) Working Papers (WP), six (6) Information Papers (IP) and one (1) presentation considered by the meeting.

5.2 A list of papers is included at **Appendix B** to this report.

Draft Conclusions, Draft Decisions and Decisions of APA-CDM/TF – Definitions

6.1 APA-CDM/TF recorded its actions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

- a) **Draft Conclusions** deal with matters that, according to APANPIRG terms of reference, require the attention of States, or action by the ICAO in accordance with established procedures;
- b) **Draft Decisions** deal with the matters of concern only to APANPIRG and its contributory bodies; and
- c) **Decisions** of APA-CDM/TF that related solely to matters dealing with the internal working arrangements of these bodies.

List of Decisions and Draft Conclusions/Decisions

7.1 List of Draft Conclusion

Nil

7.2 List of Draft Decision

Draft Decision APA-CDM/TF/5–1: Proposal for Amendment of APA-CDM/TF TOR	
What: That, the Terms of Reference (TOR) of Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF) be amended as in Appendix D to the Report of APA-CDM/TF/5.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To align the TOR with the APAC Seamless ANS Plan Version 3.0.	Follow-up: <input type="checkbox"/> Required from States
When: 16-Dec-20	Status: Draft to be endorsed by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

7.3 List of Decision

Nil

.....

REPORT ON AGENDA ITEMS

Agenda Item 1: Adoption of Agenda

Adoption of Agenda (WP/01)

- 1.1 The provisional agenda (WP/01) was adopted by the meeting without amendment.
-

Agenda Item 2: Review Outcomes of Related Meetings/Seminars

Outcome of APANPIRG/30 (WP/02)

2.1 The Secretariat provided a brief summary of APANPIRG/30 Meeting, held in Bangkok, Thailand from 4 to 6 November 2019, with particular highlights on the Conclusion and Decision related to APA-CDM/TF adopted by AOP/SG/3 and APANPIRG/30 respectively. The Report of APANPIRG/30 Meeting was available at: <https://www.icao.int/APAC/Meetings/Pages/2019-APANPIRG30.aspx>

2.2 The Chairperson expressed his appreciation to APANPIRG and AOP/SG for supporting the extension of the APA-CDM/TF for two years. The meeting noted the remarks from the Chairpersons of APANPIRG and ATM/SG that the work of APA-CDM/TF would eventually be absorbed by ATM/SG at the time when APA-CDM/TF was dissolved.

Air Traffic Flow Management Steering Group Outcomes (WP/03)

2.3 The meeting was informed of outcomes from the 10th Meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/10, Video Teleconference, 4 to 8 May 2020).

2.4 ATFM/SG/10 had been informed of matters relevant to APA-CDM/TF including the APAC Flight Information Exchange Model (FIXM) 4.1 Extension (*Conclusion APANPIRG/30/12*) and AFTN/AMHS-Based Interface Control Document (Conclusion CNS SG/23/1), both of which were available on the ICAO APAC Regional Office eDocuments web-page (<https://www.icao.int/APAC/Pages/eDocs.aspx>) for use by Asia/Pacific Administrations in implementing cross-border ATFM communications. **Table 1** summarized the data attributes currently included in the FIXM extension.

Estimated	Calculated	Target	Actual
		Target Off Blocks Time (TOBT)	Actual Off Blocks Time (AOBT)
		Target Start Approval Time (TSAT)	
	Calculated Take-Off Time (CTOT)	Target Take-Off Time (TTOT)	
Estimated Time Over (ETO)	Calculated Time Over (CTO)		Actual Time Over (ATO)
Estimated Landing Time (ELDT)	Calculated Landing Time (CLDT)		

Other	
Trajectory	Aircraft Track
<ul style="list-style-type: none"> • ETO • CTO • ATO • Flight level or Altitude • Waypoint 	<ul style="list-style-type: none"> • Ground speed • Bearing • Flight level or Altitude • Position (Designator or Latitude/Longitude or Relative Point) • Time over position

Table 1: APAC FIXM 4.1 Extension data attributes.

2.5 The meeting was informed that any proposal to include additional attributes in the FIXM Extension must be supported by a suitable operational scenario, proposed formally through ATFM/SG and/or APA-CDM/TF. It was noted that a number of attributes relevant to A-CDM process such as Actual Landing Time (ALDT) and Actual Take-off Time (ATOT) were already included in FIXM 4.1 Core.

2.6 ATFM/SG/10 had agreed that the final draft version of the ATFM Post-Operations Analysis Recommended Framework, updated from the working draft version currently available, should be uploaded to the ICAO APAC eDocuments web-page (*Draft Conclusion ATFM/SG/10-1*, for consideration by the ATM/SG/8 meeting in late 2020). A working draft version of the ATFM Daily Plan (ADP) Exchange Procedure had also been uploaded, pending its inclusion in the reviewed Regional Framework for Collaborative ATFM (*Conclusion ATFM/SG/10-2*).

2.7 Information was also provided on progress of the Asia/Pacific Cross-Border ATFM Collaboration (AMNAC, formerly the Distributed Multi-Nodal ATFM Network), the progress of ATFM interoperability between Hong Kong China and Japan, and Regional ATFM implementation status, and COVID-19-related ATM information sharing.

2.8 In response to a query, the meeting was informed that, while the Bay of Bengal Collaborative ATFM (BOBCAT) procedure required that flights both complied with the CTOT and adjusted speed to comply with the CTO at the Kabul FIR entry point, in other cases speed adjustment was not expected where CTOT had been issued for airspace constraints.

2.9 Regarding the CTOT compliance windows, it was clarified that multiple compliance windows did not apply at an individual airport. Only one CTOT compliance window should be established for all flights at an airport, taking into account factors which warranted deviation from the regionally agreed -5 to +10 minutes window, and as agreed by relevant stakeholders.

Airport Collaborative Decision Making (A-CDM) Integration with Air Traffic Flow Management (ATFM) Workshops (IP/03)

2.10 The paper presented the outcomes of A-CDM integration with ATFM Seminar/Workshop held in 2019. The main objective of the seminar/workshop was to improve understanding by all stakeholders of the benefits that A-CDM integration with ATFM could offer. The participants from the Middle East region and African region were also invited to the workshop in India as India was located at the junction of the regions.

Asia/Pacific Seamless ANS Plan (IP/04)

2.11 The paper introduced the Asia/Pacific Seamless Air Navigation Service (ANS) Plan Version 3.0 published in November 2019, subsequent to being approved by APANPIRG/30 (Bangkok, Thailand, 4 to 6 November 2019). The Plan was available at ICAO APAC Office Website

under APAC Electronic Documents and ATM category. URL of the webpage: <https://www.icao.int/APAC/Pages/eDocs.aspx#tabs-3>.

Agenda Item 3: State A-CDM Planning and Implementation Updates

Implementation of Airport Collaborative Decision Making (A-CDM) System at Mid-sized Airports in India (WP/04)

3.1 Airports Authority of India (AAI) had developed an in-house A-CDM system. After successful implementation of the system at high density Indian airports like Mumbai, Kolkata and Chennai, Airports Authority of India decided to implement this system at four more airports.

3.2 The paper presented India's experience in implementing A-CDM at four of its mid-sized airports, viz. Jaipur, Ahmedabad, Guwahati and Trivandrum, in 2019-2020, and the advantage of early implementation of A-CDM at mid-sized airports for improving operational efficiency.

3.3 The paper also presented AAI's proposal of providing A-CDM assistance to enthusiastic member States of South Asian Association for Regional Cooperation (SAARC) and other States in the APAC Region.

3.4 Upon enquiry, India expressed that the A-CDM projects at the four mid-sized airports were scalable considering the needs and complexity of the individual airports. The projects were also planned so that major upgrade to A-CDM would not be required when the airports expanded, unless with significant expansion, e.g. an additional runway. CANSO commented that the APA-CDM/TF could further explore the topic of A-CDM implementation at mid-sized airports in the future.

3.5 In response to a query, India suggested to make a provision of buffer time for A-CDM operation during congestion period.

Role of Airport Operational Database (AODB) in A-CDM Systems (WP/05)

3.6 Prepared by India, this paper presented the usefulness of AODB in supporting A-CDM Implementation. Some of the components required for calculation of TSAT can easily be obtained from AODB. The information provided included the details of A-CDM Milestones which could be captured from AODB data. Brief details were provided on how the AODB data could aid in ATFM/A-CDM Integration by providing required details for DPI messages.

3.7 In response to a query, India informed the meeting that ALDT information was currently received from multiple sources, mainly AFTN messages and Automatic Dependent Surveillance – Broadcast (ADS-B) data, supplemented with ATC manual inputs if necessary.

Status of A-CDM Implementation in India (IP/05)

3.8 Having successfully implemented A-CDM at high density and mid-sized airports, India presented an overview of A-CDM implementations, undertaken by Airports Authority of India's in-house experts and its plans on further implementations.

3.9 The meeting noted that India had extended the A-CDM implementation to four mid-sized airports operated by Airport Authority India (AAI), viz. Jaipur, Ahmedabad, Guwahati and Trivandrum, which was also covered in WP/04. AAI was discussing with the following airports for A-CDM implementation: Hyderabad, Bengaluru and Cochin.

Agenda Item 4: Interoperability of A-CDM with ATFM and Aircraft Operator systems

Implementation Plan for Interoperability of A-CDM with ATFM and Aircraft Operator Systems of Hong Kong China (WP/06)

4.1 This paper presented (i) the implementation status of integration of A-CDM and ATFM of Hong Kong China; and (ii) the implementation plan of Hong Kong China towards full interoperability of cross-border ATFM, A-CDM, AMAN, DMAN, ATM automation and Aircraft Operator systems for meeting the proposed timeframes of the ICAO Asia Pacific A-CDM Implementation Plan, i.e. preferably before November 2025.

4.2 The meeting encouraged States to apply the ICAO Asia Pacific A-CDM Implementation Plan as guidance for making available A-CDM systems and their integration/interoperation with other systems.

4.3 In response to discussion of information exchange formats used for sharing (EUROCONTROL) Flight Update Message (FUM) and Departure Planning Information (DPI) data between A-CDM and ATFM/ATM systems, the meeting was informed that, while local requirements might necessitate the exchange of such information, cross-border information exchange should focus on what information was of operational benefit to the external receivers such as the ATFM units of other Administrations. The FIXM attributes identified in **Table 1** were determined for this purpose, and were currently considered sufficient. Where a need for further attributes was identified, it should be proposed through ATFM/SG and/or APA-CDM/TF. Information exchange was further discussed in Agenda Item 5.

Agenda Item 5: Integration of A-CDM with ATFM

Integration of Airport Collaborative Decision Making (A-CDM) System with Air Traffic Flow Management (ATFM) in India (WP/07)

5.1 This paper presented a case study of the actual integration of A-CDM and ATFM in India and proposed some measures to improve the present integration process for achieving greater benefits for both systems.

5.2 The meeting noted the benefits to A-CDM and ATFM systems achievable through their integration. A-CDM generates TSAT considering ATFM measures, if any. Timely and reliable data from A-CDM systems would benefit the ATFM system to be able to take more accurate ATFM measures.

5.3 In India, ATFM/A-CDM integration had been completed in four major airports and was planned for four additional airports in 2020.

5.4 The meeting noted there were two levels of ATFM/A-CDM Integration: either within a node of the multi-nodal ATFM network, or between nodes. India's current ATFM/A-CDM integration activities were within the node. While the current expectation for cross-border information sharing was between nodes, in the future System-Wide Information Management (SWIM) environment, local A-CDM applications could subscribe to information such as Actual Take-Off Time (ATOT), published by A-CDM applications in other nodes.

CANSO Guide on ATFM/A-CDM Integration (PPT)

5.5 CANSO provided a preview of its draft ATFM/A-CDM Integration Guide which would be published in mid-2020. The Guide identified the items of information that were considered to be the minimum for effective integration of A-CDM and ATFM. Major items to be covered in the draft Guide included: Benefits of ATFM/A-CDM Integration, ATFM/A-CDM Integration Concept, Sample Use Cases for ATFM/A-CDM Integration, SWIM and ATFM/A-CDM Information Exchange and Recommendation for ATFM/A-CDM Integration.

5.6 CANSO highlighted that the Guide would focus on the information exchanges between ATFM nodes and A-CDM systems. It was not intended to cover cross-border information exchanges.

5.7 The meeting noted that the information exchanges between ATFM and A-CDM were divided into 3 categories, i.e. (1) Exchange of ATFM slot information to A-CDM system; (2) Exchange of flight updates information to A-CDM system; and (3) Exchange of departure information to ATFM system. Meanwhile, the information exchange should be scalable to allow a phased expansion of functionality on both systems. On interoperability, CANSO recommended using SWIM concept with the most current FIXM / FIXM Extension.

5.8 ICAO stated that there appeared to be a need for development of information exchange scenarios for current non-SWIM and future SWIM environments, for inclusion in the review of the Regional Framework for Collaborative ATFM. In connection with this, the meeting noted that IATA had been informed by EUROCONTROL that their intention was to make FUM and DPI messaging to be SWIM-compatible in 2020, by mapping the messages to the SWIM data model under Air Traffic Management Information Reference Model (AIRM). It was also noted that this was a requirement for SWIM messaging (e.g. FIXM already mapped to the AIRM model).

Planned A-CDM and ATFM Integration for Australia (IP/06)

5.9 Australia would be implementing A-CDM at Sydney (YSSY), Melbourne (YMML), Brisbane (YBBN) and Perth (YPPH) as a Partnership between Airservices (ANSP), Australia's four major domestic airline groups and the respective four airport corporations. To realise maximum benefits of A-CDM within the context of the entire ATM Network, the integration of A-CDM and ATFM in Australia had been considered both from a technical and CDM process perspective.

5.10 From a technological perspective, the proposed model integrated the multiple A-CDM systems with the centralized ATFM system to provide an improved projection of arrival and departure demand throughout the ATM Network. The integration also ensured that slot allocation logic between A-CDM and ATFM had been coupled, to prevent significant complexity from requiring aircraft operators to comply with potentially conflicting constraints. From a concept perspective, A-CDM implementation would allow CDM processes to include considerations of arrival and departure balancing; this ensured the best utilization of latent capacity across the network (Network-CDM).

5.11 Due to the downturn in air traffic as a result of COVID-19, Australia's A-CDM implementation program was currently on hold with the implementation schedule under review by the partners, while implementation was planned to commence in second half of 2020.

5.12 Upon enquiry, Australia clarified that, in the Australian configuration, TOBT would automatically be generated until the flight landed at an aerodrome (i.e. at ALDT), and from when airlines would provide TOBT input based on their assessment.

Agenda Item 6: APAC A-CDM Implementation Plan

Report on ICAO APAC A-CDM Survey (WP/09)

6.1 Jointly prepared by India and CANSO, this paper presented the results from the ICAO APA-CDM Survey Questionnaire #2 and provided a general overview of the A-CDM status and plans at an airport level in APAC States/Administrations.

6.2 The survey was sent to 39 States (including United States) and 2 Administrations. Responses were received from 15 States / Administrations: Australia, China, Hong Kong China, India, Indonesia, Japan, Malaysia, Myanmar, Nepal, Philippines, Republic of Korea, Singapore, Thailand, Viet Nam and United States. The response rate was 37%.

6.3 The meeting noted that, as per paragraph 7.3 of APAC Seamless ANS Plan Version 3.0, all international aerodromes should operate an A-CDM system for Airport CDM Information Sharing (ACIS) integrated with the ATM network function consistency with ASBU Elements ACDM-B0/1 & B0/2.

6.4 Republic of Korea updated the meeting that the A-CDM systems at Seoul Gimpo (RKSS), Busan Gimhae (RKPK) and Jeju (RKPC) would be put on trial in August 2020, with full implementation expected in 2021. In addition, Republic of Korea would like to update the Incheon A-CDM guidance material published as an Appendix to the APAC A-CDM Implementation Plan, with additional coverage on an A-CDM mobile application and to reflect that the ATFM centre provided CTOT information instead of the previous COBT. The Chairperson requested Republic of Korea to follow up with the Secretariat subsequent to the meeting.

6.5 The meeting noted that IATA Airport A-CDM Coordination Group (AACG) had been liaising with FAA to look into certain terms used in its Surface-CDM (TOBT and EOBT) as the definition of the terms were not aligned with A-CDM global guidance.

6.6 The meeting expressed appreciation to the experts who contributed to the development of the APAC A-CDM Implementation Plan, which provided a useful reference for airports especially those in their early stages of A-CDM implementation.

Agenda Item 7: Any Other Business

7.1 Nil.

Agenda Item 8: APA-CDM/TF Task List

APA-CDM/TF Terms of Reference and Deliverables (WP/08)

8.1 The Secretariat presented the APA-CDM/TF Terms of Reference (ToR), which was amended by APANPIRG/30 (Bangkok, Thailand, 4 to 6 November 2019) through **Decision APANPIRG/30/3**, subsequent to an amendment proposal formulated by APA-CDM/TF/4 (Bangkok, Thailand, 22 to 26 April 2019) and endorsed by AOP/SG/3 (Bangkok, Thailand, 24 to 26 June 2019). The amended ToR is available in **Appendix C** to this Report. The meeting reviewed the ToR and agreed to the following Draft Decision.

Draft Decision APA-CDM/TF/5–1: Proposal for Amendment of APA-CDM/TF TOR	
What: That, the Terms of Reference (TOR) of Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF) be amended as in Appendix D to the Report of APA-CDM/TF/5.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To align the TOR with the APAC Seamless ANS Plan Version 3.0.	Follow-up: <input type="checkbox"/> Required from States
When: 16-Dec-20	Status: Draft to be endorsed by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

8.2 The Secretariat also presented the APA-CDM/TF Task List. The meeting reviewed and updated the Task List which is contained in **Appendix E** to this Report.

Agenda Item 9: Date and Venue of Next Meeting

9.1 The next Task Force meeting was tentatively planned for April 2021. States/Administrations interested to host APA-CDM/TF/6 were requested to contact the Secretariat. The venue of APA-CDM/TF/6 would be communicated to States/Administrations through ICAO APAC Invitation Letter.

9.2 Subject to further coordination, it was proposed that the next Task Force meeting could be held in conjunction with ATFM/SG. In any case, A-CDM experts were strongly encouraged to attend ATFM/SG and/or SWIM/TF.

Closure of Meeting

10.1 Mr George Tak Yuen Wong, Chairperson of the APA-CDM/TF expressed sincere thanks to the participants from States and International Organisations for their contribution and cooperation to APA-CDM/TF/5.



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)

Video Conferencing, 15 to 17 June 2020

LIST OF PARTICIPANTS

TOTAL NO. OF STATES/ADMINISTRATIVE	16
TOTAL NO. OF ORGANIZATION	4
TOTAL NO. OF PARTICIPANTS	99
ICAO	5
GRAND TOTAL	104

AUSTRALIA	1	PHILIPPINES	3
CAMBODIA	5	REPUBLIC OF KOREA	5
CHINA	1	SINGAPORE	8
- HONG KONG CHINA	6	THAILAND	14
FIJI	4	USA	3
INDIA	8		
INDONESIA	8	CANSO	2
JAPAN	6	IATA	3
LAO PDR	9	IFALPA	1
MALAYSIA	8	IFATCA	3
NEPAL	1	ICAO	5

NAME		TITLE/ORGANIZATION	E-MAIL
1.	AUSTRALIA (1)		
	1.	Dr. Jesper Bronsvort ATM Network Strategy & Development Manager, Airservices Australia Melbourne Airport	jesper.bronsvort@airserviceaustralia.com ;
2.	CAMBODIA (5)		
	2.	Mr. Cheav Vin Director of Airport Standards and Safety Department, State Secretariat of Civil Aviation of Cambodia	vincheav@gmail.com ; vincheav@ssca.gov.kh ;
	3.	Mr. Eng Samreth Deputy Director of Airport Standards and Safety Department;	engsamreth@gmail.com ;
	4.	Mr. Huong Sodeth Deputy Director of Airport Standards and Safety Department	huongsodeth@gmail.com ;
	5.	Mr. Sok Sithpisey Chief of Bureau of Airport standards and Safety Department	soksithpisey@gmail.com ;
	6.	Mr. Kay Lina Chief of Bureau of Airport Standards and Safety Department;	kaylina@ssca.gov.kh ;
3.	CHINA (1)		
	7.	Mr. Liuhong Senior Engineer Civil Aviation Administration of China Beijing China	liuhong@caac.gov.cn ;



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)
Video Conferencing, 15 to 17 June 2020

NAME		TITLE/ORGANIZATION	E-MAIL
4.	HONG KONG CHINA (6)		
8.	Mr. WONG, Tak Yuen George <i>Chairman of the Task Force</i>	Acting Chief Electronics Engineer Air Traffic Engineering Services Div., Civil Aviation Department, Hong Kong China	gtywong@cad.gov.hk ;
9.	Mr. Matthew W C CHIU	Electronics Engineer Civil Aviation Department	mwcchiu@cad.gov.hk ;
10.	Ms. WONG Pui Ching	Acting Senior Evaluation Officer Civil Aviation Department	ppcwong@cad.gov.hk ;
11.	Mr. CHUI Tak Chuen, Anony	Evaluation Officer Civil Aviation Department	atcchui@cad.gov.hk ;
12.	Mr. CHUI Kim Man	Manager, Airfield Airport Authority Hong Kong Hong Kong International Airport	man.chui@hkairport.com ;
13.	Mr. YIM Wing Fai	Assistant Manager, Airfield Airport Authority Hong Kong	wf.yim@hkairport.com ;
5.	FIJI (4)		
14.	Mr. Ratu Maibulu Qicatabua Laliqavoka	Acting Senior Aerodrome Inspector- International Civil Aviation Authority of Fiji Nadi International Airport, Fiji	maibulu.laliqavoka@caaf.org.fj ;
15.	Alisi Namoro	Air Navigation Services Inspector-Search and Rescue/ATM Civil Aviation Authority of Fiji Nadi International Airport, Fiji	Alisi.Namoro@caaf.org.fj ;
16.	Makiti Raratabu	Air Navigation Services Inspector- Meteorology/ATM Civil Aviation Authority of Fiji Nadi International Airport, Fiji	Makiti.Raratabu@caaf.org.fj ;
17.	Osea Lewanituva	Aerodrome Inspector Civil Aviation Authority of Fiji Nadi International Airport, Fiji	Osea.Lewanituva@caaf.org.fj ;
6.	INDIA (8)		
18.	Mr. Sunil Rathee	Deputy Director OPS Directorate of General of Civil Aviation GOI/ New Delhi	Sunil76.dgca@nic.in ;
19.	Mr. Amit Srivastava	Deputy Director (Operations) (Aero- Stds.) Directorate of General of Civil Aviation GOI/ New Delhi	amits.dgca@nic.in ;
20.	Ms. Archana S. Jadoo	Assistant Director of (AS & ANSS) Directorate of General of Civil Aviation	archana.dgca@gov.in ;



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)
Video Conferencing, 15 to 17 June 2020

NAME		TITLE/ORGANIZATION	E-MAIL
21.	Mr. Manas Kumar Das	General Manager (Research & Development) Begumpet Airport, Hyderabad Airports Authority of India	kmanasd@aa.aero ; manas.atc@gmail.com ;
22.	Mr. Sudhanshu Gupta	Joint General Manager (ATM) Airports Authority of India Mumbai, Maharashtra	sudhanshu@aa.aero ; sudhanshu100@yahoo.com ;
23.	Mr. Akshat Mahalwala	Manager (ATM) Airports Authority of India Mumbai, Maharashtra	akshatm@aa.aero ;
24.	Mr. Ashish Rajan	Manager (ATM) Airports Authority of India, Mumbai,	ashish.rajan@aa.aero ;
25.	Mr. S. V. Manohj	Junior Executive ATM Airports Authority of India, Mumbai	manohj@aa.aero ; manohj@gmail.com ;
7.	INDONESIA (8)		
26.	Mrs. Annisa Dwi Kurniati	Air Navigation Inspector Directorate of Air Navigation Directorate General of Civil Aviation Jakarta, Indonesia	nisaku80@gmail.com ;
27.	Mrs. Novi Julpah	Air Navigation Inspector Directorate of Air Navigation Directorate General of Civil Aviation	novi_julpah@dephub.go.id ; novi.julpah@gmail.com ;
28.	Mr. Nur Sa'id Eko Nugroho	Air Navigation Inspector (ATM) Directorate of Air Navigation Directorate General of Civil Aviation	nse.nugroho@gmail.com ; nur_said@dephub.go.id ;
29.	Mr. Catur Yudhistira	Air Navigation Inspector Directorate of Air Navigation Directorate General of Civil Aviation	caturyudhistira170906@gmail.com ;
30.	Mr. Rachmat Widiyana	ATFM & CDM Planning Manager Airnav Indonesia	rachmat.widiyana@airnavindonesia.co.id ;
31.	Mr. Budi Ariyanto	Airport Operation Airside Senior Manager PT Angkasa Pura I (Persero)	budi.ariyanto@ap1.co.id ;
32.	Mr. Adi Hermawan	SM of AOCC – Soekarno Hatta Airport Angkasa Pura II	adi.hermawan@angkasapura2.co.id ;
33.	Mr. Subangkit Meianto	Airport Standard Officer, Directorate of Airport Directorate General of Civil Aviation	subangkitmeianto@gmail.com ;
8.	JAPAN (6)		
34.	Mr. Harano Kyotaro	Director, Air Traffic International Affairs Office, ANS Department Japan Civil Aviation Bureau	harano-k2pc@mlit.go.jp ;



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)
Video Conferencing, 15 to 17 June 2020

NAME		TITLE/ORGANIZATION	E-MAIL
35.	Mr. Yasuteru Kishimoto	Special Assistant to the Director Operations Division, ANS Department Japan Civil Aviation Bureau	Kishimoto-y01uq@mlit.go.jp ;
36.	Mr. Shigenobu Toshiya	Special Assistant to the Director ATC Division, ANS Department, JCAB	Shigenobu-t07sa@mlit.go.jp ;
37.	Mr. Shiratani Daisuke	Special Assistant to the Director ATC Division, ANS Department Japan Civil Aviation Bureau	Shiratani-d10cy@mlit.go.jp ;
38.	Mr. Hiroyuki Wada	Special Assistant to the Director ANS Planning Division, ANS Department Japan Civil Aviation Bureau	wada-h22t5@mlit.go.jp ;
39.	Mr. Yamaguchi Kei	Special Assistant to the Director ATC Division, ANS Department Japan Civil Aviation Bureau	Yamaguchi-k10tb@mlit.go.jp ;
9.	LAO PDR (9)		
40.	Mr. Kingsakda Muongmany	Aerodrome Inspector, Aerodrome Safety and Standards Division Department of Civil Aviation of Lao PDR	kingsakda_m@yahoo.com ;
41.	Mr. Vongsouthone Sounthavong	Officer, Aerodrome Safety and Standards Div., Department of Civil Aviation	tomsdk11@yahoo.com ;
42.	Mr. Juexiong Jongya	Officer, Aerodrome Safety and Standards Div., Department of Civil Aviation	juexiong1988@gmail.com ;
43.	Ms. Vanthong Mangnormake	Officer, Aerodrome Safety and Standards Div., Department of Civil Aviation	vanthongmnm@gmail.com ;
44.	Mr. Bounlieng Phommathi	Director of Wattay International Airport Airport of Laos	bounlieng2009@yahoo.com ;
45.	Mr. Keosouli Noufongsamouth	Deputy Director of Wattay International Airport, Airport of Laos	keosouli@gmail.com ;
46.	Mr. Phantha Pemphanith	Deputy Director of Airport Safety Div., Airport of Laos	phantha96@yahoo.com ;
47.	Mr. Phoutsavanh Khaikhamphithoun	Deputy Director of Airport Safety Div., Airport of Laos	yay_nut@yahoo.com ;
48.	Mr. Khine Simvongsa	General Director Airport of Laos	khine@dcal.gov.la ;
10.	MALAYSIA (8)		
49.	Ms. Ruzliana Fazila Kamarudin	Malaysia Airports (Sepang) Sdn Bhd	ruzliana@malaysiaairports.com.my ;
50.	Mr. Shahrunizam Abd Jamil	Covering General Manager, Operations Malaysia Airports (Sepang) Sdn Bhd	shahrin@malaysiaairports.com.my ;
51.	Mr. Zulkifli Bin Sidek	Malaysia Airports (Sepang) Sdn Bhd	zulsidek@malaysiaairports.com.my ;



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)
Video Conferencing, 15 to 17 June 2020

NAME		TITLE/ORGANIZATION	E-MAIL
52.	Mr. Khor Soon Kheng	General Manager – IT Strategy & Architecture, Malaysia Airports Holding	skhor@malaysiaairports.com.my ;
53.	Mr. Valliappan M.T Arasu	Manager IT Malaysia Airports Holding Berhad	valli@malaysiaairports.com.my ;
54.	Mr. Ahmad Hazwan	Assistant Director Civil Aviation Authority of Malaysia	hazwan@caam.gov.my ;
55.	Mr. Sahrol Nizal Ab Rashid	Senior Assistant Director Civil Aviation Authority of Malaysia	sahrol@caam.gov.my ;
56.	Mr. Suresh Menon	Regional Director Civil Aviation Authority of Malaysia	suresh_menon@caam.gov.my ;
11. NEPAL (1)			
57.	Mr. Sanjay Kumar	Deputy Director, ATM Department Civil Aviation Authority of Nepal	sanjay.kumar@caanepal.gov.np ;
12. PHILIPPINES (3)			
58.	Mr. Robin F. Alzona	Asst. Chief for Operations – Manila Control Tower, Air Traffic Service Civil Aviation Authority of the Philippines	robinalzona@yahoo.com ;
59.	Ms. Chadel T. Villabert	Facility Training Officer - Manila Control Tower, ATM Officer III, Civil Aviation Authority of the Philippines	ledahc@yahoo.com ;
60.	Mr. Virgilio Cipriano	Civil Aviation Authority of the Philippines	virgiliocipriano@yahoo.com ;
13. REPUBLIC OF KOREA (5)			
61.	Ms. Sohyun Park	Assistant Director, Air Traffic Division, Korea Office of Civil Aviation, Ministry of Land, Infrastructure and Transport	psohyun@korea.kr ;
62.	Mr. Jin-yeol, Do	Assistant Director of ATS & Communication Division Gimpo Aviation Management Office	raido2342@korea.kr ;
63.	Mr. Kim Yun-Su	ATC Planning, Flight Procedure Service Jeju Regional Office of Aviation	realkys@korea.kr ;
64.	Mr. Soon Hyuck Lee	Manager Korea Airports Corporation	sh.lee@airport.co.kr ;
65.	Mr. Siwan Yeom	Assistant Manager Korea Airports Corporation	swan@airport.co.kr ;
14. SINGAPORE (8)			
66.	Mr. Roger Lau	Head (ATM-Performance) Civil Aviation Authority of Singapore PO Box 1, Singapore 918141	Roger_lau@caas.gov.sg ;



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)
Video Conferencing, 15 to 17 June 2020

NAME		TITLE/ORGANIZATION	E-MAIL
67.	Mr. Joel Ng	Senior ATC Manager (System Planning) Civil Aviation Authority of Singapore	Joel_ng@caas.gov.sg ;
68.	Mr. Clarence Foo	Head (ATM-Development) Civil Aviation Authority of Singapore	Foo_kaiyu@caas.gov.sg ;
69.	Mr. Simon Cheoh Wee Pin	ATCM (ATM-Development) Civil Aviation Authority of Singapore	Cheoh_wei_pin@caas.gov.sg ;
70.	Mr. Zhang Huanbin	Head ATC Specialist (ATFM) Civil Aviation Authority of Singapore	Zhang_Huanbin@caas.gov.sg ;
71.	Mr. Mohammad Shazrin Bin Baderulshah	Senior Air Traffic Control Officer Civil Aviation Authority of Singapore	shazrin.baderulshah@gmail.com ;
72.	Ms. Fatin Zunairah Binte Zulkifli	Lead Air Traffic Control Officer Civil Aviation Authority of Singapore	ftznrh@gmail.com ;
73.	Ms. He Jialing	Lead Air Traffic Control Officer Civil Aviation Authority of Singapore	He_Jialing@caas.gov.sg ;
15. THAILAND (14)			
74.	Mr. Prachya Janlampoo	Head of Aerodrome Standard Development Division The Civil Aviation Authority of Thailand	prachya.j@caat.or.th ;
75.	Mr. Teeravee Yongwattanajiranon	Aerodrome Standard Development Officer The Civil Aviation Authority of Thailand	teeravee.y@caat.or.th ;
76.	Ms. Naruemon Leuangprasert	Aerodrome Certification Officer The Civil Aviation Authority of Thailand	naruemon.l@caat.or.th ;
77.	Ms. Jenita Chantranon	Aerodrome Certification Officer The Civil Aviation Authority of Thailand	jenita.c@caat.or.th ;
78.	Ms. Pitcha Amaralikit	Transport Technical Officer Department of Airports	pitcha.a@airports.go.th ;
79.	Mr. Chaichan Paecharoen	Director of Airport Operation Development Division, Innovation and Knowledge Development Department Airports of Thailand	chaichan.p@airportthai.co.th ;
80.	Ms. Sonthaya Iamsua	Administration Officer, Flight Services Division, Airside Operation Department, Airports of Thailand	sonthaya.e@airportthai.co.th ;
81.	Mr. Bunn Yomchinda	Administration Officer, Airside Services Division, Airside Operations Department, Don Mueang Int'l Airport Airports of Thailand	Bunn.y@airportthai.co.th ;
82.	Ms. Suvachira Teeraphathananon	Engineer, Airport Operation System Division, Information System Dept. Airports of Thailand	suvachira.t@airportthai.co.th ;



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)
Video Conferencing, 15 to 17 June 2020

NAME		TITLE/ORGANIZATION	E-MAIL
83.	Ms. Amornrat Jirattigalachote	Strategic Planning Manager (Engineering) Aeronautical Radio of Thailand Limited (AEROTHAI)	amornrat.ji@aerorhai.co.th ;
84.	Mr. Chairat Panpattarakul	Air Traffic Controller 2 (Bangkok Approach Control) Aeronautical Radio of Thailand Limited	Chairat.pa@aerorhai.co.th ;
85.	Mr. Dudsadee Sungthong	Senior Administrative Officer Aeronautical Radio of Thailand Limited	Dudsadee.su@aerorhai.co.th ;
86.	Mr. Sakon Sinlapakun	Senior Air Traffic Systems Engineer Aeronautical Radio of Thailand Limited	sakon.si@aerorhai.co.th ;
87.	Ms. Kasama Ketsuriyonk	Senior Air Traffic System Engineer Aeronautical Radio of Thailand Limited	kasama.ke@aerorhai.co.th ;
16. UNITED STATES (3)			
88.	Mr. Michael Watkins	Senior Air Traffic Representative Asia Pacific Federal Aviation Administration Air Traffic Organization, System Operations American Embassy, Singapore	michael.w.watkins@faa.gov ;
89.	Mr. Sam El-Zoobi	Program Officer, Asia Pacific Group Federal Aviation Administration Air Traffic Organization International, Mission Support, SW Washington, DC	sam.el-zoobi@faa.gov ;
90.	Mr. C. Keith Henry	Air Traffic Control Specialist Federal Aviation Administration Air Traffic Organization, NW Washington, DC	keith.henry@faa.gov ;
INTERNATINAL ORGANIZATIONS			
1. CANSO (2)			
91.	Mr. Chiang Hai Eng	Director Asia Pacific Affairs Civil Air Navigation Services Organization, Asia Pacific Office, Singapore Changi Airport, Singapore	hai.eng.chiang@canso.org ;
92.	Mr. Fredrik Lindblom	A-CDM Subject Matter Expert Civil Air Navigation Services Organization	fredrik.lindblom@saabgroup.com ;
2. IATA (3)			
93.	Mr. Wenxin LI	Director, RVPO North Asia International Air Transport Association Beijing, 100102, China	liwx@iata.org ;
94.	Mr. Richard Tan	Regional Manager Airport, Passenger, Cargo and Security, IATA, Singapore	tanr@iata.org ;
95.	Mr. Christopher Dodson	Consultant IATA, Geneva 1215, Switzerland	dodsonc@iata.org ;



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)
Video Conferencing, 15 to 17 June 2020

NAME		TITLE/ORGANIZATION	E-MAIL
3.	IFALPA (1)		
96.	Captain Amornvaj Mansumitchai	IFALPA Deputy President	amornvaj@ifalpa.org ;
4.	IFATCA (3)		
97.	Mr. Anthony Ang	Executive Vice-President Asia Pacific IFATCA International Federation of Air Traffic Controllers' Associations	anthony.ang@ifatca.org ;
98.	Ms. Yen-Chun Cheryl Chen	Regional Vice President, North East Asia IFATCA, Montreal, Canada	cheryl.chen@ifatca.org ;
99.	Mr. Niranjana Dallakoti	Regional Vice President, South West Asia, IFATCA, Montreal, Canada	niranjana.dallakoti@ifatca.org ;
5.	ICAO (5)		
100.	Mr. Manjit Singh	Deputy Director International Civil Aviation Organization	apac@icao.int ;
101.	Mr. Punya Raj Shakya	Regional Officer, Aerodromes and Ground Aids International Civil Aviation Organization	pshakya@icao.int ;
102.	Mr. Steven Ka Ho Pang	Regional Officer, Aerodromes and Ground Aids International Civil Aviation Organization	spang@icao.int ;
103.	Mr. Shane Sumner	Regional Officer, Air Traffic Management International Civil Aviation Organization	ssumner@icao.int ;
104.	Mr. Hiroyuki Takata	Regional Officer, Air Traffic Management, Regional Sub Office International Civil Aviation Organization	htakata@icao.int ;



ICAO

Fifth Meeting of the Asia/Pacific Airport Collaborative Decision Making Task Force (APA-CDM/TF/5)
Video Conferencing, 15 to 17 June 2020

LIST OF WORKING AND INFORMATION PAPERS

Paper No.	Agenda Item	Title	Presented by
WORKING PAPERS			
WP/01	1	Adoption of the Provisional Agenda	Secretariat
WP/02	2	Outcomes of APANPIRG/30 Meeting	Secretariat
WP/03 Revision 1	2	Air Traffic Flow Management Steering Group Outcomes	Secretariat
WP/04	3	Implementation of Airport Collaborative Decision Making (A-CDM) System at Mid-Sized Airports in India	India
WP/05	3	Role of Airport Operational Database (AODB) in A-CDM Systems	India
WP/06	4	Implementation Plan for Interoperability of A-CDM with ATFM and Aircraft Operator Systems of Hong Kong China	Hong Kong China
WP/07	5	Integration of Airport Collaborative Decision Making (A-CDM) System with Air Traffic Flow Management (ATFM) in India	India
WP/08	8	APA-CDM/TF Terms of Reference and Deliverables	Secretariat
WP/09 Revision 1	6	Report on ICAO APAC A-CDM Survey	India-CANSO

Paper No.	Agenda Item	Title	Presented by
INFORMATION PAPERS			
IP/01	-	List of Papers	Secretariat
IP/02	-	List of Experts on Airport Collaborative Decision Making (A-CDM)	Secretariat
IP/03 Revision 1	2	Airport Collaborative Decision Making (A-CDM) Integration with Air Traffic Flow Management (ATFM) Workshops	Secretariat
IP/04	2	Asia/Pacific Seamless ANS Plan	Secretariat
IP/05	3	Status of A-CDM Implementation in India	India
IP/06	5	Planned A-CDM and ATFM Integration for Australia	Australia

Item No.	Agenda Item	Title	Presented by
PRESENTATION			
PPT	5	CANSO Guide on ATFM/A-CDM Integration	CANSO

—END—

Asia/Pacific Airport Collaborative Decision-Making Task Force (APA-CDM/TF)

TERMS OF REFERENCE

(As amended by **Decision APANPIRG/30/3**)

The scope and objective of the APA-CDM/TF is to assist States in implementation of A-CDM at high density international aerodromes (100,000 scheduled movements per annum or more as per Asia/Pacific Seamless ATM Plan) by fostering harmonized A-CDM implementations and promoting best practices to achieve performance expectations as per Asia/Pacific A-CDM Implementation Plan.

To achieve the above objective, the Task Force shall:

- 1) Monitor and assist States in implementation of A-CDM at high density international aerodromes to foster harmonized implementations as per Asia/Pacific A-CDM Implementation Plan;
- 2) Encourage States to share their experiences and best practices in implementing A-CDM through Workshop /Seminar;
- 3) Monitor the progress of achieving the performance expectations as per Asia/Pacific A-CDM Implementation Plan and review them as needed;
- 4) Foster the interoperability of A-CDM with ATFM and Aircraft Operator systems; and
- 5) Establish and continue close working arrangements with other relevant ICAO Regional groups such as the Air Traffic Flow Management Steering Group (ATFM/SG), System-Wide Information Management Task Force (SWIM/TF) and other groups working on related issues.

Composition: The APA-CDM Task Force will be a multidisciplinary group composed of subject matter experts in aircraft operations, air traffic management, aerodrome operations and systems engineering, supplemented with other members as and when required.

Working Methods: The Task Force will hold at least one three-day face-to-face meeting each year.

Time Lines: Deliverables addressing the objective of the Task Force are required to be developed and delivered to APANPIRG/32.

Asia/Pacific Airport Collaborative Decision-Making Task Force (APA-CDM/TF)

TERMS OF REFERENCE

~~(As amended by Decision APANPIRG/30/3)~~
(Proposed Amendment by APA-CDM/TF/5)

The scope and objective of the APA-CDM/TF is to assist States in implementation of A-CDM at ~~high density~~ international aerodromes ~~(100,000 scheduled movements per annum or more as per Asia/Pacific Seamless ATM Plan)~~ by fostering harmonized A-CDM implementations and promoting best practices to achieve performance expectations as per Asia/Pacific A-CDM Implementation Plan.

To achieve the above objective, the Task Force shall:

- 1) Monitor and assist States in implementation of A-CDM at ~~high density~~ international aerodromes to foster harmonized implementations as per Asia/Pacific A-CDM Implementation Plan;
- 2) Encourage States to share their experiences and best practices in implementing A-CDM through Workshop /Seminar;
- 3) Monitor the progress of achieving the performance expectations as per Asia/Pacific A-CDM Implementation Plan and review them as needed;
- 4) Foster the interoperability of A-CDM with ATFM and Aircraft Operator systems; and
- 5) Establish and continue close working arrangements with other relevant ICAO Regional groups such as the Air Traffic Flow Management Steering Group (ATFM/SG), System-Wide Information Management Task Force (SWIM/TF) and other groups working on related issues.

Composition: The APA-CDM Task Force will be a multidisciplinary group composed of subject matter experts in aircraft operations, air traffic management, aerodrome operations and systems engineering, supplemented with other members as and when required.

Working Methods: The Task Force will hold at least one three-day face-to-face meeting each year.

Time Lines: Deliverables addressing the objective of the Task Force are required to be developed and delivered to APANPIRG/32.

APA-CDM/TF TASK LIST

(Updated ~~26 April 2019~~ 16 June 2020)

	ACTION ITEM/PLANNED ACTIVITIES	RESPONSIBLE PARTY	TIME FRAME	STATUS	REMARKS
1/1	Update group of expert names and contact details	Group of Expert States	8 December 2017	Completed	Prepared and posted as IP/02 at ICAO APAC Meeting Webpage
1/2	Examine available guidance material for clear definition of what is A-CDM and what is not	Secretariat	Ongoing	Completed	To be included in Draft Implementation Plan
1/3	Check with ICAO HQ whether APA-CDM/TF Participants can be provided with a copy of Draft Doc 9971 3 rd Edition	Secretariat	28 April 2017	Completed	For use only on APA-CDM/TF work.
1/4	Conduct survey of State A-CDM implementation status	India/CANSO/Group of Experts/Secretariat	Before November 2017	Completed	Results of Survey to be analyzed by APA-CDM/TF/2
1/5	Offline analysis of ICAO Doc 9971 Part 3, when available, and report recommendations to APA-CDM/TF/2	China/Group of Experts	APA-CDM/TF/2	Completed	Gap analysis between Doc 9971 and any identified needs.
1/6	Review the effectiveness of existing A-CDM programmes in the APAC Region	CANSO/IATA	Ongoing	Completed	Dependent on the development of a set of metrics
1/7	Develop a set of metrics for measurement of effectiveness of A-CDM implementation	CANSO/IATA/ Group of Experts/	APA CDM/TF/4	Completed	Incorporated in Draft APAC A-CDM Implementation Plan
2/1	Re-circulate A-CDM implementation survey questionnaire to non-respondent States, seek clarification from States where information provided was unclear, and make the questionnaire (i.e. in MS Word file) available in the webpage for APA-CDM/TF/2	Secretariat/CANSO	15 December 2017	Completed	Survey questionnaires and supplementary questionnaires had been sent to States.

	ACTION ITEM/PLANNED ACTIVITIES	RESPONSIBLE PARTY	TIME FRAME	STATUS	REMARKS
2/2	Finalize the interim report of the survey results incorporating information provided by States who have not responded to survey questionnaire and additional clarifications received from States	India/CANSO/Group of Experts/Secretariat	28 February 2018	Completed	Presented in APA-CDM/TF/3 meeting.
2/3	First draft of Asia/Pacific Regional A-CDM Implementation Plan	India/Singapore/CANSO/IATA/Group of Experts	31 March 2018	Completed	First draft of Asia/Pacific Regional A-CDM Implementation Plan presented in APA-CDM/TF/3 meeting.
3/1	Interoperability Milestones: 1. Develop Interoperability Operational Concept 2. Identify minimum A-CDM milestones for interoperability with cross-border ATFM; and 3. Prepare Operational Scenarios for FIXM Extension;	Hong Kong, China/India/Singapore/Thailand/CANSO/IATA/Group of Experts	APA-CDM/TF/4	Completed	Developed FIXM v4.1 Extension based on A-CDM operational scenarios developed under the SWIM in ASEAN Demonstration project
3/2	Coordinate with SWIM TF for inclusion of A-CDM attributes in FIXM Extension	Thailand/Secretariat	31 August 2018	Completed	SWIM TF Chair and Task Leaders web-conference planned for August 2018
3/3	Examine availability of A-CDM-specific MET information for inclusion by reference in A-CDM Plan.	Secretariat	APA-CDM/TF/4	Completed	Reference is made to the <i>Asia/Pacific Regional Guidance for Tailored Meteorological Information and Services to support Air Traffic Management Operations</i> and included in the Asia/Pacific A-CDM Implementation Plan

Appendix E to Report of APA-CDM/TF/5

	ACTION ITEM/PLANNED ACTIVITIES	RESPONSIBLE PARTY	TIME FRAME	STATUS	REMARKS
3/4	Provide examples of A-CDM guides, AIP Supplement, AIC for notification of A-CDM operational trial/ implementation	Republic of Korea, Hong Kong China, other States that have implemented A-CDM	28 February 2019	Completed	ROK has provided Incheon A-CDM Operational Manual
3/5	Provide examples of A-CDM performance measurement	States that have implemented A-CDM	28 February 2019	Completed	
3/6	Finalize Asia/Pacific Regional A-CDM Plan	India/Singapore/Thailand/CANSO /IATA/Group of Experts	APA-CDM/TF/4	Completed	Informal face-to-face meeting was held from 4 to 8 March 2019. DRAFT Asia/Pacific Regional A-CDM Implementation Plan submitted to the APA-CDM/TF/4 for endorsement.
4/1	Develop frequently asked questions as live document	CANSO/IATA	September 2020	In progress	
4/2	Develop new survey questionnaire based on APAC A-CDM Implementation Plan	CANSO/India/Hong Kong, China	APA-CDM/TF/5	Completed	State Letter AN 3/3 – AP109/20 (AGA) dated 12 May 2020
4/3	Analysis of the completed survey	CANSO/India/Hong Kong, China	APA-CDM/TF/5	Completed	APA-CDM/TF/5 WP/09
4/4	Interoperability of A-CDM with ATFM in collaboration with ATFM/SG Experts and SWIM TF	Hong Kong China/Thailand/Singapore/India/ CANSO/IATA	APA-CDM/TF/5	Completed	APA-CDM/TF/5 WP/06 Continue in Tasks 5/2 & 5/3.
5/1	Develop a monitoring framework and monitor the progress of achieving the performance expectations as per Asia/Pacific A-CDM Implementation Plan and review the expectations as needed, in consultation with ATFM/SG	India to lead CANSO	Framework: November 2020 Progress Monitoring Report: APA-CDM/TF/6		TOR item 3

	ACTION ITEM/PLANNED ACTIVITIES	RESPONSIBLE PARTY	TIME FRAME	STATUS	REMARKS
5/2	Develop joint operational procedure guidance for the integration of ATFM and A-CDM operations, focusing the integration between A-CDM and "cross-border" ATFM in collaboration with Experts from ATFM/SG and SWIM TF.	Hong Kong China to lead China, India, Republic of Korea, Thailand, Group of Experts, CANSO	APA-CDM/TF/6		
5/3	Identify any other data attributes which are necessary to support the A-CDM and ATFM integrated operations (from A-CDM perspective), in addition to the ones already included in the current version of the FIXM v4.1 Extension in collaboration with Experts from ATFM/SG and SWIM TF.	Thailand to lead Hong Kong China, India, Group of Experts, CANSO	APA-CDM/TF/6		
5/4	Update the Asia/Pacific A-CDM Implementation Plan	India to lead Thailand, CANSO	Editorial Changes: November 2020 Other Changes: APA-CDM/TF/6		