



International Civil Aviation Organization

MIDANPIRG Air Traffic Flow Management Task Force

Fifth Meeting (ATFM TF/5)
(Virtual, 25 – 27 May 2021)

Agenda Item 2: Regional Framework

ATM OPERATIONAL DATA EXCHANGE MODEL

(Presented by the Secretariat)

SUMMARY
<p>This paper presents the progress of the development of the MID ATM Operational Data exchange process and the periodic cross-border/Regional coordination meetings.</p> <p>Action by the meeting is at paragraph 3.</p>
REFERENCES
<ul style="list-style-type: none">- ICAO ATM/CDM process- MIDANPIRG/18 and RASG-MID/8 Meetings Report (Virtual, 15 - 22 February 2021)

1. INTRODUCTION

1.1 “ICAO Simplified procedure for Air Traffic Management Collaborative Decision Making and sharing of information (ATM/CDM process)” was initially developed at the beginning of COVID-19, and introduced in the ICAO Webinar series.

1.2 The aim was to provide an effective cross-border coordination process between ANSPs and Airspace users; it provides a collaborative platform to be used for coordination of Air Traffic management (in recovery phases), suitable for States/Regions/sub-Regions that have not yet implemented or established an ATFM structure.

1.3 The Fourth Air Traffic Flow Management Task Force (ATFM TF/4) meeting (virtual, 20 – 22 September 2020) reviewed the process and identified the need for more robust coordination process on cross-border level on the MID Region, by allowing all the stakeholders to exchange the operational data related to Airspaces/routes and demand. It would be considered as a key enabler of Regional ATFM implementation towards an improved overall ATM system. The ATFM TF/4 meeting agreed to task the Secretariat with the support of the Chairman to develop a customized version of the process to be implemented in the MID Region.

2. MID REGION OPERATIONAL DATA EXCHANGE PROCESS

2.1 The customized process was presented and endorsed by the MIDANPIRG/18 meeting (virtual, 15-22 February 2021) through Conclusion 18/29, at **Appendix A**.

2.2 Furthermore, the MIDANPIRG Conclusion 18/29 invited States to nominate their Focal Points in order to gather and provide/exchange the related operational data, and invited Airspace users to share their operational plans related to “Intention to Operate” through the MID Region FIRs/Airspaces on periodic basis.

2.3 MID Office has established, under ICAO MID Office Secure Portal, the group “RO-MIDITO”, and granted access to the State nominated focal points to submit and access the provided data from MID States and Airspace users.

2.4 MID Office is organizing the first briefing meeting (on 26 May 2021, at 0800UTC) with the participation of the State nominated “ATM Operational data exchange” Focal Points, solely.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the progress of the development of MID ATM Operational data exchange Process.

3.2 States nominated Focal points are invited to actively participate in the periodic Coordination meetings, the details will be discussed on first briefing meeting.

3.3 Airspace users are invited to continue providing the Airspace demand data/intention to operate (ITO) periodically, to enable the States/ANSPs to optimized ATS units planning and manage the Airspace capacity.

INTERNATIONAL CIVIL AVIATION ORGANIZATION



ICAO MID

MID REGION ATM Operational Data Exchange Process

Edition 1.0, Feb 2021

INTRODUCTION

1. The intention of this simplified CDM procedure is to provide effective process for air navigation service providers (ANSPs) in order to carry out cross-border coordination with their adjacent ANSPs taking into consideration the circumstances that would have impact on traffic flows. This includes going into a contingency situation or returning to normal operations.
2. The main objective of the procedures, however, is to provide a better collaborative platform for the coordination and management of traffic during the disruption caused by the COVID-19 Pandemic. These procedures would also support a smooth and less challenging return to normal operations. In this regard, the templates at Appendices A and B were developed to support coordination between adjacent area control centers (ACCs).
3. The procedures are most suitable for those States that have not implemented or established an ATFM structure yet; as well as in the ICAO Regions where no regional/sub-regional ATFM solutions had been implemented. The well-established regional or sub-regional ATFM solutions would normally ensure collaboration between their members, however, it is recognized that coordination with their adjacent States/Regions might remain a challenge.

Note 1: The procedure is not intended to replace in any form the guidance in Manual on Collaborative Air Traffic Flow Management (Doc 9971) or provisions in other ICAO documentation related to ATFM/CDM or Regional ATFM/CDM plans or guidance.

4. The procedure outlined in this document requires several layers of collaboration and coordination as follows:
 - a) National Level.
 - b) Cross border between adjacent States.
 - c) Multi-States Collaboration (Optional).
 - d) Regional. Which could be part of the contingency coordination teams (CCTs) framework or similar mechanism.

Note 2: Contingency Coordination Teams (CCTs) terminology utilized on these pages represent: contingency coordination teams, regional contingency groups, contingency and emergency response groups or any similar framework.

National Level

5. At National level, where no ATFM system is in place, a National Collaborative Decision Making (CDM) Committee should be established to coordinate the ATM issues (en-route and terminal). The Committee should be composed of representatives from entities that have involvement/impact on ATM operations (ATS, MET, AIS, CNS, SAR, PANS-OPS, regulator, airspace users, airport operators, military authorities, etc.).
6. In cases where a State already have an established Committee or other mechanism is in place, measures should be taken to ensure that it addresses ATM operations-related issues and contingency planning as well as the optimization of airspace management.
7. The CDM Committee should hold frequent (preferable daily) coordination meetings/telecoms to

address the operational status and agree on the measures that should be implemented to mitigate the associated challenges.

8. A-CDM, at the airports where it is implemented, will facilitate the work of the CDM Committee, as well as for effective optimization of flight operations at the airports and relevant terminal airspaces.

9. An ATM/CDM Coordinator should be appointed to lead the communication between all stakeholders at national level, including airports, who will also act as the point of contact for cross-border coordination with the adjacent ANSPs/ACCs. It is recommended that the coordinator is an active/dynamic en-route air traffic controller/supervisor knowledgeable of the airspace with high level tactical skills, able to discuss, coordinate and explore solutions to traffic flows. Where an ATFM structure is in place, the ATFM Manager would play this role.

Cross-border Coordination

10. The relevant communication and exchange of operational information among stakeholders on a real-time basis forms the backbone of CDM. This exchange may be accomplished by a variety of means including telephone calls, web conferences, e-mail messages, and electronic data exchange including, but not limited to web page displays. The purpose of the information exchange is to increase stakeholder situational awareness, improve operational decision-making, and enhance the efficiency of the ATM system.

11. It is a significant advantage if a tool is in place to exchange information between the adjacent ACCs. Nevertheless, operational issues for discussion could be coordinated by emails and discussed via telephone. In addition, the use of web-conference applications should be considered, which improve the exchange/sharing of information through view-my-screen options.

12. It is recommended that the ATM/CDM Coordinators from adjacent States communicate together at least once daily on a suitable time for both parties that ensure all matters related to operations are addressed in a timely manner. Timing of daily teleconference should be based on either traffic distribution of associated shift changes.

13. The objective of daily teleconferences between adjacent ACCs is mainly to address the operations outlook and any factor affecting normal operations so as to agree on ATM measures to overcome challenges impacting traffic flows and operational requirements agreed upon via the ATS Letters of Agreement (LoAs).

14. The sharing of information and coordination at national, cross-border and regional levels between stakeholders provides the following tangible and measurable operational benefits:

- reduction of unnecessary delays and airborne holding due to, better planning, increased situational awareness and solutions developed via the coordination process;
- reroute flights in collaboration with neighboring ANSPs, taking into account airspace user needs;
- fuel savings due to better-coordinated tactical air traffic management;
- communicating in a timely manner the impact of special events, contingency and crisis including weather, national disaster, disruption of services, etc.;
- advance planning for the events and for post-events recovery;
- top management kept briefed and informed; and

- optimized implementation of ATFM measures due to improved view of demand and capacity predictions.

15. The Table at **Appendix A** presents a simplified ATM/CDM Telecom Template to facilitate the daily discussions between adjacent ACCs or ATFM units during the COVID-19 Pandemic and preparation for the resumption of normal operations. A more detailed Template for teleconferences during normal situation (after the pandemic) is provided at **Appendix B**. The Table Templates would form the basis for the development of ATFM Daily Plans.

Multi States Conference Calls:

16. Instead of having one-to-one daily conferences, several States may decide to organize joint teleconferences to address the topics outlined in Appendices A or B. For better management of joint teleconferences, follow-up, monitoring and reporting, a lead State/ANSP would be nominated that will ensure communication between the States members of the joint teleconferences as well as communicating and reporting as deemed necessary to the relevant ICAO Regional Office/CCT.

Regional Level

17. ICAO Regional Offices consolidate the inputs received from their relevant States or Group of States as well as those provided by the airspace users and share it as required for regional/inter-regional consideration through the CCT framework or any other mechanism for discussion and agreement on necessary ATM measures to mitigate the identified challenges.

18. Regional Offices organize periodic teleconferences, as deemed necessary, (preferably on weekly or bi-weekly basis) with States and Organizations concerned. During these regional discussions, the relevant ICAO State Letters as well as the matters reported by States and the challenges reported by airspace users should be addressed.

19. States should coordinate with their respective ICAO regional offices to provide, on a periodic basis, the measures undertaken with respect to COVID-19 Pandemic. Regional offices will follow-up in this regard.

20. The following websites provide supporting material on the APAC COVID-19 ATM/ATFM Status Update, EUROCONTROL Network Operating Plan-COVID-19 Business Continuity Plan and CANSO – Latin America and Caribbean Region COVID-10 Limitation Update, and should prove useful to all States/regions:

- APAC: <https://www.icao.int/APAC/Pages/COVID-19-BCP.aspx>
- EUR: <https://www.public.nm.eurocontrol.int/PUBPORTAL/gateway/spec/index.html>
- CANSO: https://www.cadenois.org/vpublic_advisorynew.jsp

Note 3. A State could be assigned as a Collection Point for a group of States to consolidate the updates/inputs and provide them to the accredited ICAO Regional Office.

21. Also reference is made to the following links of ICAO, CANSO, EASA, IATA and IFATCA related to COVID-19:

ICAO <https://www.icao.int/safety/COVID-19OPS>

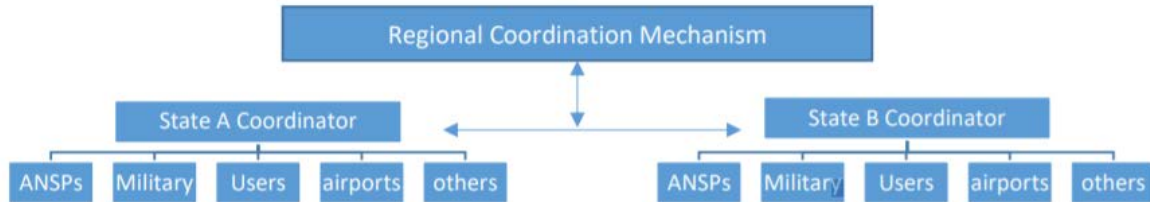
CANSO <https://www.canso.org/covid-19-ensuring-continuity-ats-service-globally>

EASA <https://www.easa.europa.eu/the-agency/coronavirus-covid-19>

IATA <https://www.iata.org/en/programs/safety/health/diseases/government-measures-related-to-coronavirus>

IFATCA <https://www.ifatca.org/covid-19>

22. The chart below illustrates the coordination process:



Recovery Phase:

23. In preparation for the recovery phase, adequate time for the gradual return of traffic should be anticipated taking into consideration the following:

- a) ATC capability to handle again an increased amount of traffic after the recess period. This includes the measures taken to ensure continued competency, qualifications and skills of air traffic controllers;
- b) status of aerodromes services/facilities and CNS/ATM infrastructure;
- c) availability of adequate number of ATC staff ready to handle the expected increase of traffic within the en-route and terminal airspaces considering the prevention measures that might be in place;
- d) availability of required air navigation services supporting ATM operations;
- e) agreement between adjacent States/ANSPs on necessary ATM measures/arrangements to be implemented to ensure a safe, smooth and orderly transition to that experienced prior to the COVID-19 Pandemic;
- f) development of regional transition plans for the resumption of normal operations in coordination with all regional stakeholders that should be based on the data provided by airlines and ANSPs:
 - i. airlines, through IATA regional offices, could use the template at **Appendix C** to provide their planned/forecasted flights for each FIR; and
 - ii. the excel sheet at **Appendix D** could be used by ANSPs to count the number of traffic at each entry/exit point to provide a better picture on the hourly distribution of traffic. Also the sheet could be beneficial for determining the impact of rerouting traffic through comparison between the situation before and after a crisis or the implementation of ATM measures.

Also reference is made to the following link to CANSO guidance related to ATFM and A-CDM and a regional cross-border initiative:

<https://www.canso.org/implementing-air-traffic-flow-management-and-collaborative-decision-making>

<https://www.canso.org/guidelines-airport-collaborative-decision-making-cdm-key-performance-measures>

<https://www.cadenois.org/index.html>

APPENDIX A**Template for Daily Teleconferences between States/ANSPs during COVID-19**

	Telecom.	Ref.	Date	Action/Remark
1	Covering period (date and time)	From:	To:	<i>i.e. coming 12h, 24h, 5, 7 days</i>
2	Between State/ANSPs	State/ANSP A: [title] [Coordinator name] [email] [Telephone/mobile]	State/ANSP B: [title] [Coordinator name] [email] [Telephone/mobile]	
3	Greetings	---	----	
4	Brief Overview of the situation			
5	Describe the measures planned/implemented due COVID-19 and/or any changes to these measures that may have impact on traffic flow during the coming period. Consider airlines reported challenges/requirements			
6	Aerodromes specific issues affecting capacity such as VIP movements, special flights, infrastructure, weather, etc.			
7	En-route specific issues such ATM restrictions, Military operations, weather, status of CNS/ATM infrastructure, etc.			
8	Changes to Coordination Processes/Communication			
9	Preparation to the normalized situation:			
	a) ANSP readiness			
	b) Measures required during transition period			
	c) Inputs from airlines			
	d) Inputs from CCTs			
	e) Common Date of implementation and publication of NOTAM			
	f) other			
10	Other topics of mutual interest			
11	Required follow-up actions till next telecom			
12	Agreement what and who will report any relevant information or decisions to the relevant ICAO Regional Office and/or CCT			
13	Summary			

APPENDIX B**Template for Daily Teleconferences between Adjacent ACCs or ATFM units**

Telecom #.				
1	Covering period (date and time)	From:	To:	<i>i.e. coming 12h, 24h, 5, 7 days</i>
2	Between State/ANSPs	State/ANSP A: [title] [Coordinator name] [email] [Telephone/mobile]	State/ANSP B: [title] [Coordinator name] [email] [Telephone/mobile]	
3	Greetings	---	----	
4	Brief Overview of the situation			
5	Describe the issues that may have impact on traffic flow during the coming period:			
	a) Weather: current or forecasted weather that would have impact on en-route or aerodrome operations such as reduced visibility, hurricanes, sandstorms, turbulence, thunderstorm activities, volcanic ash, etc.			
	b) Infrastructure (NAVAID outage, GNSS signal interference, planned maintenance, radar outage, direct COM issues, etc.) NOTAMed or planned to take place.			
	c) Military activities			
	d) Special movements			
	e) Special events			
	f) Pandemic-related issues			
	g) Others			

6	Aerodromes issues			
	a) Airport capacity			
	b) Projected terminal demand;			
	c) Anticipated ATFM measures (MDI, MIT, GSt, GDP, MINIT, etc.)			<i>Refer to Doc 9971 Chap 4 Section 4.5</i>
	d) Other			
7	En-route issues			
	a) Airspace capacity (Sector capacity)			
	b) Changes to traffic flow with highlight on relevant Entry/Exist Points.			
	c) ATS Routes status (available, closed, CDR, DCTs, etc.)			
	d) Anticipated ATFM measures (MDI, MIT, MINIT, Re-route, etc.)			<i>Refer to Doc 9971 Chap 4 Section 4.5</i>
e) Other				
8	Coordination Process/Communication			
	a) Discuss changes to way of communication and exchange of info and coordination, of traffic between the 2 ATS units, if any. This would include, Direct Speech, OLDI/AIDC, AFTN Messages, etc.			
	b) Transfer of control points			
	c) Flight level restrictions at entry/exit points			
	d) Expected frequency changes in case of Sector opening/closure or combining sectors.			
e) Other				
9	Other topics of mutual interest			
10	Required follow-up actions till next telecom			
11	Agreement what and who will report any relevant information or decisions to the relevant ICAO Regional Office and/or CCT			
12	Summary			

APPENDIX C

Template for Daily traffic demand between Airspace users and ANSPs

No	Flt No.	DEP	ARR	ETD	ETA	Operating Days							FR1-FR2			FR2-FR3			FR3-FR4			FR4-FR5...			Priority/phase	Remarks				
						Sundays	Mondays	Tuesdays	Wednesdays	Thursdays	Fridays	Saturdays	WP/Fix	Time	FL	WP/Fix	Time	FL	WP/Fix	Time	FL	WP/Fix	time	FL						
1																														
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														
13																														
14																														
15																														
16																														
17																														

APPENDIX D**Hourly Distribution of traffic on Entry/Exit points FIR**

Note	<i>Declared Capacity:</i>	<i>Defined number of traffic that could be accepted on each point taking into consideration the available FLs, separation, ATCO workload, airspace complexity, etc.</i>
	<i>No. of traffic:</i>	<i>Based on inputs received from airlines or FPLs (Appendix C)</i>
	<i>The spreadsheet could also be used to analysis the distribution of traffic and impact of rerouted traffic due to contingency situation.</i>	
	% columns and Total column are formulas based for automatic calculation	

No.	Way Points	E=Entry X=Exit B=both	0:00z			1:00z...		
			Declared Capacity	No. of Traffic	%	Declared Capacity	No. of Traffic	%
1								
2								
3								
4								
5								
6								
7								
8								
9								

- END -