

INTERNATIONAL CIVIL AVIATION ORGANIZATION



**COVID-19 OUTBREAK
SIMPLIFIED PROCEDURE FOR AIR TRAFFIC MANAGEMENT
COLLABORATIVE DECISION MAKING
AND
SHARING OF INFORMATION**

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COVID-19 Outbreak - Simplified Procedure for Air Traffic Management Collaborative Decision Making and Sharing of Information

Introduction

1. The global outbreak caused by COVID-19 has had a severe impact on the aviation sector. It became crucial that all involved stakeholders assist in limiting its spread by air transport. Due to the urgent need to reduce the risks related to the COVID-19 Pandemic by air transport, ICAO has issued several State Letters and a safety bulletin urging States to take mitigation measures to reduce the spread of the COVID-19 by air transport aiming at protecting the health of air travelers and aviation personnel.

2. In recalling Annex 11 — *Air Traffic Services*, Section 2.32 - Contingency Arrangements, concerning the development, promulgation and implementation of contingency plans, States have been encouraged to review all restrictions to flight operations, existing or planned, to ensure that they are appropriate, taking into account the need to facilitate certain operations to the extent possible. These include:

- a) aircraft in a state of emergency;
- b) overflights;
- c) operations related to humanitarian aid, medical and relief flights;
- d) alternate aerodromes identified in the flight plan (including those being used for extended diversion time operations (EDTOs));
- e) technical landings where passengers do not disembark;
- f) cargo flights; and
- g) other safety-related operations.

3. NOTAM templates related to COVID-19 were also developed and circulated to States where necessary, to harmonize the provision of sufficient information on the extent of restrictions to flight operations, the operational impact of aerodrome closures or the reduction in the capacity of provision of air traffic services.

4. States urgent attention has been drawn to the need for contingency arrangements to manage the potential for reduced staffing across air navigation services providers (ANSPs), but particularly in operational centres providing ATS and aerodrome services. Also, as a result of social distancing practices, closure of workspaces and other public health intervention measures, a number of States have taken various actions to enable air navigation services providers and personnel to maintain the validity of their certificates, licenses, and other approvals during the COVID-19 Pandemic.

5. The following are some of the operational challenges air operators had been facing during COVID-19 Pandemic, some of which are already being addressed at the ICAO headquarters and regional levels:

- long process for obtaining overflight permissions;
- designation of alternate airports;
- clearly worded, and timely publication of NOTAMs and aeronautical information; and
- User Preferred Routes (UPRs) / Optimized routings

6. The following issues should be considered to ensure the continuity of required services supporting operations within FIRs and at aerodromes:

- ensure that essential staff working at the ANSP facilities and airport are permitted to reach their work places and perform their duties in a safe and efficient manner;
- any downgrade of aerodrome category for firefighting would result in cancellation of operations by some air operators;
- facilitating the overflights and landing permits process;
- limitation in aircraft parking space and, potentially, taxiways and runways due to the high number of grounded aircraft;
- the need to promulgate detailed information regarding any restrictive measures prior to the implementing deadline to allow for preparation and to ensure business continuity and minimal disruption; and
- navigation aids' status including the validity of the flight checks/inspections.

7. In order to share information with States and aviation stakeholders related to the various measures taken to reduce the public health risk of the spread of COVID-19 by air transport, ICAO developed a COVID-19 Webpage on its public website (<https://www.icao.int/Security/COVID-19/Pages/default.aspx>). The Webpage provides a single source for aviation-specific guidelines with the objective of ensuring appropriate planning and action at all levels in order to mitigate the effects of a human outbreak.

Simplified Collaborative Decision Making Procedure

8. 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.

9. 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 centres (ACCs).

10. 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.– . 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.

11. 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.– 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

12. 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 all entities that have involvement/impact on ATM operations (ATS, MET, AIS, CNS, SAR, PANS-OPS, regulator, airspace users, airport operators, military authorities, etc.).

13. 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.

14. The CDM Committee should hold daily coordination meetings/telecoms to address the operational status and agree on the measures that should be implemented to mitigate the associated challenges.

15. 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.

16. 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

17. 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.

18. 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.

19. 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.

Recommendation: daily telecom at 08:00 local time and if needed another one at 19:00.

20. 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).

21. 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 neighbouring 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.

22. 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:

23. 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

24. 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.

25. 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.

26. 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.

27. 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 5. 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.

28. 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>

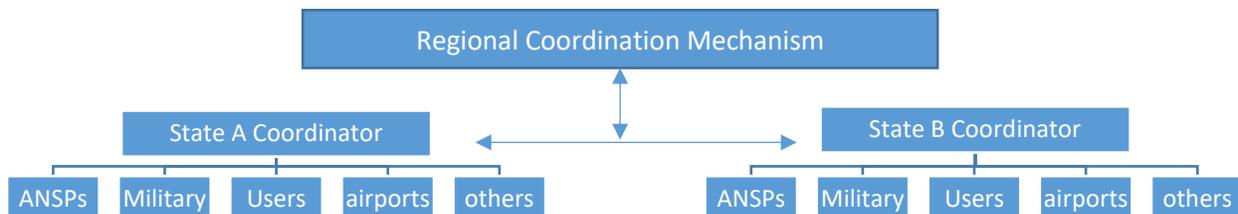
CANSO <https://www.canso.org/covid-19-ensuring-continuity-ats-service-globally>

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>

29. The chart below illustrates the coordination process:



Recovery Phase:

30. 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;
 - 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.

Regional Recovery Strategy

31. ICAO Regional Offices will work with States, Territories and Organizations concerned to develop **regional transition recovery plans**, as necessary, detailing the ATM measures/arrangements required for smooth and safe transition including the agreement on common time of resumption of normal operations (***agreed resumption time***). i.e. the common time on a day, agreed by the CCTs or group of States (in coordination with their relevant ICAO Regional Office) within the **daily periods of lowest traffic volume**.

32. The contingency situation arising from COVID-19 Outbreak could be related but limited to:

- limited airspace capacity due to disruption of ATS (low number of qualified staff, infection cases, prevention measures such as physical distancing and disinfection of facilities, downgraded services supporting effective provision of ATS, lack of financial resources; etc.);
- reopening of aerodrome(s) for international flights would have impact on traffic flows within neighbouring FIRs that might be subject to capacity constraint;
- closure of airspace(s) or suspension of ATS routes;
- airspace users circumnavigating airspace(s) and/or resuming operations to/from aerodromes; and
- re-activation of the ATM measures/arrangements and flow restrictions that were suspended due low traffic volume.

33. Depending on the needs of each ICAO region, individual considerations will be needed, especially in cases where not all States from the same region are ready for the return to normal operations at the same date and time. In such cases, the region could be split into smaller groups of States with associated agreed resumption times, having due regard to interface issues.

34. Also, a transitional approach should be considered for those FIRs where a gradual return of services is envisaged.

35. Prior notification of resumption of normal operations at the agreed resumption time should be provided via NOTAMs promulgated not **less than 24 hours** before the agreed resumption time.

36. Consideration should be given to long haul flights that may already be in the air, and planned/flying via contingency routes, at the 24-hour prior-notification time.

37. Existing NOTAMs detailing contingency arrangements should be reviewed, to end their validity at the agreed resumption time.

38. New NOTAMs notifying the resumption of normal operations in each FIR should be promulgated with validity from the *agreed resumption time* till *24 hours after that time*.

39. The above mentioned new NOTAMs should indicate that:

- a. reference is *COVID-19 – Resumption of Normal (or Limited) Operations*;
- b. only flights that will enter *FIRs* at or after the *agreed resumption time* may plan via normal routing (non-contingency routes) and subject to normal ATM measures;
- c. aircraft operators and flight crews of aircraft that are within *FIRs* at the *agreed resumption time* should not re-file FPL routes or request amended route clearances or track shortening, except in cases of emergency, or diversion for landing at aerodromes other than flight planned;
- d. ATC may tactically offer improved tracking to aircraft during the transition to normal operations; and
- e. flight crews should be aware that there may be mixed contingency route/level and non-contingency route/level operations during the transition to normal operations.

40. To ensure the smoothest possible resumption of service and normal operations, it is essential that, all ATS units and International NOTAM Offices, conform to the minimum advance notification requirements described above, and that the agreed resumption time is common to all FIRs within an ICAO region or group of FIRs.

41. Failure to comply with the agreed resumption time could result in increased operational safety risk during the transition to normal operations.

42. It is strongly recommended that NOTAM templates are prepared in advanced NOTAMR for replacing NOTAMs in force and NOTAMN for new NOTAMs as described above, in readiness for future notification of resumption of normal operations. Some text samples for NOTAM Item E is at **Appendix E** for consideration.

43. Each affected State will ensure their ATS units are prepared for any ‘mixed mode’ operations (contingency and non-contingency routes/arrangements) during the transition to full normal operations.

44. When States are ready for the return to normal operations:

- a) **ICAO Regional Office:** on receipt of notification of the time that the ANSPs will be ready for the return to normal operations, **and not less than 48 hours before the next available agreed resumption time**, notify all CCT points of contact of the resumption time.
- b) **All recipients** to acknowledge receipt.
- c) **States to publish the required NOTAMs not less than 24 hours** before the resumption time notified by ICAO Regional Office.

Proposed ANSPs and ATC Training Organizations Checklist for COVID-19 Recovery Phase

45. The following checklist highlights some areas to be considered by ANSPs and ATC training organizations as they continue operations during the COVID-19 crisis and prepare for post-crisis recovery.

I- Conduct of safety and risk assessment for the transition phase and resume of normal operations

ICAO has developed guidance on the review of potential hazards associated with recovery to normal air traffic services (ATS) following disruptions resulting from the COVID-19 pandemic, which is available on the ICAO COVID-19 Website (<https://www.icao.int/safety/COVID-19OPS/Pages/ATM.aspx>)

II- ANSP and ATC Training Organizations Personnel

Use of data to assess the need for additional/adequate resources:

- What operational data can be used to assist in planning for recovery? This could include but not limited to:
 - airlines schedules to define the expected number of flights that will operate in the airspace and to/from aerodromes;
 - Status of ATS in neighbouring FIRs that would have impact on traffic flows into/out from your FIR; and
 - airspace and aerodromes capacity considering the level of ATS and ground services, status of NAVAIDs, available aircraft parking, etc.;
- critical maintenance to ATM systems/infrastructure that should be considered.
- What additional data is required to support recovery planning? This could include but not limited to:
 - health of the operational staff;
 - number of staff to employ at operational positions;
 - the need for continued COVID-19 physical distancing between staff; and
 - medical/operational licensing or currency issues that need immediate attention.

- What is the baseline recovery scenario, and what coordination is required with airspace users and adjacent ANSPs? With the aim to anticipate the expected increase in air traffic, it is recommended that ANSPs remain in close contact with the airspace users and airport authorities in order to obtain advance information on the intention to resume flight operations.
- How will training delays affect operational rosters?
- Will ATS units be able to accept new trainees at the planned rate? Will it be necessary to amend arrangements with ATC training organizations?

Use of technology to support currency of personnel:

- Can virtual simulation, or classrooms along with other technology be used to support maintaining operational currency?
- Are the current traffic levels sufficient to support on-the-job operational currency and skills maintenance?
- Is the current level of traffic and rostering of air traffic controllers sufficient to meet regulatory requirements for maintaining proficiency?

Training:

- Can virtual classrooms or other technology be used to support training of personnel?
- Is it possible to provide the required technology to personnel to access remote or online training?
- Can simulation facilities provide the necessary physical distancing or can they be temporarily modified to provide for this?
- Is virtual simulation an appropriate alternative?
- Is appropriate computer-based training material available for students?
- Is it possible to provide students with the required technology to access virtual training?
- Are provisions in place to ensure students have mastered core concepts and subject matter?
- Are provisions in place to permit virtual testing?
- Would it be appropriate for third party educational institutions to provide the necessary expertise or technological support?
- If training is interrupted, have processes and procedures been developed to review and/or retest personnel to ensure all former progress is maintained or reacquired?

III- Business Resumption Planning

- ANSPs business resumption plans should be developed/reviewed and adjusted, if necessary, to take account of the current reality. Such plans could be published to ensure all stakeholders are familiar with the path being taken.
- ANSPs with similar operations should be contacted, in case they have business resumption plans that could serve as a beginning point to develop the necessary planning.

IV- Civil - Military Coordination

- Review current Letters of Agreement (LOA) for applicability and efficiency.
- Coordinate relaxation or temporary use of Special Use Airspace (SUA) for civilian flights.
- Consider the expansion of any temporary use of SUA for civilian as a basis for future coordination and movement toward a flexible use of airspace concept.
- Are there special arrangements required to accommodate continuing humanitarian and repatriation flights, keeping in mind they may be State aircraft and/or may not follow standard routes?
- Are there any temporary civil-military arrangements that will need to be ended as part of the recovery process?

V- Use of ATFM Resources

- Taking account of operational skill level and currency of controllers, following a significant change in level of traffic and traffic patterns, should ATFM measures be considered as traffic levels increase?
- If your ANSP has ATFM functions in place, what additional coordination or information is required to ensure effective ATFM during the recovery phase?
- If there are existing ATFM arrangements, can these arrangements be used to provide information to support recovery planning?
- If your ANSP does not have ATFM capabilities, is it possible to implement coordination between air traffic services units to support a coordinated recovery?
- If your ANSP has ATFM functions, but does not have cross-border ATFM connectivity, is it possible to coordinate with adjacent ANSPs to support a coordinated recovery?
- If your ANSP is part of a cross-border ATFM function, what additional information is needed to be exchanged, in order to support the recovery process?

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.cadenaois.org/index.html>
