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ICAO

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Agenda Item 6: ATM Coordination (Meetings, Route Development, Contingency Planning)

**AIRLINE FEEDBACK TO AIRSPACE CLOSURES AND CONTINGENCY RESPONSE
AND THE IMPORTANCE OF CONTINGENCY PLANNING**

(Presented by IATA)

SUMMARY

This paper presents international airline feedback on recent interruptions to Air Traffic Services in APAC FIRs and emphasises the importance of contingency planning for all States.

1. INTRODUCTION

1.1 2021 has seen two Asia/Pacific (APAC) Region FIRs affected by a loss of their normal Air Traffic Services (ATS). Both events have had varying levels of responses and impacts to domestic and international flights and in both cases ICAO APAC office instigated a Contingency Coordination Team (CCT) in order to maintain communications with all relevant stakeholders and to provide support for a solution and recovery.

1.2 Any time a contingency response event occurs it assists with identifying potential weaknesses in, or absence of, existing contingency plans, or for learning from their activation so that better procedures and responses may be designed and planned for possible future events.

1.3 Specifically, the events in 2021 have served as a good reminder for all States to have relevant, updated and practiced Contingency Plans in place at all times, with clear agreements and instructions for their timely activation.

2. DISCUSSION

Myanmar Contingency Response

2.1 The Yangon FIR was subject to a contingency response between 8 February 2021 and 16 February 2021 due to the unavailability of ATC Services.

2.2 The pre-prepared Level 2 Myanmar ATS Contingency Plan (CP2) was activated as a result of the loss of services and the contingency response generally proceeded without significant problems due largely to the existence of the plan.

2.3 However, despite the existence of the plan, there were still some items of confusion in the plan's instructions and some difficulty obtaining clarification of those issues. There was also feedback from Airspace Users and adjoining States with proposals for improving the efficiency of the contingency procedures.

2.4 The CP2 provided instructions for international overflights to operate on specified contingency routes at allocated Flight Levels, and to follow a set of prescribed contingency radio frequency procedures.

2.5 Notice of the contingency response was by communication with adjoining FIRs prior to the event and then immediate activation by NOTAM. There was also earlier warning by the existence of a preceding NOTAM advising additional separation requirement due lack of ATC staff.

2.6 Whilst the majority of the contingency period ran smoothly, interpretation of some of the frequency instructions was confusing, plus the limited number of available levels and 15-minute longitudinal standard requirement created more inefficiencies than Airspace Users saw as necessary.

2.7 Overall, the Myanmar contingency response worked effectively despite some issues that can be easily addressed and/or clarified. Whilst some issues were mitigated by the lower traffic numbers due COVID-19, Myanmar DCA is still to be commended for having the Level 2 Contingency Plan prepared for such a situation.

Afghanistan Contingency Response

2.8 The Kabul FIR has been subject to a contingency response since 16 August 2021 due to the unavailability of ATC Services and at writing is still undergoing a process of recovering to normal services.

2.9 A detailed Contingency Plan (CP) had been originally published in November 2018 with a reviewed version published in May 2021. The CP contained elements for a contingency response including FPL routes, flight level requirements, frequency management instructions and contact details for Afghanistan CAA (ACAA) and for neighbouring FIRs.

2.10 In earlier meetings with ACAA it had been noted that there were components of the CP that weren't clear and that it required revision and re-publishing prior to unfolding events. Letters of Agreement (LoAs) also required updates and confirmation with neighbouring States.

2.11 Unfortunately, due to the rapidly evolving events in Afghanistan at the time, ICAO was not formally notified of the activation of the CP and neighbouring States were only given short warning prior to the loss of ATS in Kabul FIR. A NOTAM was the only advice available.

2.12 Subsequently, the airspace was deemed Class G uncontrolled and all civil aviation flights diverted around the FIR with the exception of humanitarian flights for food supplies and repatriations.

2.13 During the early and evolving period of the outage, communications with the ANSP or State were primarily absent and only small updates were received sporadically and as available. Some NOTAMs were being published on behalf of ACAA but there were some confusions also associated with their content.

2.14 More recently, new appointments into key aviation administration roles have been made and contact established with ICAO. The new administration has been working with ICAO and neighbouring States to design, agree and implement new contingency procedures for activation until full CNS/ATM infrastructure capability and service provision can be returned to service.

2.15 As at time of writing some graduated services at Kabul and other locations were being put into place. As with the Myanmar outage, some issues are being mitigated by the lower traffic numbers due COVID-19.

Feedback from airlines on recent contingency responses

- 2.16 Positives:
- Availability of a pre-published Contingency Plan (CP) is invaluable
 - Contingency routes are established quickly with a CP
 - Good communication with neighboring ANSPs supports opening additional non-standard tracking around the entry and exit points of the affected volume
 - A CP can enable maintaining effective coordination between adjacent States and the affected State

- 2.17 Challenges:
- Generally only a limited number of contingency routes and Flight Levels
 - Enroute holding increases as a result of the above point and also due the requirement for additional minutes separation between flights entering the contingency FIR
 - With respect to frequencies, there has been regular confusion as to what the TIBA frequency is to be (123.45, 121.5 or area ATC VHF)
 - Restrictions in communications networks within affected States make it difficult to obtain timely clarification for some of the issues raised or to propose improvements to the procedures, or for flight approvals
 - Need for more regular and accurate updates regarding possible holding from neighboring FIRs which would assist airlines in planning
 - Ending of the contingency response must not be confused by the NOTAMs issued and cancelled

- 2.18 Additional Costs:
- Additional fuel required for possible holding – because of unknown enroute delays, many flights carried more fuel than necessary
 - Significant additional track miles for diverting around an affected volume and then additional requirements on some airlines to also track around neighbouring FIRs
 - Constraints of available flight levels - additional cost when flying at lower levels or non-optimal levels on contingency routes
 - Longer routes necessitated some changes to aircraft type with higher costs
 - Actual reports from airlines:
 - One airline advised they included additional fuel (1500kg) for wide-body aircraft and minimum 5% contingency fuel added during the Myanmar contingency
 - Another airline calculated additional USD18,200 for the period of the Myanmar contingency
 - For the Kabul ATS interruption:

Costs*	Time (mins)	Fuel (ton)	Distance (NM)	CO2 (ton)	Fuel (USD)
Max	120	13.7	825	206.1	10378
Min	5	0.5	26.8	51	2168
Ave	55	4	245	111	5574
Mean	39	3	109	96	4958
Median	47.5	3.8	71.5	92.6	5116.5

*columns are not always directly related to each other - they represent a range of individual figures provided for each category

- One long-haul carrier also reported that the average additional costs associated with the resultant routing and aircraft type changes was USD20,000 per flight
- 2.19 Recommendations for Improvement:
- Designate more contingency routes with more available flight levels

- Strengthen communication paths with contacts within the contingency State that can be approached during similar contingencies.
- Neighboring FIRs to consider providing advisories about expected delays for entry into the affected FIR and if time permits, utilise methods other than airborne holding / orbits. This could include applying ground delays or inflight speed reductions

Future Contingency Planning

2.20 The positives and the challenges highlighted from the recent Myanmar and Afghanistan contingency responses reminds us of the importance of every State having relevant, updated and practiced Contingency Plans in place at all times.

2.21 Contingency Plans are multi-layered depending on the causal events and the commensurate response required at any time. Development of Contingency Plans should always include affected stakeholders to ensure all impacts and risks are considered.

2.22 Because a Contingency Plan dictates the operating procedures during the response, the plan should always have a current Safety Assessment so that the inherent procedures don't create elevated or unmitigated risk, particularly during the critical periods of entry to and exit from the contingency response.

2.23 A Contingency Plan should also consider the possibility that the type of event (e.g. natural disaster) may cause severe and sometimes full disruption to normal public communications modes such as land / mobile phone networks and the internet. Consequently, the plan should detail the other means by which communications can be maintained during the contingency period.

2.24 Contingency Plans and their associated Safety Assessments should be reviewed annually and updated as required. As a Contingency Plan is often activated within short notice, table-top and/or simulator exercises ensure that all who will participate in the response remain current in the Plan's procedures and operations.

2.25 Where the contingency response will affect airspace up to adjoining FIR borders, neighboring States must be consulted in the Plan development as well as annual reviews. Letters of Agreement must also be enacted and current so that all affected States are very clear on the version of the Plan that is current and to be activated.

2.26 Notwithstanding all of the above, a CP is primarily for the use of the ANSP and any other signatories. The instructions contained within a CP must be published in the State's AIP so that airlines may access the information from that document or from within the information provided from data providers. This would include all instructions for contingency routes, flight levels, operational restrictions, and frequency management including specific TIBA procedures and frequencies.

2.27 Activation of a contingency response would then be by NOTAM referring the reader to the relevant section/s of the AIP.

2.28 IATA remains available for coordinating international airline input into the development and annual review of States' Contingency Plans.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss any relevant matters as appropriate; and,
- c) take action to ensure updated Contingency Plans are prepared.

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