



*International Civil Aviation Organization*  
**The Third Meeting of the APANPIRG ATM Sub-Group  
(ATM /SG/3)**

Bangkok, Thailand, 03-07 August 2015

**Agenda Item 5: ATM Coordination**

**COLLABORATIVE/PROACTIVE APPROACHES TO MANAGE CONTINGENCIES**

(Presented by India/Airports Authority of India)

**SUMMARY**

This paper provides information on the management of oceanic airspace of Mumbai FIR by India due to the contingency situation arising out of sudden closure of SANAA FIR, and presents consideration for ATS coordination group of the ANSPs on the rim of Arabian Sea for efficient and safe flow of traffic.

**1. INTRODUCTION**

1.1 On the night of 26<sup>th</sup> March 2015, SANAA ATC informed Mumbai OCC that SANAA FIR was closed henceforth due emergency situation at the ATC Centre. This lead to a contingency situation when Mumbai Oceanic Control (OCC) was required to manage the traffic which were rerouted avoiding SANAA FIR. Mumbai FIR shares a common boundary of 300 NM with SANAA FIR to the west. SANAA FIR is still partially closed and the contingency arising out of the situation is being dealt by Mumbai OCC.

**2 DISCUSSION**

2.1 Closure of SANAA FIR affected the traffic flow on ATS route P751 which are being rerouted via G450 to/from Mogadishu FIR.

2.2 The flights operating between Mideast Asia to East African and island destinations like Seychelles and Mauritius which used to pass through Sanaa FIR, started rerouting via Mumbai FIR in following manner:

a) The traffic from Mogadishu/Seychelles/Mauritius FIRs to Muscat FIR which used to pass through SANAA FIR entered Mumbai FIR via ORLID or VUTAS or MURUS on eastbound flight levels. These flights turned westbound within Mumbai FIR and exited Mumbai FIR to Muscat FIR via KITAL. The eastbound levels had to be changed to westbound levels by climbing/descending the flights as the case may be.

b) The traffic from Muscat FIR to Mogadishu/Seychelles/Mauritius FIR which used to pass through SANAA FIR now entered Mumbai FIR via KITAL/ASPUX on eastbound flight levels. These flights turned westbound within Mumbai FIR and enter Mogadishu FIR via ORLID or Seychelles FIR via VUTAS or Mauritius FIR via MURUS. The eastbound levels had to be changed to westbound levels by climbing/descending the flights as the case may be.

2.3 This very complex situation was highly challenging as all the three types of separation i.e.: vertical, lateral and longitudinal were to be achieved tactically for the reciprocal traffic flows.

2.4 The change of eastbound levels to westbound and vice versa in the Oceanic Airspace was creating conflict with other traffic on route P570, UL425, L516 and L894. Considering traffic on ATS Route UL425 as potential conflict to these traffic, UL425 was closed for west bound traffic entering via ANODA in coordination with and support from Chennai so that major conflict could be avoided. However, the route UL425 is open for east bound traffic entering from Muscat FIR.

2.5 Considering the sudden increase in the volume of traffic in this sector, in the interest of safe operation of flights, India proposed establishment of a temporary contingency ATS route. Accordingly a draft contingency unidirectional RNP10 ATS route was designed. The proposal was then shared with Oman, Somalia and Seychelles ANSPs with a copy to ICAO-APAC and IATA for comments. After obtaining comments from the ANSPs, India promulgated contingency route T101 [RNP10] (Unidirectional Route- North bound) on 30<sup>th</sup> April 2015. The route regulated the traffic flow enhancing safety and also saved 110 NMs for all northbound flights.

2.6 The southbound flights entered Mumbai FIR via KITAL and after waypoint UNRIV on L516 proceeded to Mogadishu/Seychelles/Mauritius FIR as the case maybe. Such flights were also provided direct routings, traffic permitting, saving time and fuel for the flights.

2.7 Initially about 40 flights operated daily on route T101 through Mumbai FIR to avoid SANAA FIR. Over the time the traffic started to route via contingency routes promulgated by SANAA. The route T101 is rarely used by flights now and may be withdrawn soon. However the traffic on P751 continues to reroute via G450.

2.8 The spirit of collaboration between all the FIRs i.e. Mumbai, Muscat, Seychelles, Mogadishu and Chennai has been prompt and appropriate to the contingency which has helped in establishment of contingency route and management of traffic.

2.9 The crisis situation, wherein there was sudden rerouting of traffic, posed difficulties for Airlines and ANSPs alike. The additional traffic and the traffic conflict situations which were not existing earlier, resulted into increase in workload and stress of controllers of all affected ANSPs. Perhaps because of these factors, there has been rise in instances of miscoordination. The instances of miscoordination which led to traffic conflicts were taken up bilaterally with respective ANSP in the interest of safety. Some of the issues were flagged to ICAO APAC also. The situation has not improved much and still needs special attention as the traffic on P751 continues to reroute via G450 which is getting overloaded. However, conflicts arising out of coordination failure are being resolved tactically and out of box solutions like lateral offset flying.

2.10 The crisis situation where the sudden rerouting of traffic pose difficulties for Airlines and ANSPs alike can be better managed if there is advance warning about a possible scenario of such rerouting. Organizations like ICAO, IATA, CANSO may consider constituting a joint forum at global level which can function with following two primary objectives:

- a) monitor and predict situations, political/natural/others, that may result in closure of certain airspaces
- b) work with ANSPs and airlines involved to plan possible rerouting beforehand and plan for enhancements/amendments that would be required in coordination procedures between involved FIRs.

2.11

In the absence of any formal ICAO forum in the Arabian Sea the collaborative spirit forged by informal groups like ASIOACG, INSPIRE & BOBASIO proved to be invaluable in managing the crisis situation. Considering the growing traffic over the Arabian Sea, ICAO may consider institutionalizing a formal ATS coordination group of the ANSPs on the rim of Arabian Sea for efficient and safe flow of traffic.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss suggestion contained in the paper, and
- c) discuss any relevant matters as appropriate.

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