



International Civil Aviation Organization

**The First Meeting of the Ad Hoc Afghanistan Contingency Group Meeting
(AHACG/1)**

Kuala Lumpur, Malaysia, 11-12 September 2014

Agenda Item 3: Europe- Southeast/South Asia Contingency Planning (scenarios, procedures)

**INDIA'S PLAN TO MITIGATE THE POSSIBLE IMPACT OF AFGHANISTAN'S
MILITARY CIVIL TRANSITION**

(Presented by India)

SUMMARY

This paper highlights the India's Plan to mitigate the impact of the Afghan transition from military to civil control.

1. INTRODUCTION

1.1 The ATC contract for provision of services from the Kabul Area Control Centre (ACC) expires in December 2014 resulting in uncertainty regarding the level of Air Traffic Control (ATC) services in Kabul FIR. Besides the uncertainty regarding the transition from military to civilian control of the Kabul FIR, there are also significant uncertainties regarding the provision of air navigation services in Afghanistan.

1.2 This working paper highlights India's plan to mitigate the impact of the Afghan transition from Military (NATO) to Civil (Afghan ATSP). The planning is essential to ensure the least possible disruption of operations affected by any reduction in air navigation services within the Kabul FIR, whilst improving the safety and efficiency of flight operations by providing suitable alternates, factoring the total or partial unavailability of ATS Routes in Afghanistan FIR.

1.3 The Indian subcontinent is under seamless surveillance coverage with all major ATC Centres capable of processing multiple surveillance sensor data. The four Indian Metro ATC Centres is also equipped with ADS-C and CPDLC and SATCOM.

2. DISCUSSION

2.1 India is capable of and committed to handling East bound air traffic flow into Mumbai and Delhi FIRs from west, in accordance with any judicious plan proposed by the ICAO MID (Muscat/Iran) and ICAO APAC (Pakistan), especially given the surveillance capabilities (networked RADARs, ADS-B for surveillance over continental airspace as well as ADS-C for oceanic airspace).

2.2 India has analyzed the traffic flow from Delhi FIR and Mumbai FIR transiting through Karachi and Lahore FIRs into Kabul FIR. On an average 130 to 135 flights are westbound through these two gateways into Afghanistan airspace. The distribution of traffic is 74% through Delhi FIR and 26 % through Mumbai FIR. It is explicitly evident that Delhi FIR is likely to be affected the most. Whereas, India can suggest efficient rerouting options for the west bound flights, which is judicious, with minimal alteration to the present flight patterns.

2.3 The traffic analysis is appended as **Attachment A** to this working paper and may be referred to. The most preferred routing appears to be via waypoints SAMAR/GUGAL – PAVLO/SITAX with the TIGER/VIKIT – ROSIE, the west bound flights via these combination amount to 95 out of the 130 odd flights and tantamount to 70% of the total flights.

2.4 India expects that all the over flights entering/ exiting via Afghanistan FIR Boundary Points, LAJAK, PAVLO, SITAX, ROSIE and ASLUM will most likely be following the routes South of Afghanistan FIR during such a contingency, except the flights to Tajikistan, Kyrgyzstan, Kazakhstan and Uzbekistan, which may route west of Kabul FIR into Dushanbe FIR via HANGU - P 500 – PADDY – FIRUZ (**Figure 1**).

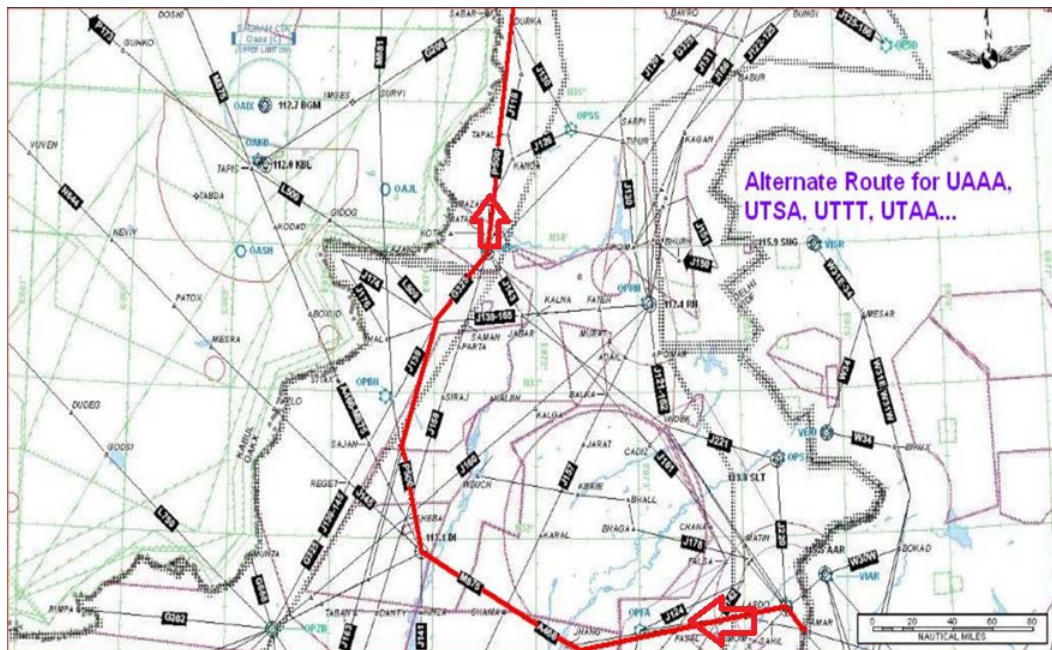


Figure 1: Alternative Route for Central Stan States

2.5 The assumption that the Zahedan VOR (ZDN) routing will not be available due proximity to Afghanistan FIR is probably ungainly, especially given the challenge of providing viable and efficient alternate routing(s). Similarly G452 is well within Karachi FIR and is under positive control of Karachi, therefore, it seems to be a better option than routing via Afghan airspace with lowered service levels and heightened safety concerns in the absence of established Air Traffic Services (**Figure 2**).

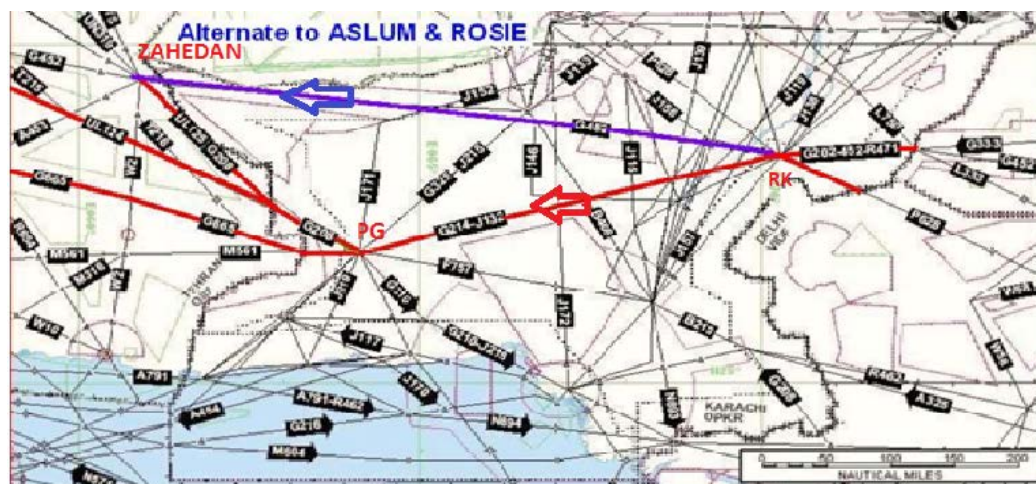


Figure 2: Alternative Routing to ASLUM and ROSIE

2.6 The suggestion from Iran (IRI) to provide efficient routing via UL 125, UL 124 and G665 can best be utilized either by allowing a flow via G452 – Zahedan to join UL 125 or in order to avoid congestion due to westbound traffic exiting Delhi/Mumbai FIR on routes G333/G452, P628, L333, UL125 and G208 converging over the Zahedan VOR, resulting in less than optimum levels being allocated, it is proposed that a portion of the traffic from TIGER/VIKIT be routed via RK G214 PG [PANJGUR] to join either UL 124 or G 665 (**Figure 3**).



Figure 3: Alternative Route to N571

2.7 The traffic from Mumbai, Chennai, Bangalore, Hyderabad and Goa may prefer routing via N 571 – PARAR. This ATS Route is less utilized compared to L 301 which is another RNP 10 ATS Route North of N571. It is mention worthy that India has implemented 30NM longitudinal separation between eligible pairs of RNP 4 approved flights operating via M300, P570, P574 and N571. These ATS Routes can realize its potential in additional capacity, if and only if, the adjacent FIRs implement the 50 NM (RNP 10) and 30NM (RNP 4) longitudinal separation minima.

2.8 East bound flights released to Delhi by Karachi may not be cruising at their most economic level(s) due to airspace capacity, west of Delhi, especially with the additional load of traffic constrained to avoid Kabul FIR. These flights may expect their economical flight levels after entering Delhi FIR if the route planned aircraft are diverging after RK (Karachi FIR) via G452 or P628 and TIGER (L333/ G452) and after DPN (R460/ L759). Application of 50 NM RHS will further enhance the availability of economic levels, for the eastbound flights. Flights following RNP 10 routes after Delhi / Karachi FIR Boundary (P628/ L333) shall be accepted with 50NM RHS from Karachi ACC.

2.9 The west bound traffic will be released to Karachi ACC at levels accepted by Karachi ACC. If Karachi ACC Delhi accepts 50NM RHS between flights routing via P628, a significant increase in capacity is expected. It is important to note that the minimum level on route P628 in Indian FIR and up to RK in Karachi FIR is FL320; thereby rendering two east bound levels in the RVSM band unavailable. (FL 290/310).

2.10 The Bay of Bengal Cooperative Air Traffic Flow Management Advisory System (BOBCAT) in its present form may not be able to address the impact of the contingent situation. BOBCAT should extend its operations H24 and include more airports and airlines to meet the contingent requirement of Flow Management.

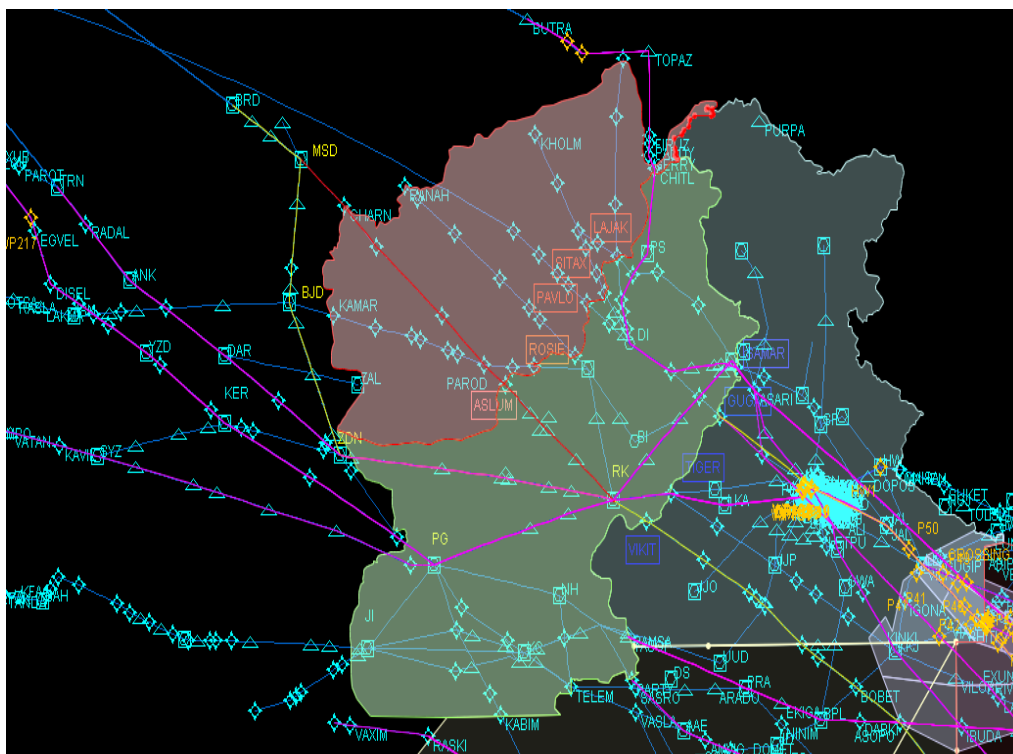


Figure 4: Proposed Contingency Routes

2.11 The points ASLUM, ROSIE, PAVLO and SITAX were chosen because these were entry points at Kabul FIR, which was then a non RVSM airspace and pairs of west bound levels e.g. 300/320, 340/360, 380/400 were considered to be a pair. BOBCAT may have to choose suitable way points which serve the emerging scenario (**Figure 4**) and probably provide level allocation decision support based on AWUT for both east and west bound flights.

2.12 The Secretariat may reconsider the use of ADS-B since ADS-B (OUT) has no much relevance in a scenario described, where flights transit through Kabul FIR via A466/N644/G792/L750. It only provides an advantage to ADS-B (IN) equipped aircraft.

2.13 Given the political scenario post NATO/ISAF pull out from Afghanistan availability of skilled ATM manpower may be a big question. In case the suggestion of the Secretariat to close some crossing routes is feasible, it may be possible to allow ADS-C/CPDLC equipped aircraft to operate via A466/N644/G792/L750 with 10 minutes Longitudinal separation monitored by a separate ATS Unit established for this purpose in a neighboring country with ATC manpower skilled in the use of ADS-C/CPDLC.

2.14 ATM experts from India, Iran, Pakistan, Tajikistan and Muscat should continue to discuss these scenarios to overcome this potential crisis in the horizon.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) critically examine the mitigation plan proposed by India; and
- c) discuss any relevant matters as appropriate.

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Attachment - A

S. No.	INDIAN FIR EXIT POINT	KABUL FIR ENTRY POINT	NO OF FLIGHTS	DETAILS OF THE FLIGHTS	PRESENT ROUTING(S)	PROPOSED REROUTING AFTER EXITING INDIAN FIR
1	SAMAR	LAJAK	10	03 flights from Delhi to UAAA, UTSA,UTTT,UTAA. 06 flights from Phuket, Bangkok to London. 01 flight from Singapore to Amsterdam	SAMAR-A466-M881-LAJAK	SAMAR-A466-DI-P500 (On P500 the flights have to cross the Afghanistan FIR by an insignificant 12 NM and Lahore ATC may transfer the control or communication of these flights directly to Dushanbe (Tajikistan)
2	SAMAR	ASLUM	02	02 flights from Singapore to Amsterdam	SAMAR-LA-G214-RK-G792-ASLUM	SAMAR-LA-G214-RK-G452-ZAHEDAN SAMAR-LA-G214-RK-G214-PG-UL124/G665
4	SAMAR/ GUGAL	SITAX	27	From Delhi, Phuket, Bangkok, Vietnam (Cam Ranh) to Eastern Europe (mainly Moscow – UUEE UUDD UJWW USSS)	SAMAR-A466-DI-A466-SITAX	SAMAR-LA-G214-RK-G452-ZAHEDAN-UL125 SAMAR-LA-G214-RK-G214-PG-UL124/G665
5	SAMAR/ GUGAL	PAVLO	46	20 flights departing from Bangkok/Singapore and proceeding to various European Destinations. 19 flights from Delhi to various European Destinations. 02 flights from Dhaka to London. 04 flights from Singapore to Paris. 01 flight from Delhi to UTAA	SAMAR-A466-DI-N644-PAVLO	SAMAR-LA-G214-RK-G452-ZAHEDAN-UL 125 SAMAR-LA-G214-RK-G214-PG-UL124/G665 The flight from Delhi to UTAA (Ashgabat) may be routed via: SAMAR-A466- DI-P500-BANNU(BN)- - PADDY -FIRUZ Or via G452 – Zahedan – G 775 – MASHHAD - ASHGABAT
6	TIGER/VI KIT	ROSIE	21	Flights Departing from Phuket, Hanoi Singapore, Kuala Lumpur	TIGER-G202N-ZHOB-L750-ROSIE VIKIT-P628-RK-G202S-ZHOB-L750-ROSIE	TIGER-G452-RK-G214-PG-UL124/G665 OR TIGER-G452-RK-G452-ZAHEDAN VIKIT-P628-RK-G214-PG-UL124/G665 OR VIKIT-P628-RK-G452-ZAHEDAN
7	VIKIT	ASLUM	12	Flights with destinations such as LFPG, EHAM, EGLL, EDDF	VIKIT-P628-RK-G792-ASLUM	VIKIT-P628-RK-G214-PG-UL124/G665 OR VIKIT-P628-RK-G452-ZAHEDAN
8	PARTY	SERKA	13	Flights from Mumbai, Goa, Bangalore, Hyderabad with destinations such as LFPG, EHAM, EGLL, EDDF.	PARTY-G208W-CHOR-B210-NH-B466-SERKA	Flights from Mumbai to join the route N571 at AROTA to PARAR -Muscat FIR. Flights from Chennai, Bangalore, Hyderabad to join route N571 at DORAM, to PARAR -Muscat FIR