



CASE STUDY

IMPACT OF KABUL FIR CONTINGENCY OPERATIONS AND AIRSPACE CLOSURES WITHIN THE MIDDLE EAST

Presented by

PAKISTAN

(PAKISTAN AIRPORTS AUTHORITY / ANSP)

7/13/2026

About the Presenter

- **Active Air Traffic Controller since 2008**
(18 lovely years & counting)
- **Worked in HQ PAA for around 4 years on**
ATM and ATS Training Portfolios
- **Currently working as the Approach / Area**
Surveillance Controller at Lahore Area
Control Center



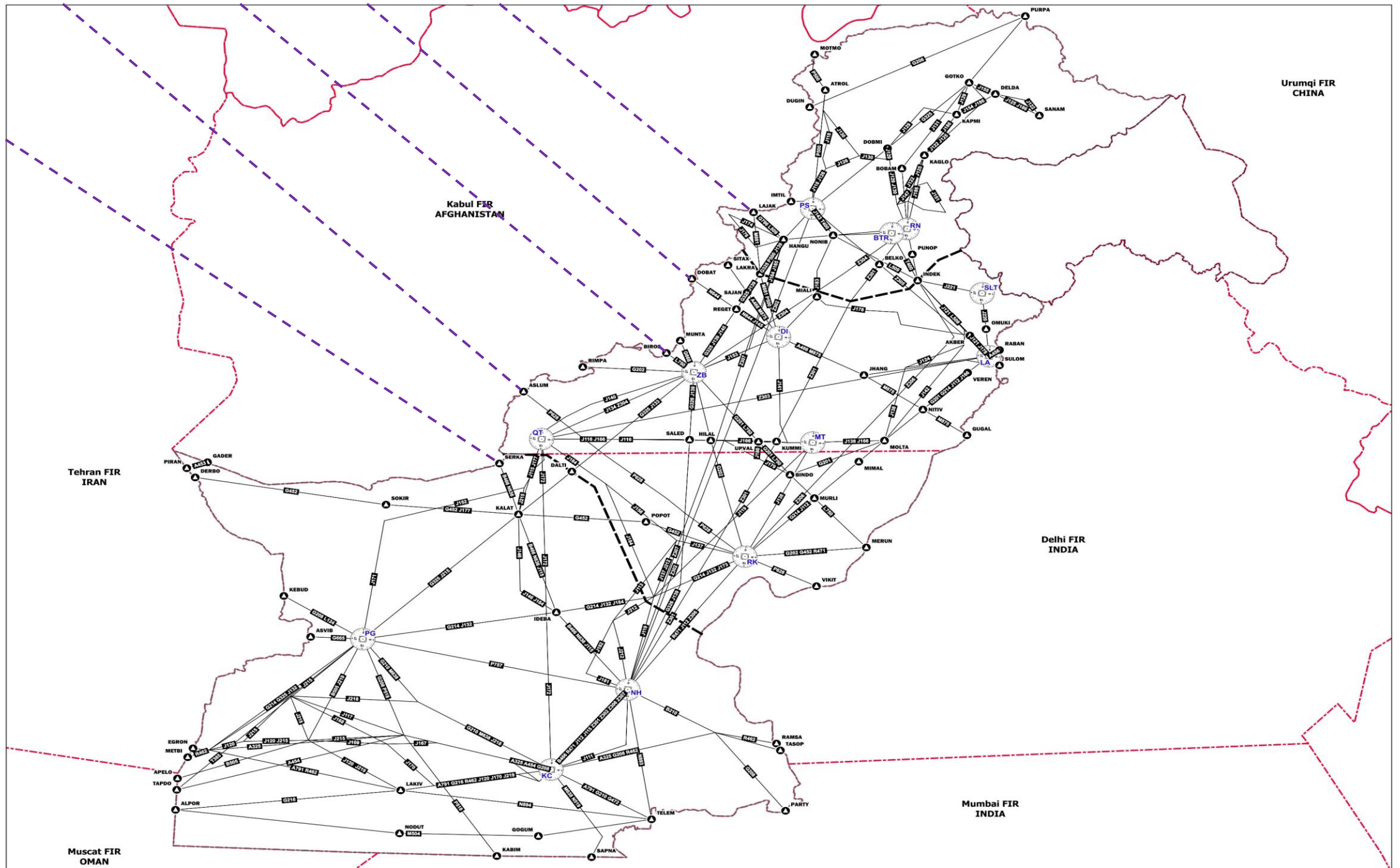
SALMAN NAZAR

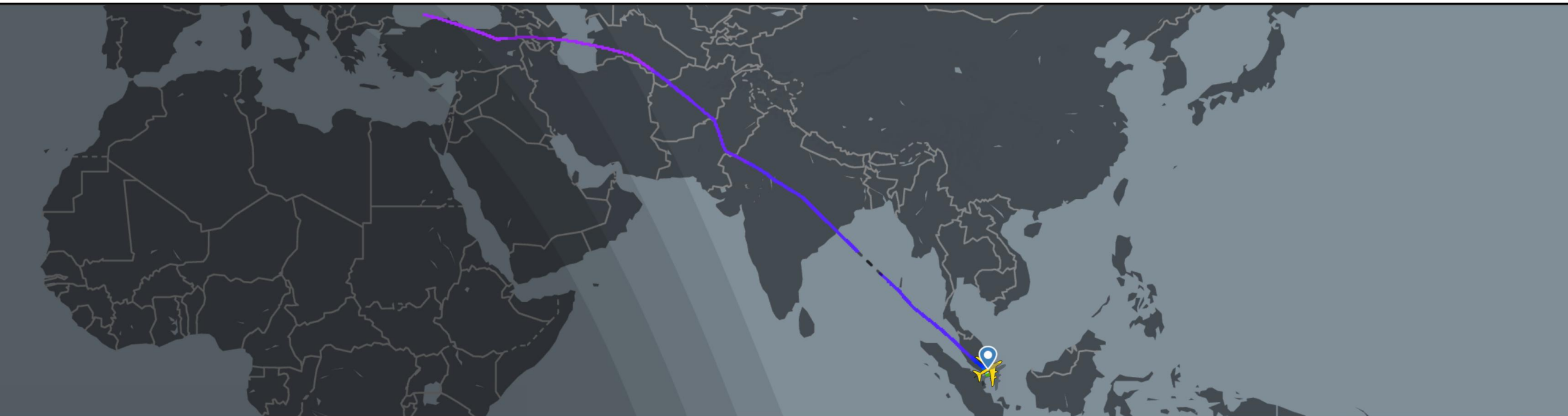
SENIOR JOINT DIRECTOR (ATS)
PAKISTAN AIRPORTS AUTHORITY
(AIR NAVIGATION SERVICE PROVIDER)

Outline

- **Introduction**
- **Timeline** of the events 2021 - 2024
- **Overview** of Kabul Fir Contingency Procedures From August 2021 To August 2025
- **Timeline** of the events 2024 - 2025
- Overview of **Initiatives** taken by Pakistan in collaboration with ICAO and neighboring states
- Airspace Contingency due **Middle East Escalation**
- **Tactical** Measures by ATC
- **Key** take aways and Lesson **learned**

INTRODUCTION





Playback of flight SQ308 / SIA308

GREAT CIRCLE DISTANCE
10,888 km

AVERAGE FLIGHT TIME
13:14

ACTUAL FLIGHT TIME
-

FROM
Singapore (SIN)

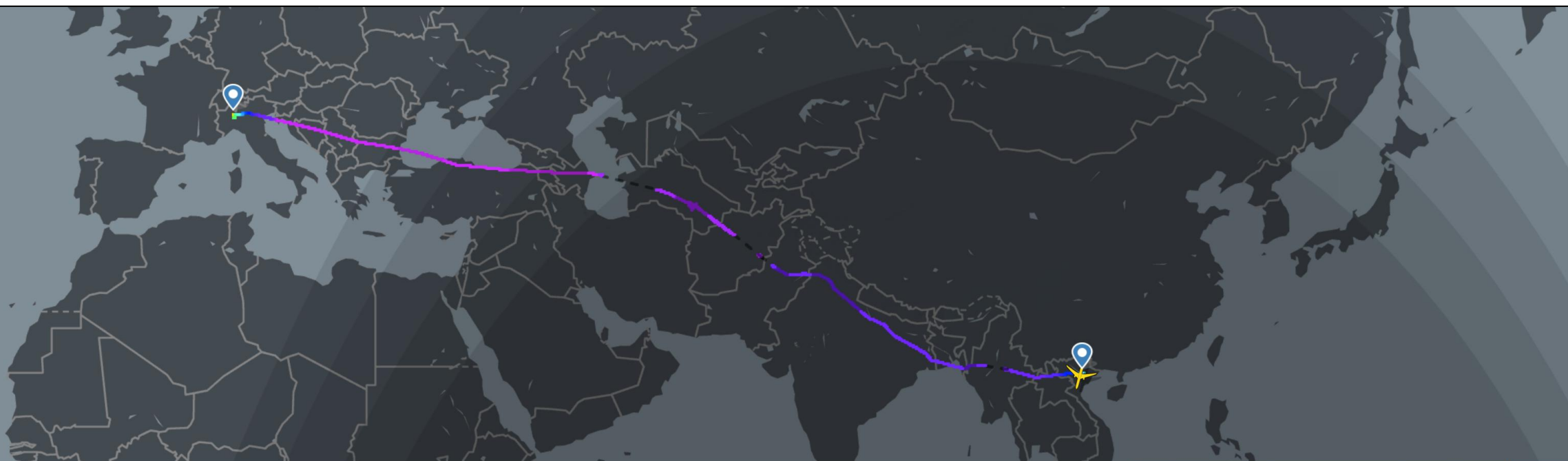


TO
London (LHR)



© Leonard Damm | Jetphotos

AIRCRAFT
Airbus A380-841



Playback of flight VN73 / HVN73

GREAT CIRCLE DISTANCE
8,879 km

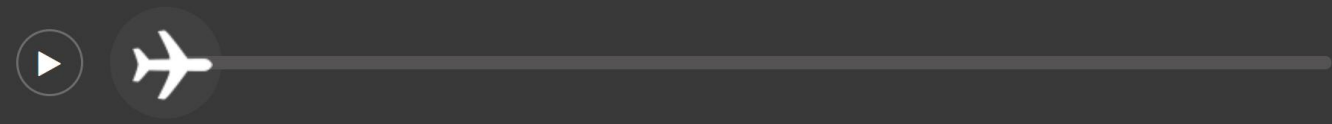
AVERAGE FLIGHT TIME
11:21

ACTUAL FLIGHT TIME
11:13

FROM
Hanoi (HAN)

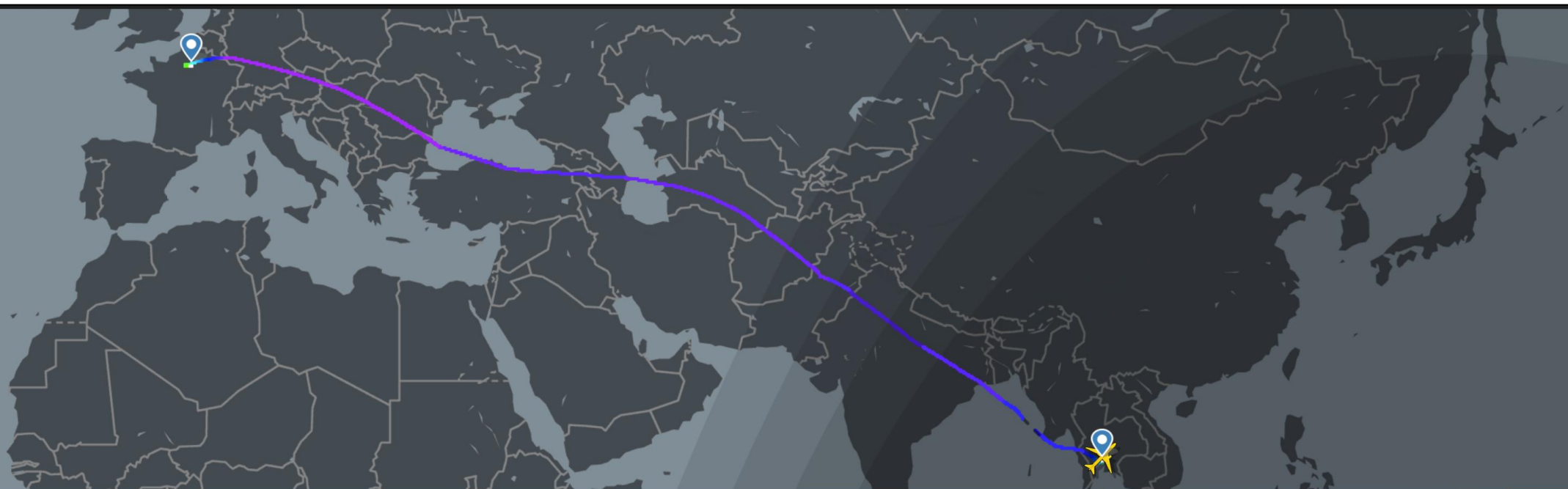


TO
Milan (MXP)



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AIRCRAFT
Airbus A350-941



Playback of flight TG930 / THA930

GREAT CIRCLE DISTANCE
9,459 km

AVERAGE FLIGHT TIME
11:44

ACTUAL FLIGHT TIME
11:44

FROM

Bangkok (BKK)

TO

Paris (CDG)



© Jasonwong777 | Jetphotos

AIRCRAFT
Boeing 777-3D7(ER)



 **THAI**



Lufthansa



BRITISH AIRWAYS 



TURKISH AIRLINES



EVA AIR



SINGAPORE AIRLINES



CHINA AIRLINES



 **SWISS**



Austrian



malaysia
airlines



 **AIR CANADA**



condor 



FINNAIR



virgin atlantic



AZERBAIJAN
AIRLINES



QANTAS



 **Vietnam Airlines**



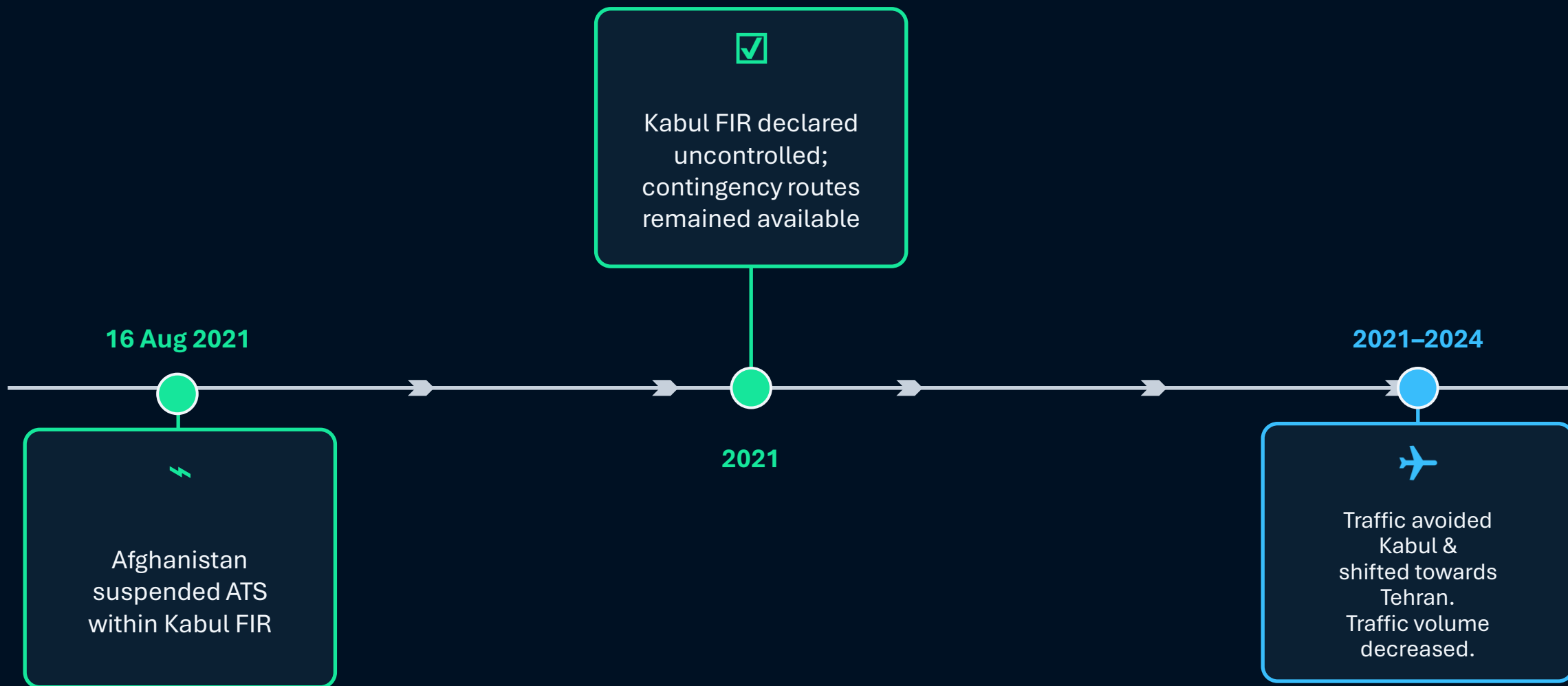
KLM
Royal Dutch Airlines



AIRFRANCE 

TIMELINE OF EVENTS

2021 - 2024



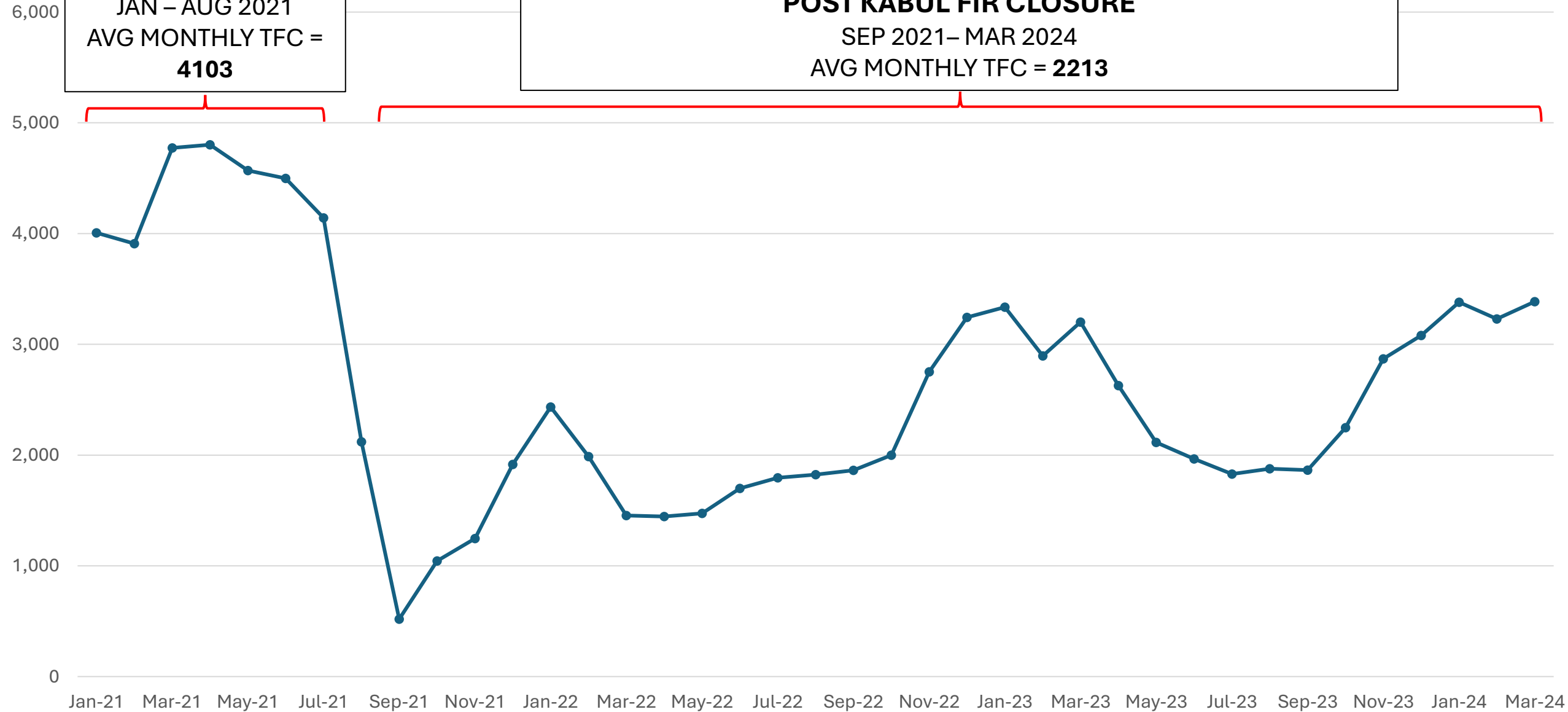
KABUL FIR TCP TRAFFIC

PRE KABUL FIR CLOSURE

JAN – AUG 2021
AVG MONTHLY TFC =
4103

POST KABUL FIR CLOSURE

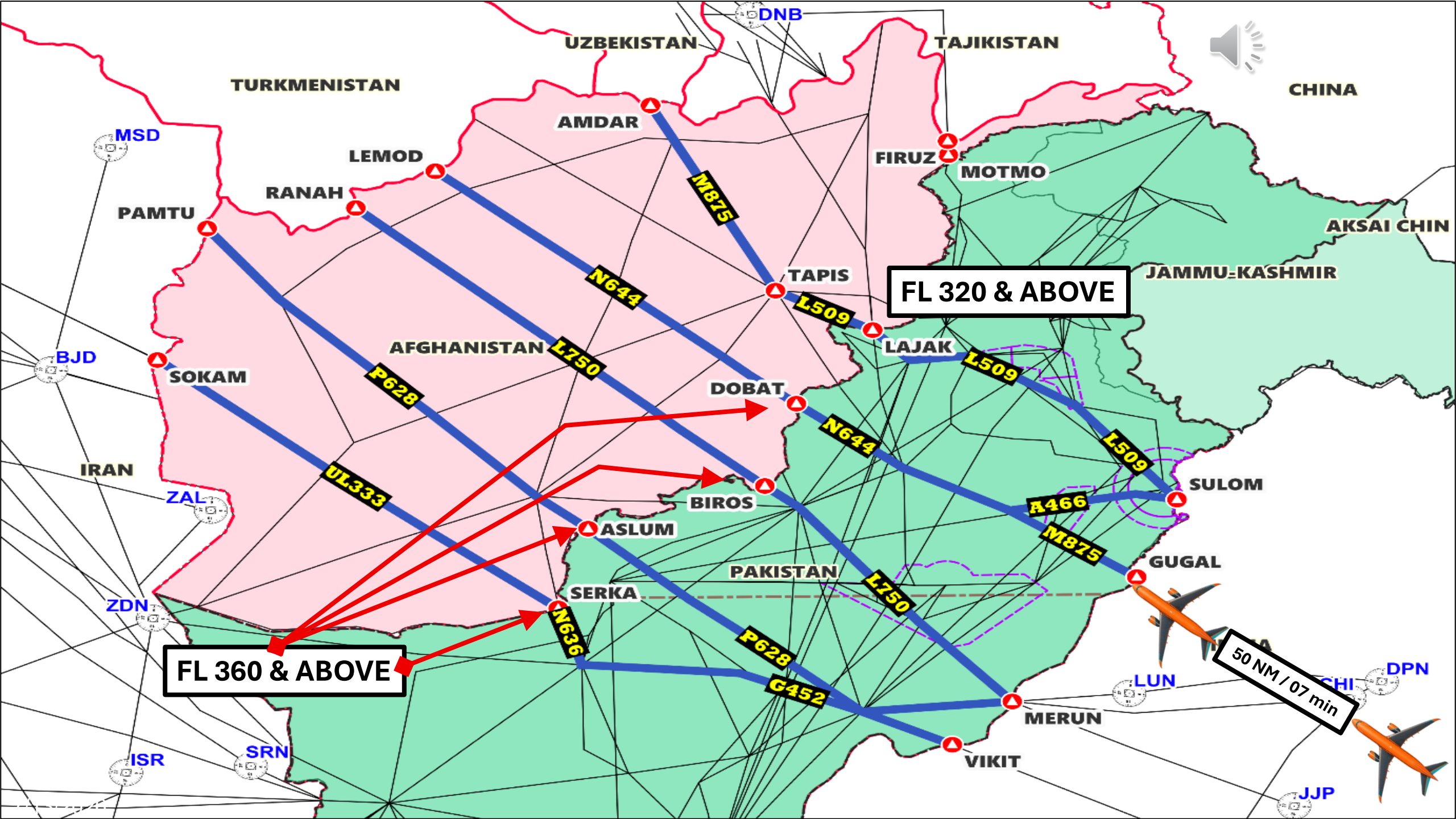
SEP 2021– MAR 2024
AVG MONTHLY TFC = **2213**

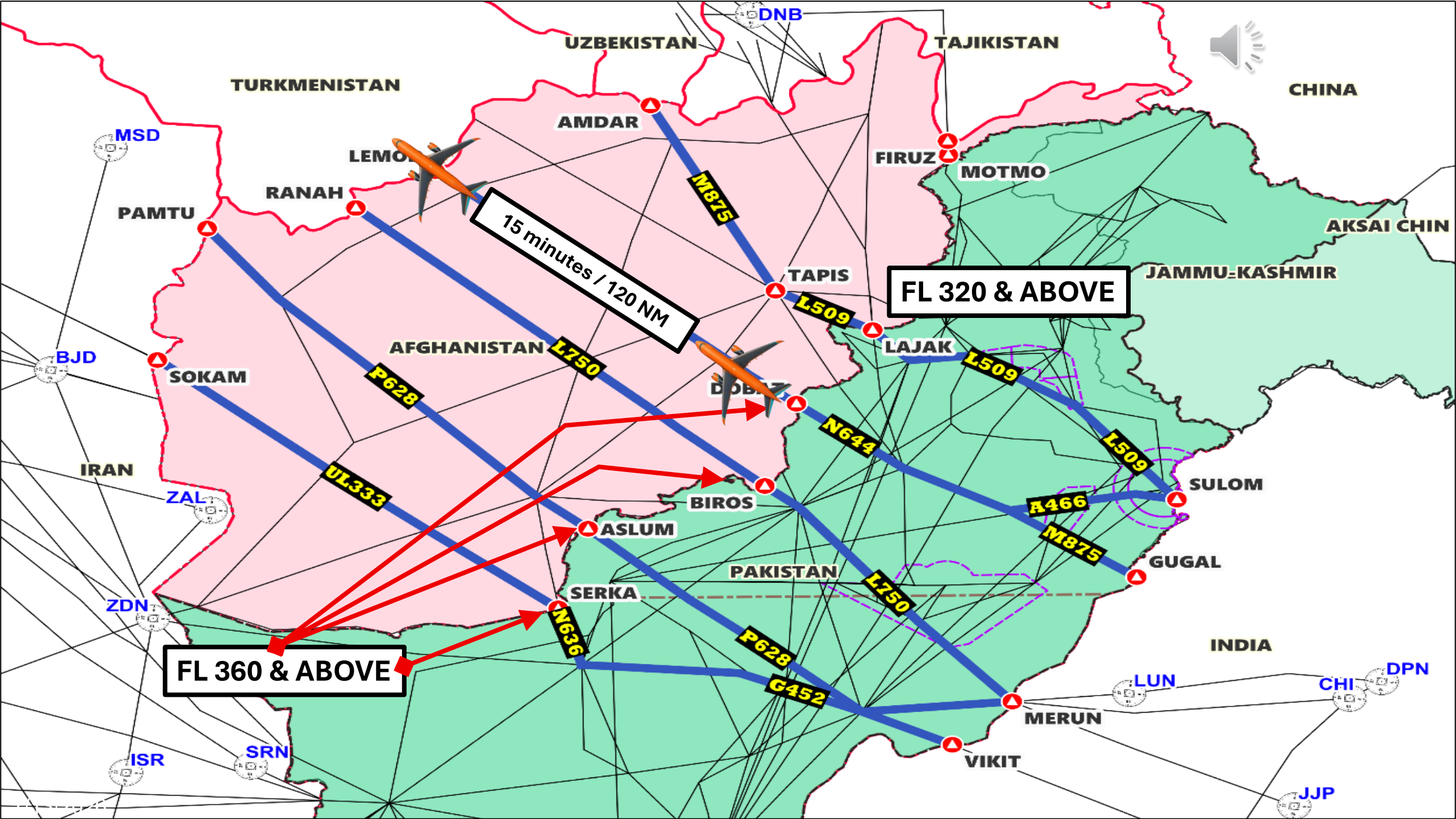


OVERVIEW OF KABUL FIR CONTINGENCY PROCEDURES FROM AUGUST 2021 TO AUGUST 2025

KABUL FIR ATM CONTINGENCY PLAN (UPPER AIRSPACE FL300 – FL510)

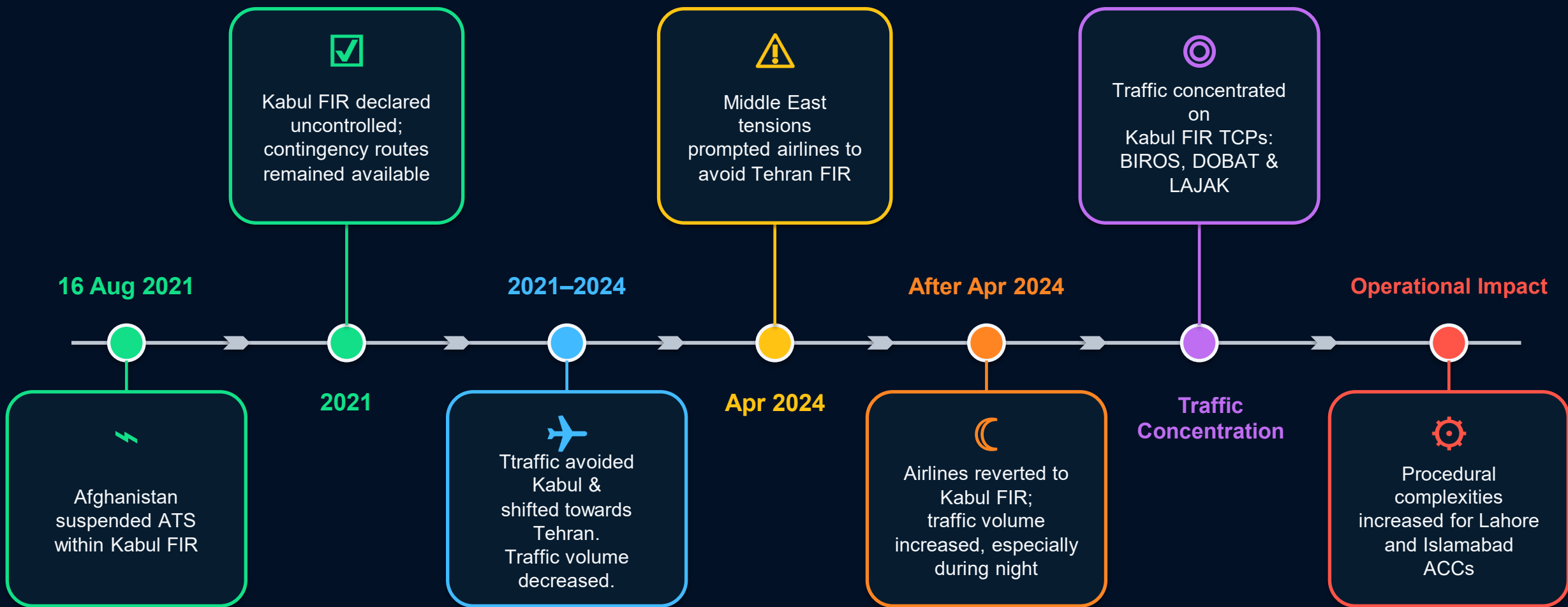
- As per Kabul FIR ATM Contingency Plan and relevant NOTAMs, the following routes are available for transit traffic:
 - a) FIRUZ-P500-MOTMO (FL300-FL510)
 - b) AMDAR-M875-TAPIS-L509-LAJAK(FL310-FL510)
 - c) LEMOD-N644-DOBAT (*FL360-FL510*)
 - d) RANAH-L750-BIROS (*FL360-FL510*)
 - e) PAMTU-P628-ASLUM (*FL360-FL510*)
 - f) SOKAM-UL333-SERKA (*FL360-FL510*)
- Adjacent FIRs need to provide minimum in-trail intervals of 15 minutes (constant or increasing) between flights per flight level per ATS route in the event of complete disruption of ATC within the Kabul FIR.





TIMELINE OF EVENTS

2024 - 2025



KABUL FIR TCP TRAFFIC

MIDDLE EAST ESCALATION

APR 2024 – FEB 2026

AVG MONTHLY TFC = **8012**

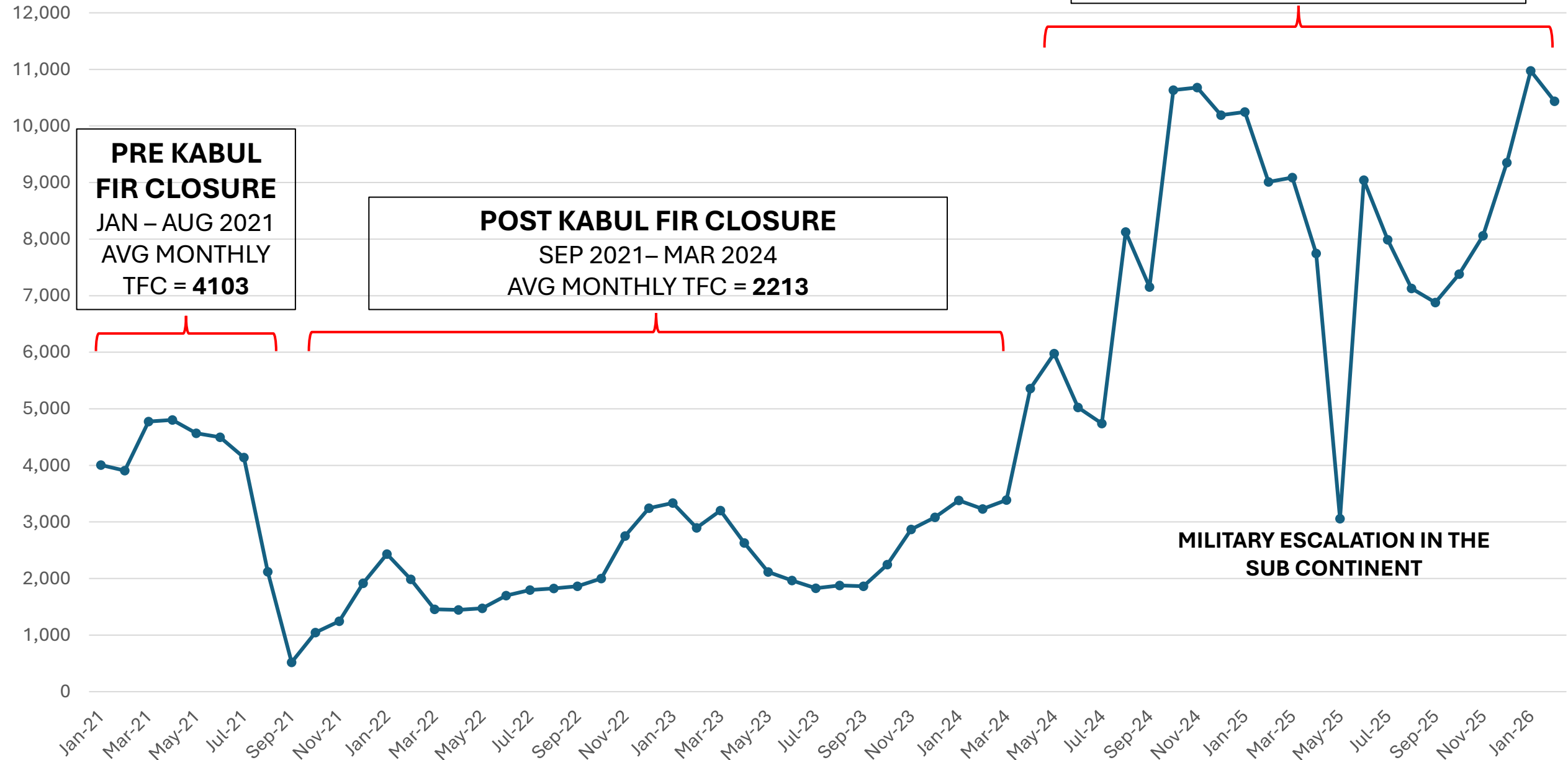
PRE KABUL FIR CLOSURE

JAN – AUG 2021
AVG MONTHLY
TFC = **4103**

POST KABUL FIR CLOSURE

SEP 2021 – MAR 2024
AVG MONTHLY TFC = **2213**

**MILITARY ESCALATION IN THE
SUB CONTINENT**



IMPACT ON PAKISTANI ATC

- Changeover points with Delhi / Mumbai ACCs:
 - SULOM
 - MERUN
 - GUGAL
 - VIKIT
- As per LoA, westbound traffic is accepted by Lahore ACC at these changeover points with a longitudinal separation of 50 NM at same level.
- Traffic is accepted at FL300 & above. FL 280 is also available from 1700 UTC till 0100 UTC
- Once traffic is accepted by Lahore & Islamabad ACCs, Controllers have to ensure that all aircraft fulfill the Contingency procedures before entering Kabul FIR via LAJAK (FL320 & Above), DOBAT (FL360 & Above), BIROS (FL360 & Above), ASLUM (FL360 & Above) OR SERKA (FL360 & Above) i.e. *they have to be longitudinally separated by 15 minutes at same level and they also have to meet the applicable vertical restrictions.*
- In order to achieve this, controllers at Lahore & Islamabad ACC have to apply *speed control, rerouting, vectoring or enroute holding*

IMPACT DUE TO CONTINGENCY

- Increased ATC Workload
- Flight Safety Hazards posed by holding aircraft
- Excessive flight delays
- Extra fuel consumption
- Increased carbon emissions
- Aircraft have to descend / climb to non-optimal Flight Levels

HOLDING & DELAY DATA

APRIL 2024 - AUGUST 2025			
CHANGEOVER POINT WITH KABUL	DAILY FLIGHTS SUBJECTED TO HOLDING / DELAY	AVERAGE DELAY (IN MINUTES)	MINIMUM & MAXIMUM (IN MINUTES)
LAJAK	1 to 2	09	05 - 20
DOBAT	7 to 8	07	05 - 18
BIROS	3 to 4	09	05 - 22
<i>TOTAL 10 to 15 Flights were being subjected to excessive delays on daily basis</i>			

INITIATIVES BY PAKISTAN IN COLLABORATION WITH ICAO AND NEIGHBORING STATES

2022

- Internal ATS Route adjustment was carried out to facilitate connectivity between Lahore FIR and Dushanbe FIR saving approximately 15 minutes of flying time for each flight.

March 2025

- Pakistan presented case during 4th Meeting of SAIOSEACG in March 2025 for availability of FL 320 & 340 over SERKA, ASLUM, BIROS & DOBAT as well as availability of FL 300 over LAJAK.
- Pakistan also proposed resumption of BOBCAT ATFM procedures on the basis of 15 min longitudinal spacing.

August 2025

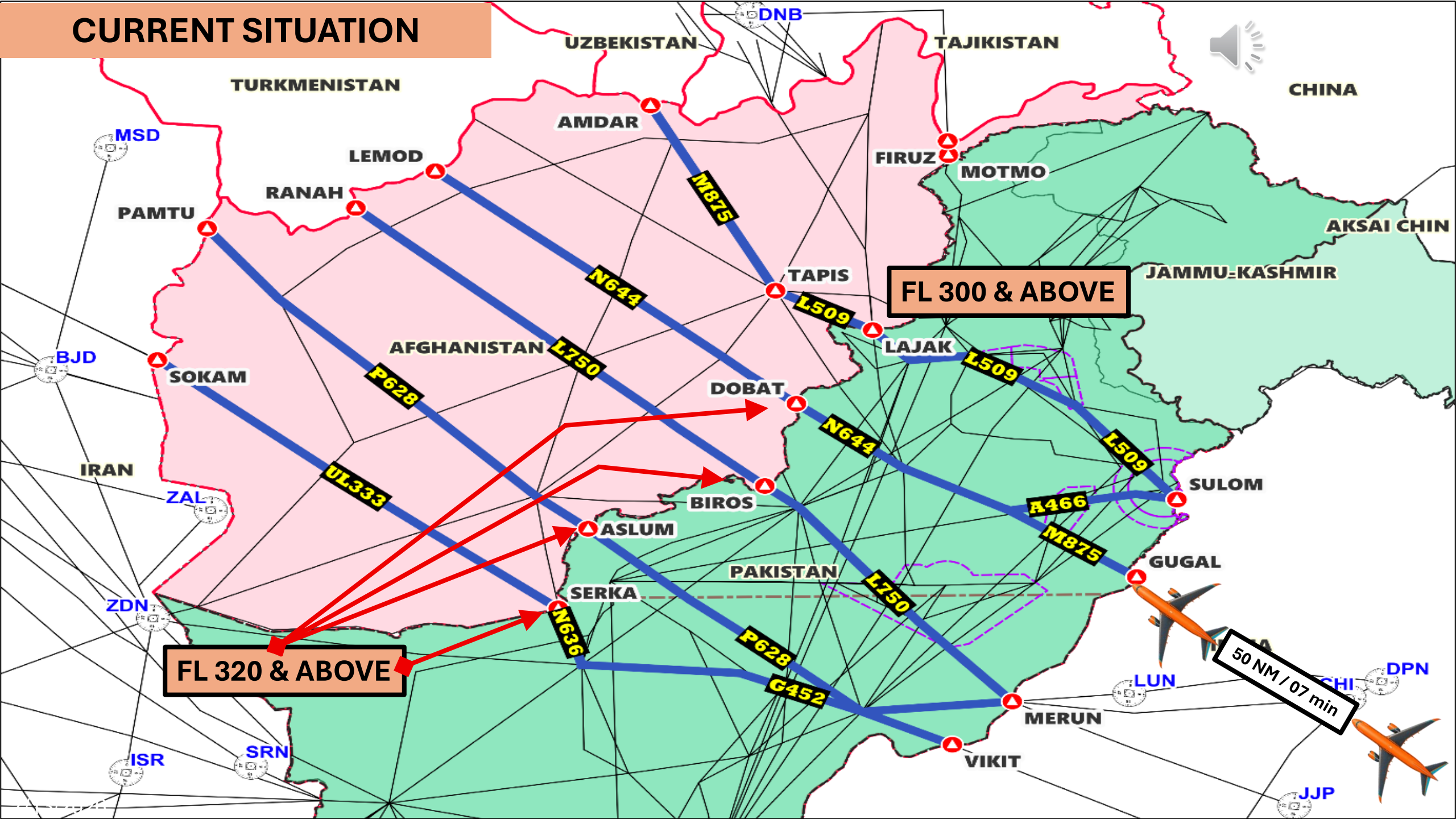
- With the cooperation of concerned States and support of ICAO APAC / ICAO EURO/NAT and IATA, the above lower levels became available over KABUL FIR TCPs in the month of August 2025.

September 2025

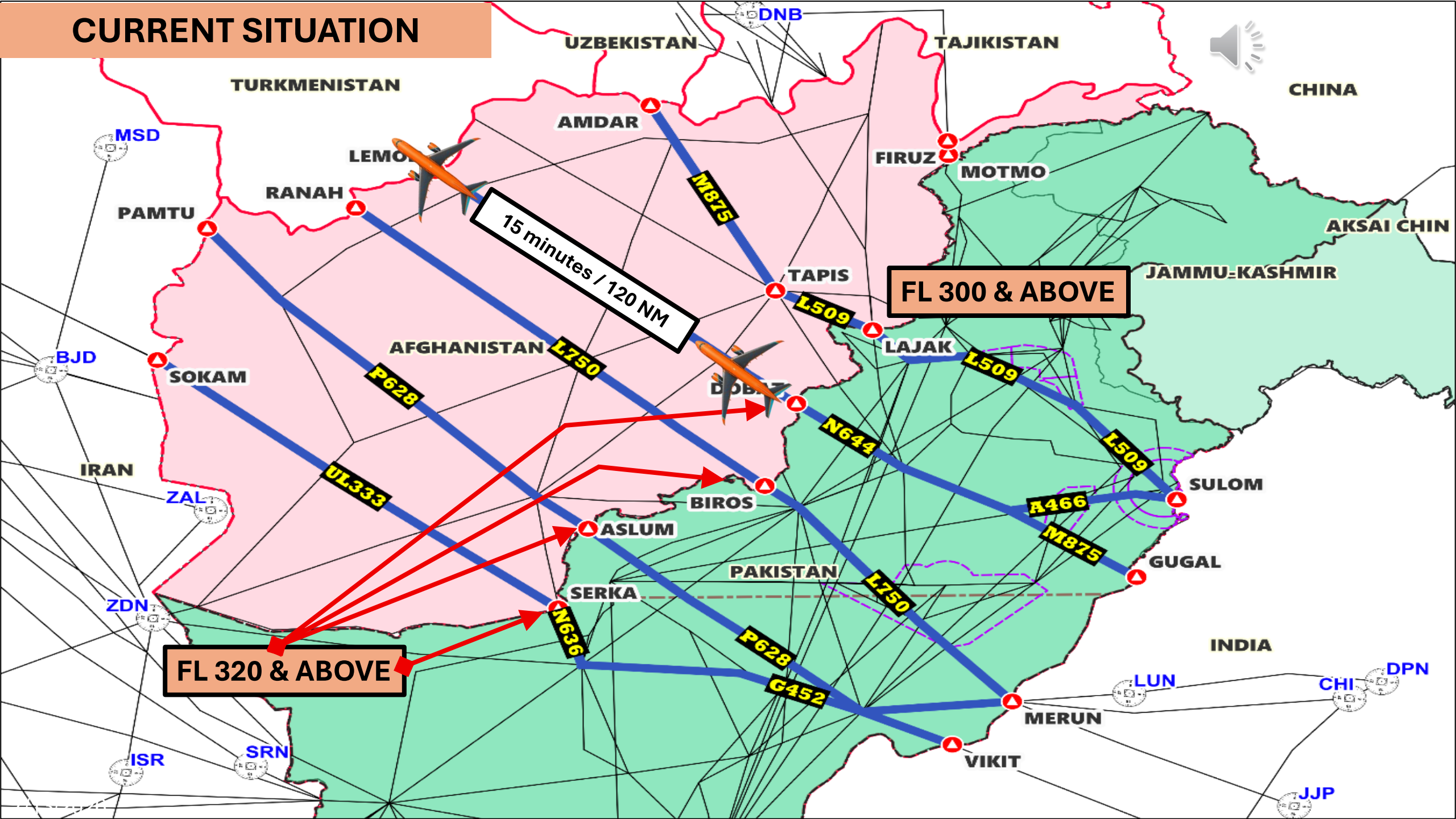
- With the efforts of AeroThai, BOBCAT ATFM was successfully resumed w.e.f. 04th September 2025.

Pakistan Airports Authority

CURRENT SITUATION



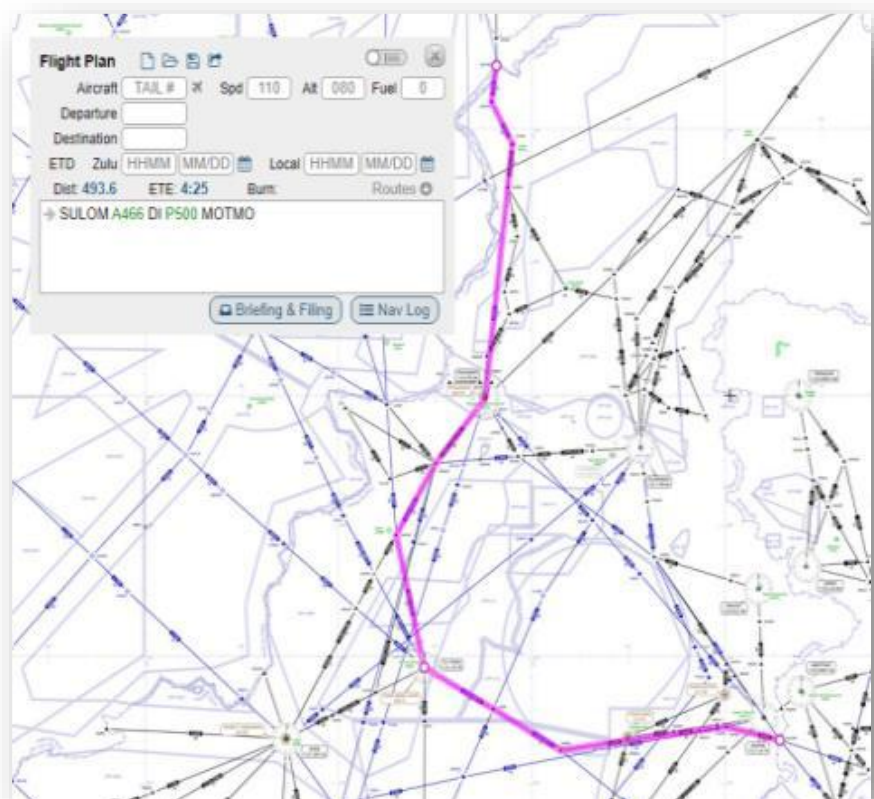
CURRENT SITUATION



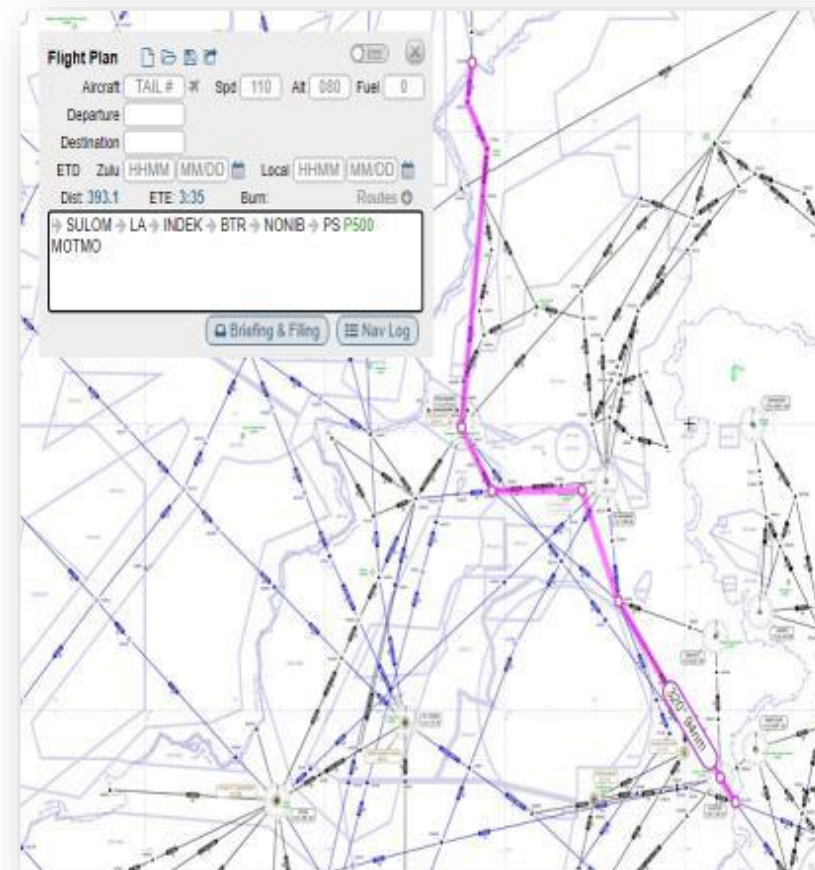


ATS ROUTE ADJUSTMENT- T400-P500- 2022

Internal ATS Route adjustment was carried out to facilitate connectivity between Lahore FIR and Dushanbe FIR saving approximately 15 minutes of flying time for each flight:



A466-P500



T400-P500

POST SEPTEMBER 2025 SITREP

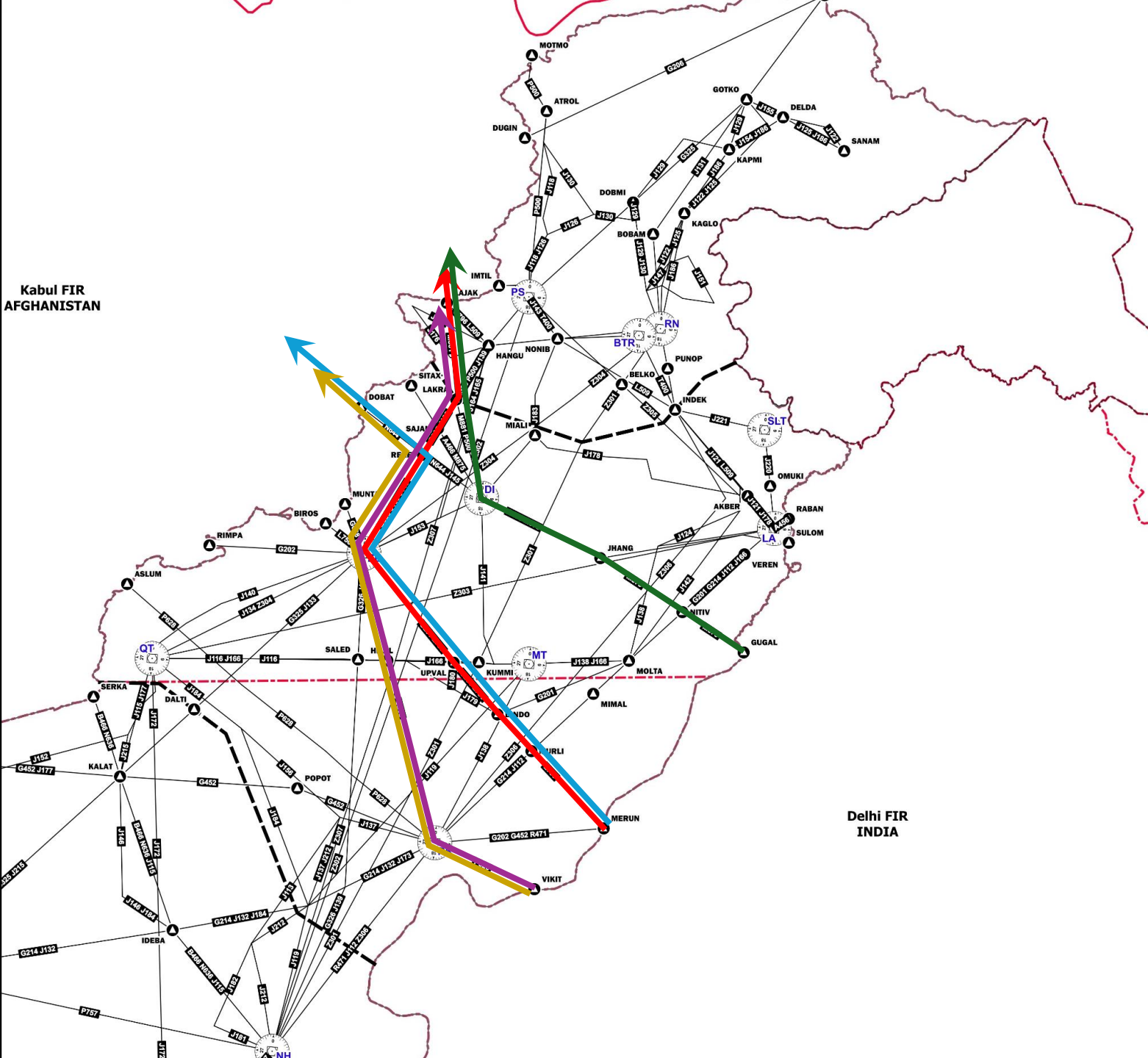
- Traffic volume through Afghanistan is consistently high throughout the day, especially during night time.
- The availability of additional levels over KABUL FIR TCPs and resumption of BOBCAT ATFM has considerably eased the situation.
- Majority of Westbound traffic (almost 80%) is utilizing BOBCAT ATFM for flight level allocation.
- ATC intervention, in the form of speed control, vectoring / holding, has significantly reduced, however, still a few flights have to face delays on a daily basis, due to the demanding Contingency requirements over KABUL FIR TCPs.

HOLDING & DELAY DATA

KABUL FIR TCP	DAILY FLIGHTS SUBJECTED TO HOLDING / DELAY		AVERAGE DELAY (IN MINUTES)		MINIMUM & MAXIMUM (IN MINUTES)	
	APR 24 TO AUG 25	SEP 25 TO FEB 26	APR 24 TO AUG 25	SEP 25 TO FEB 26	APR 24 TO AUG 25	SEP 25 TO FEB 26
LAJAK	1 to 2	0 to 1	09	03	05 - 20	03 - 05
DOBAT	7 to 8	2 to 3	07	04	05 - 18	03 – 06
BIROS	3 to 4	2 to 3	09	04	05 - 22	03 - 06

POST SEPTEMBER 2025 SITREP

- *One prominent issue that emerged was that many flights started to fly unconventional flight paths, based on their flight planning.*
- *These paths cross multiple routes and also involve flight level changes due to varying direction of flight.*
- *This is further explained in slide below*



GUGAL	WB	JHANG
JHANG	WB	DI
DI	WB	LAJAK

MERUN	WB	ZB
ZB	EB	REGET
REGET	WB	DOBAT

MERUN	WB	ZB
ZB	EB	LAKRA
LAKRA	WB	LAJAK

VIKIT	WB	ZB
ZB	EB	LAKRA
LAKRA	WB	LAJAK

VIKIT	WB	ZB
ZB	EB	REGET
LAKRA	WB	DOBAT

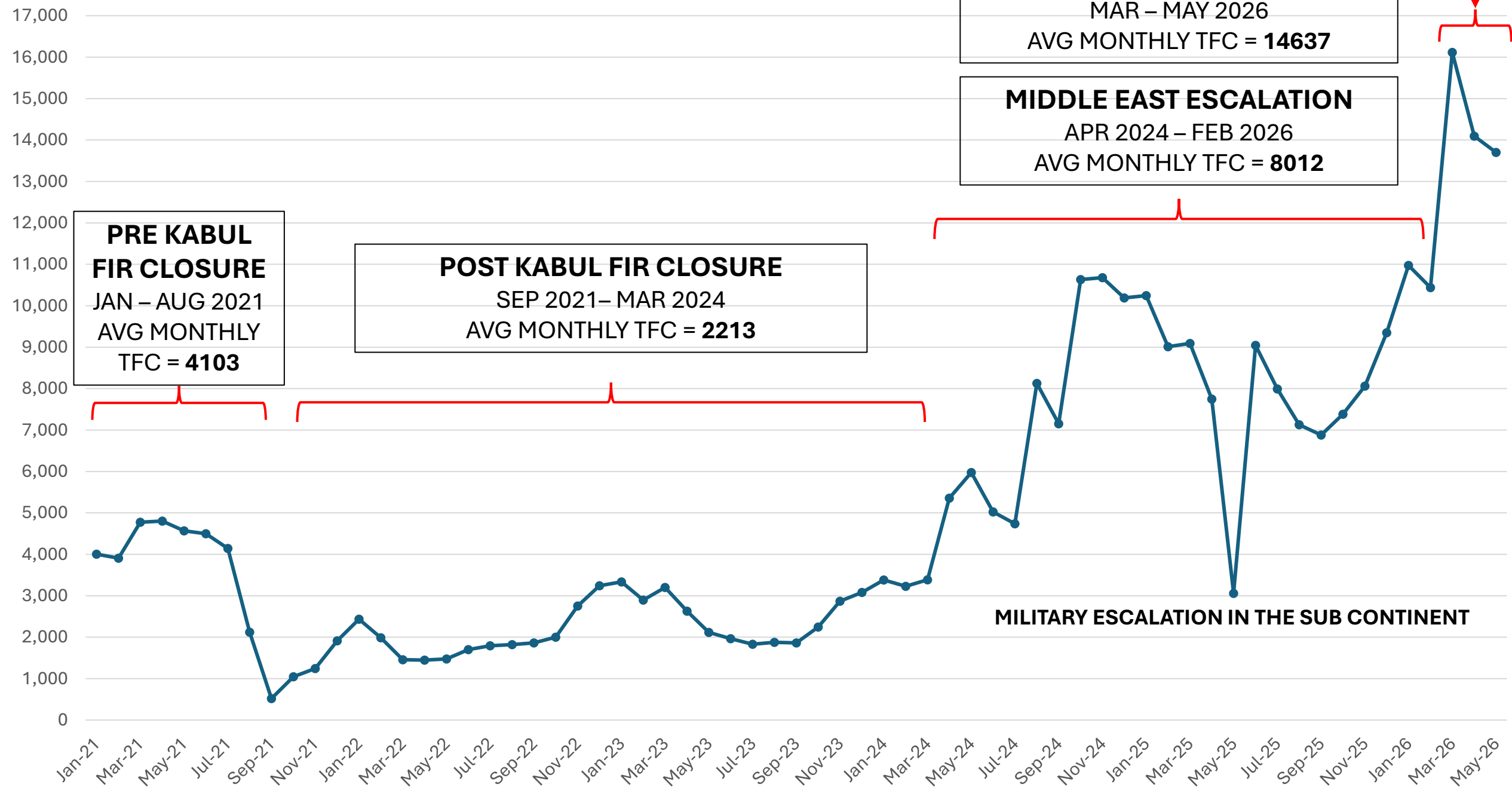
UNIDIRECTIONAL WESTBOUND TRAFFIC IS DEPICTED HERE FOR UNDERSTANDING HOWEVER THIS ISSUE IS FACED IN CASE OF EASTBOUND TRAFFIC AS WELL

FLIGHT LEVEL CHANGES DUE TO VARYING DIRECTION OF FLIGHT AND INCREASED ATC WORKLOAD

- Flights cross multiple busy routes leading to conflicts
- The route G325 is a major trunk route with high volume traffic flowing from North to South & vice versa.
- Controllers have to be very vigilant and active in ensuring timely level changes of subject Westbound flights (defined above), because in case level changes are delayed or overlooked, these flights become reciprocal with traffic operating on G325 at same level.

MIDDLE EAST ESCALATION (TIMELINE OF EVENTS) FEB 2026 ONWARDS

KABUL FIR TCP TRAFFIC



Feb 2026

- Iran War started on 28th Feb, 2026.
- Largely all Airports and FIRs across the Middle East closed down in the early phase of the war.



Early to Mid March 2026

- Limited flight operation resumed consisting of mostly repatriation flights.



April 2026

- Phased reopening of Airspaces began.
- Flight Operation gradually resumed.



Current Status (June 2026)

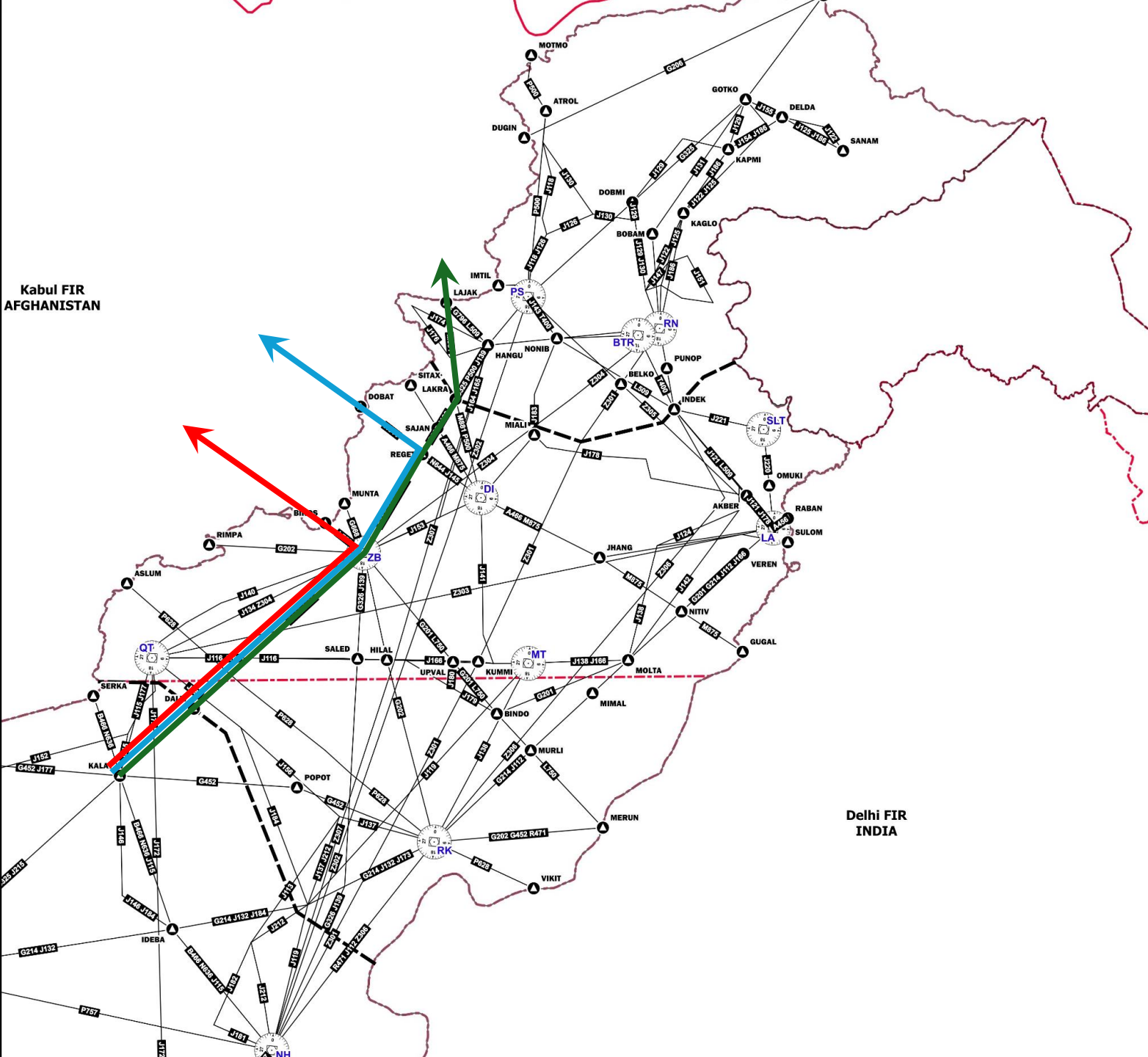
- Flight operation has largely been restored but at reduced capacity.
- Many Airlines are still not able to fully restore pre-war schedules.



Pakistan Airports Authority

CURRENT SITREP

- a) Transits that utilized Muscat FIR and oceanic airspace through the Middle East have also rerouted via Afghanistan
- b) Departures from Gulf states towards Europe, Central Asia etc that previously utilized Tehran FIR were now utilizing Pakistan Airspace from the South and exit via Afghanistan or Tajikistan.
 - These flights do not participate in BOBCAT ATFM and have to be adjusted tactically.
 - Said flights cross all the major Westbound routes leading to traffic conflicts.
 - Level changes are involved due to varying direction of flight along their respective route i.e. EASTBOUND to WESTBOUND and vice versa.
- c) The issue explained earlier regarding flights following unconventional flight paths through Pakistan Airspace still persists, with similar ramifications as outlined above.



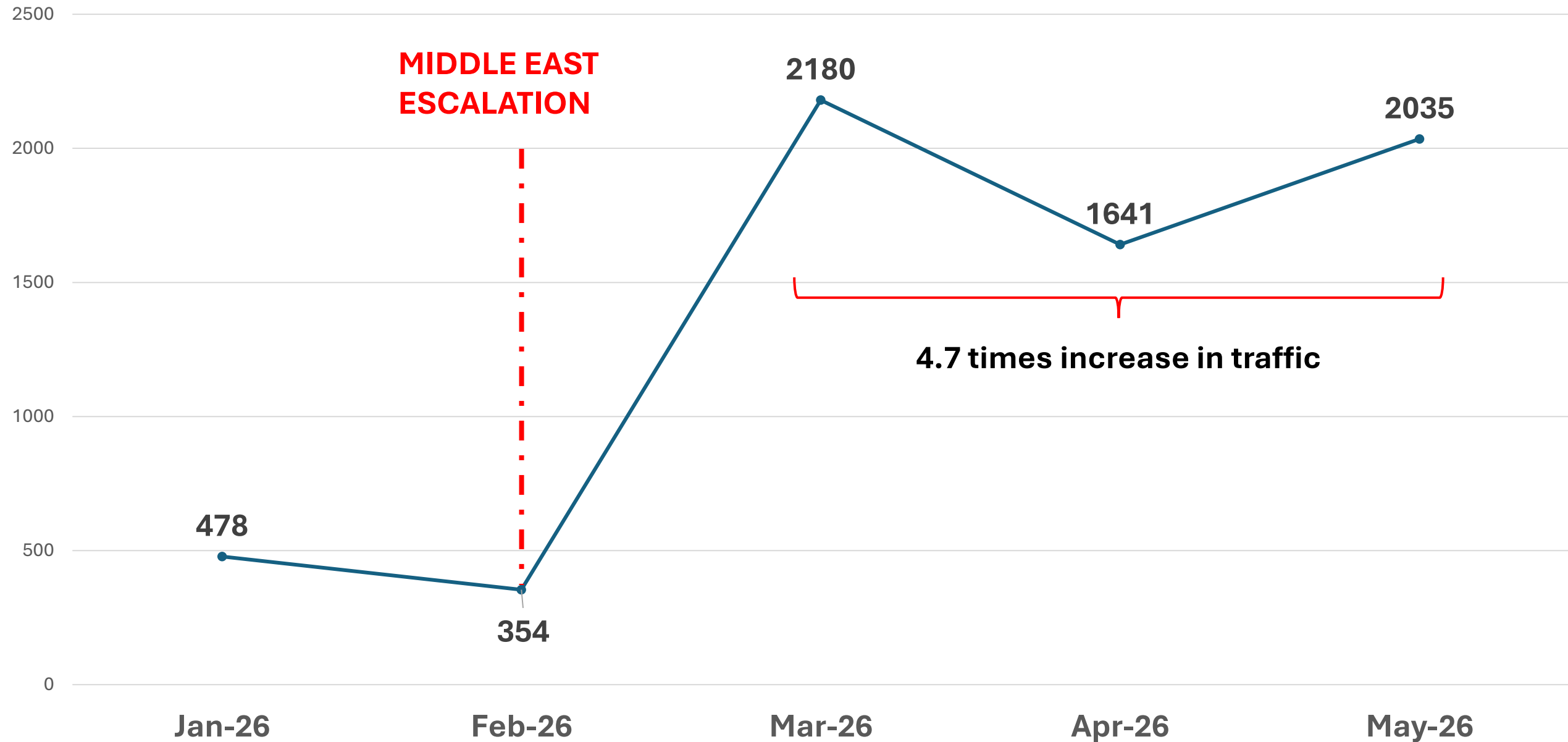
DALTI	<i>EB</i>	ZB
ZB	<i>EB</i>	LAKRA
LAKRA	<i>WB</i>	LAJAK

DALTI	<i>EB</i>	ZB
ZB	<i>EB</i>	REGET
REGET	<i>WB</i>	DOBAT

DALTI	<i>EB</i>	ZB
ZB	<i>WB</i>	BIROS

UNIDIRECTIONAL TRAFFIC (SOUTH TO NORTH) IS DEPICTED HERE FOR UNDERSTANDING HOWEVER THIS ISSUE IS FACED IN CASE OF OPPOSITE DIRECTION TRAFFIC AS WELL

Middle East Arrivals & Departures using Afghanistan Airspace to connect with Europe & Central Asia



HOLDING & DELAY DATA

KABUL FIR TCP	DAILY FLIGHTS SUBJECTED TO HOLDING / DELAY			AVERAGE DELAY (IN MINUTES)			MINIMUM & MAXIMUM (IN MINUTES)		
	APR 24 TO AUG 25	SEP 25 TO FEB 26	MARCH 26 ONWARDS	APR 24 TO AUG 25	SEP 25 TO FEB 26	MARCH 26 ONWARDS	APR 24 TO AUG 25	SEP 25 TO FEB 26	MARCH 26 ONWARDS
LAJAK	1 to 2	0 to 1	2 to 3	09	03	08	05 - 20	03 - 05	03 - 15
DOBAT	7 to 8	2 to 3	5 to 6	07	04	05	05 - 18	03 – 06	03 - 10
BIROS	3 to 4	2 to 3	5 to 10	09	04	05	05 - 22	03 - 06	03 - 08

TACTICAL MEASURES BY PAKISTAN ATC

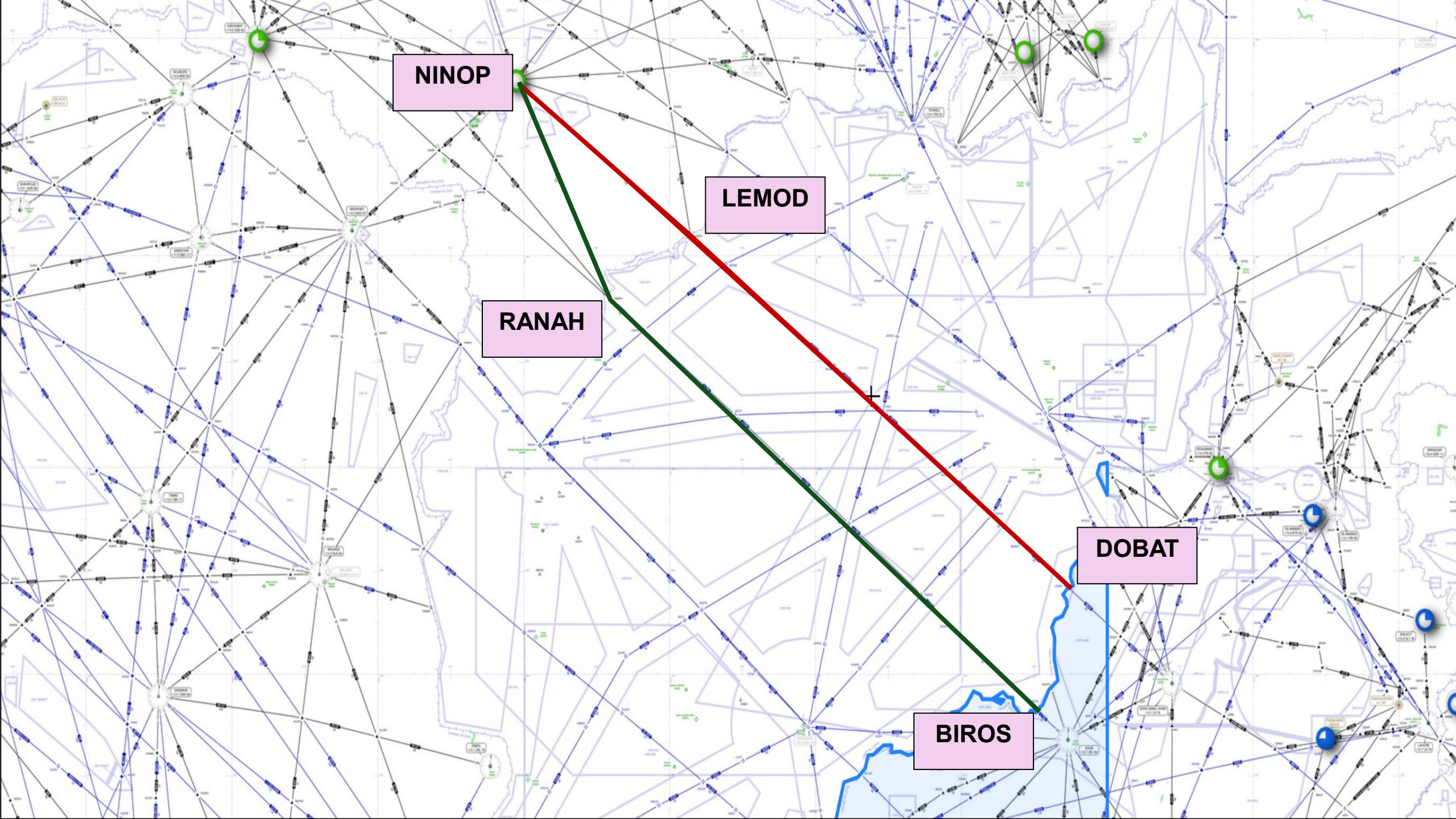
TACTICAL MEASURES

1. COORDINATION AMONGST AFFECTED STATES:

- a) Coordination with Turkmenistan for transmission of estimate messages directly in ATM system for Eastbound traffic. Pakistan agreed to do the same for WESTBOUND traffic.
- b) Considerable difference between the transmitted and actual estimates was observed in some cases. It later came to light that the revision was a result of difference in UPPER WINDS fed in the system.
- c) Regular update of UPPER WINDS in ATM System was ensured, which has consequently improved the accuracy of estimates being relayed.

TACTICAL MEASURES

2. Dedicated screens were installed in ACCs displaying FlightRadar24 data to check progress of traffic, beyond normal surveillance coverage and better situational awareness ONLY.
3. REROUTING OPTION: In case of excessive delay, WESTBOUND flights are offered rerouting option. Rerouting is planned in such a way that flights can regain original routing in Turkmenabat FIR. Similar rerouting is also being practiced by Turkmenabat ACC. See Fig on next Slide



NINOP

LEMOD

RANAH

DOBAT

BIROS

TACTICAL MEASURES

4. Westbound traffic is concentrated over 3 TCPs (LAJAK, DOBAT & BIROS). ACC Islamabad deals with TCP LAJAK and Lahore ACC Sector West deals with TCPs DOBAT & BIROS.
5. It is endeavoured to the maximum extent possible to carry out the planning and resolution of all traffic conflicts by the feeder sectors i.e. Lahore ACC East & South, especially during the night time hours where traffic volume is high.
6. This is important as all the WESTBOUND traffic converges in Sector West leading to high traffic congestion.
7. The changeover between internal sectors / units is also fluidly managed, allowing sectors the flexibility of early / delayed handover of traffic to ease the traffic load, as required.

ISLAMABAD ACC

LAJAK

Kabul FIR
AFGHANISTAN

DOBAT

BIROS

WEST

ASLUM

SERKA

EAST

SULOM

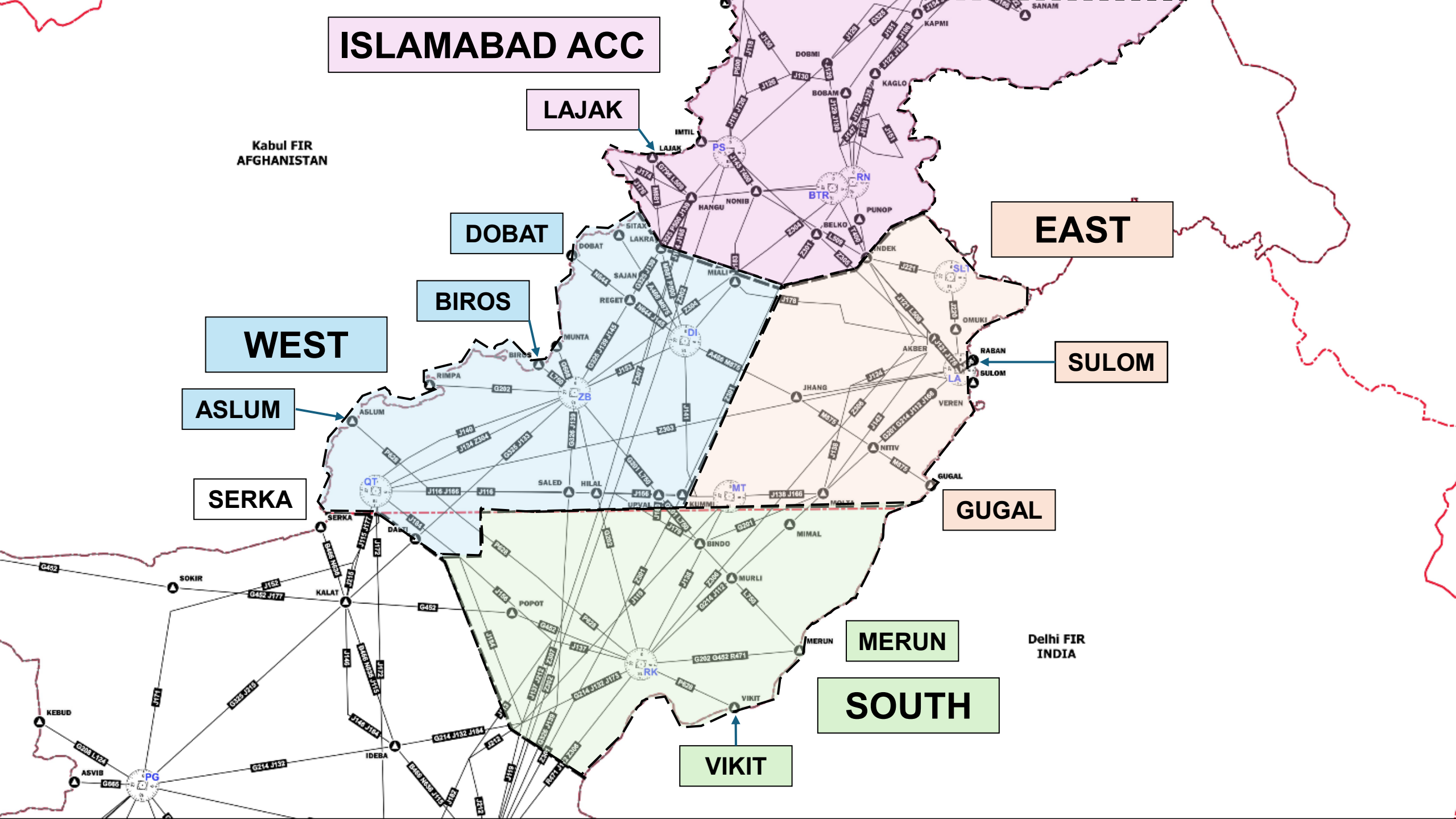
GUGAL

MERUN

SOUTH

Delhi FIR
INDIA

VIKIT



TACTICAL MEASURES

8. The following measures are implemented, as and when required, in order to manage the traffic following unconventional routes / flight paths:
 - a) Direct Track: Traffic is given direct so that they fly offset to the normal route. In this way traffic is protected from imminent danger, even if there is conflicting reciprocal traffic at same level
 - b) Proactive planning is ensured to highlight conflicts well in advance, as limited airspace is available.

FUTURE MEASURES

1. Further coordination is in progress with the support of ICAO APAC Office for reduction of 15 minutes longitudinal spacing over KABUL FIR TCPs to 10 minutes using Mach number technique as per Asia/Pacific Region ATM Contingency Plan
2. Moreover, coordination is also in progress for availability of FL 300 over KABUL FIR TCPs (SERKA, ASLUM, BIROS & DOBAT).

KEY TAKE AWAYS & LESSONS LEARNED

KEY TAKE AWAYS AND LESSONS LEARNED

- Pakistan procured its ATM System back in 2011. At that time the need for additional future sectors was not given due consideration. Equipment for only one additional sector at Lahore & Karachi ACCs, respectively, was procured.
- With the passage of time and subsequent airspace restructuring the vacant consoles were also assigned to newly established sectors, leaving behind zero vacant positions.
- Once the traffic began to rise exponentially during recent months the need was felt to vertically bifurcate particular ACC sectors, however, no working position was available for this purpose.
- Therefore, considering that procurement of ATM Systems are long term investments, States should give due thought and consideration for long term future requirements.

KEY TAKE AWAYS AND LESSONS LEARNED

- Active participation of states in Contingency Coordination Team (CCT) meetings, is of paramount importance for harmonized approach in regional contingency handling
- ANSPs should seek to proactively promote coordination amongst affected States to enable a collaborative approach towards dealing with Contingency events
- ANSPs should always be on the look out for innovative solutions e.g. use of Flight Radar24, Direct Tracking, use of non-semicircular levels (in dire circumstances only) etc
- Timely and transparent information sharing among relevant stakeholders, particularly airspace users, is essential for proactive operational planning;
- Sudden change in traffic flow and pattern may give rise to new confliction in airspace concerned which requires higher alertness and situational awareness of controllers. ATM tools and Supervisory support can be key mitigating factors

KEY TAKE AWAYS AND LESSONS LEARNED

- Close institutional collaboration and regular joint discussions among Civil Aviation Authorities (CAAs), Air Navigation Service Providers (ANSPs), and military authorities serve as key enablers for managing both foreseeable and unpredictable contingency events
- Strong professional commitment, adaptability, and teamwork from operational personnel—most notably air traffic controllers—are essential elements in handling contingencies;
- Conducting safety risk assessments for airspace initiatives carried out in case of contingency handling and continuously monitoring safety data are critical steps to maintain safety standards.
- Expeditious process for issuance of non-schedule flight clearance facilitates the entry of unexpected flights due to some enroute airspace closure

KEY TAKE AWAYS AND LESSONS LEARNED

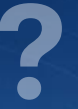
- To manage additional traffic, airspace capacity enhancement initiatives should be explored (such as airspace route re-structuring, reduction in TOC separation, availability of additional flight levels etc.)
- States may revisit their respective ATM Contingency Plans to bring them in line with the Asia/Pacific Region ATM Contingency Plan, to allow effective practical implementation in case of activation (God forbid). Level allocation on Contingency routes should take into consideration commercial flight operation and aircraft performance.

Questions & Answers

**Not all questions come with answers,
but every great answer begins
with a question.**

Questions, thoughts, and discussion are welcome.

DISCUSSION • FEEDBACK • WAY FORWARD





THANK YOU