International Civil Aviation Organization

Third Meeting of the Bay of Bengal Traffic Flow Review Group (BOBTFRG/3)

Video Teleconference, 14 – 15 December 2021

Agenda Item 4: Discussion on PBN Route Development

NEW ROUTE PROPOSALS IN THE BAY OF BENGAL

(Presented by IATA)

SUMMARY

This paper presents IATA's new route proposals in the Bay of Bengal that has great potential to enhance flight efficiencies.

1. INTRODUCTION

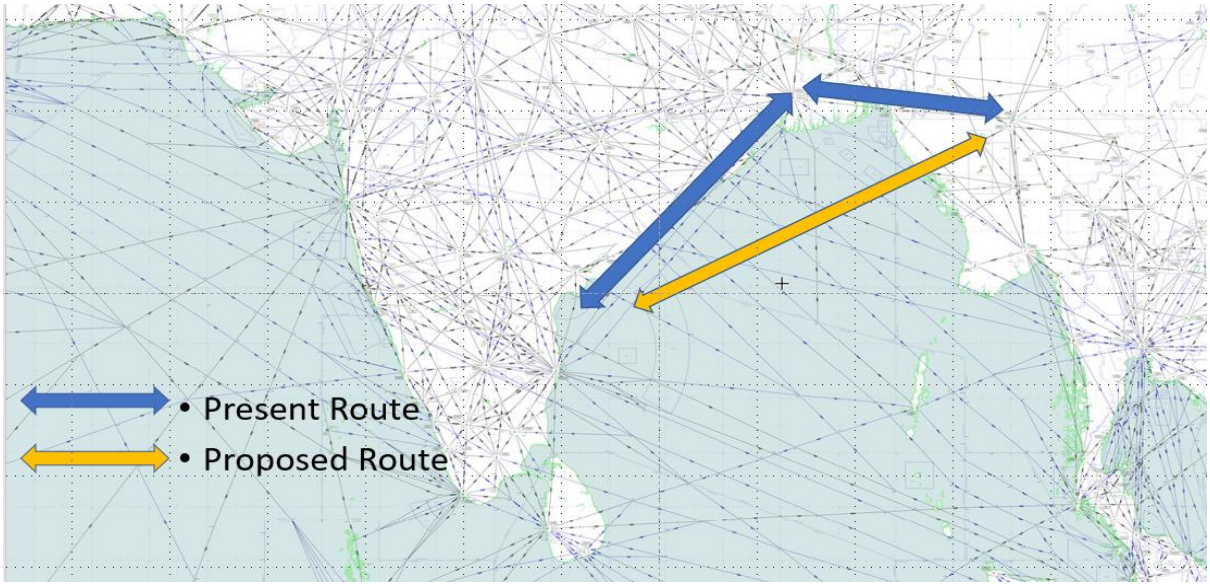
1.1 The present airway structure in the Bay of Bengal offers a longer routing that results in approximately 100 additional track miles for flights from South West Bay of Bengal with Far East destinations.

1.2 Based on inputs from airlines, IATA developed route proposals BOB 01and BOB 02 that has great potential of reducing flying time by about 12 minutes. These proposals are incorporated in the *Asia/Pacific Region ATS Route Catalogue* at the ATM/SG/9.

2. DISCUSSION

Route Structure in the Bay of Bengal

2.1 Refer to the graphic below illustrating routes structure for flights between Southwest Bay of Bengal and Far East City pairs.



2.2 In the present route structure, flights to/from southwest Bay of Bengal are required to fly a longer, circuitous route (over Kolkata) in absence of a direct connecting airway.

2.3 With enhanced ATM infrastructure and improved ATC co-ordination among neighbouring ANSPs, it is proposed to consider establishing a direct connection between southwest Bay of Bengal and Mandalay (MDY).

2.4 The following points may be noted while analysing the crossing air traffic with respect to the proposal:

Crossing traffic		Majority traffic* has flown for:	Type of aircraft	Preferred Flight Levels
Eastbound	Europe/Mid East to South Asia	More than 6 hours	Widebody	Higher
	Southwest Bay of Bengal to Far East	Just departing or up to about 2 hours	Widebody	Lower
Westbound	South Asia to Europe/Mid East	Up to about 2 hours	Widebody	Lower
	Far East to Southwest of Bay of Bengal	More than 5 hours	Widebody	Higher

* Note: There will be a few minor exceptions to these traffic patterns. For example:

- Eastbound traffic from AFI might have flown for 5-6 hrs but it may have ADS-C/CPDLC equipped fleet that might help: or,
- Traffic departing India would require lower flight levels that may not be ADS-C/CPDLC equipped. In this case, improved co-ordination among Delhi, Kolkata, Chennai might help.

2.5 Relevant extract of the BOB 01 and BOB 02 proposals from the Asia/Pacific Region ATS Route Catalogue version 21, Chapter 1: South Asia, is in Annexure A.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matters as appropriate.

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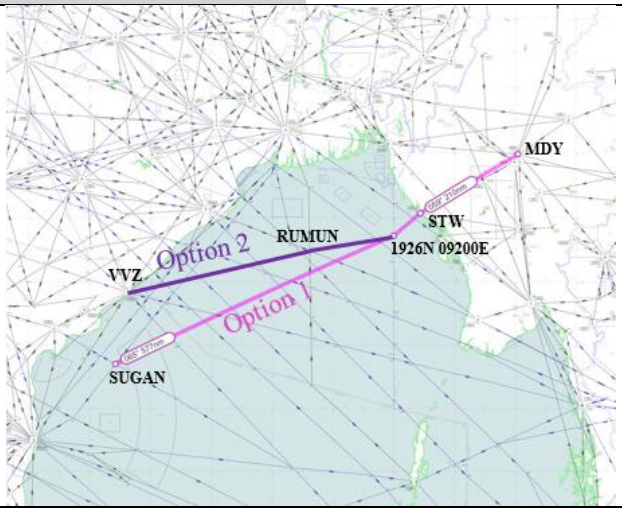
ATS Route Name	**BOB 01**
State Priority	
IATA Priority	**HIGH**
Requested by (when)	IATA (05/11/2021: ATM/SG/9)
States/Administrations Involved	India, Myanmar (Chennai, Kolkata, Yangon FIRs)
Route Description	Option 1: SUGAN 152500N 0825045E – New Waypoint 192600N 0920000E (FIR BDRY between Kolkata and Yangon) – Sittwe (STW) – Mandalay (MDY) Option 2: Vishakhapatnam (VVZ) 174003.90N 0831510.00E – RUMUN 185805N 0891420E – New Waypoint 192600N 0920000E (FIR BDRY between Kolkata and Yangon) – Sittwe (STW) – Mandalay (MDY)
Flight Level Band	All suitable bi-directional flight levels. Else, at least suitable eastbound flight levels. (airline operators preferred flight level would be FL330 as primary and FL310 as secondary)
Benefit (fuel, environmental)	Option 1: Narrow body fleet: 94 NM / 12 minutes, 456 kg fuel, 1.5 tonnes CO_2 per flight, 166 tonnes fuel, 548 tonnes CO_2 annually Wide body fleet: 94 NM / 12 minutes, 900 kg fuel, 3.0 tonnes CO_2 per flight, 329 tonnes fuel, 1095 tonnes CO_2 annually Option 2: Narrow body fleet: 71 NM / 9 minutes, 344 kg fuel, 1.1 tonnes CO_2 per flight, 126 tonnes fuel, 402 tonnes CO_2 annually Wide body fleet: 71 NM / 9 minutes, 679 kg fuel, 2.2 tonnes CO_2 per flight, 248 tonnes fuel, 803 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency, potential city pairs)	About 110 flights per week Africa/South Asia – Far East, Southern India – East Coast of the United States
Remarks: The proposed routes would efficiently connect South West Bay of Bengal traffic and Far East.	

ATS Route Name	**BOB 02**
State Priority	
IATA Priority	**HIGH**
Requested by (when)	IATA (05/11/2021: ATM/SG/9)
States/Administrations Involved	India, Myanmar (Kolkata, Yangon FIRs)
Route Description	KAKID 203833N 0865951E – TEBOV 202504N 0915949E – Mandalay (MDY)
Flight Level Band	All suitable flight levels
Benefit (fuel, environmental)	Narrow body fleet: 50 NM / 6 minutes, 228 kg fuel, 750 kg CO_2 per flight, 83 tonnes fuel, 274 tonnes CO_2 annually Wide body fleet: 50 NM / 6 minutes, 450 kg fuel, 1.5 tonnes CO_2 per flight, 164 tonnes fuel, 548 tonnes CO_2 annually
Operational Information (potential airlines, flight frequency, potential city pairs)	About 110 flights per week Africa/South Asia – Far East, Southern India – East Coast of the United States
Remarks: The proposed route would not only provide efficient connection over Bay of Bengal, but it would also help in de-congesting ATS routes A791, B465, Q19 and Q20.