



ICAO

International Civil Aviation Organization

Fourth Meeting of the Bay of Bengal Traffic Flow Review Group (BOBTFRG/4)

Video Teleconference, 6 – 8 December 2022

TERMS OF REFERENCE

BAY OF BENGAL TRAFFIC FLOW REVIEW GROUP (BOBTFRG)

1. Objective

1.1. The objectives of the BOBTFRG are to:

- a) identify requirements and improvements for optimising airspace capacity and maintaining an efficient route network across the Bay of Bengal airspace and routes leading towards Afghanistan's airspace;
- b) monitor the status of implementation of the agreed ATS routes and airspace improvement projects; and
- c) report outcomes of the review and recommendations to the South Asia, Indian Ocean and Southeast Asia ATM Coordination Group (SAIOSEACG).

2. Tasks

2.1. To meet this objectives, with reference to the *Asia/Pacific Region Seamless ANS Plan* and expected traffic growth, the BOBTFRG shall:

- a) Review the existing route structures and airspace improvement projects in the concerned airspaces (Bangkok, Chennai, Colombo, Dhaka, Jakarta, Kabul, Karachi, Kuala Lumpur, Kolkata, Lahore and Yangon Flight Information Regions);
- b) Identify current CNS/ATM capabilities and determine the CNS/ATM requirements which would be needed in order to optimise the airspace to support the implementation of more efficient route network that accommodated enroute traffic (and also departures from India and Pakistan that would join this traffic flow);
- c) Identify the most efficient horizontal separations to be utilised, based on the current and planned CNS/ATM capabilities, taking into account aircraft approval status of the traffic operating on the relevant routes as well as the new CNS capabilities available;
- d) Review the existing Flight Level Allocation Scheme (FLAS) operating within the Bay of Bengal airspace with a view to enhancing efficiencies;
- e) Establish appropriate timelines/milestones/dependencies for activities planned under this Group;

- f) Make recommendations to SAIOSEACG on implementation plans for route structures, airspace, FLAS and separation solutions to meet the expectations of the *Asia/Pacific Seamless ANS Plan*; and
- g) Make recommendations to SAIOSEACG on the future status of the Bay of Bengal Cooperative ATFM System (BOBCAT) tool.

3. Participation

- 3.1. Participation of the BOBTFRG includes Afghanistan, Bangladesh, India, Indonesia, Malaysia, Myanmar, Pakistan, Singapore, Sri Lanka, Thailand and IATA, and any other body that the BOBTFRG deems appropriate.

Approved by SAIOSEACG/1 (Date: 1 April 2022)

BOBTFRG TASK LIST

(Last updated BOBTFRG/3)

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
1/3	India to review Bay of Bengal conflicts and remove FLAS with Port Blair ADS-B operational if possible	BOBTFRG/4	India	Open	Action Item 4/2 of SAIOACG Task List. India to update ATM/SG/4. Needs to be consulted with Myanmar (Yangon FIR). Port Blair ADS-B still on test (SAIOACG/8 2018). India commented that FLAS should be retained, as there was still limitation on surveillance and communication capabilities. A new ATS route L524 had been implemented to increase the capacity to offset the FLAS. Task updated at BOBTFRG/3. No report received.
2/1	Identify current spacing implemented by States	BOBTFRG/4	All BOBTFRG States	Open	States to fill and submit the Attachment D to BOBTFRG/2 State Letter by 31 October 2019. Bangladesh, India, Indonesia, Malaysia, Myanmar, Pakistan and Thailand had submitted data to ICAO. Re: ATM/SG/9 WP/7, ICAO APAC Regional Office would circulate a new survey form, requesting APAC Administrations to provide information about the authorised ATC separation minimums and separation minimums at each FIR TOC point.
2/3	Review the existing Flight Level Allocation Scheme (FLAS) operating within the concerned airspace, with a view to improve efficiencies	31 January 2022	All BOBTFRG States	Open	States to fill and submit the Attachment D to BOBTFRG/2 State Letter by 31 October 2019. Reason for FLAS: multiple crossings of higher density routes over Category R airspace. States to verify the accuracy of the information in the Bay of Bengal FLAS Chart (BOBTFRG/3 Report re: WP/07).

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
2/5	Investigate whether appropriate handoff procedures are implemented between controllers providing ATS surveillance in adjacent airspace – review ATS Letter of Agreement (LoA)	31 January 2022	All BOBTFRG States	Open	Bangkok – Kuala Lumpur ACCs: Yes Bangkok – Yangon ACCs: Yes Jakarta – Kuala Lumpur ACCs: Yes Dhaka – Kolkata ACCs: expected in 2025. Dhaka – Yangon ACCs: expected in 2025. Yangon – Kolkata ACCs (ATS route A201)? Delhi – Lahore ACCs? Delhi – Karachi ACCs? Mumbai – Karachi ACCs? Lahore – Kabul ACCs? Karachi – Kabul ACCs? Colombo ACC – Chennai OCC?
2/6	States to identify routes along which reliable surveillance and communication are available to look at the possibility of reduced longitudinal spacing	31 January 2022	All States	Open	India and Pakistan: 50 NM longitudinal spacing implemented at the TOC points of following FIR boundaries: Delhi – Karachi FIRs; Delhi – Lahore FIRs; and Mumbai – Karachi FIRs. Indonesia and Malaysia: 20 NM longitudinal spacing implemented at the following TOC points: GOTLA, PUGER and SALAX. Malaysia and Thailand: 30 NM longitudinal spacing implemented at the TOC points between Bangkok and Kuala Lumpur FIRs. Myanmar and Thailand? India and Myanmar (ATS route A201)? India and Sri Lanka?
2/7	Agreement between States to implement 20 NM longitudinal spacing (or as close to the separation minima as practicable) in Category S airspace through Thailand, Myanmar Bangladesh, India, Pakistan and Afghanistan	2025	Afghanistan, Bangladesh, India, Myanmar, Pakistan, Thailand	Open	Traffic operating north of Bay of Bengal airspace will traverse through Dhaka FIR, and currently no en-route ATS surveillance service provided in Dhaka FIR. To be reviewed in tandem with the Modernization Project of CNS-ATM System of Bangladesh.

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
2/8	The application of performance-based separation minima and distance-based separation minima (RNP 10, with procedural position reports not less than 24 minutes apart) in airspace over the high seas requires supporting procedures in ICAO Doc 7030 – <i>Regional Supplementary Procedures</i> .	SAIOSEACG/1	India, Indonesia, Malaysia, Myanmar, Sri Lanka	Open	Jakarta and Colombo had implemented 50 NM longitudinal spacing. Yangon and Kolkata, and Chennai had implemented 50 NM longitudinal spacing. Chennai OCC and Kuala Lumpur ACC had signed a new LoA, effected on 01 June 2021. 50 NM longitudinal spacing implemented. BOBTFRG/3 Report re: IP/03.
2/10	Implementation of 50 NM longitudinal separation (RNAV 10/ RNP 10) with PBCS in the BOB airspace, at or above a level to be determined	To be discussed at SAIOSEACG/1	States, IATA	Open	BOBTFRG/3 Report re: WP/08.
2/11	Develop PBCS implementation plan to support 30 NM longitudinal spacing on RNP 4 (or RNP 2) routes within Category R airspace of BOB	To be determined	India, Indonesia, Malaysia, Myanmar, Sri Lanka	Open	States that require PBCS to support 30 NM longitudinal spacing: Bangladesh: To be determined. Sri Lanka: No information. India: Expected to be implemented in Chennai FIR in 2020; Mumbai FIR in 2023; and Kolkata FIR to be determined. Indonesia: Expected in 2023 as part of the new Jakarta ACC ATM system project. Malaysia: Expected in second quarter of 2022. Myanmar: To be determined.
2/12	Implementation of RNP 4 (or RNP 2) routes within BOB airspace	To be determined	India, Indonesia, Malaysia, Myanmar, Sri Lanka	Open	Subject to the implementation of PBCS.
2/13	Agreement between States to implement 30 NM longitudinal spacing on affected ATS routes within Category R airspace of BOB	To be determined	India, Indonesia, Malaysia, Myanmar, Sri Lanka	Open	

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
2/14	Review the demand and capacity on the affected ATS routes	To be determined	All BOBTFRG States	Open	Three months after the implementation of 30 NM longitudinal spacing on affected ATS routes within Category R airspace of BOB.
2/15	Identify solutions to integrate departing traffic from New Delhi with the BOBCAT traffic	To be determined		Open	
2/16	Review the requirement to retain BOBCAT tool based on the increase in capacity utilising improved longitudinal spacing, taking into account forecast growth in air traffic	To be determined		Open	
2/17	Make recommendations to SAIOACG on the future status of the BOBCAT tool	To be determined		Open	
2/18	Malaysia to consider India's proposal to realign ATS route N877 from AMVUR to AGEGA and join ATS route L510. ATS route L510 will be eastbound only up to AGEGA within Chennai FIR and Kuala Lumpur ACC may facilitate both east bound and west bound between LEKIR and EMRAN within the Kuala Lumpur FIR	November 2022	India, Malaysia	Open	BOBTFRG/2 Report WP/05. Task updated at BOBTFRG/3. Malaysia positive, and would conduct meeting with India.
3/1	Engage in three party discussion between India, Indonesia and Malaysia to support the mitigating of LHDs at Chennai – Kuala Lumpur interface (Hot Spot A2)	SAIOSEACG/1	India, Indonesia, Malaysia	Open	BOBTFRG/3 Report re: WP/02.
3/2	Amendment to the BOBTFRG Terms of Reference	SAIOSEACG/1	ICAO	Open	BOBTFRG/3 Report re: WP/05.
3/3	Withdrawal of ATS Route B466 Segment in Chennai FIR	SAIOSEACG/1	India, Indonesia, Malaysia, ICAO	Open	BOBTFRG/3 Report re: WP/06.
3/4	Analysis on fleet equipage in ADS-C/CPDLC, RNP 10, RNP 4 and RNP 2 (continental and oceanic)	SAIOSEACG/1	States, IATA	Open	BOBTFRG/3 Report re: WP/08.

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
3/5	States requiring PBCS support to implement performance-based separation to develop its PBCS implementation plan, including expected date of implementation.	SAIOSEACG/1	India, Indonesia, Malaysia, Myanmar, Sri Lanka	Open	BOBTFRG/3 Report re: WP/08.

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