



ICAO

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The Second Meeting of the South Asia, Indian Ocean and Southeast Asia ATM Coordination Group (SAIOSEACG/2)

Bangkok, Thailand, 20 – 24 March 2023

Agenda Item 2: Review Outcomes of Related Meetings

BOBTFRG MEETING OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents outcomes from the Fourth Meeting of the Bay of Bengal Air Traffic Flow Review Group (BOBTFRG/4) for the review and action by SAIOSEACG.

1. INTRODUCTION

1.1 The Bay of Bengal Traffic Flow Review Group (BOBTFRG) was established by SAIOACG to analyse the traffic flows in the Bay of Bengal airspace and air routes, to consider the safety issues, and to optimise airspace capacity in the long term.

1.2 The Fourth Meeting of the Bay of Bengal Air Traffic Flow Review Group (BOBTFRG/4) was held via Video Teleconference from 6 to 8 December 2022. The meeting was attended by 72 participants from Bangladesh, India, Indonesia, Malaysia, Pakistan, Singapore, Sri Lanka, Thailand, the United States of America, IATA, IFATCA and ICAO. The relevant presentations and papers are available at <https://www.icao.int/APAC/Meetings/Pages/2022-BOBTFRG4.aspx>

2. DISCUSSION

Updates from States and IATA on ADS-C/CPDLC and PBCS Implementation

2.1 Malaysia presented its initiative to improve Air Traffic Services in the Bay of Bengal area. With the readiness and advanced capabilities in ATM Automation System and the satisfied performance criteria requirements in RCP240 and RSP 180, Malaysia would immediately implement 50 NM Performance-based separation over the BOB area to fully utilize the usage of PBCS separation, and further reduce the longitudinal separation minimum to 30 NM as well as lateral separation minimum to 23 NM for the next step.

2.2 India provided an insight into the existing facilities to support the Air-traffic management in the oceanic region of the Bay of Bengal in terms of Communication & Surveillance facilities and the futuristic plan to meet the demands of the growing air traffic for an enhanced capacity and improved efficiency as follows:

- **Ground-based ADS-B** data from Port Blair and Campbell Bay sensors integrated into the ATM Automation units at Chennai and from Port Blair sensor at Kolkata ACCs;
- **Space-based ADS-B** data integrated into the Automation Systems at Chennai,

Mumbai and Kolkata ACCs opening the new surveillance environment in India Airspace, with almost zero surveillance gap over the Indian oceanic airspace;

- **PBSC (RSP180 / RCP 240):** Chennai ATM Automation system is being upgraded to comply with PBCS (RSP 180 / PCP 240) considering implementation of PBCS designated routes of reduced separation standards over the oceanic region;
- **VHF RCAG SYSTEMS:** Offset carrier VHF system installed at Chennai-Vizag-Port Blair and Kolkata-Vizag-Port Blair sectors enhancing the VHF coverage for two important ATS routes;
- **AIDC** established with Chennai-Kuala Lumpur, Chennai-Maldives in the oceanic region, and Chennai-Yangon, Chennai-Colombo in the compatibility testing stage;
- **HF Radio** receivers recently networked to eliminate unserviceability due to the fading effect by achieving greater space and frequency diversity.

Discussion on PBN Routes Development

2.1 ICAO presented selected ATS route proposals from the most recent Version 21.2 of the *Asia/Pacific Region ATS Route Catalogue* for review and update by concerned States. More details will be discussed in a separate Working Paper.

- There were updates by States and IATA on HIMALAYA 02, IND 07 (N877 Extension), AFG 01, MID 02 (a), BOB 01, and BOB 02.
- ICAO informed the meeting that the proposals with no progress for more than 5 years as per the management protocol of the APAC ATS Route Catalogue would be reshuffled to be archived for future discussion or deletion from the list in consultation with relevant States and IATA. With the confirmation of Pakistan and IATA, IND 07 (N877 Extension) and MID 02 (a) have been archived.

Side Meeting between India and Malaysia

2.2 With regard to the withdrawal of B466 (Action Item 3/3 of the BOBTFRG Task List), the query from Malaysia regarding the non-PBN aircraft flying on the PBN route was answered by the ICAO APAC office, and Malaysia informed that further assessment of India's suggestion to realign B466 on N571 was needed, and feedback would be reported to the bi-lateral meeting with India.

2.3 Malaysia updated India regarding the progress made for India's proposal to realign ATS route N877 from AMVUR to AGEGA and join ATS route L510. Outcomes from Safety Risk Assessment (SRA) required lower-level transfer of aircraft arrival to VTSP. Joint SRA between Malaysia and India would be required subject to the agreement from India. India would evaluate the mitigation measures identified by CAAM and confirm the proposed date for a bilateral meeting regarding the level restriction by 1st week of January 2023. Technical discussion regarding AIDC would be proposed by Malaysia. India agreed to the suggestion. Update information will be provided by India in a separate IP to this meeting.

Progress of User-Preferred Route (UPR) Implementation in Indonesia

2.4 Indonesia provided an insight into their successful implementation of a User-Preferred Route trial operation based on the FREE ROUTE concept, where airspace users could freely plan a route between a defined entry point and a defined exit point, with the possibility to route via intermediate waypoints without referring to the Air Traffic Services (ATS) route network.

- ICAO congratulated Indonesia on their excellent and exemplary work in the UPR trial

- IATA suggested the meeting consider taking reference from the FLAS withdrawal trial in the Arabian Sea with a step-by-step approach and form a transition plan for FLAS optimization taking into account the ADS-C/CPDLC mandate timeline to ensure better-equipped aircraft were less affected by FLAS.
- As requested by Thailand, India agreed to investigate the possibility of including FL280 for ATS Routes L301, L524, M506, and N895 with support from IATA. India requested Thailand to provide a time period when additional flight levels are necessary. Thailand in turn requested IATA to help in the analysis of traffic.

Congestion in the BOB and IATA Survey Data

2.7 IATA provided information on options for reducing separation standards in the Bay of Bengal and supporting PBCS non-exclusive mandate trials based on the airline equipage and capability data inviting the meeting to prioritise implementation of the most efficient standards according to demonstrated performance capabilities.

- The survey data shows that for the region a large majority of the fleets of their member airlines that responded reported capability and regulatory approval to operate under PBCS, most also reported PBN capability of RNP4 or better.
- IATA informed the meeting that it had already been working with Malaysia to combine further traffic data and refine the analysis to demonstrate equipage and capability that supports immediate moves towards implementation of more efficient standards under PBCS. Also, IATA indicated its availability to work with other States to conduct similar refined analysis if required to assist in finalising a date for the PBCS mandate trial.
- **Figure 2** illustrating equipage analysis for April 2022 air traffic on Oceanic airways clearly indicates higher percentage of air traffic with ADS-C/CPDLC equipage.

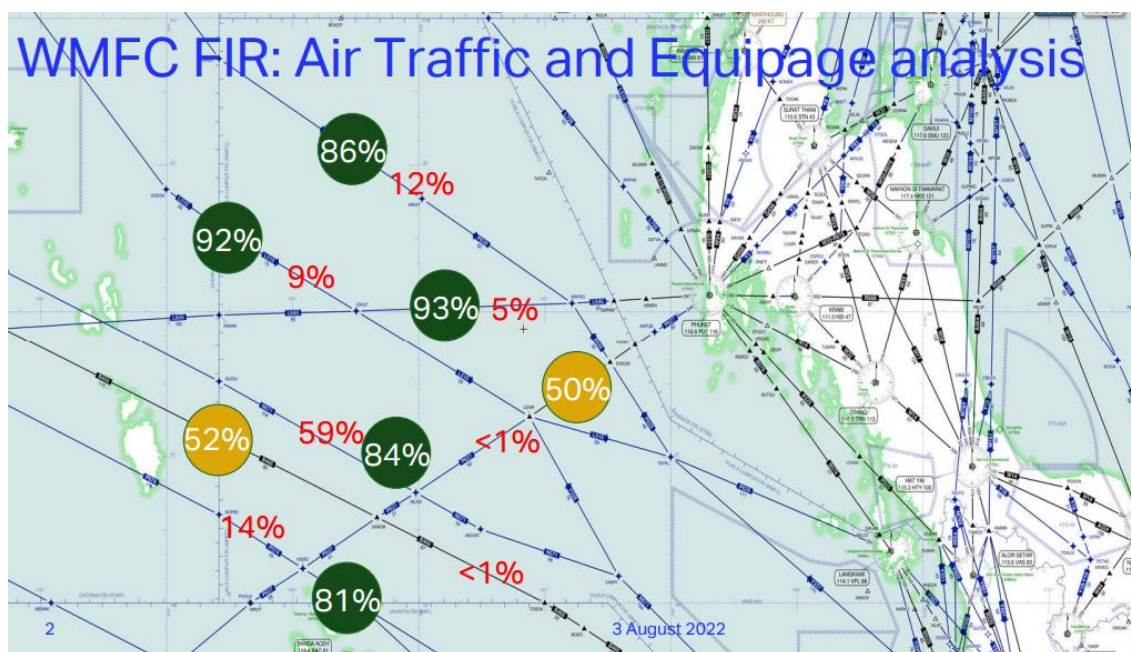


Figure 2: Air Traffic and Equipage analysis in WMFC FIR

- IATA reiterated its support for the PBCS mandate trial in the Bay of Bengal (and adjoining areas where relevant) taking reference to the NOPAC Route System and appealed to States concerned to prioritise the implementation of the most efficient separation standards according to demonstrated performance capabilities as applicable as possible.

2.8 With respect to discrepancies in fleet equipage data from IATA and some States such as India, ICAO elaborated on the reason behind, that some aircraft did not activate the function despite the capability available. So, the meeting recognised and reconfirmed that the mandate is the key to increasing the fleet equipage rate for smaller separation applications to enhance airspace capacity and efficiency.

- To foster the operators' equipage, as suggested by the Chair and IATA, a more specific PBCS operational approval process could be discussed as one of the key subjects when taking into consideration the regulatory aspects in the PBCS trial implementation planning.
- In response to a request by ICAO, IATA agreed to encourage and promote its member airlines including other airlines flying over the BOB airspace to file an operational approval to the respective authority, so that ANSP's ATM automation system could process the PBCS indicators in the flight plan and speed up the operators' equipage rate as the traffic returns were quite faster than expected.

Review of BOBTFRG Priority Areas Implementation Timelines

2.9 ICAO reminded the meeting that The BOBTFRG Priority Areas 1 and 2 were developed and agreed upon at the Second Meeting of the Bay of Bengal Traffic Flow Review Group (BOBTFRG/2, Bangkok, Thailand, 08 – 10 October 2019). The BOBTFRG/3 (VTC, 14 -15 December 2022) agreed to update the implementation timelines for each priority to reflect the changed factors by COVID-19.

- The meeting was invited to note the Performance Expectations in the *Asia/Pacific Seamless ANS Plan*, and recalled PBCS implementation provisions of ICAO Annexes 6 and 11, Doc 4444 PANS-ATM and Guidance Material.
- Highlighting that the ADS-C and CPDLC were identified as the most needed to support performance-based separations and to enhance the efficiency in the Bay of Bengal. ICAO reminded the meeting that as the ADS-C/CPDLC mandate is being deferred from the planned date. Given the urgent need to ensure the most efficient ATM systems to support the recovery of the aviation industry after severe financial losses during the COVID-19 and the benefits that performance-based separation would bring, ICAO urged all BOB States and IATA to step forward to firming up a timeline for mandating ADS-C/CPDLC including the affordable transitional period for un-equipped aircraft.

2.10 To ensure both Air Navigation Service Providers (ANSPs) and airspace users are ready and capable of PBCS and to develop a more detailed plan with feasible implementation timelines for all concerned Stakeholders including flight level band, forming a small working group, consisting of experts and participants from States concerned and IATA, was proposed as a good way to progress more effectively.

2.11 Considering the analysis results by IATA on fleet equipage of traffic over the Category R airspace in the BOB area, it was agreed by the meeting as the **Draft Decision** as below:

Draft Decision BOBTFRG/4-1: Form of the Bay of Bengal Route Network Small Working Group

*That, noting the objectives and the tasks under the BOBTFRG, to identify current CNS/ATM capabilities and CNS/ATM requirements to optimize the airspace to support the most efficient horizontal separations to be utilized, taking into account aircraft approval status and the new CNS/ATM capabilities, **Small Working Group** is to be formed to draft the trial implementation of PBCS with ADS-C/CPDLC mandate by defining the action items including all BOB member States and IATA, such as:*

- a) identify constraints and the CNS/ATM capabilities that are needed to implement the performance-based separation for 10 NM spacing over Category S airspace, 30 NM longitudinal separation over Category R airspace with support PBCS requirements;*
- b) define the timelines, milestones and dependencies for actions that should be followed;*
- c) firm up the mandate date for the ADS-C/CPDLC, which was identified as the key enabler for airspace enhancement;*
- d) draft the trial implementation plan for the PBCS over the Bay of Bengal area, including the phased detailed action plans.*

2.12 The works that have been done by the SWG will be presented by WP09 *Form of The Bay of Bengal Route Network Small Working Group* for this meeting.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) Noted the ***Draft Decision BOBTFRG/4-1: Form of The Bay of Bengal Route Network Small Working Group***
- c) discuss any relevant matters as appropriate.