



International Civil Aviation Organization

The Sixth Meeting of the Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF/6) and the First Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/1)

Bangkok, Thailand, 19 – 23 September 2011

Agenda Item 3: Operational Issues

**ATM ROUTES TO BE CONSIDERED IN IMPLEMENTATION OF PHASE 2 BOB-RHS
50 NM LONGITUDINAL SEPARATION**

(Presented by the Secretariat)

SUMMARY

The purpose of this paper is to discuss and agree on RNAV routes to be included in the implementation of Phase 2 of BOB-RHS, as well as specific RNAV routes not implemented in Phase 1 due to operational issues. It is expected that an AIRAC date for implementation of these RNAV routes should also be considered and agreed to.

1. INTRODUCTION

1.1 The first phase of the Bay of Bengal Reduced Horizontal Separation (BOB-RHS) project was implemented on 30 June 2011. Unfortunately, due to operational issues, only 2 routes of the proposed 4 routes in phase 1 were implemented on AIRAC date 30 June 2011. Reports from States indicated that there were no adverse issues encountered.

1.2 This phase was purposely designed as a test of both ADS-C/CPDLC systems and performance using 50NM longitudinal separation. Sufficient information on Phase 1 indicates that the meeting should now look at the 2nd Phase of the BOB-RHS/TF, which was designed to implement the majority of RNAV routes transiting the Bay of Bengal, Arabian Sea and most routes transiting the Kabul FIR.

2. DISCUSSION

2.1 Notwithstanding that the number of routes to be considered is far in excess than the routes considered in Phase 1 of the project, the methodology used in the implementation of Phase 1 remains the same. As mentioned previously, only 2 routes were finally implemented in Phase 1 one of which was a route transiting across the Bay of Bengal (N571) and then the Arabian Sea, and the other (P762) from Bangkok to Colombo.

Coordination with States outside the APAC region

2.2 In targeting Phase 2 of the project, it is now proposed to identify additional RNAV routes crossing the Bay of Bengal which transit either the Arabian Sea or the Kabul FIR for 50 NM longitudinal separation application. The routes passing through the Kabul FIR will exit via either

I.R.Iran, Turkmenistan or Uzbekistan. Agreement with these EUR/NAT States in reducing the longitudinal separation to 50NM is also required.

2.3 The meeting should note that considerable coordination has already taken place involving these three States mentioned above to ensure that FIRs bordering Kabul FIR agree to the implementation of reduced longitudinal separation, and positive responses have been indicated. Additional work is still required by all involved in the production of AIP SUPPs and LOAs.

RNAV routes identified in Phase 2 of BOB-RHS

2.4 The meeting is requested to look at the following routes for implementation of 50 NM longitudinal separation. These routes mainly cross the Bay of Bengal and then either proceed through India, Pakistan and Afghanistan to Europe or across India to the Middle East. There are some occasions where a route designator may change to cover a section of route involving one or two FIRs. The tables below indicate where 50 NM longitudinal separation is proposed to be introduced:

Proposed RNAV routes involved in Phase 2 Implementation of BOB-RHS 50NM

| No. | RNAV Route | FIRs Involved | Remarks |
|-----|------------|---|--|
| 1. | P570 | Jakarta, Colombo, Mumbai, Muscat | |
| 2. | M300 | Jakarta, Colombo, Mumbai, Muscat | |
| 3. | N563 | Kuala Lumpur, Jakarta, Colombo, Mumbai, Muscat | |
| 4. | P574 | Kuala Lumpur, Jakarta, Colombo, Mumbai, Muscat | |
| 5. | N877 | Chennai, Kolkata, Mumbai, | |
| 6. | B579/L759 | Kuala Lumpur, Bangkok, Yangon, Chennai, Kolkata, Mumbai, Delhi | Suggest Malaysia change B579 to RNAV route L759 for consistency |
| 7. | M770 | Kuala Lumpur, Bangkok, Yangon, Kolkata, | |
| 8. | L301 | Bangkok, Yangon, Kolkata, Mumbai, Muscat | |
| 9. | N895 | Yangon, Kolkata, Mumbai, Karachi | N895/G472 mirrored between Pathin VOR and PARTY. |
| 10. | P646 | Bangkok, Yangon, Kolkata, Delhi, | P646 between Bangkok and Varanasi only. |
| 11. | L507 | Bangkok, Yangon, Kolkata | L507 between Bangkok and Kolkata only. |
| 12. | N636 | Karachi, Kabul | Previously B210/B466 |
| 13. | UL333 | Karachi, Kabul, Tehran | Commences at SERKA |
| 14. | L750 | Lahore, Kabul, Turkmenabat | Commences at Zhob |
| 15. | N644 | Lahore, Kabul, Turkmenabat | Commences at DI |
| 16. | A466 | Lahore, Kabul, Samarkand | Commences at JHANG |
| 17. | L507 | Kolkata, Delhi, Lahore, Kabul | Commences at Gaya |
| 18. | P628 | Kuala Lumpur, Chennai, Kolkata, Mumbai, Delhi, Karachi, Kabul, Tehran, Ashgabat | Agreed that G792 be renamed to P628 in Karachi/Kabul and Tehran FIRs |
| 19. | L510 | Kuala Lumpur, Chennai, Kolkata, Mumbai | This route is labeled as Eastbound only. Also used Westbound during BOBCAT |

2.5 It should be remembered by the meeting that Item 18 and 19 above were originally labeled for implementation in Phase 1, however due to operational issues, were deferred to Phase 2 of the project.

2.6 In creating this Table above, it was also noticed that there were on some occasions, what appeared to be unnecessary duplication of both RNAV and conventional routes in different FIRs, which could lead to chart clutter. It is also recommended that where possible to do so, States should endeavour to ensure that there is a seamless RNAV path along routes which traverse many FIRs. In summary, it is recommended that States look at these areas for the purpose of simplifying the present route structure across the entire area under consideration.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) discuss and agree to the list of RNAV routes to be included in the implementation of Phase 2 of the BOB-RHS 50NM separation;
- b) ensure that a seamless RNAV approach should be taken across all FIRs involved; and
- c) discuss and agree to an implementation date of 50NM longitudinal separation on all RNAV routes mentioned above.

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