International Civil Aviation Organization

The Twenty-first Meeting of the Bay of Bengal ATS Coordination Group (BBACG/21)

Bangkok, Thailand, 07 – 10 March 2011

Agenda Item 3: Review Outcomes of Related Meetings

OUTCOMES OF BOB-RHS/TF

(Presented by the Secretariat)

SUMMARY

The purpose of this working paper is to update the meeting on work achieved by the Bay of Bengal Reduced Horizontal Separation Task Force (BOB-RHS/TF) which has held 5 meetings from November 2009 to February 2011.

1. INTRODUCTION

1.1 In order to ensure active progress towards implementation of reduced horizontal separations in the Bay of Bengal the meeting agreed to establish a Bay of Bengal Reduced Horizontal Separation Task Force (BOB-RHS/TF). The objectives of the ICAO Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF) were described in the draft Terms of Reference shown in Attachment 1 to this working paper. The initial scope of work commenced with a Phase 1 programme to implement widespread 50NM longitudinal separation using CPDLC communications in the Bay of Bengal during 2009.

1.2 Due to administrative difficulties, the first meeting of the task force was held in the ICAO Bangkok from 2 – 6 November 2009.

2. DISCUSSION

2.1 Five meetings of the task force have now been held, with consistent progress in the development of a Phase One implementation plan for 50NM longitudinal separation.

Proposed changes to Terms of Reference (TORs) of the BOB-RHS/TF

2.2 It became evident that, to achieve an early success in this worthwhile initiative, the original TORs would require expansion to include extensions westwards outside the Bay of Bengal on the four ATS routes selected for Phase One as well as other initiatives in future phases of the project. These extensions were:

a) For N571, include the whole route from Kuala Lumpur FIR through continental Indian airspace through the Mumbai FIR and into Muscat FIR;

b) L510 from Kuala Lumpur FIR through continental Indian airspace until joining P628;

c) P628 from Kuala Lumpur FIR through continental Indian airspace then joining G792 at Rahim Ya Khan (RK) through Karachi FIR and also through Kabul FIR into Tehran FIR;

d) P762 from DAWEI (DWI) to Colombo

2.3 It should also be noted that the BOB-RHS/TF agreed that for operational efficiency and consistency, two further routes were included in the Phase One implementation process, which were:

a) B466 from SERKA (Karachi FIR) to PAROD (Kabul FIR), and;

b) UL333 SERKA to SOKAM (Boundary point Kabul FIR/Tehran FIR).

2.4 The resultant effect of these important changes would allow traffic flow on these mentioned routes to have the capacity of 50NM longitudinal separation along these routes from the Eastern side of the Bay of Bengal to Tehran FIR (P628/L510) and N571 to Muscat FIR across the Arabian Sea. A similar benefit would be achieved in future Phases of the project.

2.5 The meeting is invited to discuss and agree to the TOR changes.

Changes from ATS routes to RNAV RNP10 Routes

2.6 It was further decided by the task force that, where appropriate ATS routes would be changed to RNAV RNP10 Routes on necessary segments of the routes mentioned above. Appropriate steps would be undertaken to coordinate these changes with States concerned.

Implementation of Phase One

2.7 At the 5th Meeting of the BOB-RHS/TF, the meeting agreed that the implementation date for Phase One of the project would be AIRAC Date 30 June 2011.

50Nm Longitudinal Separation Phase 2 operations on other ATS routes within the Bay of Bengal, Arabian Sea and parts of the Indian Ocean

2.8 The BOB-RHS/TF meeting agreed that, to achieve a uniform approach to all of these changes, both in Phase One and Phase Two, the original Terms of Reference (TORs) required modification to extend the areas in both Phases of implementation. Some of these amendments to the TORs had already been agreed to by the ATM/AIS/SAR/SG/20 meeting held in Singapore on 5 – 9 July 2010. A suggested amended TOR is part of this working paper as shown at Attachment 1.

2.9 Afghanistan advised that they now have full VHF coverage of their FIR which will allow Direct Controller-Pilot Communications (DCPC) in support of 50NM Longitudinal Separation requirements.

India Enroute Monitoring Agency – Bay of Bengal/Arabian Sea Monitoring Agency (BOBASMA)

2.10 India has been extensively working on their BOBASMA proposal and is expected to be endorsed by the Regional Airspace Monitoring Agency (RASMAG). The proposal is to be presented to APANPIRG for approval. They are continuing to be supported by the Sea East Asia Monitoring Agency (SEASMA) of the Civil Aviation Authority of Singapore.

2.11 The task force has been well represented by all States concerned as well as IATA, Boeing Company, SITA and ARINC. Two FIT-BOB meetings were also held during this period.

2.12 India, Malaysia and Myanmar have given high energy in successfully working with the Boeing Company to enhance their ADS-C/CPDLC capability. Sri Lanka, in cooperation with IATA, is continuing to test their CNS/ATM workstation and are satisfied with the results. They intend to also conduct tests using the Boeing "test bench" shortly. The Maldives have recently installed an Surveillance system which has an integrated ADS-C/CPDLC capability.

2.13 A visit to Myanmar was undertaken by ICAO and the Boeing Company for the purpose of a "bench test" of the Yangon ACC CNS/ATM workstation using equipment installed at the Boeing Laboratories in Seattle, USA. The test included accuracy of aircraft position, aircraft diversions and altitude changes, as well as hand-over procedures to neighbouring FIRs. All tests were successful.

Changes to the BOBCAT system as a result of the introduction of 50NM longitudinal separation

2.14 In order to gain benefits to the application of 50NM longitudinal separation for aircraft transiting the Kabul FIR during the published hours of BOBCAT, a procedure was devised that would reduce the time spacing between BOBCAT aircraft by 3 minutes along ATS routes as each Phase was introduced. This would allow significant savings to aircraft both from an economical as well as a reduced carbon emissions point of view.

Additional work from the five meetings held by the BOB-RHS/TF

Contingency Planning

2.15 A working paper was presented reminding States of their responsibilities in the production of suitable Contingency Plans in association with neighbouring FIRs which would allow a continued flow of aircraft through the affected area, or specific instructions as necessary to divert around the area affected. States were asked to follow the guidance given in the ICAO Draft Contingency Plan, and where necessary to do so, arrange coordination meeting with their neighbouring States to ensure harmonization of their respective Contingency Plans.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) discuss and endorse the work achieved by the task force;

b) endorse the proposed implementation date of AIRAC Date 30 June 2011 for Phase 1 implementation;

c) note the ongoing changes to the BOBCAT system as each Phase of the project is introduced; and,

d) endorse the changes to the TORs to cover the expanded area of the task force.

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Draft Terms of Reference

Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF)

1) The objective of the ICAO BOB-RHS Task Force is:

In collaboration with affected stakeholders and ensuring inter-regional harmonization, develop and implement strategic, benefits-driven plans to improve en-route airspace efficiency by means of the implementation of reduced horizontal separation (lateral and longitudinal) based on the ICAO RNAV 10 (RNP 10) and RNP 4 PBN navigation specifications along the Major Traffic Flow AR4 (Southeast Asia to Europe, South of the Himalayas and the Middle East).

2) To meet this objective the Task Force shall:

a) Review the existing Bay of Bengal and the Oceanic area of the Mumbai FIR route structures and examine suitability's for implementation of reduced horizontal separation.

b) Identify areas/routes where the implementation of reduced horizontal separation would bring immediate operational efficiency

c) Determine the reduced horizontal separation required, taking into account traffic volumes and disposition, approval status of the aircraft operating on the relevant routes, user expectations and the communication and surveillance capabilities of ATS providers involved.

d) Examine the possibility of a step-by-step or phased implementation of reduced horizontal separation and detail the phases required and the areas/routes concerned.

e) Develop and action the necessary strategic plans with appropriate timelines to implement reduced horizontal separations based on the APANPIRG Regional PBN Implementation Plan and ICAO Standards and Recommended Practices, whilst taking into account the need for inter-regional harmonization and user requirements.

f) Ensure the conduct of Annex 11 compliant pre-implementation safety assessments and make arrangements for States to conduct ongoing post-implementation safety monitoring in accordance with ICAO provisions.

g) Consider setting up appropriate teams/groups which might but not necessarily, include the entire Task Force, to address and implement specific agreed measures within specific airspaces.

h) Cooperate with other Task Forces and groups which are involved with similar work in adjacent airspaces in order to achieve harmonized inter-regional solutions.

i) Explore possibilities for further enhancements to operational efficiency of routes through reconfiguration and/or enhanced surveillance.

3) Scope of work:

The Task Force shall adopt a phased implementation programme, as follows:

Phase One: Implement 50NM longitudinal separation using CPDC or CPDLC communications in the Bay of Bengal and the Oceanic area of the Mumbai FIR as well as some portions of the Kabul FIR, on the following ATS routes:

a) N571 across the Bay of Bay of Bengal and the Oceanic area of the Mumbai FIR into Muscat FIR;
b) L510 across the Bay of Bengal into India airspace joining P628;
c) P628 across the Bay of Bengal through India, G792 through Karachi FIR and Kabul FIR into Tehran FIR:
d) UL333 from SERKA (Karachi FIR) through Kabul FIR to SOKAM (BDY Kabul/Tehran FIRs;
e) B466 from SERKA (Karachi FIR) to PAROD (Kabul FIR)
f) P762 from DAWEI (DWI) to KAT (Colombo)

Phase Two: a) Implement 50 NM longitudinal separation on all other RNAV routes across the Bay of Bengal, Arabian Sea and some portions of the Indian Ocean (for aircraft from Southeast and Southern Asia to South Africa);
b) Implement 50NM longitudinal separation on L509 from SAMAR through Lahore and Kabul FIRs
c) Implement 50NM longitudinal separation on N644, L750 through Lahore and Kabul FIRs

Phase Three: *To be determined*

The Task Force reports via the ICAO Bay of Bengal ATS Coordination Group (BBACG) to the ATM/AIS/SAR Sub Group of APANPIRG.

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