



## INTERNATIONAL CIVIL AVIATION ORGANIZATION

**TWENTY SIXTH MEETING OF THE ASIA/PACIFIC AIR NAVIGATION  
PLANNING AND IMPLEMENTATION REGIONAL GROUP  
(APANPIRG/26)**

Bangkok, Thailand, 7 – 10 September 2015

**Agenda Item 3: Performance Framework for Regional Air Navigation Planning and  
Implementation**
**3.2: ATM**
**OUTCOMES OF THE SECOND BANGLADESH, INDIA, MYANMAR, THAILAND ATM  
COORDINATION MEETING (BIMT/2)**

(Presented by Bangladesh, India, Myanmar and Thailand)

**SUMMARY**

This Information Paper presents the conclusions from the Second Bangladesh, India, Myanmar, Thailand ATM Coordination Meeting (BIMT/2) which was held in Yangon, Myanmar from 22 to 24 June 2015.

*Strategic Objectives:*

- A: **Safety** – Enhance global civil aviation safety
- B: **Air Navigation Capacity and Efficiency**—Increase the capacity and improve the efficiency of the global aviation system
- E: **Environmental Protection** — minimize the adverse environment effects of civil aviation activities.

## 1. INTRODUCTION

1.1 The Second Bangladesh, India, Myanmar, Thailand ATM Coordination Meeting (BIMT/2) was held in Yangon, Myanmar from 22 to 24 June 2015, kindly hosted by DCA Myanmar. The meeting was arranged to discuss and collaborate on ATM coordination issues focusing on the four States involved and covering the air traffic services and airspace over the Northern Bay of Bengal. Twenty (20) participants attended the meeting.

## 2. DISCUSSION

2.1 BIMT/2 Meeting yielded four (4) important Conclusions aiming to enhance efficiency and capacity of air traffic services over the northern Bay-of-Bengal. The four Conclusions were presented here for ease of reference:

2.2 Conclusion BIMT2/1: BIMT States agreed on the design of the enhanced route structure, PBN navigation specification, and implementation plan and a transitional strategy. This conclusion included an agreed plan to establish parallel routes for existing L507 and L301 and realignment/enhancement for G463, P464 and N895. While continuing using the existing Flight Level Allocation, the enhanced route structure and new longitudinal separation are planned in be operational by 2016.

2.3 Conclusion BIMT2/2: India and Myanmar agreed on the establishment of an RNP 10 route from IIM to LINSO. This route will initially use 50 NM longitudinal separation and the two States agreed to consider a transition towards RNAV2 or RNP 2 with possibly 20 NM longitudinal separation in the near future.

2.4 Conclusion BIMT2/3: Noting the upcoming agreement among India, Pakistan and Iran on using 50 NM longitudinal separation for existing RNP10 routes, India requested and Thailand and Myanmar agreed in principal to use 50 NM longitudinal separation for all existing RNP 10 routes towards India as an interim measure. India will coordinate this effort for a common date of implementation and LOA updates are expected to be done by BOBASIO/5.

2.5 Conclusion BIMT2/4: BIMT States advised airlines operating over Northern Bay-of-Bengal to start getting ready for ADS-B operation. The airlines should also considered preparing for RNP 2 or (RNAV2 with ADS-B) to support a future transition.

2.6 A full Report of BIMT/2 may be found in the **Appendix** of this Information Paper.

### **3. ACTION BY THE MEETING**

3.1 The Meeting is invited to note the outcomes of BIMT/2 Meeting.

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**REPORT  
OF  
THE SECOND  
BANGLADESH, INDIA, MYANMAR, THAILAND  
COORDINATION MEETING  
(BIMT/2)**

**Yangon, Myanmar, 22-24 June 2015**

## **1.1 Introduction**

1.1.1 The Second Bangladesh, India, Myanmar, Thailand ATM Coordination Meeting (BIMT/2) was held in Yangon, Myanmar from 22 to 24 June 2015, kindly hosted by DCA Myanmar. The meeting was arranged to discuss and collaborate on ATM coordination issues focusing on the four States involved and covering the air traffic services and airspace over the Northern Bay of Bengal.

## **1.2 Officers, Secretariat and Participants**

1.2.1 The meeting was facilitated by U Tike Aung, Director (ANS), DCA Myanmar. Upon a request by the meeting, Mr. Noppadol Pringvanich, Chief, ICAO APAC RSO, served as the secretariat of the meeting. The facilitator and the secretariat were assisted by U Soe Paing, Deputy Director (ANS), DCA Myanmar.

1.2.2 Twenty (20) participants from Bangladesh (Civil Aviation Authority of Bangladesh: CAAB), India (Airports Authority of India: AAI), Myanmar (Department of Civil Aviation Myanmar: DCA Myanmar), Thailand (Aeronautical Radio of Thailand: AEROTHAI), and ICAO Asia-Pacific Regional Sub-office (ICAO RSO) attended the meeting. The list of participants can be found in **Appendix A** of this report.

## **1.3 Opening of the Meeting**

1.3.1 U Tike Aung welcomed the participants to Myanmar and the meeting, and remarked on the importance of collaboration between Bangladesh, India, Myanmar, and Thailand in working toward harmonized air traffic flow within the Bay of Bengal sub-region. Participants were encouraged to have open discussion in a relaxed collaborative atmosphere throughout the meeting.

1.3.2 Mr. Noppadol Pringvanich provided a briefing on the ICAO APAC RSO's roles and responsibilities in supporting PBN and ATFM/CDM implementation efforts in Asia-Pacific region and extended the RSO's continuing support to BIMT.

## **1.4 Documentation and Working Language**

1.4.1 The meeting was conducted in English. All meeting documentation was in English.

1.4.2 All presentations presented at the meeting were attached in **Appendix B** of this report.

## **Summary of Conclusions**

Conclusion 2/1: BIMT States agreed on the design of the enhanced route structure, PBN navigation specification, and implementation plan and a transitional strategy as shown in Appendix E of this report.

Conclusion 2/2: India and Myanmar agreed on the establishment of an RNP 10 route from IIM to LINSO. This route will initially use 50 NM longitudinal separation and the two States agreed to consider a transition towards RNAV2 or RNP 2 with possibly 20 NM longitudinal separation in the near future.

Conclusion 2/3: Noting the upcoming agreement among India, Pakistan and Iran on using 50 NM longitudinal separation for existing RNP10 routes, India requested and Thailand and Myanmar agreed in principal to use 50 NM longitudinal separation for all existing RNP 10 routes towards India as an interim measure. India will coordinate this effort for a common date of implementation and LOA updates are expected to be done by BOBASIO/5.

Conclusion 2/4: BIMT States advised airlines operating over Northern Bay-of-Bengal to start getting ready for ADS-B operation. The airlines should also considered preparing for RNP 2 or (RNAV2 with ADS-B) to support a future transition.

## **Summary of Action Items**

Action 2/01 – By August 2015, Myanmar to provide to India the gap analysis for the AIDC requirement as shown in Appendix D. Myanmar and India will also participate in an AIDC coordination meeting in Delhi by 31 August 2015 in conjunction with upcoming BOBASIO meeting.

Action 2/02: As a way to satisfy the requirement for the Target Level of Safety (TLS) for the use of Reduced Longitudinal Separation, Bangladesh, Myanmar and Thailand were invited to refer to the Pre-implementation Safety assessment conducted by BOBASMA and submitted to WP/27 of RASMAG/14 WP8 of RASMAG/15 and the periodical Safety Assessment WP09 of RASMAG/20 for the introduction 50 NM Reduced Horizontal Separation in the region.

Action 2/03: RSO was invited to consider providing coordination assistance with China regarding IIM-LINSO route and its potential extension towards Kunming.

Action 2/04: BIMT States were invited to attend ATFM/CDM workshops and trainings being provided by ICAO APAC RSO for 2015. BIMT States were also invited to consider requesting ATFM/CDM training and implementation support from RSO for the year 2016.

Action 2/05: BIMT requested ICAO APAC RSO to coordinate with the FAA for BIMT States to participate in ATFM Teleconferences.

Action 2/06: To ensure a leveled playing field during coordination and implementation of ATFM within the APAC region, Thailand and Myanmar requested ICAO APAC RSO to provide support to Laos PDR in the area of ATFM/CDM training.

Action 2/07: Thailand and Myanmar were invited to consider the sharing of ADS-B data between Bangkok and Co Co island ground stations to support future enhancement.

## BIMT/2 Report

Action 2/08: BIMT States were invited to consider utilizing the samples AIC publications, including AIP Supplement 18/2014 of India, to support their future ADS-B and PBN implementations.

Action 2/09: India was requested to draft contingency procedures supporting L301 and L507 parallels during cyclone to be reviewed by BIMT States at the BIMT/3 meeting.

Action 2/10: BIMT/2 agreed to present a paper to APANPIRG/26 reporting the outcomes of this meeting. Myanmar as the host State of BIMT/2 would present the paper. Other BIMT States would provide supporting statements following the presentation of the paper.

### **Agenda Item 1 – Adoption of Agenda**

1.1 The meeting adopted the meeting agenda and programme as shown in **Appendix C** of this report.

### **Agenda Item 2 – Review of the Report of BIMT/1**

2.1 BIMT/2 reviewed the BIMT/1 report, which was circulated earlier, and adopted the report.

### **Agenda Item 3 – ATM matters**

#### **Agenda Item 3.1 a ATM system implementation**

3.1a.1 Myanmar presented the progress of ATM system enhancement in Myanmar. Myanmar traffic growth was observed to be increased by 13.1% annually. Some overflight routes had their traffic increased by 19% in one year. A599 (19% annual growth), L507 (13%) and L301 (13%) were the dominant overflight routes. DCA Myanmar was enhancing on its communication infrastructure by installing VSAT/RCAG-VHF at Tachileik and planning the same for Coco Island. ADS-B ground stations at Co Co island and Sittwe had also been installed. An ADS-B data sharing agreement between India and Myanmar had been signed.

3.1a.2 Bangladesh provided an update on a project regarding to ADS-B, ATM system and RADAR in Bangladesh. The update included information on a JICA project on RADAR installation at Chittagong which was expected to be completed in 2015.

3.1a.3 India provided a presentation on planning and operations at Kolkata ATC Centre.

3.1a.4 Thailand provided presentations on Thailand Modernization CNS/ATM System (TMCS) and Thailand's ATM Network Management Center which was scheduled to be in operation in 2016.

#### **Agenda Item 3.1 b AIDC**

3.1b.1 Myanmar provided a presentation on her plan for AIDC implementation and trials. Chennai, Kolkata and Bangkok were invited to take part of the trials by 2016. Myanmar also requested support from India in sharing information on AIDC.

3.1b.2 India provided a presentation on her AIDC implementation at Kolkata ACC. The AIDC at Kolkata was considered to be in compliance with APAC ICD version 3.0. During this meeting, India also provided Myanmar the technical requirement for AIDC connection as shown in **Appendix D** of this report.

***Action 2/01 – By August 2015, Myanmar to provide to India the gap analysis for the AIDC requirement as shown in Appendix D. Myanmar and India also plan to participate in an AIDC coordination meeting in Delhi by 31 August 2015 in conjunction with upcoming BOBASIO meeting.***

3.1b.3 Thailand provided a presentation on their AIDC implementation plan.

### **Agenda Item 3.2 ATS Coordination**

a) Coordination errors in the ATC to ATC transfer of control responsibility (Cat E LHD)

3.2.1 Myanmar reported information of LHD coordination error from April to June 2015. Most of errors were from ATC coordination which might come from increasing work load for ATC. Myanmar suggested that AIDC and surveillance data sharing/hand-over could be part of long term solution.

3.2.2 Following the report from Myanmar, India proposed an interim solution starting in July 2015 to have a single coordination point at Kolkata ATCC to be contacted by Myanmar. The interim solution was accepted by Myanmar.

b) Difficulties in ATC coordination

3.2.3 Myanmar invited India to consider the ATC familiarization visit to enhance coordination. India agreed to provide feedback on this invitation by the upcoming ATM BOBASIO/5 meeting.

3.2.4 Bangladesh informed the meeting that the requests for climb through FL290 over Yangon FIR were often not given. Myanmar explained that this limitation was due to the lack of surveillance over the northern part of Myanmar and heavy traffic over A599.

c) Communication Difficulties

3.2.5 No specific discussion on this agenda item.

d) FLAS limitation

3.2.6 Noting limitation in India due to crossing traffic over L301, the meeting agreed to use the current FLAS but focus of reducing longitudinal separation and adding parallel route to L301 as ways forward in capacity enhancement

3.2.7 India informed the meeting that they have conducted an evaluation of safety level under reduced separation minima as shown in WP/27 of RASMAG/14 WP8 of RASMAG/15 and WP09 of RASMAG/20. The result proved satisfactory.

***Action 2/02: As a way to satisfy the requirement for the Target Level of Safety (TLS) for the use of Reduced Longitudinal Separation, Bangladesh, Myanmar and Thailand were invited to refer to the Pre-implementation Safety assessment conducted by BOBASMA and submitted to WP/27 of RASMAG/14 WP8 of RASMAG/15 and the periodical Safety Assessment WP09 of RASMAG/20 for the introduction 50 NM Reduced Horizontal Separation in the region.***

### **Agenda Item 3.3 Airspace Management**

3.3.1 The meeting reviewed the outcomes of the PBN Design Session which were jointly conducted by BIMT States and ICAO APAC RSO on 3-5 February 2015 at ICAO APAC RSO. The outcomes of the Design Session included a draft enhanced international route structure over the Northern Bay of Bengal, tentative PBN navigation specification and a draft work plan.



3.3.2 Using the outcome of the Design Session as a basis, Thailand and Myanmar jointly presented the outcomes of Myanmar-Thailand coordination meeting on PBN harmonization which was conducted in June 2015. This bilateral meeting resulted in some recommendations on the draft international route structure especially for the portion between Yangon and Bangkok FIR. The meeting noted and reviewed the recommendations.

3.3.3 Bangladesh notified the meeting that CAAB was still under coordination with the military regarding the establishment of G463'. The meeting noted that this situation did not impact the rest of the draft route structure and encouraged CAAB to continue their effort in coordinating with the military.

3.3.4 Following the review of Design Session outcomes and incorporating recommendations from the Thailand-Myanmar coordination meeting, BIMT States agreed on the design of the enhanced route structure, PBN navigation specification, and implementation plan and a transitional strategy as shown in **Appendix E** of this report.

***Conclusion 2/1: BIMT States agreed on the design of the enhanced route structure, PBN navigation specification, and implementation plan and a transitional strategy as shown in Appendix E of this report.***

3.3.5 India and Myanmar discussed and agreed on the establishment of an RNP 10 route from IIM to LINSO. This route will initially use 50 NM longitudinal separation and the two States agreed to consider a transition towards RNAV2 or RNP 2 with possibly 20 NM longitudinal separation in the near future. The meeting noted the agreement between the two States.

***Conclusion 2/2: India and Myanmar agreed on the establishment of an RNP 10 route from IIM to LINSO. This route will initially use 50 NM longitudinal separation and the two States agreed to consider a transition towards RNAV2 or RNP 2 with possibly 20 NM longitudinal separation in the near future.***

3.3.6 Myanmar and India requested ICAO APAC RSO to assist with the coordination with China in order to extend the IIM-LINSO routes towards southern China including Kunming.

***Action 2/03: RSO was invited to consider providing coordination assistance with China regarding IIM-LINSO route and its potential extension towards Kunming.***

3.3.7 India informed the meeting about the upcoming agreement among India, Pakistan and Iran on using 50 NM longitudinal separation for existing RNP 10 routes. The meeting noted the information and formed the following conclusion:

***Conclusion 2/3: Noting the upcoming agreement among India, Pakistan and Iran on using 50 NM longitudinal separation for existing RNP10 routes, India requested and Thailand and Myanmar agreed in principal to use 50 NM longitudinal separation for all existing RNP 10 routes towards India as an interim measure. India will coordinate this effort for a common date of implementation and LOA updates are expected to be done by BOBASIO/5.***

3.3.8 Myanmar presented a presentation on her PBN plan including the implementation of PBN at Yangon and Mandalay international airports and a plan for implementing PBN domestic parallel route structure and ACC re-sectorization.

3.3.9 ICAO APAC RSO provided a presentation on Global PBN Progress. The meeting also noted the progress of PBN implementation by each of BIMT States and the associated global and regional targets.

3.3.10 Noting the plan for PBN and ADS-B implementation within the BIMT States, the meeting formed the following conclusion:

***Conclusion 2/4: BIMT States advised airlines operating over Northern Bay-of-Bengal to start getting ready for ADS-B operation. The airlines should also considered preparing for RNP 2 or (RNAV2 with ADS-B) to support a future transition.***

#### **Agenda Item 3.4 ATFM/CDM**

3.4.1 ICAO APAC RSO provided a presentation on ATFM support to APAC and BIMT States, including ATFM/CDM trainings and assistance being provided by ICAO APAC RSO. The meeting noted the current support on ATFM/CDM and encouraged BIMT States to attend the relevant trainings and workshops scheduled for 2015.

***Action 2/04: BIMT States were invited to attend ATFM/CDM workshops and trainings being provided by ICAO APAC RSO for 2015. BIMT States were also invited to consider requesting ATFM/CDM training and implementation support from RSO for the year 2016.***

3.4.2 ICAO APAC RSO notified the meeting about a potential invitation from the FAA for BIMT States to observe their ATFM daily teleconference in the future. This activity might serve as a starting point for organizing effective ATFM teleconferences both in national and sub-regional levels.

3.4.3 BIMT States expressed their initial interest in this potential invitation and requested more detailed information to be gathered and coordinated.

***Action 2/05: BIMT requested ICAO APAC RSO to coordinate with the FAA for BIMT States to participate in ATFM Teleconferences.***

3.4.4 Thailand presented a presentation on its traffic situation, especially regarding demand over capacity at VTBD, VTCC, VTSP and VTBD and over Bangkok TMA. Thailand had conducted capacity assessments of sectors and was working on capacity enhancement initiatives, including new automation system, AMAN/DMAN and AIDC. Thailand was also pursuing short term measures including demand prediction and gate hold procedures.

3.4.5 Thailand presented a presentation on Multi-nodal ATFM project which was commencing its operational trial. The trial would include 10 APAC States. Regarding regional harmonization under the multi-nodal project, multi-nodal partners were planning to invite Laos and Myanmar to be part of multi-nodal project initially as Level 1 – ATMF Nodes (observers). Thailand also presented information on the work plan of multi-nodal project.

***Action 2/06: To ensure a leveled playing field during coordination and implementation of ATFM within the APAC region, Thailand and Myanmar requested ICAO APAC RSO to provide support to Laos PDR in the area of ATFM/CDM training.***

3.4.6 India presented a presentation on India's work plan and progress for procurement and commissioning of ATFM system aiming for Phase 1 operation in March 2016. The meeting was also informed that India was organizing an ATFM workshop in cooperation with ICAO APAC RSO in September 2015 in New Delhi.

## **Agenda Item 4 CNS Matters**

### **Agenda Item 4.1 ADS-B Implementation**

4.1.1 Myanmar informed the meeting that Myanmar had installed ADS-B ground stations at Co Co island and Sittwe and would install additional stations including Yangon, Mandalay and Myeik in 2016. Myanmar also signed an ADS-B data sharing agreement with India at 2015 CANSO conference. Myanmar invited Thailand to discuss ADS-B data sharing agreement in the future.

4.1.2 Thailand presented information on ADS-B and SSR implementation plans, including surveillance data sharing.

***Action 2/07: Thailand and Myanmar were invited to consider the sharing of ADS-B data between Bangkok and Co Co island ground stations to support future enhancement.***

4.1.3 India informed the meeting that it had installed ADS-B ground stations throughout its FIRs and had ADS-B data integrated into the ATM system. Currently, AAI was looking forward to an approval from the regulator before utilizing ADS-B data. India also brought into the attention of the meeting its AIC publication regarding ADS-B Out Surveillance Services.

4.1.4 Additionally, ICAO APAC RSO provided an example of AIC publication regarding PBN route implementation to the meeting. The meeting considered the two sample AICs and formed the following action item:

***Action 2/08: BIMT States were invited to consider utilizing the samples AIC publications, including AIP Supplement 18/2014 of India, to support their future ADS-B and PBN implementations.***

## **Agenda Item 5: Future Directions**

### **5.1 Surveillance and Communications Data Sharing**

5.1.1 This agenda item was discussed in conjunction with Agenda Item 4.1.

## **Agenda Item 6: Other Matters**

### **Agenda Item 6.1 a: Contingency Route**

6.1a.1 Thailand, India and Myanmar reviewed the structure of their contingency routes during the meeting. Noting the upcoming implementation of L301 and L507 parallels, the meeting formed the following action item:

*Action 2/09: India was requested to draft contingency procedures supporting L301 and L507 parallels during cyclone to be reviewed by BIMT States at the BIMT/3 meeting.*

**Agenda Item 6.1 b: Outcomes of Regional PBN Seminar and PBNICG/2 Meeting**

6.1b.1 ICAO APAC RSO presented the outcomes of ICAO APAC PBNICG/2 Meeting and the ICAO Regional PBN Seminar.

**Agenda Item 6.1 c: Reporting to ICAO Forum: Submission of Meeting Report as part of Joint IP to APANPIRG/26**

6.1c.1 The meeting agreed on the following action item:

*Action 2/10: BIMT/2 agreed to present a paper to APANPIRG/26 reporting the outcomes of this meeting. Myanmar as the host State of BIMT/2 would present the paper. Other BIMT States would provide supporting statements following the presentation of the paper.*

**Agenda Item 6.1 d: Date and Venue**

6.1d.1 BIMT States requested Bangladesh to consider hosting the BIMT/3 meeting in 2016.

**Other Business and Closing**

6.2.1 Myanmar requested an update on the progress on SAR-LOA updating with India. India informed the meeting that the SAR-LOA update was still under consideration.

6.2.2 The meeting facilitator congratulated the meeting for its fruitful outcomes. He also thanked participants and ICAO APAC RSO for active participations and support.