



International Civil Aviation Organization

The Combined Meetings of the Fifth FANS Implementation Team – Bay of Bengal (FIT-BOB/5), the Second FANS Implementation Team – South East Asia (FIT-SEA/2), the First Air Traffic Flow Management Task Force (ATFM/TF/1) and ADS/CPDLC Seminar

Bangkok, Thailand, 18 - 22 April 2005

Agenda Item 6: Air Traffic Flow Management Plan and Implementation

AIR TRAFFIC FLOW MANAGEMENT TASK FORCE REVIEW AND PLANNING

(Presented by the Secretariat)

SUMMARY

This paper summarizes the establishment of the Air Traffic Flow Management Task Force (ATFM/TF) under the Bay of Bengal ATS Coordination Group (BBACG) to progress flow management strategies for the Bay of Bengal/South Asia area. The paper also seeks to review and update the draft ATFM/TF Terms of Reference and Task List, and encourages activities aimed at implementing an operational ATFM plan in the Bay of Bengal by the third quarter of 2005, in accordance with the ATFM/TF implementation plan.

1 INTRODUCTION

1.1 Recent meetings of APANPIRG, the BBACG and the RVSM/TF have all recognized a need to improve the overall management of traffic flows across the Bay of Bengal area. APANPIRG/15 (August 2004) had noted the considerable efforts being made by States to collaborate together with IATA to improve the ATFM over the Bay of Bengal area and encouraged all parties to continue their efforts and to take into account the benefits to be derived from ATM automated systems.

1.2 During RVSM/TF/24 (November 2004) further extensive discussion took place regarding aspects of ATFM in the Bay of Bengal. RVSM/TF/24 recommended that a special coordination meeting should be convened to study the matter in greater detail, and consideration be given to conducting an operational trial to enable the States concerned to assess the effectiveness of any automated ATFM system selected and the corresponding ATFM plan.

1.3 In order to progress this work, the Special Coordination Meeting – Bay of Bengal (SCM-BOB) called for by RVSM/24 was held in conjunction with the BBACG/16 meeting during 31 January – 4 February 2004. The SCM-BOB meeting agreed that a dedicated Air Traffic Flow Management Task Force should be established under BBACG to plan and develop an ATFM service for the Bay of Bengal and South Asia.

2 DISCUSSION

Establishment of the ATFM Task Force

2.1 SCM-BOB drafted the following Terms of Reference of the ATFM Task Force for the Bay of Bengal and South Asia region. The ATFM Task Force would report to the BBACG.

Objectives:

The objectives of the Air Traffic Flow Management Task Force (ATFM/TF) are to:

1. To enhance and facilitate the orderly and efficient flow of air traffic across the Bay of Bengal and South Asia;
2. To minimize ground and enroute delays;
3. To maximize capacity and optimize the flow of air traffic within the area;
4. To plan for and manage future ATS workload in the light of forecast increased traffic flow within the area; and
5. To assess the economic and environmental impact of the implementation of the ATFM system.

Implementation Programme

To meet these objectives the ATFM/TF shall adopt a phased implementation programme as per the following:

Phase One: Flights planning to transit the Kabul FIR

Phase Two: Other international flights crossing the Bay of Bengal and/or South and South East Asia areas

Phase Three: Future planning for increased traffic within the Bay of Bengal and South and South East Asia areas

(Note: For the purposes of the ATFM/TF, South Asia includes, India, Nepal, Pakistan and Sri Lanka).

ICAO Reference Documents:

- *Procedures for Air Navigation Services — Air Traffic Management* (Doc 4444, 3.2 - Air Traffic Flow Management), and
- *Air Traffic Services Planning Manual* (Doc 9426)

Phase One

2.2 The ATFM/TF agreed that priority should be given to resolving the immediate problems encountered by westbound traffic operating across the Bay of Bengal to Europe during the night time period. In order to progress toward a solution, the following steps were identified to assist in the implementation of ATFM in this context by the third quarter of 2005:

- a) complete an analysis of the traffic data including Departure/Arrival data;
- b) identify bottleneck areas;
- c) develop an ATFM tool to optimize the usage of all ATS routes and levels available through the Kabul FIR;
- d) Undertake a series of trials and demonstrations of the ATFM tool; and
- e) Develop the ATFM/TF Task List, as shown in the **Attachment**.

2.3 The SCM-BOB considered that in view of the tight timescale proposed, the ATFM/TF would need to perform its tasks in an efficient and timely manner, and a core team approach would be adopted. In consideration of appointing a chairperson, SCM-BOB requested Australia if they would be prepared to make Mr. Ron Rigney of Airservices Australia available to chair the ATFM/TF as he had considerable experience in a leadership role with ICAO regional projects such as Y2K contingency planning, EMARSSH and RVSM. Australia supported the request, subject to the normal Airservices Australia approval process.

2.4 The SCM-BOB agreed that the ATFM/TF should hold its first meeting as soon as practicable. In this regard, it was agreed that if States were able to include the ATFM/TF member in their delegation to the combined FIT-BOB/SEA seminar and meeting scheduled for 18-22 April 2005, it would be possible to arrange an initial meeting of the ATFM/TF during this period. States were also urged to nominate a person to serve on the ATFM/TF and provide contact details to the Secretariat.

2.5 The SCM-BOB requested the ATFM/TF members to continue discussions over next few weeks “off-line” with key organizations/industry stakeholders to consider/evaluate options for an ATFM tool and to update FIT-BOB/SEA at their combined April meeting.

2.6 Accordingly, an informal ‘mini’ working group meeting of several South East Asia task force members and industry stakeholders was held at the Singapore Aviation Academy on 14 & 15 March 2005. The meeting was attended by the Australian task force Chairman and representatives from Singapore, Thailand, and IATA officers and airline representatives. The meeting commenced work on a draft framework for the proposed ATFM/TF activities to be considered by the full ATFM/TF/1 meeting in April.

Thailand’s ATFM developments

2.7 Thailand informed the SCM-BOB that they had already commenced work on developing an ATFM computer model and had set a target date to complete testing, acceptance and completion by the third quarter of 2005. In recognizing work being done in this area by other States involved, Thailand was prepared to take a proactive role in the establishment of an effective ATFM system for the area under consideration.

2.8 Thailand considered that any system or systems implemented to increase the efficiency of traffic movements in the area under consideration, should not only be practical and robust, but also have the flexibility to adapt to changing circumstances such as adverse weather conditions, which occur frequently in the Bay of Bengal area, as well as restrictions and special requirements that may be imposed by States as in the case of Afghanistan.

2.9 In view of the complexities and size of this project, as well as the urgency in overcoming the airspace management problems, Thailand was also interested in working with partners to share ideas and workload for the purpose of putting in place a system to allow for a smooth flow of traffic and meet present and future airspace management requirements.

2.10 The SCM-BOB, on reviewing the issues described above, agreed to support Thailand's initiative to develop and operate an automated ATFM system to address the westbound traffic flow problems. The meeting also agreed that in the longer term, it would be necessary to put in place a more comprehensive ATFM system to cater for the increasing traffic. The SCM-BOB requested Thailand to provide more details on the Concept of Operations of the ATFM system being developed. Thailand agreed to make this available to the Regional Office by early April 2005 for circulation to States and users concerned.

US FAA Dynamic Ocean Track System Plus (DOTS+)

2.11 During RVSM/TF/24, in response to an invitation from the Regional Office, an FAA representative briefed the meeting regarding the DOTS+ automated flow management system. DOTS+ and its Online Track Advisory service has been in operational use in the United States for more than 10 years and could be readily modified to manage the westbound departures across the Bay of Bengal. The system was developed by the FAA, but could be owned and operated by a State ATS provider(s) or by IATA and its member airlines, and the software provided by the FAA under a licensing arrangement.

2.12 Subsequent to the 'mini' working group meeting in Singapore on the 14th & 15th March, the Chairman of the ATFM/TF requested that the Regional Office urge the attendance of the FAA at the ATFM/TF/1 meeting in order that the FAA could provide comprehensive briefings in regard to DOTS+ applications suitable for the Bay of Bengal.

Establishment of an Operational Trial

2.13 In regard to implementation of a Bay of Bengal ATFM system, the SCM-BOB agreed that an operational trial would be required and this matter would be considered further by the ATFM/TF.

3 ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review and update the terms of reference of the ATFM/TF;
- b) review and update the attached Task List of the ATFM/TF, including provisions for the establishment of an operational trial; and
- c) undertake activities aimed at implementing an operational ATFM plan for the Bay of Bengal and South Asia by the third quarter 2005 in accordance with the ATFM/TF implementation plan.

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FIT-BOB/5, FIT-SEA/2&ATFM/TF/1-WP/3
ATTACHMENT

TASK LIST FOR THE IMPLEMENTATION OF AN ATFM SYSTEM IN THE BAY OF BENGAL (VERSION 1.0)

ID	Task Name	Start Date	Finish Date	Completion Date	Resource Names/Remarks
1.0	Operational Issues				
1.1	Identify Operational Needs				
1.2	Co-ordinate and update Operational Concept				
1.3	Define airspace affected				
1.4	Define data collection plan				
1.5	Examine the operational factors and workload associated with implementation				
1.6	Determine required ATC tools				
1.7	Develop, coordinate and submit necessary international and regional documentation				
2.0	Establishment of an ATFMU				
2.1	Develop and publish ATFM Policies & Procedures				
2.2	Develop, coordinate and submit necessary ATFM documentation (Handbook)				
2.3	Determine operating hours, manning and equipment requirements				
2.4	Coordination and communications requirements with ACCs and Airlines				
3.0	Financial considerations				
3.1	Determine need for Cost Benefit Analysis				
3.2	Determine funding arrangements for operation of ATFM service				
4.0	Data collection for ATFM analysis				
4.1	Benchmarking requirements and justification				

FIT-BOB/5, FIT-SEA/2&ATFM/TF/1-WP/3
ATTACHMENT

ID	Task Name	Start Date	Finish Date	Completion Date	Resource Names/Remarks
5.0	Determination of Systems and Performance requirements				
5.1	Establishment of coordination links between ATFMU and ACCs				
5.2	Determine and develop interface requirements between airlines and ATFMU				
5.3	Assess workload and procedures				
6.0	Complete coordination with adjoining States and Industry organisations				
6.1	Publish necessary AIP Supplement/NOTAM				
6.2	Communicate with States, ATS Providers, Communications Service Providers and international airspace users				
6.3	Confirm common understanding of published requirements				
7.0	Develop Airline Procedures				
7.1	Review contingency procedures for applicability				
8.0	Develop ATC Procedures				
8.1	Assess ANSP's workload and procedures				
8.2	Determine need for simulations				
8.3	Harmonise ANSP's requirements				
9.0	Training				
9.1	Conduct training for Air Traffic Controllers				
9.2	Information dissemination to Airline Operators				
10.0	Perform system verification				
10.1	Complete trials and evaluation of ATFM tool and coordination procedures with ATFMU				
10.2	Perform end to end system integration and standardization.				

FIT-BOB/5, FIT-SEA/2&ATFM/TF/1–WP/3
ATTACHMENT

ID	Task Name	Start Date	Finish Date	Completion Date	Resource Names/Remarks
11.0	Final Implementation Decision				
11.1	Review all factors affecting implementation decision				
11.2	Declare full operational capability within defined area				
11.3	Develop Post- Implementation follow-up Plan for expansion of ATFM				
12.0	Monitor System Performance				
12.1	Perform follow-on monitoring				