

International Civil Aviation Organization

Fifteenth Meeting of the APANPIRG ATM/AIS/SAR Sub-Group (ATM/AIS/SAR/SG/15)

Bangkok, Thailand, 25 – 29 July 2005

Agenda Item 5: Review of ATS coordination group meetings

REVIEW OF THE MEETINGS OF THE BAY OF BENGAL ATS COORDINATION GROUP, FANS-IMPLEMENTATION TEAMS FOR THE BAY OF BENGAL AND SOUTH–EAST ASIA AND THE SPECIAL COORDINATION MEETING FOR THE BAY OF BENGAL CENTRAL REPORTING AGENCY

(Presented by the Secretariat)

SUMMARY

This working paper presents information for review by ATM/AIS/SAR/SG/15 on the meetings of the Bay of Bengal ATS Coordination Group (BBACG), FANS Implementation Team for the Bay of Bengal (FIT-BOB) and South-East Asia (FIT-SEA) and the Special Coordination Meetings for the BOB.

1. INTRODUCTION

1.1 Since the ATM/AIS/SAR/SG/14 meeting held on 28 June-2 July 2005, the BBACG, FIT-BOB and FIT-SEA held the meetings listed below. The meeting reports are summarized for review by the Sub-Group:

- a) 13-17 September 2004 Combined BBACG/15 and FIT-BOB/4;
- b) 31 January to 4 February 2005 Combined SCM BOB (ATFM) and BBACG/16;
- c) 18-22 April 2005 Combined FIT-BOB/5, FIT-SEA/2 ADS/CPDLC Seminar and ATFM/TF/1; and
- d) 2-3 June 2005 SCM BOB CRA (Funding).

2. MEETING SUMMARIES

FIT-BOB/4 and BBACG/15 Meetings

2.1 The combined meetings of BBACG/15 and FIT-BOB/4 were held at the ICAO Asia Pacific Office, Bangkok, Thailand from 13 to 17 September 2004. The meeting was attended by 34 participants from 8 States, 1 International Organization, and 1 aircraft manufacturer.

FIT-BOB/4

Establishment of the Central Reporting Agency

2.2 FIT-BOB/4 noted that BBACG/14 had recognized that the establishment of a CRA was critical to enabling States to implement operational ADS and CPDLC systems. The CRA performed the essential technical analysis of the performance of these systems and undertook the investigation of system failures and other technical malfunctions. This was essential to trace the cause of problems and to initiate remedial action by the responsible parties. In this regard, the tasks performed by a CRA were highly specialized and required test equipment and simulation capability that were not readily available.

2.3 The meeting noted that Boeing, who provided the CRA services for the Pacific Region, had indicated to BBACG/13 (September 2003) that they would be willing to provide the CRA services for FIT-BOB to support the operational trial and subsequently for States in the Bay of Bengal area to implement ADS and CPDLC services. However, to undertake this work, it would be necessary for Boeing's cost to provide CRA services to be funded. In this regard, FIT-BOB/3 had agreed to accept Boeing's offer to provide CRA services and IATA and Boeing were requested to pursue the establishment of a contract on behalf of the FIT-BOB States participating in the operational trial for Boeing to set up and operate the CRA.

2.4 Boeing CRA confirmed to FIT/BOB/4 that satisfactory arrangements had been made and that the finalization of the legal aspects was imminent. Boeing indicated that the CRA should be able to commence work related to the Bay of Bengal operational trial from October 2004. Participating States were urged to provide appropriate data, contact persons, etc for use by the CRA in accordance with the details contained in the FIT-BOB task list and related CRA documentation, including the FANS 1/A Operations Manual (FOM).

2.5 FIT-BOB/4 expressed its appreciation to Boeing and IATA for successfully concluding arrangements to establish the CRA. It was now important that States concerned provided the required technical performance data and problem reports to the CRA promptly so that effective follow-up action could be taken.

FANS 1/A Operations Manual

2.6 FIT-BOB/4 noted that in considering implementation of data link systems, APANPIRG/15 (August 2004) agreed that States should take all relevant ICAO provisions on data link into account when establishing their operating requirements and procedures and that the FOM provided the necessary procedures for ATS providers and should be used as a basis to operate ADS and CPDLC with aircraft equipped with the FANS-1/A systems. Accordingly, APANPIRG/15 adopted Conclusion 15/ 7 for States and users in the Asia and Pacific Regions to use the FOM as a basis for operating ADS and CPDLC along with appropriate ICAO documentation.

Draft guidance material for end-to-end safety and performance monitoring of air traffic service data link systems in the Asia/Pacific Region

2.7 FIT-BOB/4 noted that RASMAG/1 (April 2004) was developing draft *Guidance Material for End-to-End Safety and Performance Monitoring of ATS Data Link Systems in the Asia/Pacific Region.* It was intended that this guidance material would help promote a standardized approach for monitoring the performance of ATS data link systems within the Region. The meeting agreed that the guidance material would be used to set up and operate the data link monitoring services under the CRA for the Bay of Bengal area.

ADS/CPDLC operational trial - Chennai and Kolkata FIRs

2.8 India updated the meeting with regard to problems experienced in the Chennai and Kolkata FIRs during the ADS/CPDLC operational trial, which commenced on 19 February 2004. Approximately 15 airlines continued to participate in the trials accounting for almost 45 percent of the traffic in the Bay of Bengal Area. However, a number of airlines had not been participating in the trials, and although there may be technical or other reasons for this non-participation, the meeting agreed that it was in the interests of all airlines to participate in the trial in order to maximize the effectiveness of the trial. This would allow the airlines to evaluate their avionics installations, and encouraged airlines to participate.

2.9 Based on airline feedback provided through IATA India reported that the default periodic reporting period was increased from 5 minutes to 27 minutes in May 2004.

2.10 Chennai and Kolkata ACCs were maintaining a record of the number of aircraft logging on to their systems as well as a record of the problems encountered. Since the commencement of the trial, a total of 62 problems were observed at Chennai and more than 200 at Kolkata and were being analyzed.

- 2.11 India reported that the problems had been were mainly related to:
 - a) inability to exchange messages in spite of AFN window indicating connected;
 - b) inability to disconnect ADS/CPDLC when end of service was sent;
 - c) inability to effect transfer of control to the next data authority (NDA) (Yangon), by Kolkata;
 - d) an ADS connection was established but not CPDLC;
 - e) delays in receipt of ADS Reports; and
 - f) inability to uplink in spite of receiving repeated downlink messages.

2.12 In light of the problems experienced so far, India advised that they were not pursuing a reduction in separation standards based on ADS/CPDLC. In addition, route conformance monitoring and distance-based conflict alerts were yet to be incorporated into the ground system. India welcomed the establishment of the CRA and looked forward to the assistance that would be provided by the CRA.

Expansion of the operational trial for the Indian Ocean airspace

2.13 FIT-BOB/4 noted that the Bay of Bengal area comprised only one portion of the Indian Ocean. The Secretariat encouraged States to commence planning towards the implementation of ADS/CPDLC operations throughout the entire Indian Ocean. This would necessarily involve coordination with Australia, island States in the Indian Ocean and East African States, in addition to the member States of the BBACG.

2.14 The Secretariat considered that there were a number of advantages in bringing the greater Indian Ocean area under the oversight of one body. This was particularly relevant in the context of the introduction of ADS/CPDLC operations to the area. A greater level of standardisation would be achieved and operational implementations would be more readily coordinated in order to avoid patchy implementation.

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2.15 The Secretariat proposed an arrangement under which an annual meeting of the whole Indian Ocean Group would be conducted subsequent to meetings of three main subsidiary groups – an Arabian Sea Group, a Bay of Bengal Group and a southern Indian Ocean Group. IATA supported the proposal in regard to the ability to facilitate simultaneous implementations in contiguous airspaces and considered that a group of this nature would assist in accelerating the implementation process. The meeting was invited to consider this proposal and provide feedback at the next BBACG meeting.

Equipment specifications

2.16 The meeting noted the lack of guidance available regarding the requirements for ground based equipment for use in ADS/CPDLC operations. States were seeking information on technical requirements in order to ensure the equipment they purchased was suitable for the implementation of ADS/CPDLC to a point where the application of reduced separation minima would be achieved.

2.17 The meeting noted that ICAO did not provide SARPs in respect to the FANS-1/A aircraft systems, and there were a number of documents related to data link systems specifications that would need to be taken into account when determining the performance parameters to be achieved for the provision of ATC services using ADS and CPDLC. In regard to reduction of separation, it would be necessary to refer to the appropriate safety assessment and collision risk models. This material provides the reference performance material to guide ATS providers to prepare equipment specifications. The meeting agreed that it would be of assistance to States if they were able to obtain information from States who have already procured and operate these systems.

2.18 Boeing CRA informed the meeting that there was some technical information available in the FOM regarding equipment performance requirements that may be of assistance to States.

2.19 The meeting was reminded that the intent of CNS/ATM was to increase airspace capacity by allowing the safe implementation of reduced separation requirements. In this regard, ADS/CPDLC equipment purchased by States should be able to facilitate reduced lateral and longitudinal separation as low as 30 NM in the future.

Venue for the FIT-BOB/5 meeting

2.20 The meeting noted the earlier discussions relating to the need to hold a 2 day ADS/CPDLC seminar in conjunction with the next FIT-BOB/5 meeting. Accordingly, the FIT-BOB/5 would be undertaken separately from the BBACG meeting and would be held over 5 days, of which 2 days would be allocated to the seminar.

BBACG/15 Meeting

2.21 The BBACG/15 meeting primary objectives were to progress implementation of data link services and development of a cohesive air traffic flow management plan for the Bay of Bengal area. The meeting recognized that, since the EMARSSH routes were implemented in November 2002, considerable attention had been given to improving air traffic management for the major traffic flows westwards over the Bay of Bengal to Europe via Afghanistan airspace where significant bottlenecks occur. Operators continued to seek further improvements to obviate ground delays at some South-East Asia airports and improve the efficiency of fight level allocation on the long-haul flights to Europe that were fuel critical.

2.22 The meeting also reviewed the outcome of the FIT-BOB/4 meeting which is summarized below.

Myanmar – Update

2.23 The meeting was updated on Myanmar's long standing air- ground communications difficulties, which adversely affected operations in the Yangon FIR, and had been identified as a deficiency by APANPIRG since 1998. It was recognized that further action should be taken on a complete systems basis to correct the communication deficiencies and Myanmar was in the process of taking the following actions:

- VHF system to be completely replaced with a new systems of 5 RCAG stations;
- provision of reliable power supply system with solar power system as a main system with a back up of the city supply;
- VSAT link to be established between RCAG sites and Yangon ACC with the back up of the MPT links; and
- relocation of Yangon ACC to the new operations building as soon as possible.

2.24 BBACG/15 was pleased to note that the DCA Myanmar had obtained required funds from the Government and was proceeding with implementation of the action plan developed in consultation with the ICAO Regional Office based on the systems approach. Myanmar planned to complete actions by early 2005.

Nepal update on CNS/ATM

2.25 Nepal updated the meeting on the current status of it CNS/ATM implementation and future implementation strategy. Nepal's airspace and air route structure were being revised in preparation for the implementation of RNAV.

ICAO Special Implementation Project for the Bay of Bengal

2.26 The meeting was informed of a Special Implementation Project (SIP) approved by the Council of ICAO to be conducted for the Bay of Bengal area planned for November 2004. SIPs were designed to assist States in overcoming problems of implementation, which may have significant adverse effects on the safety, regularity, or efficiency of international civil aviation. Recognizing the significant airspace changes that had occurred in the Bay of Bengal area in recent times, ICAO had considered it timely to visit a number of States involved and review their capabilities to provide the required air navigation services.

Air traffic flow management plan for the Bay of Bengal area

2.27 The BBACG/15 meeting considered the ongoing problems surrounding the implementation of effective air traffic flow management (ATFM) in the Bay of Bengal, noting that as well as the RVSM Task Force and BBACG meetings that had considered the issue, several special meetings had taken place over the past two years in an effort to develop a flow management system or traffic orientation scheme to overcome these serious problems.

2.28 The meeting reviewed the deliberations of APANPIRG/15, who had noted that the route network capacity was constrained by restrictions in the Kabul FIR, including the loss of levels due to RVSM not being implemented. APANPIRG/15 recognized that whilst the route system had sufficient capacity to meet present demand, inefficiencies in making use of available slots were a contributing factor to delays from airports in South-East Asia during the peak night time period for westbound traffic. However, the primary problem was the inadequate air navigation services in the Kabul FIR.

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2.29 The meeting considered the benefits of using automated systems that would allow airlines to collaborate and manage the slots over Afghanistan. IATA briefed the meeting on two such systems operated by the United States and Airservices Australia and it was considered by them that either system should be capable of addressing the requirement to manage the traffic flows through Afghanistan. IATA urgently requested that the Bay of Bengal ATS providers adopt a collaborative decision making programme to manage the traffic flows to Europe during the night time peak period.

2.30 In considering the issues raised, the meeting agreed that there were two distinct problems to be dealt with – a regional ATFM Plan and the ATC coordination arrangements. In this regard BBACG/15 agreed that further work should be undertaken by the BBACG with a view to formulating a regional ATFM Plan as soon as practicable and further study the use of automated systems suggested by IATA.

2.31 The meeting also considered the issues raised by India regarding the problems encountered during the application of the ATFM trial procedures put in place by India to decongest conflict points in Indian airspace. The States involved agreed to review and re-issue the relevant NOTAMs, make any adjustments to the procedures that were required, and to fully support the Indian trial.

<u>L759 – Mach Number Technique</u>

2.32 Considerable discussion had taken place concerning the use of a fixed Mach number on L759, which had been introduced to overcome the problem of optimizing the traffic flow with a faster aircraft following when applying 10 minute longitudinal separation using the Mach number technique (MNT). The meeting agreed to consider the implementation of M0.82 as the common speed for use at FL280 on L759, whilst retaining M0.83 for FL300 and above. The meeting noted that individual pilots in command may refuse to fly at any speed that they considered unsafe, and that speed requirements would change during periods of adverse weather.

ATS route developments

2.33 The meeting was updated regarding the progress of the ATS Route Network Review Task Force (ARNR/TF), formed by APANPIRG/14 (August 2003) Conclusion 14/2 to undertake a review of the Asia/Pacific ATS route network. BBACG/15 noted that at the first meeting of the ARNR/TF held on 6 -10 September 2004, was agreed that although ARNR/TF activities would be undertaken to clarify the route structures required, the respective States and ATS coordination groups would retain responsibility for the implementation of routes.

Other business

- 2.34 The BBACG/15 also considered the following matters:
 - a) implementation of 2 NM offset right of centre line procedures;

The meeting noted that as the ICAO Separation and Airspace Safety Panel (SASP) studies showed, the application of the offset procedures would result in an overall increase in the safety of operations in remote and oceanic airspace, all States who were responsible for the provision of air traffic services in such airspace were urged to authorize the use of strategic lateral offsets in accordance with these guidelines at the earliest opportunity. Accordingly, the meeting agreed that the AIRAC date 25 November 2004 should be the date for implementation of these procedures throughout the Asia/Pacific Region. The Regional Office would undertake coordination with States to verify the earliest date for implementation and to ensure a wide implementation of the procedures on the date proposed.

b) IATA's Shortcoming and Deficiency Programme;

IATA provided information on its Asia Pacific Shortcoming and Deficiency Programme, which was in its final stages of development and should be implemented later this year. IATA intended to complement ICAO's programme with an additional perspective on areas of high concern to the airspace user. IATA would continue to offer its full support to the ICAO Deficiency Programme

c) language proficiency;

The meeting was informed of ICAO provisions on language proficiency in Annex 1 - Personnel Licensing, Annex 6 - Operation of Aircraft, Annex 10 - Aeronautical Telecommunications and Annex 11 - Air Traffic Services applicable on 27 November 2003, and its worldwide educational and awareness campaign to introduce ICAO language proficiency requirements and to provide practical information to facilitate implementation of the new SARPs.

d) MAAR Traffic Sample Data (TSD);

The meeting was updated on the level of compliance by States in the Bay of Bengal area on the request made MAAR at the RVSM/TF/21 meeting (March 2004, 90-day post implementation review) for States to provide TSD necessary for updating the RVSM safety assessment for the Bay of Bengal RVSM airspace. Although the majority of States had provided data to MAAR in accordance with their request for TSD for the month of July 2004, a number of States had not yet provided data. The meeting recognizing the essential role of MAAR as the RVSM Regional Monitoring Agency appointed by APANPIRG to analyze of safety related data urged States to cooperate and provide the required TSD as soon as possible.

e) developments to improve air navigation services in Afghanistan;

The meeting was updated on progress to rehabilitate Afghanistan's air navigation services, and significant progress was being made to reinstate air navigation facilities and services. At Kabul Airport, a DVOR/DME has been installed and a Category I ILS installed on runway 29. Flight tests were conducted in February 2004 and the DVOR/DME was fully operational. GPS non-precision approach procedures have been developed for the airports and airstrips in Afghanistan. Instrument approach procedures for ILS/DME, DVOR/DME and GPS non-precision approaches were expected to be published on 28 October 2004. New VHF communications equipment and VSAT stations were being installed at Kabul FIC and at Herat, Mazar and Kandahar. In addition, a new high power HF station was planned to be installed at Kabul before the end of 2004. A training programme has been initiated for Afghan ATM and CNS personnel. NATO, responsibility for air traffic operations at Kabul International Airport, was expected to upgrade the FIC to an ACC and introduce ATC services in January 2005. Longer term planning was also underway to implement RVSM and radar services in the Kabul FIR.

f) ATM Safety Management Seminar – Beijing; and

The meeting noted the ATM Safety Management Seminar hosted by the General Administration of Civil Aviation of China (CAAC) scheduled to be held in Beijing on 15-19 November 2004. This seminar would address matters related to Annex 11 provisions on ATS Safety management, and cover the safety of the operational ATM

environment over a wide range of safety related activities, in particular runway safety and human factors.

g) Civil Military Seminar – Bangkok

The meeting noted the seminar to be held on 14-17 December 2004 at Bangkok on civil/military coordination. A seminar on this subject had not been held in this region since 1998, and it was important that civil/military coordination matters were given priority in light of events in recent times involving military action in the Middle East Region that led to the short notice closure of strategic airspaces used by international civil aviation. The military had expressed their keen interest to cooperate and work with civil authorities for the benefit of safe and efficient civil flight operations.

BBACG/16 Meeting and SCM BOB (ATFM) s

2.35 The BBACG/16 meeting and the SCM Bay of Bengal (ATFM) were held at the ICAO Asia and Pacific Office, Bangkok, Thailand from 31 January to 4 February 2005. The meeting was attended by 36 participants from 11 States and 2 International organizations

SCM BOB (ATFM)

Air Traffic Flow Management System

2.36 The SCM BOB (ATFM) was convened in conjunction with the BBACG/16 meeting in follow-up to the recommendation of the RVSM/TF/24 meeting (BOB one-year review) held on 8-12 November 2004, to progress the establishment of ATFM plan and implementation of ATFM automated systems for the Bay of Bengal traffic flows. This matter was considered a high priority by users and ATS providers, and should be progressed in a timely manner.

2.37 The meeting had recalled that at recent meetings of APANPIRG, the BBACG and the RVSM/TF, all recognized a need to improve the overall management of traffic flows across the Bay of Bengal area. In particular for the westbound traffic flows to Europe through Afghanistan airspace.

2.38 During the RVSM/TF/24 meeting extensive discussion took place regarding aspects of ATFM. The meeting was briefed by the FAA on the *DOTS*+ automated flow management system, and Airservices Australia made a presentation on general flow control techniques and their Central Traffic Management System (CTMS). In regard to the Airservices system, they had elected to remove the *CTMS/SKYFLOW* system from further consideration.

2.39 In light of the discussions, 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.

2.40 Thailand advised the meeting of its air traffic flow management developments for the Bay of Bengal area since the need to establish this service had been identified following the implementation of the EMARSSH revised route structure on 28 November 2002 and RVSM on 27 November 2003. Taking all factors into account, Thailand supported the introduction of a robust ATFM system to overcome the present and future traffic requirements over the Bay of Bengal area, and would fully support and assist ICAO, other States concerned and IATA to move forward quickly on this important issue

2.41 Thailand informed the meeting 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

2.42 IATA reminded the meeting that the problem of lengthy delays and uneconomic routes and flight levels for long haul flights from South East Asian airports to Western Europe across the Bay of Bengal and Indian Continental airspace were well known. In this regard, the measures implemented to date have led to an easing of the traffic congestion over the Bay of Bengal during the peak night time period. However, in IATA's view this was a temporary respite and it would be unrealistic to assume that this situation would last very long. Increase in traffic volumes not just from the South-East Asian airports but possibly more dramatically from the airports in the Indian continent itself, was inevitable. Ultimately, a comprehensive air traffic management plan including the implementation of ATFM automation for the whole of the Bay of Bengal was the only viable long-term solution. However, there continued to be an immediate need to manage the evening bunching of traffic overflying Kabul FIR

2.43 The meeting recognized that making use of automated tools to provide a comprehensive picture to operators in advance of the level and route availability was the most effective way to reducing departure delays and to optimize airspace utilization.

Establishment of ATFM Plan and automated system

2.44 The SCM on reviewing the issues 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.

2.45 To progress this work, the meeting agreed that a dedicated Task Force should be established under BBACG. To examine this in more detail, the meeting formed a Special Working Group to prepare Terms of Reference for a Task Force to plan and develop an ATFM service for the Bay of Bengal and South Asia.

2.46 The Working Group drafted the following Terms of Reference of the ATFM Task Force for the Bay of Bengal and South Asia region:

Objectives:

The objectives of the Task Force 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 en route 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.

To meet these objectives the Task Force 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

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

2.47 In view of the timeframe for Thailand to develop an operational system by the third quarter of 2005, the meeting agreed that the Task Force should hold its first meeting as soon as practicable. In this regard, the Secretariat advised that the joint FIT-BOB/SEA seminar and meeting was scheduled for 18-22 April 2005, and if States included the ATFM/TF member in their delegation, it would be possible to arrange an initial meeting of the Task Force during the period of the seminar (18-19 April).

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

Tsunami disaster briefing by States

2.49 States present at the SCM, India, Indonesia, Malaysia, Singapore, Thailand and Sri Lanka affected by the Tsunami disaster that struck the Bay of Bengal coastal areas on 26 December 2004 provided information on the impact of the disaster on aviation activities.

BBACG/16 Meeting

2.50 The meeting reviewed and updated the Work Plan agreed upon at the BBACG/15 meeting (13-17 September 2004). The meeting agreed that as the items related to ATS routes were being dealt with by the ARNR/TF, these would be removed from the Work Plan. However, the meeting would be kept up to date with progress being made by the ARNR/TF.

RVSM matters

2.51 The meeting was informed of the activities of the RVSM/TF/24 meeting held on 8-12 November 2004, which carried out the one-year review of the implementation of RVSM in the Bay of Bengal and Beyond area on 27 November 2003. It was noted that in some cases States had experienced a few minor issues, however no major problems were evident. The RVSM/TF/24 meeting declared full RVSM operational capability for the Bay of Bengal and Beyond area since RVSM operations were progressing well and the safety level continued to be met.

Special Implementation Project for the Bay of Bengal

2.52 The SIP was carried out by CNS and ATM experts from the Regional Office. Seven States and eight ACCs in the Bay of Bengal area were visited during November/December 2004 in order to study and evaluate ATS coordination practices and procedures, including the effectiveness of point-to-point and air-ground communications. The States (ACCs) visited were Bangladesh (Dhaka), India (Chennai and Kolkata), Malaysia (Kuala Lumpur), Myanmar (Yangon), Singapore, Sri Lanka (Colombo), and Thailand (Bangkok). 2.53 In general terms, the SIP reports provided identification of specific problems with discussion and proposals to address the problems identified. One of the issues identified concerned upper airspace management over the international airspace of the Bay of Bengal and the following recommendation had been made:

Recommendation

UPPER AIRSPACE MANAGEMENT OVER THE INTERNATIONAL AIRSPACE OF THE BAY OF BENGAL

That, taking into account the forecast increase of international flight operations over the Bay of Bengal, concerned States are requested to support an initiative to investigate a process whereby a mechanism is established to look at all issues regarding this important area and develop procedures to safely, efficiently and expeditiously manage future aircraft operations in the upper airspace over the international waters of the Bay of Bengal

2.54 In line with Assembly Resolution A35-14, Thailand invited States to consider this matter with a view to improving the airspace air traffic management in the Bay of Bengal by allocating the international upper airspace to fewer controlling authorities, which would in turn streamline coordination and ATS procedures, especially with the use of ADS/CPDLC. This type of airspace management would significantly simplify and enhance operations in this airspace. It should also be noted that, if ADS and CPDLC were introduced under the present airspace arrangements, several impediments including additional log-on requirements would negate to some degree benefits of introducing these valuable ATM tools

2.55 The meeting appreciated the information provided by Thailand and agreed that this should be studied further by States. The Secretariat pointed out that reorganization of airspace had been carried out or was being planned by a number of States in the region to reduce the number of FIRs and ACCs, e.g. Australia, Indonesia and Japan. ICAO was encouraging States to adopt a proactive approach along theses lines as this was a cornerstone to the ICAO ATM operational concept, which would allow for the maximum benefits in using data link services in the international non-radar airspaces

2.56 IATA expressed full support for Thailand's proposal and encouraged States to take the next step and examine how such changes could be implemented, which would have significant benefits for international civil aviation operations as well as further enhancing safety.

Regional Airspace Safety Monitoring Advisory Group

2.57 The meeting was updated by the Secretariat on the outcomes of the RASMAG/2 meeting held on 4 - 8 October 2004. RASMAG had reviewed the requirements for providing safety management services for the ATS routes and airspaces in the APAC region. It had been determined that a number of areas were not being provided with these services and the updating of safety assessments had not been done for some time. The Bay of Bengal area was one of those areas affected. RASMAG called upon those States responsible to establish the required safety management services and undertake the safety assessment updates as soon as practicable.

Establishment of a Safety Monitoring Agency (SMA)

2.58 The meeting was presented information by CSSI on its interest to assume the duties and responsibilities associated with the provision of airspace monitoring in connection with RNPbased horizontal-plane separation minima. CSSI advised the meeting that current capabilities and prior experience allowed it to immediately fulfill the roles and responsibilities of the SMA, and was willing to start work as soon as Asia/Pacific States may require. As CSSI was a private business company, it would be necessary to charge for its services. The meeting noted and appreciated the information provided by CSSI.

2.59 Thailand advised that AEROTHAI, who had been appointed by APANPIRG to operate the RVSM regional monitoring agency (MAAR) for the Asia Region was also interested in providing SMA services for the Bay of Bengal area.

2.60 The BBACG/16 meeting requested that the States concerned indicate to the Regional Office prior to the RASMAG/3 meeting, their position on the establishment of SMA services for the Bay of Bengal area bearing in mind that Annex 11 required States to establish ATS safety management programmes. In this regard, the Regional Office would write to States concerned to provide detailed information on the requirements to establish an SMA and the offers made by Thailand and CSSI.

2.61 The Secretariat pointed out that ongoing safety monitoring services and updating of safety assessments had not been put in place for the Bay of Bengal RNP 10 routes where 50 NM route spacing was applied. As the route system had been implemented on 28 November 2002, updating of the safety assessment was overdue. This was primarily due to States not being able to obtain airspaces safety monitoring services. As this was a responsibility of States under Annex 11, in ICAO's view, it was now an urgent matter to meet this requirement and the interest of both parties expressed at this meeting to provide such services was timely and welcomed.

2.62 In consideration of a possible need for States to recover costs of providing these services through air navigation charges, the Regional Officer, Air Transport (RO/AT) briefed the meeting on financing arrangements that could be adopted.

2.63 The meeting noted that to progress this matter would require expertise and management decisions not present at this level of meeting, which deals with operational and technical matters. Therefore, States were requested to raise this matter within their administrations, stressing the safety issues involved and urgency to provide the safety management services for the airspaces concerned. The matter would be referred to the RASMAG/3 meeting on 6-10 June 2005 and States were requested to resolve this issue at that meeting.

ATS route developments

2.64 IATA queried whether all route implementations had to be channelled through the ARNR/TF as this could take some time to process, and there were route improvements required by operators that could be implemented much sooner by States through meeting forums such as this or bi-laterally. The meeting was advised that the ARNR/TF did not replace the existing arrangements to implement new routes or make route changes. The main work of ARNR/TF was to update the APAC BANP, compile a master database of all ATS route characteristics in the region, and to produce a catalogue in a user friendly format containing all the ATS routes listed in the BANP, highlighting those not implemented and including new route requirements. Once this work was completed, the Task Force would be dissolved by APANPIRG.

State Contingency Planning

2.65 The meeting was informed by the Secretariat of the ICAO provisions with regard to the requirements for States to have in place contingency measures for application in the event of disruptions to ATS and associated services. This matter was now of particular relevance in light of the tsunami disaster and States should review their overall national contingency arrangements taking into account lessons learnt by States involved.

2.66 The meeting was reminded that APANPIRG/12 had called for a survey of States in the Asia/Pacific Region to determine the status of contingency planning and the extent to which contingency plans are exchanged between neighbouring States. This survey had been delayed and would be carried out in the coming months and the results would be reported to APANPIRG/16.

2.67 The meeting urged States to take action to review their contingency arrangements and to provide copies of contingency plans to the Regional Office.

Other business

2.68 The BBACG/16 also considered the following matters:

a) ICAO language proficiency requirements;

The meeting was presented with information on the new ICAO language proficiency provisions in Annexes 1, 6, 10 and 11. The meeting recognized that States could be expected to undertake substantial work in the preparation and application of language testing instruments in order to assess the present ability of pilots, radio operators and air traffic controllers to meet the SARPs. Also they would have to examine issues of aviation language training aimed at enhancing the language skills of operational staff to achieve at least the minimum Level 4.

The Secretariat advised the meeting, that in addition to ICAO's guidance material, an education programme has been launched in the form of a series of seminars to be held in all ICAO regions. The first global seminar was held at ICAO Headquarters, Montreal in September 2004 and the first regional seminar was held at Tokyo in December 2004. The Regional Office did not have language expertise and any further assistance to States would have to be sought from ICAO Headquarters or to make use of expertise in the public or private sectors.

b) Informal Indian Ocean ATS Coordination Group;

Australia informed the meeting of the outcomes of the 4th meeting of the Informal Indian Ocean ATS Coordination Group (IIOACG/4) held at the Department of Civil Aviation ACC, Plaine Magnien, Mauritius in December 2004. The IIOACG reviewed the current ATM management structures, systems status and future plans. Of particular note to this meeting was the implementation of data link services (ADS and CPDLC) and flex tracks in the FIRs of the States concerned.

In noting the comments in the BBACG/15 Report, the IIOACG/4 meeting expressed the view that perhaps the IIOACG Forum could be the nucleus for a whole of Indian Ocean ATS Coordination Group. Airservices Australia expressed their support for reenergizing of the South West Asia ATS Coordination Group (SWACG), with the inclusion of "North Indian Ocean" States and Organizations, to compliment the ongoing work and activities being undertaken by the existing IIOACG.

The Secretariat advised the meeting that the intent of the Regional Office was to find a means to bring together all parties involved in implementing data link services to improve airspace capacity, efficiency and enhance safety. To this end, it was envisaged that there would be one coordinating body for the whole of the Indian Ocean, and a number of sub-groups responsible for sub-regional implementation. A single CRA and SMA ideally should cover this whole area. The meeting supported in principle the idea of integrating all the various coordinating groups and implementation plans into a consolidated approach. The Regional Office was encouraged to develop this idea further, coordinate with the parties concerned and present a way forward to APNPIRG/16 for endorsement

c) Civil and military coordination;

A Civil/Military Coordination Seminar was held at the Regional Office in December 2004 attended by 67 civil and military participants from 12 States and 2 international organizations.

The seminar had reviewed the *Asia/Pacific Regional Civil Military Co-operation Guidelines*, as contained in Part VIII 'Airspace management' of the ASIA/PAC FASID (Doc 9673, 2001), and had not identified any need to amend the existing provisions. However, the seminar urged States not to be complacent in regard to existing national provisions relating to civil/military coordination, to undertake a thorough review of current arrangements in the light of ICAO provisions and the deliberations of the seminar and to incorporate the FASID *Guidelines* in all current and future airspace planning.

The seminar had noted that effectual cooperation and coordination between civil and military agencies was essential for the safety, security and efficiency of international civil aviation and had endorsed the principle adopted by the previous regional Civil/Military seminar (1998), that of the *equitable sharing of both convenience and inconvenience* by civil and military users.

d) Electronic Locator Transmitters (ELT); and

The meeting was reminded of the Annex 6 amendment that defers the mandatory carriage of automatic ELTs operating simultaneously on 406 MHz and on 121.5 MHz to 1 January 2007.

e) implementation of 30/30 Separation Standards

Australia informed the meeting of the implementation for the first time of the 30/30 NM separation standard on 20 January 2005 in the following FIRs: Honiara FIR (Solomon Islands); Nauru FIR (Republic of Nauru); and the Tasman Sea area, which includes portions of the Brisbane FIR (Australia); Nadi FIR (Fiji); and Auckland FIR (New Zealand).

The application of 30/30 NM separation was based on ADS and RNP 4 and enabled suitably equipped and approved aircraft to operate in closer proximity to each other to utilise the airspace in a more effective manner.

A critical element of the implementation process concerned conducting a safety assessment. This involved a substantial body of ground breaking work, which would serve as a benchmark for all future implementations. This document has been made available to the Regional Office and may be used by States

FIT-BOB/5 and FIT-SEA/2 Meetings

2.69 The combined meetings of the FIT-BOB/5, FIT-SEA/2, ATFM/TF/1 and ADS/CPDLC Seminar were held at the ICAO Asia and Pacific Office, Bangkok, Thailand from 18 to 22 April 2005. The meeting was attended by 48 participants from 14 States, 2 International

Organizations, and 1 data link service provider. The ATFM/TF/1 meeting and ADS/CPDLC Seminar reports are summarized under separate working papers.

FANS 1/A Operations Manual

2.70 The Secretariat updated the meeting in regard to the status of the FOM. In regard to further development of the regional *Guidance Material* and the FOM, and harmonizing with ICAO provisions, APANPIRG/15 recognized that additional work was required to more closely align the material of the documents concerned.

2.71 In considering the need for harmonized global FANS 1/A operating procedures, ICAO Headquarters had supported proposals raised during the North Atlantic FANS Interoperability Group Eleventh meeting (NAT-FIG/11, October 2004). NAT-FIG/11 agreed that amalgamation of the Pacific FOM and the NAT Guidance Material was a desirable goal.

2.72 NAT-FIG/11 requested that the Asia and Pacific Regional Office be informed of the views expressed, with a view to investigating the possibility of such an amalgamation. The Regional Office supported the proposal and work has commenced under the auspices of the ICAO EUR/NAT Office in order to produce a joint document. Although the magnitude of the task was significant, it was expected that an initial draft document would be circulated for preliminary comment during the 3rd quarter 2005.

India - Update of ADS/CPDLC Operational Trial

2.73 The trial activities served 13 routes in the Bay of Bengal portions of the Chennai and Kolkata FIRs, including P574, N571, N563, P762, L645, P628, N877, L759, M770, L507, L301, N895 and P646. ADS services are available H24 in the Kolkata FIR and from 0200 to 2030 UTC in the Chennai FIR. India has adopted the FOM as the operational procedures applicable to the trial.

2.74 India advised that they would very much appreciate assistance from a CRA in order to analyze and correct the problem reports received so far during the trial.

2.75 India reported that the trials were proceeding positively, with confidence increasing amongst pilots and controllers. The ground system, which would receive software update modifications shortly, has already reached a level of stability where failures were now very infrequent. Unfortunately, although the system has capacity to accommodate additional traffic, the number of participating airlines has not increased significantly.

Update of FIT-BOB Work Plan

2.76 The meeting reviewed the Work Plan agreed to by FIT-BOB/4 (September 2004).

2.77 Sri Lanka advised the meeting that they had installed ADS/CPDLC equipment in early 2001 and commenced trial operations on 15 June 2001 within Colombo FIR. Currently, the system was not operational due to an equipment malfunction which was expected to be fully restored by mid May 2005 when the operational trial would be reactivated.

2.78 Sri Lanka also updated the meeting in regard to the assistance that had been provided by India to train their controller staff and assist with technical advice in regard to ADS/CPDLC operations.

2.79 The meeting shared Sri Lanka's need to gain technical knowledge and expertise, and called upon Airservices Australia who pioneered, along with their partners in the South Pacific

Region, the introduction of the first ADS and CPDLC operations, to support the efforts of States in the Asia Region to implement ADS and CPDLC.

2.80 The Secretariat advised that Australia was presently working with African States through the Informal Indian Ocean ATS Coordination Group to implement ADS and CPDLC in the Southern Indian Ocean area. The FIT-BOB/4 meeting had considered the establishment of a Whole of the India Ocean meeting to harmonize ADS/CPDLC implementation across the region. This was endorsed by BBACG/16 (February 2005) who recommended that the Regional Office bring this to the attention of APANPIRG/16 to be held on 22-26 August 2005. This would allow for integration of all the various coordinating groups and implementation plans into a consolidated approach.

Update of FIT-SEA Work Plan

2.81 The meeting reviewed the FIT-SEA Work Plan and recognized that the Work Plan contained minimal detail and had not been developed sufficiently for an implementation project. Accordingly, the meeting requested the Secretariat to adopt the FIT-BOB model.

2.82 The meeting noted that the two principal ATS providers for the non-radar airspace over the South China Sea where ADS was needed were the Philippines and Viet Nam.

2.83 IATA expressed concern that continued delay in upgrading air traffic services to introduce ADS and CPDLC in the South China Sea area had a major negative impact on flight operations. The need for improved surveillance was long overdue and there were safety concerns that need to be addressed. IATA urged the States concerned to review their implementations plans and do their utmost to accelerate implementation of data link services in accordance with the ICAO's regional CNS/ATM plan. The Secretariat endorsed IATA's comments and suggested that there needed to be a renewed effort on the part of States and ICAO to address the timely implementation of the regional CNS/ATM plan and give suitable priority to providing the data link services.

2.84 The meeting agreed that the Regional Office should bring this to the attention of States, and in view of the growth in traffic in the region and the safety and environmental concerns being expressed, to request that they give priority to funding the necessary ATM improvements.

Establishment of the CRA for the South-East Asia area

2.85 Japan informed the meeting that in follow-up to the FIT-SEA/1 meeting held in combination with the eleventh meeting of SEACG/11 from 24 to 28 May 2004, and the offer made by CRA Japan to undertake the role of CRA activity for the South China Sea area, CRA Japan confirmed that it would be willing to provide the CRA service and requested the meeting to consider this offer. The provision of CRA services would be an extension of its existing activities in the Tokyo FIR as aircraft were operating from the Tokyo FIR to the South-East Asia area. Also this would provide continuous CRA services across this geographical area.

2.86 CRA Japan advised that initially there would be no charge for setting up and operating the CRA, but consideration would need to be given for funding its ongoing service, and this matter should be taken into account in the CRA funding discussions in due course.

2.87 In regard to the formalities to establish the CRA, the Secretariat advised that this was a matter for the States concerned to decide as they were responsible for the provision of the CRA services. In this case, as CRA Japan was an established CRA, the States could all agree through the FIT-SEA to appoint CRA Japan. This was the approach taken by the States of the FIT-BOB to appoint Boeing as the CRA for the Bay of Bengal area. Also, it would be necessary to obtain the cooperation of the aircraft manufacturers and data link service providers and in this regard the Secretariat was requested to confirm their participation at future FIT-SEA meetings.

2.88 CRA Japan advised that the objectives of the FIT-SEA CRA was to assist the FIT-SEA members in planning and implementing ADS/CPDLC systems by sharing the technical and operational information, processing FANS 1/A Problem Reports (PR), disseminating the de-identified problem report information, and submitting reports to the FIT-SEA and relevant bodies.

2.89 CRA Japan advised that at the next FIT-SEA/3 meeting it would be necessary to confirm the role of the CRA, clarify who were the FIT-SEA members and their roles, and put in place the procedures and process for operating the CRA. CRA Japan advised that they were willing to start work with Singapore on any problem reports that they had experienced as they were the only State presently operating ADS and CPDLC services in the area. Singapore agreed to provide these reports to the CRA Japan.

Central Reporting Agency

2.90 The Secretariat presented the meeting with a review of the background and work undertaken to date to put viable CRA funding arrangements in place to support an operational trial for implementation and operation of ADS and CPDLC in the Bay of Bengal area.

2.91 The Regional Officer, Air Transport made a presentation on how States could best organize to provide necessary safety monitoring services. ICAO's policies and guidance related to the recovery of necessary expenditures were summarized and various options for financing cooperative approaches to the provision of air navigation services were described.

2.92 A legal expert from IATA provided an update on the CRA funding contract being finalized with Boeing to establish for the Bay of Bengal CRA. To bring the CRA into operation, it would be necessary for IATA also to enter into a formal arrangement with the States concerned to ensure provision of the necessary data and to enable IATA to collect charges from the users of the data link services. This would require States to notify users that charges would be levied for the provision of ADS and CPDLC and that IATA was authorized by the States concerned to invoice and collect charges specifically for the operation of the CRA.

2.93 The meeting was encouraged by the progress being made and thanked IATA for their considerable effort to establish the CRA on behalf of the States concerned. In regard to the date of the SCM for CRA Funding, it was agreed that this should be held on 2 - 3 June 2005, before the RASMAG meeting on 6-10 June.

Draft Guidance Material for End-to-End Safety and Performance Monitoring

2.94 The meeting was presented with a draft copy of the *Guidance Material for End-to-End Safety and Performance Monitoring of Air Traffic Service (ATS) Data Link Systems in the Asia/Pacific Region* for review. The guidance material was intended to provide a set of working principles for ATS data link system performance monitoring that would be applied by all States implementing these systems, as well as providing detailed guidance on the requirements for establishing and operating a FIT and CRA. It was intended that this guidance material would help promote a standardized approach for monitoring the performance of ATS data link systems within the Region.

2.95 The draft guidance material would be presented to RASMAG/3 during June 2005, with a view to bringing the material to APANPIRG/16 in August 2005 for endorsement as regional guidance material.

ICAO OPLINK Panel Draft CPDLC Guidance Material

2.96 The meeting was advised that, as a result of reports of widespread misunderstanding of the use of CPDLC, ICAO Operational Data Link Panel (OPLINKP) was developing a document containing guidance material for the use of CPDLC. It was considered that the draft material would be of value to States operating CPDLC systems. Accordingly, the material had been released as a 'draft for comment' in order to allow States to access the material and also to facilitate feedback with a view to finalizing the material.

2.97 States and Organizations were invited to review the draft Guidance Material and provide feedback to the OPLINKP. Comments from airlines, pilots, ATS providers and all other interested parties should be directed to OPLINKP via the primary author adam.watkin@airservicesaustralia.com or via the Regional Office for relay to OPLINKP.

Other business

2.98 The SCM also considered the following matters:

- a) ICAO language proficiency requirements;
- b) 30/30 Implementation in the Tasman Sea;
- c) the Australian Organized Track Structure (AUSOTS);

Australia provided a presentation to the meeting in regard to the initiatives being taken by Airservices Australia in regard to flex track operations in the Indian Ocean and domestic airspace.

d) India VHF

India informed the meeting that operators should note that a VHF remote control station using VSAT had been installed at Port Blair giving extended VHF coverage of 200 NM to Kolkata ACC on 132.45 MHz. IFALPA advised that the Jeppesen charts of the area had not been updated to show this frequency and India was requested to bring this to their attention as this would facilitate pilots making use of the frequency.

e) RVSM Issues

IFALPA raised the problem of RVSM not being applied in the Manila FIR in a consistent manner and pilots experienced some confusion. It was explained by the Secretariat that the Manila FIR had become a transition area between two flight level orientation schemes (FLOS) being used in the West Pacific/South China Sea airspace (modified single alternate) and adjacent airspaces of the Pacific to the east and Indonesia FIRs to the south operating the single alternate FLOS. The Philippines was using a flight level allocation system to cater for the transition problems, which resulted in 2000 ft separation being applied in some areas. This problem was being addressed by the RVSM/TF.

SCM BOB CRA (Funding)

2.99 The SCM BOB CRA (Funding) was held at the ICAO Asia/Pacific Office, Bangkok, Thailand from 2 to 3 June 2005. The meeting was attended by 9 participants from 4 States and 1 International Organization.

Review of Bay of Bengal CRA issues

2.100 The SCM BOB CRA had been convened to address a very specific task, that of the funding of the CRA for the Bay of Bengal. The SCM noted the background in progressing arrangements to establish the CRA for the Bay of Bengal. These had been were reviewed by previous meetings involved and updated at FIT-BOB/4 and BBACG/15.

2.101 Subsequently, the status of the CRA was again reviewed during the Combined Meetings of the FIT-BOB/5 and FIT-SEA/2, held in conjunction with the First Meeting of the Air Traffic Flow Management Task Force (ATFM/TF/1) and ADS/CPDLC Seminar in April 2005.

2.102 FIT-BOB/5 was informed that IATA had experienced some unforeseen delays in making arrangements with member airlines and consequently had been unable to finalize the CRA funding arrangements with Boeing, with the result that CRA services for the Bay of Bengal operational trial were still not available. However, IATA was pleased to advise FIT-BOB/5 that they were now at the final stage of reaching agreement with Boeing and expected that a contract would be signed by the end of April 2005.

2.103 Although the initial contract between IATA and Boeing would be for 18 months, the meeting was advised that it would be possible to extend the arrangement on an annual or triennial basis thereafter, should this interim approach to funding the CRA prove successful for the parties concerned.

2.104 IATA reported that to bring the CRA into operation, it would be necessary for IATA to also enter into formal arrangements with the States concerned to ensure provision of the necessary data and to enable IATA to collect charges from the users of the data link services.

Funding arrangements for the Bay of Bengal CRA

2.105 The meeting considered a draft legal agreement between IATA and relevant States, which comprised the legal arrangements necessary to enable and facilitate the collection by IATA of a specific 'CRA Charge' from operators for the purposes of funding CRA services in the Bay of Bengal area.

2.106 It was noted that the primary reason for establishing such multinational facilities or services is to enable two or more States to carry out the services each has accepted responsibility for under the regional plan more efficiently and in a more cost effective manner than each of them could achieve on its own.

2.107 The meeting was advised the issue of funding such agencies had been raised in other ICAO Regions and that, as a result of the Council's decision on the Report of EANPG/45 9 June 2004, the Air Transport Bureau had been requested to include in its work programme for the current triennium the task to develop and propose a fair and equitable global method of cost recovery of the required RMA infrastructure. Pending the development of this guidance material the meeting was urged to make progress on the matter of funding the CRA so that the operational trials could continue

2.108 The draft legal agreement between IATA and States was thoroughly reviewed and updated by the meeting, addressing many of the concerns raised at this and previous meetings. In recognition that India and Sri Lanka would be the two States initially involved in supporting the provision of data to IATA in order to facilitate the collection of a specific 'CRA Charge' from airspace users, the meeting drafted separate agreements between IATA and India, and IATA and Sri Lanka, for consideration by the parties involved as final agreements suitable for implementation.

Implementation arrangements for the Bay of Bengal CRA

2.109 The meeting considered implementation arrangements for the CRA. Once the agreements between IATA and the States concerned had been signed and the enabling activities described in the agreements had been commenced, IATA would be in a position to sign the agreement between IATA and Boeing, thereby allowing Boeing to commence the provision of CRA services.

2.110 In order to ensure that the work toward implementation of CRA services continued at best speed, the meeting agreed to the following steps:

- 1) IATA to complete the fine detail and editorial work to the Agreements and provide 'execution' copies of the agreement documents to India and Sri Lanka as soon as possible;
- 2) IATA to coordinate with Sri Lanka in respect of progressing the Agreement to signature through State approval processes;
- 3) Airports Authority of India (AAI) to present the Agreement to the Board of AAI as soon as possible;
- 4) Subject to AAI Board approval, AAI to present the Agreement to the Government of India as soon as possible;
- 5) AAI to advise IATA immediately when Board and Government approval had been granted; and
- 6) AAI to coordinate with IATA to conduct formal signing of the Agreement.
- 7) Regional Office to coordinate with surrounding States in respect of the issuance of suitable AIP SUP notifying the implementation of CRA services.

2.111 It was noted that as a result of this SCM, the agreements between IATA and India and Sri Lanka were substantially complete and that, following final editorial scrutiny by IATA, the agreements could be presented to State organizations and Governments as the final step before implementation. This represented a big step forward in providing CRA services in support of the ADS/CPDLC operational trial in the Bay of Bengal and was therefore a significant step towards implementing the provisions of the regional CNS/ATM plan in respect of the provision of ADS/CPDLC services.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note and support the work and initiatives taken by the BBACG, FIT-BOB and FIT-SEA to progress implementation of the ICAO regional CNS/ATM Plan, and to deal with operational matters necessary to improve the efficiency of operations and enhance safety.
