International Civil Aviation Organization

**Fourteenth Meeting of the APANPIRG ATM/AIS/SAR Sub-Group
(ATM/AIS/SAR/SG/14)**

Bangkok, Thailand, 28 June – 2 July 2004

Agenda Item 4:   Consider problems and make specific recommendations concerning the provision of ATM/AIS/SAR in the Asia/Pacific Region

REVIEW OF ATS COORDINATION GROUP ACTIVITIES

(Presented by the Secretariat)

SUMMARY

This paper provides an update since ATS/AIS/SAR/SG/13 meeting in June 2003 on activities of the ICAO and State ATS Coordination Groups that contribute to the work of APANPIRG.

1   INTRODUCTION

1.1   This paper provides an update on the activities since the ATS/AIS/SAR/SG/13 in June 2003 of the ICAO and State ATS Coordination Groups meeting that contribute to the work of APANPIRG.

1.1.1   ATS Co-ordination Groups have been established by ICAO in the Asia/Pacific Region for two main purposes: firstly, to foster the implementation of regional air navigation agreements; and secondly, to provide opportunities for airspace providers and users having common geographically related ATS interests, to meet and develop solutions to problems that limit the capacity and efficiency of the airspace structure. The Groups also exchange information necessary to ensure a coordinated approach to the introduction of the new CNS/ATM systems.

1.1.2   In addition to the ICAO ATS Co-ordination Groups, Special ATS Co-ordination meetings are convened from time to time, to consider matters that may require urgent attention, or which relate to areas that are outside the parameters established for the regular Sub-Regional ATS Coordination Group meetings. Other groups have also been established by States at a sub-regional level under bi-lateral or multi-lateral arrangements. The following Sub-Regional ATS Coordination Groups are currently active in the Asia/Pacific Region:

> **ICAO**
>
> Bay of Bengal ATS Coordination Group (BBACG)
> FANS Implementation Team for the Bay of Bengal area (FIT-BOB)
> South East Asia ATS Coordination Group (SEACG)
> FANS Implementation Team for the South-East Asia (FIT-SEA)
> China, Mongolia, Russian Federation, IATA (CMRI)
> **State**

Informal South Pacific ATS Coordination Group (ISPACG)
Informal Pacific ATS Coordinating Group (IPACG)
Russian-American Co-ordination Group for Air Traffic Control (RACGAT)

2. **DISCUSSION**

BBACG/13 and FANS Action Team (FAT-BOB/2)

2.1   The BBACG and the FAT-BOB meetings were temporarily suspended after BBACG/12 and FAT-BOB/1 meetings were held in Bangkok on 5-9 June 2000 and in Singapore in August 2000 respectively. This was due to the Revised ATS Route Structure, Asia to the Middle East and Europe, South of the Himalayas (EMARSSH) project being established by APANPIRG/11 (October 2000), which took over the work programme of the BBACG. Following implementation of the EMARSSH routes on 28 November 2002, the EMARSSH Project had been substantially completed, and BBACG and FAT-BOB were reconvened on 8-12 September 2003. Also, APANPIRG/14 (August 2003) had noted that the reactivation of the FAT-BOB was considered essential to alleviate the problems presently encountered over the Bay of Bengal due to poor HF air/ground communications.

2.1.1   With the reactivation of the BBACG and FAT-BOB, this was the beginning of a new phase in the implementation of CNS/ATM systems in the region that would bring about significant changes to air traffic operations over the Bay of Bengal, and enhance safety and efficiency of operations providing benefits for users and ATS providers. With the introduction of automatic dependent surveillance (ADS) and controller-pilot data link communications (CPDLC) services, improvements to air traffic operations could be realized. Also, since the implementation of the EMARSSH routes, operational problems had arisen largely due to airspace constraints in the Kabul FIR, causing serious delays to the traffic flow from Asia to Europe. Considerable effort had already gone into resolving these problems, and the BBACG would continue to address this matters.

2.1.2   The BBACG/12 meeting formed the FAT-BOB and developed the terms of reference (TORs) and a work programme to evaluate the performance of ADS and CPDLC over the Bay of Bengal. Data had been collected from 1-14 July 2000 on routes in the Bangkok, Kolkata and Yangon FIRs. No formal Central Reporting Agency (CRA) for the tracking and analysis of CNS/ATM related problems reports had been put in place, and Boeing, ARINC and SITA undertook the major problem solving effort with support provided by the South Pacific FANS Interoperability Team (FIT) and CRA. A FAT-BOB review meeting was held in conjunction with the CNS/ATM/IC/SG/7 meeting on 21-25 August 2000 at Singapore. The CNS/ATM/IC/SG/7 agreed to Boeing undertaking the CRA responsibilities. Following the review of the trial data, no further action was taken by BBACG to progress the implementation of ADS and CPDLC as the EMARSSH project established by APANPIRG took over the work programme of BBACG.

FAT/BOB/2

2.1.3   The FAT/BOB/2 meeting was held on 8-12 September 2003 at the ICAO Asia/Pacific Regional Office in conjunction with the BBACG/13. It reviewed the previous arrangements established by BBACG/12 for the FAT-BOB. Consideration was given to making arrangements to establish and operate the CRA, to investigate funding of CRA activities, and to carry out safety assessments necessary for implementation of reduced separation minima using ADS and CPDLC in accordance with ICAO provisions in Annex 11 and the PANS-ATM (Doc 4444). The meeting agreed that to conduct the safety assessments, this should be carried out by a regional monitoring agency (RMA), which would need to be identified.
        Funding considerations

2.1.4   In considering the funding of the CRA, the meeting noted the outcome of APANPIRG/14 (August 2003), concerning the report of the Asia Pacific Airspace Safety Monitoring Task Force (APASM/TF) set up by APANPIRG/12 to establish a Regional Airspace Safety Monitoring Advisory Group (RASMAG). The APASM/TF had taken into account funding arrangements for provision of airspace safety monitoring services. However, it was noted that the APASM/TF and APANPIRG/14 had recognized in principle that user charges would be the main means of funding airspace safety monitoring services. Also, APANPIRG/14 agreed that provision of monitoring services would need to be provided in a cost effective manner based on cost/benefit considerations.

2.1.5   To progress this matter further, it was recognized that States collectively had responsibility to provide CRA services and to conduct safety assessments for implementation and ongoing operation of ADS and CPDLC over the Bay of Bengal. Therefore, arrangements between States/ATS providers to provide funding for these services would need to be addressed. The meeting agreed that this matter should be considered further by States and airspace users. Accordingly, the meeting agreed to refer the matter to the ICAO Asia/Pacific Regional Office Air Transport Section for further consideration and advice. Subsequently the Regional Office convened a Special Coordination Meeting on 8-10 December 2003 to consider CRA funding matters.

CRA and Safety Assessment issues

2.1.6   The FAT/BOB/2 reviewed the operating practices of the CRAs established by the Informal South Pacific ATS Coordinating Group (ISPACG) and Informal Pacific ATS Coordination Group (IPACG) for implementation of ADS and CPDLC in the Pacific Region. In this regard, Boeing had been providing the CRA for the States that comprise these groups since 1998, and the Japan CRA provided the services for the Tokyo FIR. The detailed requirements for a CRA were contained in the Pacific Operations Manual (POM) and the meeting agreed that the POM would be used as the basis for establishing the requirements for the FAT-BOB CRA.

Central Reporting Agency resource requirements

2.1.6   The meeting reviewed the CRA resource requirements based on the experience gained by the ISPACG and IPACG CRAs. It was recognized that to be effective, the CRA must have two main components: dedicated staff and adequate tools.

2.1.7   The meeting recognized that for a CRA to carry out its specialized work, this could only be effectively carried out by aircraft manufacturers, Boeing and Airbus who had the test equipment required to analyze data link system performance and identify the source of network problems. Based on the POM, the meeting agreed to adopt the CRA tasks and resource requirements developed by the meeting.

Operations procedures document

2.1.8   The meeting noted that the *ICAO Guidance Material on CNS/ATM Operations in the Asia/Pacific Region* had incorporated the operational procedures contained in the South Pacific Operations Manual (SPOM). Arising from a review of *Guidance Material* undertaken by ICAO Headquarters and the comments of the Air Navigation Commission, APANPIRG/14 established a Task Force to review the Guidance Material. The ICAO Guidance Material Task Force conducted the review meeting at Honolulu, Hawaii on 2-4 October 2003. The Guidance Material was presently being revised by the Regional Office and would be issued in due course.

2.1.9   In regard to the above, the POM was reviewed by ISPACG/18 (February 2004) and coordinated with IPACG, and updated taking into account the results of the ICAO Task Force. Also, the document was renamed the FANS Operations Manual in the interest to standardize the operating

procedures for worldwide applicability.

2.1.10   Then meeting agreed to adopt the POM Version 2.0 dated 15 August 2003 to be used as the operations procedures document by FAT-BOB by States participating in the Bay of Bengal; operational trial.

Selection of Central Reporting Agency

2.1.11   The meeting agreed that operation of ADS and CPDLC in an operational air traffic control environment was safety critical, and the performance of aircraft and ground ADS and CPDLC systems, and their potential contribution to operational risk, must be thoroughly evaluated and effective monitoring carried out prior to implementation and for ongoing operations.

2.1.12   Boeing who was operating the CRA for the Pacific Region, indicated that they would be willing to provide CRA services for FAT-BOB to support States in the Bay of Bengal area implement ADS and CPDLC services. However, to undertake this work, it would be necessary for Boeing's cost for providing these services to be funded. In this regard, the funding issue required further investigation to resolve difficulties in setting up a mechanism whereby funds could be made available. In this regard, Boeing agreed to provide a cost estimate for CRA services, which would be forwarded to the Secretariat as soon as practicable**.**

2.1.13   In addition to establishing a CRA, the meeting recognized that it would be necessary to carry out the safety assessment work for implementation of reduced separation minima using ADS and CPDLC in line with ICAO requirements. The meeting agreed that it would be desirable to identify the organizations willing to provide RMA services to the Bay of Bengal area. Further, the meeting agreed that at the next FAT-BOB meeting this matter should be addressed.

Establishment of operational trial

2.1.14   The meeting agreed to start an operational trial of ADS and CPDLC performance capability by States operating ADS and CPDLC systems in the Bay of Bengal area on AIRAC date 19 February 2004. As a requirement to participate in the trial, the meeting agreed that the ATS providers must have ADS/CPDLC systems that could be evaluated with the objective of bringing these systems into full operational use at the end of the trial period. Further, these operational systems must be capable of supporting ATC separation services.

Change of title

2.1.15   The meeting considered that the name FANS Action Team (FAT) did not accurately reflect the activities of the Group, which was to implement ADS and CPDLC services in the Bay of Bengal area. Therefore, the meeting agreed to change the name to FANS Implementation Team (FIT-BOB).

BBACG/13

2.2   The BBACG/13 meeting reviewed and updated the implementation status of actions agreed upon at the BBACG/12 meeting held in Bangkok, Thailand, 5 to 9 June 2000. Also, the meeting reviewed the action items of the EMARSSH Post Implementation Review Meeting (PIRM) held at the Gold Coast, Australia on 31 March-2 April 2003. Apart from the one-year review meeting of EMARSSH, the meeting noted that the EMARSSH project had been completed and all outstanding action items on its work programme would be taken over by the BBACG. Accordingly, the PIRM action items were incorporated in the action plan for this meeting.

2.2.1   The PIRM noted that all of the planned EMARSSH Phase II programme, as originally

agreed by States, could not be implemented. Therefore, instead of four independent Asia – Europe flows across the northern half of the Bay of Bengal and through India, Pakistan and Afghanistan, there were still the same two independent flows (via TIGER or SAMAR at the India/Pakistan FIR boundary) that existed prior to EMARSSH.

2.2.2   Recognizing the impact of the restricted route structure on the overall traffic flow and combined with the long standing operational difficulties, IATA proposed a Traffic Orientation Scheme (TOS) to improve the efficiency of air traffic management and make better use of the available capacity on the routes used by traffic transiting the Afghanistan airspace. The PIRM had recognized the value of this proposal and agreed that the TOS required further study.

RVSM matters

2.2.3   The meeting reviewed the Special ATS RVSM Meeting on the RVSM flight level orientation scheme (FLOS) held at Kuala Lumpur on 11-13 August 2003 and the Joint MID/ASIA/RVSM/TF/2 meeting at Abu Dhabi, United Arab Emirates, 27-28 August 2000. The progress made by the Middle East and Asia RVSM Task Forces was noted and it appeared highly likely that RVSM would be implemented in the Bay of Bengal and beyond area as planned on 27 November 2003.

Air traffic flow management plan for the Bay of Bengal (ATFMP-BOB)

2.2.4   The meeting considered implementation of an air traffic flow management plan to optimize the flow of traffic following RVSM implementation on 27 November 2003 over the Bay of Bengal and Indian continental airspace, and to avoid re-routes during evening peak hours for the westbound traffic flow. The meeting was reminded that the full EMARSSH route structure could not be implemented over India for a variety of reasons. The meeting progressed the development of the ATFMP-BOB and to use as a basis the TOS proposed by IATA.

2.2.5   It was further agreed that a follow-up meeting involving India, Malaysia, Myanmar, Pakistan, Singapore, Thailand, and IATA should be convened in the immediate future

CNS/ATM Implementation

2.2.6   The meeting reviewed the results of the FAT-BOB/2 meeting, which had developed an operational plan for States to commence an operational trial of ADS and CPDLC over the Bay of Bengal area tentatively scheduled to begin on 19 February 2004. The meeting agreed with the plan and the objective to implement ATC services using these systems.

FAT-BOB CRA funding arrangements

2.2.7   The meeting noted that a major obstacle to commencing the FAT-BOB operational trial was the provision of funding for establishing and operating the CRA, which was necessary to implement the trial and for ongoing operation of ADS and CPDLC in an operational ATC environment. To progress the matter further, the meeting invited the ICAO Regional Officer Air Transport to brief the meeting on ICAO Joint Financing (JF) arrangements. The meeting was provided with a comprehensive briefing on the various funding arrangements that could be adopted, e.g. DEN/ICE agreement for height monitoring in the North Atlantic and SADIS.

2.2.8   The meeting further noted that it would also be necessary at a later date to provide for funding of RMA services necessary for carrying out safety assessments to determine that the acceptable level of safety was achieved so that reduction in separation using ADS and CPDLC could be implemented. In this regard, the costs of the RMA was expected to be considerably less than the CRA.

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2.2.9   The meeting agreed that the Secretariat would follow-up with the States concerned as a matter of priority determine whether a meeting of States and other parties concerned could be held in December or early January under the ICAO Asia/Pacific Office Air Transport.

2.2.10   The meeting agreed to the FAT-BOB developing the coordinated implementation plan for ADS and CPDLC implementation in the Bay of Bengal.

BBACG/14

2.3   The BBACG/14 meeting was held on 2-6 February 2004 at the ICAO Asia/Pacific Regional Office in conjunction with the FAT/BOB/3.

2.3.1   The meeting reviewed and updated the Work Plan agreed upon at the BBACG/13 meeting. In regard to the outstanding routes to be implemented, they would be referred to the APANPIRG ATS Route Network Review Task Force (ARNR/TF). In addition, the meeting referred to the ARNR/TF the route segments to be implemented as requested IATA at the EMARSSH One-Year Review (OYR) meeting in January 2004 as follows:

    a)   PRA – SERKA – SOKAM
    b)   GASIR – BIRJAND
    c)   NH – ZAHEDAN

2.3.2   The outstanding EMARSSH routes in the Kathmandu FIR that had been presented by Nepal to EMARSSH- OYR were referred to the ARNR/TF.

2.3.3   In regard to search and rescue (SAR) matters, an ICAO SAR Seminar was hosted by the Civil Aviation Department of Hong Kong, China in conjunction with its annual SAREX on 24-29 November 2003. At that event, participants indicated their support for a similar seminar and SAREX to be held in the Bay of Bengal area in 2004.

2.3.4   In regard to communications action items (COM 15-22), the meeting noted the progress made by India to improve its communication facilities and services. However, there were a number of outstanding matters to be resolved with adjacent States and ICAO was requested to assist with coordination, urge the States concerned to complete their planned implementation of communications improvements, and update the status for the BBACG/15 meeting.

2.3.5   The meeting expressed its disappointment with the lack of progress by Myanmar to improve its communications infrastructure. There continued to be frequent pilot reports that indicated no significant improvements had been made. The Secretariat informed the meeting that the Regional Office had conducted ATM and CNS missions to Myanmar in July and October 2003 respectively. It was noted that although Myanmar had plans in place to undertake remedial work, funding had not been provided to commence the projects. The Asia and Pacific Office was continuing its effort to assist Myanmar where possible, and had urged them to take immediate action to overcome the communications problems.

Review current operations across the Bay of Bengal and identify problem areas

2.3.6   The meeting noted that the extension of EMARSSH route P628 from ASOPO to VIKIT (Delhi/Karachi FIR boundary position) was implemented on 22 January 2004. At the same time, the minimum enroute altitude (MEA) on P628 was reduced by India to FL 300. Pakistan continued to operate a MEA of FL 310 with the lowest level available westbound of FL 320. India also reduced the MEA on L333 to FL 300.

2.3.7   IATA requested that consideration be given by India and Pakistan to lowering the MEA on their routes concerned to FL 280 to harmonize the MEA for the entire routes, thereby enhancing efficiency of operations. India indicated that there would be difficulties obtaining military approval, and it was unlikely this could be achieved in the near term but the matter would be pursued. Without Pakistan in attendance, it was not possible to determine whether this was feasible in Pakistan airspace, and this would be coordinated by ICAO.

2.3.8   The meeting noted that the Afghanistan AIP had not been issued in the ICAO format and AIP aeronautical information was being published on the Coalition Forces Regional Air Movement Control Center (RAMCC) website. The meeting recognized that this was not in line with Annex 15 and the matter should be brought to the attention of the authorities concerned, and could be raised at the proposed Inter-regional Coordination Meeting on Afghanistan.

2.3.9   The meeting reviewed the Action Plan of the SCM/RVSM/IND-PAK meeting, which had included non-RVSM ATM operational matters related to the Bay of Bengal area.

2.3.10   The meeting recognized that the Bay of Bengal ATM system lacked a cohesive plan and enhanced technology to allow for a system wide ATFMP. At the present stage of development, fine tuning the present procedures and making better use of existing ATM tools was still the best option. With the absence of Malaysia and Myanmar at this meeting, it was not possible to make any substantial progress. Thailand advised the meeting that following the SCM/RVSM/IND-PAK meeting where it was agreed to make more flexible use of FL300, which was a NO-PDC level reserved for crossing traffic on L301, this had been put into effect on Monday, 2 February 2004.

2.3.11   The meeting recalled the discussions at previous meetings regarding the No-PDC practices and recognized the limitations in rigidly adhering to this arrangement. The meeting agreed that a dynamic and flexible approach to ATM was desirable but this was difficult to achieve in practice in the present ATM environment. Whilst the No-PDC arrangement would remain in effect, States agreed to continue their coordination effort to achieve a more flexible assignment of flight levels.

2.3.12   The meeting recalled that much discussion had taken place concerning the use of a fixed Mach number (M0.84) 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. The issue of aircraft types such as the B777 and Airbus 330/340 having a maximum IAS of 330 kts (M0.83) at FL 280 and being restricted to fly M0.84 had not been resolved. In light of the above, to resolve the issues of certain aircraft types (all B777 family of aircraft and Airbus 320, 330, 340 family) that had difficulty conforming to M0.83/0.84, IATA made several proposals for consideration at the next ATS coordination meeting.

Implementation of the new CNS/ATM systems in the Bay of Bengal airspace

2.3.13   The meeting noted the results of the FIT-BOB/3 meeting which preceded this meeting and was satisfied with the arrangements put in place to implement the ADS/CPDLC operational trial. However, the non-attendance of key States responsible for a significant portion of the Bay of Bengal airspace and beyond was highly disappointing, and adversely affected the outcome of the meeting.

2.3.14   The meeting noted that planning and implementation of other elements of the "Asia/Pacific Regional Plan for the New CNS/ATM Systems" such as the ATN, AIDC, automated AIS systems, GNSS and ADS-B were progressing slowly. States were urged to give appropriate priority to progressing their implementation planning, in particular in the area of data link communications and ATM automated systems.

2.3.15   In regard to ADS-B, the meeting was reminded that the ADS-B/TF/2 meeting would be held at Bangkok, Thailand on 22-26 March 2004.

Other business

2.3.16   The Secretariat presented a proposed amendment to the *Regional Supplementary Procedures* (Doc 7030), MID/ASIA-RAC-9 to include under the *Area of applicability*, paragraph 6.5.1, the FIRs in the Bay of Bengal area and beyond where RVSM was implemented on 27 November 2003. This amendment had been overlooked and the SUPPs need to be updated. The FIRs concerned: Chennai, Colombo, Delhi, Dhaka, Karachi, Kathmandu, Kolkata, Lahore, Male, Mumbai and Yangon were included in the RVSM Implementation Plan approved by APANPIRG and the States concerned.

South East Asia ATS Coordination Group (SEACG)

2.4   The Eleventh Meeting of the South-East Asia ATS Co-ordination Group (SEACG/11) and the First Meeting of the FANS Implementation Team, South-East Asia (FIT-SEA/1) were held at the ICAO Asia/Pacific Regional Office, on 24-28 May 2004. The meeting had been scheduled in March 2003 but had to be postponed due to the outbreak of the Severe Acute Respiratory Syndrome (SARS) that affected the Asia Region in early 2003.

2.4.1   The meeting reviewed and updated the Action Agreed Items arising from the of SEACG/10 meeting held on 18-22 March 2002, and closed 11 of the 15 Action Agreed Items.

Review current operations across South East-Asia and identify problem areas

2.4.2   The meeting was provided with the List of Deficiencies in Air Navigation in the ATS/AIS/SAR Fields in the Asia Pacific Region from the APANPIRG/14 report, and States were invited to the list and notify the Regional Office by official correspondence of any amendments, corrections or deletions to the listing.

2.4.3   The meeting was briefed regarding the outcomes of a number of ICAO fora relating to the management of deficiencies in the Air Navigation Field, in particular the outcome of the AN-Conf/11. Further, the mechanisms in place to report and follow-up on deficiencies was reviewed and an Asia/Pacific supplement to the Universal Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies had been developed by the Deficiency Review Task Force to assist APANPIRG and States better manage the elimination of deficiencies. The States present were urged to bring this matter to the attention of their Administrations.

Dissolution of the Bangkok AOR

2.4.4   Cambodia informed the meeting of progress made to resume the air traffic services for the Bangkok Area of Responsibility (AOR) operated by AEROTHAI on behalf of the State Secretariat of Civil Aviation of Cambodia (SSCA) on 8 July 2004.

2.4.5   In regard to concerns expressed by IATA of aircraft deviating across a narrow portion in the southwest area of the Phnom Penh FIR which could involve ATC coordination by three ACCs,

Cambodia, Thailand and Viet Nam discussed the matter and agreed that it would be preferred to have Viet Nam delegated responsibility for ATS for the small portion of the AOR in question under the terms of a combined ATS operational Letter of Agreement between the three States.

Updating the SCS routes safety assessment

2.4.6   The meeting was informed by the Secretariat of the safety assessment arrangements that had been put in place for the implementation of RNP 10 operations on the South China Sea route system which introduced a parallel route structure with 60 NM spacing on 1 November 2001. The original safety assessment carried out by Airservices Australia had used traffic data based on the previous route structure, and the meeting agreed that there was a need to update the assessment using present traffic data.

2.4.7   IATA requested that States give consideration to reducing the minimum separation that may be applied to 50 NM as this would afford greater flexibility and facilitate deviations due to weather and other contingencies. In this regard, the meeting was advised by the Secretariat that the MID/ASIA Regional Supplementary Procedures (Doc 7030) would need to be amended to permit the use of 50 NM as a regional agreement was required by all States concerned. States were advised to submit an amendment proposal to include the FIRs concerned to the ATM/AIS/SAR/SG/14 meeting or APANPIRG/15 on 23-27 August 2004.

2.4.8   In regard to conducting safety assessments for the SCS routes, RASMAG/1 identified a need for a safety monitoring group to be responsible to carry out safety assessment activities for separation minima being used with RNP 10 and later when ADS and CPDLC were introduced. Further, RASMAG/1 had recommended that APANPIRG/15 consider setting up regional Safety Management Agencies (SMAs) to potentially undertake all safety activities within the area of responsibility of the agency.

2.4.9   Thailand advised the meeting that discussions were under way between AEROTHAI and Airservices Australia on the possibility of establishing a joint SMA to provide safety assessments services in the Asia Region. It was anticipated that the RASMAG/2 meeting on 4-8 October 2004 would be informed of the outcome of these discussions.

Update on airspace safety monitoring activities for RVSM Implementation in the SCS/WPAC and Bay of Bengal areas

2.4.10   The meeting reviewed the action taken by the ICAO RVSM Task Force and regional monitoring agencies (RMAs) in regard to airspace safety monitoring activities for RVSM implementation and follow-up in the Western Pacific (WPAC) and South China Sea (SCS) and the Bay of Bengal and Beyond areas.

Review of safety assessment for implementation and post implementation of RVSM in the WPAC/SCS

2.4.11   The meeting reviewed the safety assessment arrangements and results for RVSM implementation in the WPAC/SCS area. In this regard, APARMO conducted the assessment of the safety associated for the planned RVSM implementation on 21 February 2002. The technical and operational risk assessed by APARMO, i.e. the risk due to all causes, was equal to 1.2×10^{-9} fatal accidents per flight hour, which as well below the TLS value.

2.4.12   Although the risk estimates using the modified collision risk model (CRM) recommended that it was and had been safe for RVSM to be implemented in the WPAC/SCS airspace, there were a number of LHDs that occurred after the implementation in October 2002 that greatly

influenced operational risks. Hence, careful monitoring of the LHD occurrences in WPAC/SCS was very important and required. MAAR advised that there had been an increase in LHDs in the transition areas involving the modified single alternate and the single alternate FLOS.

2.4.13   The meeting noted the safety assessment work carried out for RVSM implementation and that States needed to continue to pay close attention to monitoring LHDs and to report these to MAAR on a monthly basis, including NIL reports.

Harmonization of the modified single alternate FLOS applicable in the SCS area with the single alternate FLOS

2.4.14   The meeting recalled that at the RVSM/TF/16 meeting (September 2002), discussions were held regarding harmonization of the modified single alternate FLOS with the single alternate FLOS that had been implemented by States outside of the SCS area. It was considered that ultimately a single alternate flight level orientation scheme should be adopted, and studies made in preparation for any transition plan to introduce a single alternate FLOS.

2.4.15   The RVSM/TF/18 meeting reviewed the modified single alternate FLOS that was utilized for RVSM operations in the WPAC/SCS areas. Recognizing that the modified single alternate FLOS had been operating well since RVSM implementation in February 2002 and that safety and operational efficiency had been enhanced, the meeting agreed that a detailed study should be conducted to support any change to the FLOS. The Task Force decided to continue with the modified single alternate FLOS for the WPAC/SCS areas, with a view to review the FLOS when the study by States concerned was completed. The Secretariat had encouraged States to complete their studies on changing the FLOS from the modified single alternate to the single alternate for the SCS route structure in good time for the matter to be addressed at the RVSM SCM in September 2004.

Lateral offset developments

2.4.16   The meeting was reminded of the guidelines provided by ICAO on the use of lateral offsets as a safety measure to reduce the risk of collision in the event of loss of vertical separation. Guidelines were circulated under State letter AN 13/11.6-00/96 dated 3 November 2000 which provided for a 1 NM offset procedure. These were revised by the Separation and Airspace Safety Panel (SASP) by State letter AN 13/11.6-02/21 dated 31 May 2002. This allowed for the application of offset procedures up to 2 NM provided that a safety analysis for the particular airspace had shown that the proposed procedures would meet appropriate safety criteria.

2.4.17   Under amendment proposal (APAC-S 00/4) to the MID/ASIA/PAC/RAC SUPPs (Doc 7030) dated 4 March 2004 the use of the 1 NM offset procedure was approved for specified FIRs in the Asia/Pacific Region: Auckland Oceanic, Brisbane, Honiara, Melbourne, Nauru, New Zealand, Port Moresby Auckland Oceanic, Easter Island, Nadi and Tahiti.

2.4.18   SASP was continuing its work to provide global offsets procedures using the 2 NM procedure, and it was expected that the ICAO guidelines would be revised accordingly in the near term. In this regard, the meeting endorsed the safety benefit of introducing a global lateral offset procedure, and agreed that as soon as ICAO published the revised guidelines, States should adopt this procedure.

Improvement to the routing between Hong Kong/Jakarta and beyond

2.4.19   IATA requested that the meeting consider improving the SCS route structure for flights operating between Hong Kong and Jakarta. Since the introduction of the revised SCS routes on 1 November 2001, flights have suffered severe operational penalties of up to 30 minutes for a round trip. In addition to extra fuel costs, increased maintenance as well as flight crew limitations had resulted in losses for one airline of approximately US$ 4.6 million annually.

2.4.20   The meeting considered the IATA proposal and after extensive discussions by the States concerned, agreed to use a north-bound track from Jakarta via the Manila FIR to Hong Kong, and a south-bound route on the western side of the South China Sea route structure.

2.4.21   The States agreed to prepare an AIP Supplement for the introduction of the route providing a two AIRAC cycle notification to users. An ANP amendment proposal would be prepared in coordination with the Regional Office and presented to APANPIRG/15. The meeting agreed that the Regional Office should coordinate with the States concerned on the implementation arrangements, and to determine an implementation date as soon as practicable.

Review of No-Pre-departure Clearance procedure

2.4.22   The meeting was requested by IATA to review this arrangement in light of advances in ATM automation and other means available to determine flight level allocation. In view of the advances in ATM automated systems, these should be used to greater effect and air traffic flow management arrangements put in place taking full advantage of these systems to maximize the use of available levels. The meeting recognized that improvements could be made to the No-PDC practices and agreed that this subject would be included on the future agenda of this meeting.

Indonesian route developments

2.4.23   In its continuing implementation programme of restructuring airspace and routes within Indonesia FIR, seven new RNP 10 routes were proposed for implementation subject to agreement by other States concerned. IATA requested that further study of the proposal was required to consider the impact on flight operations. The meeting also requested that the other States concerned should coordinate with Indonesia and IATA, and agree on a proposal to amend the ANP. Indonesia would prepare an ANP amendment proposal to be coordinated with the Regional Office and submitted to APANPIRG/15.

Harmonization of the lower vertical limit of SCS RNP 10 airspace

2.4.24   Hong Kong, China brought to the attention of the meeting the variety of lower vertical limits which applied to the SCS RNP10 routes which varied between 8000 feet and FL270. Hong Kong proposed that a standard level should be applied to all these routes to the extent possible. The meeting recognized the existing lower limits of the RNP10 airways effectively precluded non-RNP10 aircraft from using the routes.

2.4.25   The meeting agreed that only RNP10 aircraft could operate on the RNP10 route structure. Consequently, it would be necessary to provide for non-RNP10 aircraft to transit the SCS airspace whilst remaining clear of the RNP10 route structure. In this regard, the meeting agreed that RNAV routes (non-RNP10) should be established under existing RNP10 routes. The upper limit should be set at FL285 wherever possible to allow RNAV aircraft to flight plan at FL280. The meeting agreed that these arrangements should be kept under review and any changes to the route arrangements, separation criteria or significant increases in traffic density, etc should be subject to further safety assessment.

2.4.26   Hong Kong, China agreed to prepare an AIP supplement for the Hong Kong AIP and

to distribute the draft supplement to affected States and IATA for comment. States should adopt the same wording for their respective AIP supplements.

Other business

2.4.27   The Secretariat suggested that Singapore may wish to consider introducing 50 NM longitudinal and intersecting track separation in the Singapore FIR using ADS. It was recognized that the CAAS was operating its ADS and CPDLC system successfully for a considerable period and had gained substantial operational experience. Singapore agreed to look into the matter and would keep the meeting informed.

Other meetings covered under separate papers to this meeting

FANS Implementation Team for the South-East Asia (FIT-SEA)

2.5   Information on the First Meeting of FANS Implementation Team for the South-East Asia (FIT-SEA) held on 24-28 May 2004 at the ICAO Asia/Pacific Regional Office, Bangkok is provided in Working Paper 14.

Regional Airspace Safety Monitoring Advisory Group (RASMAG)

2.6   Information on the First Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG) held on 26-30 April 2004 at the ICAO Asia/Pacific Regional Office, Bangkok is provided in Working Paper 17.

Informal South Pacific ATS Coordinating Group (ISPACG)

2.7   Information on the Eighteenth Meeting of the Informal South Pacific Air Traffic Services Coordinating Group (ISPACG/18) held on 23-26 February 2004 at Nadi, Fiji is provided in Information Paper 9. The ICAO Regional Office was invited to attend the meeting but declined due to resource constraints.

Informal Pacific ATS Coordinating Group (IPACG)

2.8   Information on the Twenty-first Meeting of the Informal Pacific Air Traffic Services Coordination Group (IPACG/21) held on 7-11 June 2004 Tokyo, Japan is provided in Information Paper 13. The ICAO Regional Office was invited to attend the meeting but declined due to resource constraints.

Russian-American Co-ordination Group for Air Traffic Control (RACGAT)

2.9   Information on the Thirteenth Meeting of the Russian-American Co-ordination Group for Air Traffic Control (RACGAT/13) held on 20-23 October 2003 at Vladivostok, Russia is presented in Information Paper 11. The ICAO Regional Office was invited to attend the meeting but declined due to resource constraints.

China, Mongolia, Russian Federation, IATA (CMRI)

2.10   China, Mongolia, IATA and Russian Federation ATS Coordination Group (CMRI) did not hold a meeting since ATS/AIS/SAR/SG/13 in June 2003.

3.   **ACTION BY THE MEETING**

3.1   The meeting is invited to:

a)   note the activities of the ICAO and State ATS Coordination Groups; and

b)   consider the issues being addressed by these groups and ways to facilitate progressing them as appropriate.

―END―