



International Civil Aviation Organization

The Third Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/3) and the Twentieth Meeting of the South East Asian ATM Coordination Group (SEACG/20)

Bangkok, Thailand, 18 – 22 February 2013

Agenda Item 2: Review Outcomes of Related Meetings

RELEVANT MEETING OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents information on meeting outcomes relevant to the SAIOACG and SEACG.

This paper relates to –

Strategic Objectives:

A: Safety – Enhance global civil aviation safety

C: Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment

Global Plan Initiatives:

- GPI-1 Flexible use of airspace
- GPI-2 Reduced vertical separation minima
- GPI-3 Harmonization of level systems
- GPI-4 Alignment of upper airspace classifications
- GPI-5 RNAV and RNP (Performance-based navigation)
- GPI-6 Air traffic flow management
- GPI-7 Dynamic and flexible ATS route management
- GPI-8 Collaborative airspace design and management
- GPI-9 Situational awareness
- GPI-10 Terminal area design and management
- GPI-11 RNP and RNAV SIDs and STARS
- GPI-12 Functional integration of ground systems with airborne systems
- GPI-13 Aerodrome design and management
- GPI-14 Runway operations
- GPI-15 Match IMC and VMC operating capacity
- GPI-16 Decision support systems and alerting systems
- GPI-17 Data link applications
- GPI-18 Aeronautical information
- GPI-20 WGS-84
- GPI-21 Navigation systems
- GPI-22 Communication infrastructure

1. INTRODUCTION

1.1 The Twenty Third Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/23) was held in Bangkok, Thailand from 10-14 September 2012.

1.2 The Second and Third Meetings of the ICAO Asia/Pacific Seamless ATM Planning Group (APSAPG/2 and 3) were held in Fukuoka, Japan from 6-10 August 2012, and Chennai, India from 21 to 25 January 2013, respectively.

1.3 The Seventeenth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/17) was held in Bangkok from 27 to 31 August 2012.

1.4 The Tenth Meeting of the ICAO Asia/Pacific Performance-Based Navigation Task Force (PBN/TF/10) was held at Nadi, Fiji 10-13 December 2012.

1.5 The Seventh Meeting of the Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/7) was held in Hanoi, Vietnam from 13 to 16 March 2012.

1.6 The First Meeting of the Asia/Pacific Regional Search and Rescue Task Force (APSAR/TF/1) was held in Bangkok from 5 to 7 February 2013.

2. DISCUSSION

APANPIRG/23

2.1 APASPG/2 had extensively discussed the draft Position Statement on Aviation System Block Upgrades (ASBU) and after modifying its content accordingly, agreed to a revised draft. The meeting incorporated the inputs from Australia, Hong Kong, China, Japan and Thailand into the list of element implementation priority. APANPIRG/23 agreed to the following Conclusion:

Conclusion 23/ 49 Asia/Pacific Position Statement on ASBU

*That, the Asia/Pacific Position Statement containing the response to the Draft Aviation System Block Upgrade (ASBU) Document appended as **Appendix 2 to the Report on Agenda Item 3.5** be adopted for States to use as a reference in formulating their position for the 12th Air Navigation Conference .*

2.2 In accordance with the APSAPG Terms of Reference (TOR), a draft Seamless ATM Plan outline was required to be developed for APANPIRG/23 (10-14 September 2012), with the completed Plan to be submitted to APANPIRG/24 in 2013.

2.3 The draft Asia/Pacific Seamless ATM Plan was presented to APANPIRG for review of the draft as a framework, containing the basic structure, introductory material and agreed Seamless ATM Principles. APANPIRG/23 thanked the Secretariat for the great effort in compiling the draft APAC Seamless ATM Plan. The completed document would become useful guidance material to assist the implementation of seamless ATM. The meeting noted that the completed document should look at user expectations as well as States and ANSP's requirements, achieving seamless ATM across the APAC regions in a truly collaborative, practical and visionary manner.

2.4 IATA summarized the development of an Arabian Sea/Indian Ocean (ASIO) User Preferred Routing (UPR) Zone and highlighted the co-operation between many states from three ICAO regions together with a number of airlines and the INSPIRE partnership. APANPIRG noted what could be achieved by like-minded proactive effort from all stakeholders to progress Seamless operations.

2.5 IATA highlighted the airline Industry's concern at the increasing level of delay at many airports and major routes questioning the ability of the Asia Pacific ATM infrastructure to meet future air traffic demand. The meeting noted the proposed ASEAN Single Aviation Market would be implemented in 2015 and the potential loss of economic benefit to the Region if capacity constraints limit traffic levels. Airlines had reported increased delay and capacity constraints at many airports and airlines' leading to increased concern at the cost and inconvenience of delay.

2.6 IATA outlined their program for 2013 to identify key airports with capacity constraints and to work with airports and ANSP on determination and agreement of practical capacity levels. At these selected locations IATA also noted their intention to facilitate Aerodrome Collaborative Decision Making (A/CDM) agreements and to participate in existing enroute CDM programs.

2.7 IATA also questioned the current ICAO processes to successfully manage the Seamless ATM program implementation, noting that ICAO Europe Region had delegated implementation of Europe wide ATM upgrades to EUROCONTROL some year ago. IATA had agreed to develop the Seamless ATM cost benefit analysis and intended to complete an initial draft for APSAPG/3 in 2013.

2.8 APANPIRG/23 noted the request from IATA that States support:

- discussion at key airports to develop realistic capacity evaluation;
- establishment of A/CDM at the selected airports;
- dialogue to improve gate-to-gate CDM along major routes across boundaries; and
- IATA in developing the cost/benefit case for Seamless ATM under APSAPG.

2.9 IATA stated that APSAPG need to address implementation issues and discuss seamless ATM progress with the ASEAN and APEC bodies. APANPIRG noted that ICAO was in discussion with ASEAN and APEC on these matters.

2.10 A joint paper by Hong Kong, China, Singapore and Thailand was presented to update APANPIRG/23 on a collaborative effort by the three administrations to develop a sub-regional ATFM concept. Aeronautical Radio of Thailand Limited (AEROTHAI), the Hong Kong Civil Aviation Department (HKCAD) and the Civil Aviation Authority of Singapore (CAAS) managed significant air traffic movements. The unique and common challenge faced by the three ANSPs provided an opportunity for the three ANSPs to collaborate toward developing an ATFM concept with CDM.

2.11 HKCAD, AEROTHAI and CAAS would be exploring the concept of networked CDM to manage the traffic flows between these three hubs at a sub-regional level. Given the high volume of international traffic at the three hubs, the collaboration could act as a test case of the concepts and also provide a facility for further research in applying ATFM at a regional level. Through collaboration and information sharing, the concept could potentially be further expanded to manage air traffic in sub-regional areas within 4 to 5 hours range from the hubs, using virtual ATFM units.

DGCA/49

2.12 The ICAO Secretariat outlined ‘A shared Vision for the Future’ with Global Strategic Plans and Better Tools for Everyone. The paper noted that Events will be focused on Priorities on Safety (Runway Safety, Reducing Controlled Flight into Terrain and Loss of Control) and Air Navigation Capacity and Efficiency (PBN, CCO and CDO). The Conference noted that the Revised PBN Manual, PBN Airspace Concepts Manual, CCO Manual, OPS Approval Manual and Flight validation Manual are available as free documents in one implementation kit.

2.13 Australia invited the Conference to take into account the need for a Performance Based Approach to planning and the current hierarchy of ICAO documentation, when conducting national and regional planning activities, as well as preparing for the 12th Air Navigation Conference. ASBU modules should be prioritised in a manner that was compatible with the application of the Performance Based Approach and that, whilst fostering harmonisation and interoperability, recognised the diversity of performance-problems around the world. Work on standards development and on implementation support for current standards, should also be prioritised in a manner that is compatible with the application of the Performance Based Approach and which recognised the diversity of performance-problems around the world.

2.14 Japan urged States to recognize the importance of AIRAC adherence. The paper also briefed on the importance of the transition from AIS to AIM and noted that there was a large gap between the States in the Asia/Pacific Region according to the survey conducted by ICAO Asia/Pacific Regional Office. Recognizing the slow progress of AIM implementation in the region, the paper emphasized the necessity of harmonized efforts for AIM and urged States to accelerate necessary activities for AIM. The Conference noted the current status of AIM implementation in Japan.

2.15 IATA expressed their concern at the increasing level of air traffic delays being experienced in Asia/Pacific at key airports and along major air routes. The paper also noted the working group which is examining seamless ATM across Asia Pacific, yet there was some concern that, in the near term, the ability of the current infrastructure to meet the increasing demand could limit the economic benefits which should flow to all Asia/Pacific States from a single aviation market. The paper outlined IATA’s intention to work with Singapore Airport, Bangkok Airport, Hong Kong – China Airport, Beijing Capital Airport and Shanghai Pudong Airport on development of Aerodrome Collaborative Decision Making (A/CDM) Programme and en-route efficiency of these key city pairs.

2.16 The Moderator urged ICAO HQ to prioritize the ASBU Block Items with the application of the Performance Based Approach and to develop required standards ahead of implementation schedules whilst providing implementation support for current standards. Moreover, the Moderator stated that it was encouraging to note that the regional sub-office would have Seamless ATM as one of its initial tasks. The List of DGCA Action Items relevant to ATM is as follows:

Action Item 49/3	The Conference urged States to review the draft Asia Pacific Seamless ATM plan and to ensure high level attendance including military representatives at the APSAPG 3 and APSAPG 4 meetings to be held in India and Hong Kong, China respectively.
Action Item 49/4	The Conference urged ICAO HQ to prioritize the ASBU Block Items with the application of the Performance Based Approach and to develop required standards ahead of the implementation schedules whilst providing implementation support for current standards.

Action Item 49/5	Recognizing the importance of a seamless ATM in the region, States with major airports are urged to implement Airport CDM and to collaborate with other states to develop a sub-regional ATFM network.
Action Item 49/6	The Conference urged States and Administrations to ensure the compliance of AIRAC dates and to recognize the importance on harmonization on transition and implementation of AIM in the region. States are also urged to develop and submit a basic plan with target dates of Transition elements in their AIS-AIM Roadmap to the Asia Pacific Regional Office before 1 January 2013.
Action Item 49/8	The Conference encouraged interested States to work together with ICAO on the certification of and implementation of SMS by small ANSPs and airports.

APSAPG/2 and 3

2.17 APSAPG/2 deliberated over the draft of the Seamless ATM Plan outline to be developed for APANPIRG/23 (10-14 September 2012). The completed Plan was due be submitted to APANPIRG/24 in 2013. The meeting discussed the draft at length, and amended the draft accordingly. There was considerable discussion about the terms used to indicate the expectations of ATM service levels, and how these expectations might be presented in later versions.

2.18 At APSAPG/3, IATA presented their initial economic study report which calculated that:

- without ASBU Block 0 improvements, aviation’s contribution to Asia/Pacific Regional Gross Domestic Product (GDP) would fall from 2.22% to 0.81% by the year 2030; and
- this represented a loss of economic benefit to the Regional economies of Asia Pacific of some USD16.63B per annum, or USD815B compounded by 2030.

2.19 The Draft Seamless ATM Plan was presented by the Secretariat and further refined. Meeting participants made several suggestions regarding the contents of the Plan. The Secretariat will continue to refine the Plan taking into account the feedback provided by States and organisations at APSAPG/3. The final draft will be presented to APANPIRG/24.

RASMAG/17

2.20 RASMAG/17 recalled that some States had difficulty in enacting a formal ATS Letter of Agreement (LOA) for data provision, so agreed that a formal LOA was not necessary if an informal agreement was as effective. Thus there was no specific requirement for a formal agreement, although it was important that some agreed process was in place to facilitate the provision of data. RASMAG discussed ways that could improve the on-going problems that monitoring agencies had with the collection of data. RASMAG noted that the content of the EMA Handbook contained a sample data provision agreement template that could be referenced by States.

2.21 The FIT-Asia/1 (Future Air Navigation Interoperability Team) meeting noted that there were still issues with data link implementation in the Bay of Bengal area, as highlighted by the number of Problem Reports. Meeting also noted that IATA would continue to support the Boeing CRA until 2013 at least. The meeting discussed the future possibility of forming a CRA for Asia with a direct link to the Boeing CRA, and supported collaboratively by several Asia/Pacific States.

PBN/TF/10

2.22 Hong Kong, China emphasized the need for more comprehensive ICAO guidance material and training courses to assist implementation of the new navigation specifications in the advance Fourth Edition (unedited) version of the PBN Manual.

2.23 The Task Force agreed that training material for Advanced RNP would be needed, particularly for the advanced ATM capabilities envisaged. However, the Advanced RNP applications need more development before training material can be produced.

2.24 The meeting considered that the most practical way to undertake these tasks and update the PBN Manual Doc 9613 was through the reconvening of the ICAO PBN Study Group. The meeting agreed to the following Draft Conclusion for consideration by the CNS Sub-Group and APANPIRG:

Draft Conclusion PBN/TF/10-2: New PBN Navigation Specifications

Considering that the RNP2, RNP0.3 and Advanced RNP Navigation Specifications were to be significantly valuable for future planning, ICAO HQ was urged to:

- a) expedite standards and guidance associated with these navigation specifications; and*
- b) provide adequate training material and courses to enable effective implementation; and*
- c) expedite the development of procedure design standards in Doc 8168 for low RNP value missed approach and departure operations.*

2.25 The Regional Navigation Strategy for the Asia/Pacific Region was a list of high-level navigation policies that had been developed by the CNS-MET Sub-Group of APANPIRG. Under the recent re-organization of APANPIRG, the Strategy fell under the responsibility of the CNS Sub-Group, which the PBN/TF reported to. The latest version of the Regional PBN Implementation Plan (Version 3.0, September 2011) provided detailed guidance for administrations in the field of PBN. APSAPG had been tasked by APANPIRG with the development of an Asia/Pacific Seamless ATM Plan, which incorporated the ASBU modules, including those related to PBN.

2.26 The PBN/TF/10 meeting extensively discussed proposed amendments to the Regional Navigation Strategy for the Asia/Pacific Region and the Regional PBN Implementation Plan, and also took the opportunity to provide feedback on the early draft excerpt of the Asia/Pacific Seamless ATM Plan related to PBN.

2.27 The draft Asia/Pacific Seamless ATM Plan excerpt included a passage that required the establishment of a PBN specification for all ATS routes. During discussion at the PBN Workshop, Australia had advised that it intended to re-designate PBN specifications for all domestic RNAV routes. RNAV5 was being used as the baseline in order to confirm the area semi-widths and minimum safe altitudes for routes. Australia advised that the RNAV specification was being supported by GNSS, and that this would be confirmed in the Australian AIP, as the RNAV5 specification allowed use of other navigation aids such as VOR and DME.

2.28 It was recognised that while the original intention of PBN was to create a harmonised world-wide navigation scheme, unfortunately there was no hierarchy between specifications; thus an aircraft with a higher performing capability such as RNP2 was not able to utilise a route with a lower specification such as RNAV5. Australia had deemed higher performing navigation specifications as being able to be used on RNAV5 routes, in effect creating a hierarchy between specifications.

2.29 The following Draft Conclusion was agreed by the PBN/TF/10 for consideration by the CNS Sub-Group and APANPIRG:

Draft Conclusion PBN/TF/10-4: PBN Implementation Guidance Updates

That, recognizing the need for alignment of PBN Strategies and Guidance Material, as well as development of the Asia/Pacific Seamless ATM Plan, the following documents be updated with regard to PBN:

- a) Regional Navigation Strategy for the Asia/Pacific Region, appended as **Appendix E**; and*
- b) Asia/Pacific Regional PBN Implementation Plan Version 4.0, appended as **Appendix F**.*

AAITF/8

2.30 IATA presented information on issues associated with the promulgation of AIS changes that required update of the various aviation global databases critical to safe operations. IATA stated that changes and their promulgation must be made in a timely manner to ensure current accurate information is available to all aviation stakeholders.

2.31 Japan reviewed discussion on the timeliness of AIS promulgation, especially regarding change procedures in the assignment of location indicators established in Doc7910. Japan noted that the purpose of Aeronautical Information Regulation and Control (AIRAC) was to assure enough lead time so that all stakeholders could update their databases, including Flight Management Systems (FMS) and relevant manuals prior to the change taking effect.

2.32 The meeting discussed the possible reasons for the systemic issues noted in these areas. The Chair and the Secretariat noted that project planning that took into account AIM issues should be an automatic part of a State's responsibilities under their Safety Management System (SMS) requirements. The main reasons for the failure of some administrations to adhere to Annex 15 lead times appeared to be:

- Poor planning and coordination between change originators such as Air Traffic Management (ATM), resulting in AIS units receiving information for promulgation less than the required time before its effective date; and
- AIS units not being empowered to decline to promulgate information not complying with the Annex 15 requirements.

2.33 Acknowledging the serious and systemic nature of this problem, the meeting agreed to the following Draft Conclusion:

AAITF Draft Conclusion 7/1: Annex 15 Promulgation Requirements Compliance

That, States should be urged to recognise the importance of Annex 15 compliance in respect of aeronautical data affected by major projects, by:

- a) establishing formal coordination between change originators and Aeronautical Information Service (AIS) units to ensure appropriate planning and that promulgation requirements were taken into account; and*
- b) empowering AIS personnel to decline requests that did not comply with Annex 15, except for urgent corrections, emergencies, and matters of national security.*

2.34 Given the slow progress in many States to achieve AIM transition thus far, it was suggested that the Task Force place a much greater emphasis on individual State planning as soon as practicable. The meeting agreed to the following Draft Conclusion for the ATM/AIS/SAR Sub-Group's endorsement and APANPIRG's approval:

AAITF Draft Conclusion 7/2: AIS-AIM Transition State Plan

That, States should develop a basic plan that identified when all the Aeronautical Information Service – Aeronautical Information Management (AIS-AIM) Transition elements in the AIS-AIM Roadmap would be completed, and submit these plans to the Asia/Pacific Regional Office prior to 1 January 2013.

2.35 The meeting noted the completion of implementation of WGS-84 by China and Solomon islands in 2011.

SEARRTF/6&SEACG/19 BOBRHS TF/7& SAIOACG/2 Meetings

2.36 The SEARRT/F and the BOBRHST/F were dissolved and the outstanding tasks were transferred to the SEACG/19 and SAIOACG/2 meetings respectively. The outcomes and issues reported in the SEACG19 and the SAIOACG/2 Meetings are contained in **Appendix 1**.

AP SAR/TF/1

2.37 Singapore nominated Mr. Scott Constable, Rescue Coordination Centre Chief, Emergency Response Division, Australian Maritime Safety Authority (AMSA) to chair the Asia/Pacific Search and Rescue (SAR) Task Force. Bangladesh seconded the nomination. No other nominations were made, and the meeting duly elected Mr. Scott Constable to the chair.

2.38 ICAO HQ stated that there was a desire to complete a full review of Annex 12, and present an amendment proposal in the near future.

2.39 ICAO had been tasked with a review of Standards and Recommended Practices (SARPs) and guidance material after the fatal flight of a large airliner from Brazil to France to improve surveillance, flight monitoring and communications of aircraft, including the provision of timely and adequate search and rescue services. The Operational Data Link Panel (OPLINKP) had been tasked to review data-link related procedures to address this. A proposed PANS-ATM amendment regarding ATM procedures was presented to the Air Navigation Commission (ANC), with a proposed applicability of November 2014.

2.40 ICAO had already initiated actions to address recommendations for an extended life for batteries of underwater locator beacon for flight data recorder, and the possibility of automatic ELT activation under certain circumstances.

2.41 The Flight Recorder Panel had been considering options to address related issues, mainly regarding airborne equipment. New ELTs, automatically triggered in-flight when necessary, improved flight data recorders and other options would soon be presented to the ANC, with the objective of ensuring that the location of an aircraft following an accident would be determined within a 6NM radius.

2.42 The Secretariat presented the status of SAR information, including the Regional SAR Compliance Overview (**Figure 1**) in the Asia/Pacific Region known to the ICAO Regional Office for reporting to APANPIRG, and requested States to update this information.

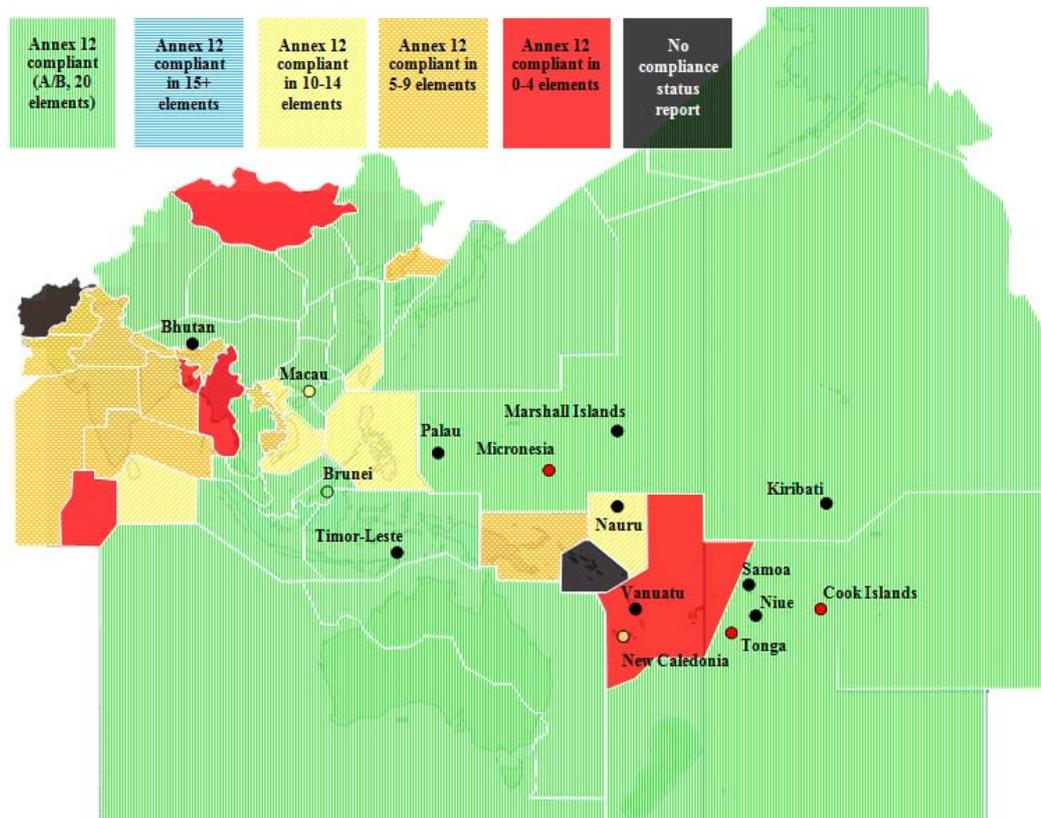


Figure 1: Regional SAR Overview

2.43 The SAR Status data indicated that only three Asia/Pacific administrations had Annex 12 compliance in all elements. The Regional SAR Compliance Overview indicated particular weaknesses in South Asia, Mongolia and the Southwest Pacific areas. The Chairperson and the United States acknowledged the excellent tool that the Overview provided in portraying weak areas of the region.

2.44 Indonesia informed the meeting that there would be an ASEAN Transport SAR Forum meeting in Bali from 05-07 March 2013, which would discuss SAR related matters, including a review of the 1972 SAR Agreement in order to further strengthen the commitment between member States. Indonesia also informed the meeting that an ASEAN SAREX was planned to be held in 2015 consisting of a table top exercise in 2014, and a field exercise in 2015, as mandated by the ASEAN Transport Action Plan 2011-2015.

2.45 The meeting discussed the difficulties of enacting agreements between States, which often involved waiting for long periods for political agreement. The Philippines asked if the Secretariat could assist to facilitate new SAR Agreements. The meeting noted that ICAO/IMO may be able to facilitate some agreements involving high-level decision-makers. The Task Force agreed to the following Draft Conclusion for consideration by the ATM Sub-Group and APANPIRG:

Draft Conclusion APSAR/TF-1: Search and Rescue Agreements

Recognising the difficulties of enacting Search and Rescue (SAR) Agreements, States should be urged to make arrangements for senior civil and military decision-makers to facilitate the implementation and maintenance of SAR Agreements as early as possible.

2.46 The meeting discussed the need for the status of the Regional Air Navigation Plan (Doc 9673) SAR material to be reviewed, to determine whether some could be contained within the Asia/Pacific Regional SAR Plan, or deleted due to duplication by SARPs or State AIPs. The meeting noted that it was not intended to remove regional-specific planning material. It was agreed that the Chairperson and the IMO would make a preliminary review of the material before circulation to the other APSAR/TF members.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) note the information contained in this paper; and
 - b) discuss any relevant matters as appropriate.

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Outstanding items from SAIOACG/2 and SEACGG/19

BOBRHS TF		
1	Draft Decision BOBRHS/TF7/1 – Dissolution of the BOB-RHS/TF	Done
	That, the Bay Of Bengal Reduced Horizontal Separation Task Force (BOB-RHS/TF) be dissolved and any outstanding tasks be delegated to South Asia/Indian Ocean ATM Coordination Group (SAIOACG).	
2	Decision SAIOACG2/2 Establishment of SAIOACG Small Working Groups	Done. SWG reports in WPxx
	That, SAIOACG Air Traffic Flow Management (ATFM), ATS Communications (COM) and ATS Surveillance (SUR) Small Working Groups be established to:	
	<ul style="list-style-type: none"> a) Assess the current status and planning of implementation; b) Identify barriers to implementation; c) Make recommendations to assist harmonized ATM procedures and applications; d) Make recommendations that assist implementation in accordance with the Asia/Pacific Air Navigation and ATFM Concepts of Operations, and the Asia/Pacific Seamless ATM initiatives, related to the ATFM, COM and SUR fields. 	
3	Post-Implementation Analysis of 50NM Longitudinal Separation	Update Oman, India
	Oman had advised difficulties in implementing application of 50NM longitudinal separation, which had to be delayed. Oman stated that a large number of aircraft were not equipped with Controller Pilot Data-link Communications (CPDLC) and Muscat Area Control Centre (ACC) automation was not yet able to ascertain the aircraft equipage status. India and Oman discussed this issue at the BOBASIO/02 meeting and agreed to share data and analysis in order to implement on routes M300, L301, N563, P570 and P574.	

Outstanding items from SAIOACG/2 and SEACGG/19

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| 4 | Sri Lanka could not participate in the phase 2 implementation due to issues in upgrading their ATM system. | Update? |
| 5 | India and Pakistan implemented 50NM on L509 on 12 January 2012 between 1900 and 2130UTC at or above F320 with mutual coordination. During a Special Coordination Meeting between Afghanistan, India, Pakistan and IATA, Pakistan proposed to extend the availability of L509 in Lahore FIR to 9 hours between 1500 and 2359UTC at or above FL300 and FL280 between 1900 and 2359 UTC from 5 April 2012. India was also considering the extension of the timings to include BOBCAT hours with Indian military authorities, and were also discussing with Pakistan the possibility of introducing 50NM on two more routes (M875 and L333), which were not part of BOB-RHS plan. | Update? |
| 6 | Indonesia advised that personnel training had affected the schedule but had published their implementation in March 2012, and was working on the ATS LOA with Sri Lanka. Sri Lanka confirmed this and clarified that they were working in a standby ACC facility, and were expecting the new ACC to be operational at the end of July as they had some past problems with the contractor. Sri Lanka expected full operational use in September 2012 and their controllers were being trained in Thailand. Sri Lanka also advised that they did not have a functioning CPDLC system, so therefore could not currently satisfy the Direct Controller Pilot Communications (DCPC) requirement for implementation of 50NM separation. | Update? |
| 7 | Myanmar was using a stand-alone Automatic Dependent Surveillance-Contract (ADS-C)/CPDLC system. They clarified that although there were some issues with the vendor, they were able to provide CPDLC services and implement 50/50NM separation within the Yangon FIR. | Update? |
| 8 | The Sultanate of Oman stated that they had three issues: airlines not filing their data-link status properly ('J' in the PRESENT format), training and the ATM system capability. Oman currently had issues with identifying RNP10 capable aircraft from flight plan information but stated that they would be able to accept 50NM for westbound flights by July 2012. | Update? |
| 9 | Proposal to Introduce 30NM on ATS Route L301 and N571 by India | Update? |

Outstanding items from SAIOACG/2 and SEACGG/19

- 10** The final phase of 50/50NM horizontal separation was implemented on 8 March 2012 over selected routes in the Oman, Pakistan, Afghanistan, India, Sri Lanka, Myanmar, Thailand, Malaysia, and Indonesia. However, there were some issues which arose from the implementation due to connectivity in the routes which theoretically prevented the seamless implementation across multiple FIRs. A Special Coordination Meeting was held with Afghanistan, India (by telephone), and Pakistan at the ICAO Regional Office in Bangkok from 19 to 20 March 2012 to resolve these issues. Update?

SAIOACG/2

11 Draft Conclusion SAIOACG2/1 –Asia/Pacific Air Navigation Concept of Operations Mandates

That, States intending to implement Performance-Based Navigation and Safety Nets may, after appropriate consultation with airspace users, designate portions of airspace within their area of responsibility:

- a) as providing priority for access to such airspace for aircraft with prescribed Performance-Based Navigation (PBN) specifications and supporting data-link equipage (ADS/CPDLC); and
- b) mandating the carriage and use of an operable Automatic Dependent Surveillance/ Controller Pilot Data-link Communications Systems (ADS/CPDLC) system, mode A/C and/or mode S transponder, Airborne Collision Avoidance System (ACAS) and Terrain Awareness Warning Systems (TAWS) as appropriate.

(amended SEACGG Draft Conclusion)

- 12** The ADS-B Study and Implementation Task Force meeting (ADS-B SITF/11, Jeju, Republic of Korea, 24-27 April 2012) noted India had announced plans to install ADS-B at 14 locations. India update?

Myanmar had advised of its intentions to install six ADS-B stations before the end of 2013. A key focus area for the Bay of Bengal were the ADS-B stations at Port Blair (India) and Coco Island (Myanmar) and data sharing from these facilities (**Figure 2**). This would assist the management of ATS routes L510, L759, M770, N877, P628 and crossing P762 intersections, using ATS surveillance based separation instead of 15 minute procedural and Flight Level Allocation Scheme (FLAS) procedures. Myanmar advised that the Sitwe installation was expected to Myanmar Update?

Outstanding items from SAIOACG/2 and SEACGG/19

be completed in 2012.



India presented its plan to enhance ATS surveillance through the use of ADS-B on major air routes and within terminal areas, integrated with ATC automation to supplement existing radars. During 2012, it was proposed to install seven more ADS-B ground stations to cater for medium traffic density at the airports as well as to provide redundancy.

India was willing to share ADS-B data with neighbouring states as follows:

- a) Malaysia after commissioning of their new ATC automation in 2012;
- b) Myanmar (Coco Island and Pathein), Maldives, Pakistan and Sri Lanka;
- c) Indonesia, if Indonesia needed the Port Blair data.

Outstanding items from SAIOACG/2 and SEACGG/19

13 Sri Lanka had planned two ADS-B stations, one near the international airport and one to enhance coverage towards the east. Sri Lanka requested data sharing with India to assist with coverage within the northeast and southern portions of their FIR. [Sri Lanka update](#)

14 Oman stated that sharing ADS-B data took time to organise, and they used filters to ensure that some data (such as military aircraft) is shared without the security implications. Oman was studying a proposal for a floating platform for ADS-B and VHF which is connected by fibre in the Arabian Sea, and stated the return on investment would be very positive. [Oman update](#)

BOBASIO

15 A new ATS Route was proposed south of the current L301 as follow up from the First India-Myanmar-Thailand ATM Coordination Meeting (IMT-ATM/CM/1) to ease congestion in the area of the Major Traffic Flow AR-10. This proposal was being studied by India and their military. [India](#)

India informed the meeting about the 'Upper Airspace Harmonization of Chennai FIR' project, which commenced on 22 September 2011. This created a single airspace continuum of 2.46 Million Km², facilitating uniform application of methods, procedures and separation standards.

16 India presented information on issues related to ATFM operations and the BOBCAT system within the Delhi FIR and the suggestions for improvement. India had problems with convergence of ATS routes within the Delhi FIR that required a tactical handling of aircraft crossing or joining the Major Traffic Flows being managed by BOBCAT. The short route lengths and requirement to hand off to Pakistan to meet their tactical requirements meant that adjustment to level allocations was regularly required. [India](#)

It was estimated that more than 50% of aircraft significantly differed from their allocated slots, and there were some overflying aircraft which do not participate in BOBCAT. Sometimes due to non-availability of levels for overflying traffic, level allocations of Delhi departures are used, which involved ground delays for these aircraft.

India noted that airspace saturation was observed during daytime, also resulting in delays to overflying flights and Delhi departures. There was a need to extend ATFM, perhaps through extending BOBCAT allocation during

Outstanding items from SAIOACG/2 and SEACGG/19

daytime.

Implementation of CNS/ATM Systems

- 17** India noted that the Aeronautical Message Handling System (AMHS) system was first installed in 2008, although the AMHS was not utilised until late 2009 when neighbouring States had this capability. The Mumbai – Karachi AMHS link was established in September, 2010 and interoperability tests were successfully carried out in November 2010. India was waiting for Pakistan to commence parallel operations and circuit commissioning. [Update India and Pakistan](#)

ATS Route Development

- 18** Converting Non-RNAV Routes to RNP10 Routes and New ATS Route Creation [India](#)

India stated that since routes non-RNAV routes in Mumbai FIR G450, B459 and A474 were separated by more than 50NM until crossing N563 and thereafter were within radar coverage of Mumbai, these routes could be upgraded to RNAV routes. Similarly, G465 and T940 could also be upgraded to RNAV routes in Mumbai FIR, ensuring that Eastbound aircraft be vertically separated as these two routes were converging in the Male FIR. Sri Lanka and Maldives would discuss this proposal before submission to the Regional Office; India indicated that Somalia and the Seychelles had already indicated their agreement. The Secretariat noted that the preference was to designate all the upper airspace as RNP in accordance with the Asia/Pacific Air Navigation Concept of Operations, and the change of individual routes should be a consequential activity which should drive airline equipment in the right direction. India also proposed to implement the following additional RNP10 routes:

V30 and V3;

RNP10 route L856; and

Outstanding items from SAIOACG/2 and SEACGG/19

RNP10 route X123.

Sri Lanka raised issues with regard to V31. India assured Sri Lanka that they would take Sri Lanka's concerns into consideration.

SEARRT

19 Draft Decision SEA/RR 6/1: Dissolution of the Southeast Asia Route Review Task Force

Done

That, the South East Asia Route Review Task Force (SEARRT/F), be dissolved and any on-going **tasks be delegated to existing bi-lateral or multilateral groups as identified** in the South East Asia Implementation Plan.

20 Implement 30NM minimum Longitudinal Spacing on A1 and A202 (WP04)

Completed

Hong Kong, China presented WP04, which provided an update on the uniform application of 30 Nautical Mile (NM) separations on ATS Routes A1 and A202. At the SEA-RR/TF/4 meeting, China and Hong Kong, China had proposed a reduction of minimum longitudinal spacing on A1 from 40NM to 30NM to increase capacity. The reduced 30NM spacing had been implemented since 5 April 2012. Hong Kong, China reported smooth operations and highlighted a positive increase in capacity of 25% as a result of this project. China noted that this was just a first step, but it was a good change to enhance route capacity.

21 Route Structure 1, 2, 3, 4 completed**22 Route Structure 5 M756 TSN-ENREP:** This route proposal was transferred to SEACG, as the completion date was in the 2013 to 2014 timeframe.SEACGG Task List item
12
Vietnam, Singapore

Outstanding items from SAIOACG/2 and SEACGG/19

SEACGG Task List item 12 SEA Route Review Implementation Plan Proposal 5 M756 TSN-ENREP.

Singapore and Viet Nam would continue the dialogue on this proposal bilaterally. Both States expressed the view that agreement was possible by the end of 2012, and would advise the results of discussion by SEACG/20.

23

Route Structure 6 CAB-BHY: China did not attend SEA/RR/TF/5, but there had been high level meetings between China and Viet Nam. Due to civil/military reasons, this route was unlikely to be implemented in the foreseeable future, so it was agreed to remove this item as a SEA/RR/TF Task, as this would be managed bilaterally.

Bilateral
China, Vietnam

24

Route Structure 7 LPB/CMA/BGO: Thailand advised that this route could not be approved unconditionally due to the presence of military airspace. Thailand's Airspace Panel would consider whether this route was able to be operated conditionally (i.e.: when the military were not using the airspace). Lao PDR had no objection to the route, and both Thailand and the Lao PDR would continue discussing this at the Mekong Air Traffic Management (ATM) Coordination Group.

Mekong
Thailand, Lao PDR,
Myanmar

25

Route Structure 8 NAN-TATEL-BGO: This route consideration was expected to be completed during 2012. The route would be discussed at the next Mekong ATM Coordination meeting. Myanmar would be invited to attend this group to facilitate this discussion. The Secretariat emphasized the importance of informal meetings, in that States could progress matters bi-laterally or multi-laterally in-between formal ICAO meetings, whether ICAO attended or not. IATA agreed with ICAO's comments, and was happy to support the Mekong ATM Coordination Group.

Mekong
LaoPDR, Myanmar,
Thailand

26

Route Structure 9 A202/A1: China had not attended TF/5 but was committed to a joint objective of improving capacity. The Secretariat noted that the Mekong ATM Coordination Group had discussed this proposal. Thailand noted the comment and would take this into consideration at the Mekong ATM Coordination Group.

SEACGG Task list item
11

SEACGG Task list item 11 SEA Route Review Implementation Plan Proposals 2 and 9, A202 & A1. Proposal 2 was already noted as complete. Regarding Proposal 9, China reiterated that route changes within the Sanya FIR in the foreseeable future were not possible, due to the interest of other stakeholders

Outstanding items from SAIOACG/2 and SEACGG/19

- 27** **Route Structure 10 Unidirectional parallel route L628:** The Philippines stated that there had been no progress on this proposal, and recommended that this item be added to the SEACG Task List. Viet Nam preferred to reduce the separation standard rather than establishing a new route, confirming that they could use 10NM radar-based separation. Cambodia had no objections to the route proposal. The Secretariat pointed out that the main purpose of the parallel route was not to increase capacity but to increase the level allocation for capacity increase on the north-south crossing tracks (i.e.: to amend the flight level allocation scheme). SEACGG Task List item 13

SEACGG Task List item 13 SEA Route Review Implementation Plan Proposal 10, L628. The meeting discussed the reasons behind this proposal at length, describing the fact that although the route proposed to be duplicated had low traffic density, the change would allow a uni-directional flow to release some level restrictions on the main Southwest-Northeast traffic flow (at present, the crossing tracks utilised FL330, 370 and 410 eastbound and FL280 and 340 westbound). This proposal needed further consideration by the Airspace Authority of Viet Nam.

- 28** **Route Structure 11 M768 BN-TSN:** same as above but Malaysia and Singapore were involved. Viet Nam emphasized that they had radar surveillance and were happy to use reduced separation as required. Singapore recommended that this item should go to SEACG for further discussion. Malaysia noted that there were crossing track issues within the Kota Kinabalu Flight Information Region (FIR). SEACGG Task List item 14

SEACGG Task List item 14 SEA Route Review Implementation Plan Proposal 11, M768. Viet Nam was concerned about the effect of several new reporting points created by the new ATS route proposal. The Secretariat clarified that the number of reporting points should not be a factor within ATS surveillance coverage, as a State was able to advise through the AIP that pilot reports were unnecessary in such airspace, unless specifically requested by ATC. Viet Nam would consider this and advise their position at a later date. .

- 29** **Route Structure 12- Unidirectional parallel route A461:** Hong Kong China advised that they had discussed the change to unidirectional routes with the Philippines, which was conditional on the implementation of ADS-C (Automatic Dependent Surveillance – Contract) and CPDLC (Controller Pilot Data-link Communications) at Manila. **Bilateral**
Philippines, Hong Kong

Outstanding items from SAIOACG/2 and SEACGG/19

2.1 Hong Kong, China stated that they needed a six month ‘no procedure change’ either side of their new ATM system implementation in 2013.

30 **Route Structure 13-B462/B348 MNL/TPE** : The Philippines advised that there was no update on this proposal. IFATCA stated that the Taipei Area Control Centre (ACC) did not prefer this solution due to the effect on their terminal airspace traffic flow. The proposal would continue to be discussed between both ACCs and further progressed by the East Asia Air Traffic Management Coordination Group (EATMCG), and was removed from the SEA RR TF list. **EATMCG
Philippines,IATA**

31

Route Structure 14-Re-align M771: Hong Kong, China preferred a more holistic approach to route realignment and would consider shortening routes but not to the extent proposed. Hong Kong, China saw greater short-term benefit in moving to 30NM separation. China supported Hong Kong, China’s view on reduced longitudinal separation and noted that they had hosted a tri-lateral meeting at Hainan between Viet Nam, China and Hong Kong, China on 2 March 2012 to improve the ATM coordination in the Sanya FIR area.

**SEACGG Task List
item 15**

SEACGG Task List item 15 SEA Route Review Implementation Plan Proposal 14 and 15, M771 and L642. China reiterated that route changes within the Sanya FIR in the foreseeable future were not possible, due to the interest of other stakeholders. The Secretariat reminded China about the concern from IATA regarding the need to be responsive to the economic and environmental drivers

32 **Route Structure 15- Re-align L642**: Same as 14 above

**SEACGG Task List
item 15**

SEACG /19

33 **Draft Conclusion SEACG 19/1-Asia/Pacific Air Navigation Concept of Operations Mandates**

That, States intending to implement Performance-Based Navigation (PBN) and Safety Nets may, after appropriate consultation with airspace users, designate portions of airspace within their area of responsibility:

- a) as providing priority for access to such airspace for aircraft with prescribed PBN specifications; and

Outstanding items from SAIOACG/2 and SEACGG/19

- b) mandating the carriage and use of an operable mode A/C and/or mode S transponder, Airborne Collision Avoidance System (ACAS) and Terrain Awareness Warning Systems (TAWS) as appropriate.

Amended by SAIOACG

34 Application of 50NM longitudinal separation on M771 and L642

IATA highlighted an apparent disconnect between declared availability and actual day-to-day application of longitudinal separation on ATS Routes L642 and M771. IATA urged that disparities between declared availability and actual operational application should be identified and addressed.

Update
Singapore, Hong Kong,
IATA

- 35** The meeting was asked as a first step to provide a more effective and seamless service to flights, to commit to providing surveillance separation where surveillance capability was available, and where areas with overlapping radar coverage already had existing radar hand-off procedures, commit to providing seamless surveillance separation between the busy city pairs which they serve. Where there was no surveillance capability, but Direct Controller Pilot Communications (DCPC) capability, the meeting was asked to commit to providing 50NM longitudinal separation; and eventually moving to providing 30/30NM for aircraft meeting RNP4 (Required Navigation Performance) navigation capability.

Updates

36 Review of large scale weather deviations over the South China Sea Area

Singapore informed the meeting that there were several recurring instances of ad hoc air traffic flow restrictions which were not in accordance with the Large Scale Weather Deviation (LSWD) procedures. Such restriction includes time-based spacing of flights regardless of flight level. Singapore highlighted some instances where restrictions were in place for as long as nine hours. Hong Kong, China commented that the flow measures may not be as a result of the LSWD. The meeting noted the lack of a formalised ATFM system to respond to such weather events, and suggested a small working group to study the feasibility of specific ATFM measures to respond to such weather deviations

Updates

37 Decision SEACG 19/1: Establishment of SEACG Small Working Groups

Outstanding items from SAIOACG/2 and SEACGG/19

That, SEACG AIDC, ATFM/LSWD and ATS Surveillance Small Working Groups (SWG) be established to:

- a) assess the current status and planning of implementation;
- b) identify barriers to implementation;
- c) make recommendations to assist harmonized ATM procedures and applications; and
- d) make recommendations that assist implementation in accordance with the Asia/Pacific Air Navigation and ATFM Concepts of Operations, and the Asia/Pacific Seamless ATM initiatives, related to the AIDC, ATFM/LSWD and ATS Surveillance fields.

- 38** Hong Kong, China felt that ADS-B mandates provided a very clear message to aircraft operators to plan for retro-fitting and forward-fitting their fleets. Updates

IATA advised that they saw ADS-B as the key for long-term height keeping monitoring. They noted that ADS-B compliance with the Australian mandate would be achieved by airlines in time for the mandate in 2013.

- 39** It was reported at the RASMAG/15 meeting that Phase 2 of the trial ADS-C/CPDLC operations were estimated to commence during the first quarter of 2012. However, the project was under review and evaluation by the Philippines Department of Transportation and Communications (DOTC). Resumption of the ADS/CPDLC trial operations could not commence until the department had finalized its review. In view of this, the Philippines informed the meeting that the suspension of the ADS/CPDLC trial operations would continue until further advised. As soon as issues with the equipment had been settled, the Philippines would be working to resume the ADS/CPDLC trial operations. Updates

- 40** Hong Kong, China suggested that ATS routes A461 (from Hong Kong FIR to Manila FIR) and A583 (from Manila FIR to Hong Kong FIR) be reconfigured as unidirectional PBN routes. A Flight Level Allocation Scheme (FLAS) was being discussed between Hong Kong ATCC and Manila ACC. Updates
Hong Kong , Philippines

Hong Kong, China was willing to continue consultations with the Philippines on this subject, with the caveat that they would not be able to implement changes from approximately July 2013 to June 2014 due to the commissioning of new ATM system and ACC. The Philippines were not able to consider this proposal at this

Outstanding items from SAIOACG/2 and SEACGG/19

juncture due to its issues with the current radar system.

41 Configuration of PBN routes L642 and M771

Updates
Hong Kong

After extensive discussions, Hong Kong, China agreed to consider the possibility of track saving strategies wholly contained within the Hong Kong FIR.

42 Development of State Contingency Plans

Updates

Regional ATM Contingency Plan

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Outstanding items from SAIOACG/2 and SEACGG/19

WP 2 Appendix 1