

INTERNATIONAL CIVIL AVIATION ORGANIZATION



**REPORT OF THE FIFTH MEETING OF THE SOUTH ASIA/INDIAN
OCEAN ATM COORDINATION GROUP (SAIOACG/5)**

BANGKOK, THAILAND, 3-5 MARCH 2015

The views expressed in this Report should be taken as those of the
Meeting and not the Organization

Approved by the Meeting
and published by the ICAO Asia and Pacific Office, Bangkok

SAIOACG/5
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INTRODUCTION

Meeting

1.1 The Fifth Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/5) was held at Bangkok, Thailand from 03 to 05 March 2015.

Attendance

2.1 The meeting was attended by 35 participants from Bangladesh, Cambodia, India, Indonesia, Lao PDR, Maldives, Malaysia, Nepal, Singapore, Thailand, United States, ARINC, IATA, and ICAO. A list of participants is appended at **Appendix A** to this report.

Officers & Regional Office

3.1 Mr. Sylvester Israel, General Manager (ASM) of the Airports Authority of India, Chairperson of SAIOACG chaired the meeting.

3.2 Mr. Len Wicks, Regional Officer ATM, ICAO Asia and Pacific Office was the Secretary for the meeting. He was assisted by Mr. Shane Sumner, Regional Officer ATM, ICAO Asia and Pacific Office.

Opening of the Meeting

4.1 On behalf of Mr. Arun Mishra, Regional Director of ICAO Asia and Pacific Office, Mr. Len Wicks welcomed participants to the meeting.

Documentation and Working Language

5.1 The working language of the meeting and all documentation was English. There were ten Working Papers (WP), four Information Papers (IP) and one flimsy considered by the meeting. A list of papers is included at **Appendix B** to this report.

Draft Conclusions, Draft Decisions and Decisions of SAIOACG – Definition

6.1 SAIOACG recorded its actions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

- a) **Draft Conclusions** deal with matters that, according to APANPIRG terms of reference, require the attention of States, or action by the ICAO in accordance with established procedures;
- b) **Draft Decisions** deal with the matters of concern only to APANPIRG and its contributory bodies; and
- c) **Decisions** of SAIOACG that related solely to matters dealing with the internal working arrangements of these bodies.

List of Decisions and Draft Conclusions/Decisions

7.1 List of Draft Conclusions

Draft Conclusion SAIOACG5/SEACG22-1: ATS Route Catalogue Version 14

That Version 14 of the *Asia and Pacific Region ATS Route Catalogue* replaces Version 13 on the Asia/Pacific Regional Office's web site, noting that:

- Chapter A had been transitioned to the electronic Air Navigation Plan (eANP); and
- the remaining ATS route proposals in the ATS Route Catalogue may be amended by the ICAO Regional Office without reference to an APANPIRG Conclusion in future.

Draft Decision SAIOACG5-2: SAIOACG Terms of Reference

That South Asia Indian Ocean Air Traffic Management Coordination Group (SAIOACG) Terms of Reference be amended in accordance with **Appendix C** to the Report.

REPORT ON AGENDA ITEMS

Agenda Item 1: Adoption of Agenda (WP01)

1.1 The meeting noted the minor proposed change to Agenda Item 6, in order to include reference to Search and Rescue. The provisional agenda was adopted by the meeting.

Agenda Item 2: Review Outcomes of Related Meetings

Relevant Meeting Outcomes (WP02)

2.1 ICAO presented information relevant to the SAIOACG/5 meeting from recent ICAO meetings, including the:

- Third Meeting of Air Traffic Flow Management Steering Group (ATFM/SG/3) and The Fourth Meeting of Air Traffic Flow Management Steering Group (ATFM/SG/4);
- Third Meeting of the Future Air Navigation Systems Interoperability Team-Asia (FIT-Asia/3) and the Nineteenth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/19);
- Ninth Meeting of the Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/9);
- The Second Meeting of the APANPIRG Air Traffic Management Sub-Group (ATM/SG/2) was held in Hong Kong, China from 04 to 08 August 2014.
- Twenty Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/25);
- First Meeting of the Ad Hoc Afghanistan Contingency Group (AHACG/1) and the Second Meeting of the Ad Hoc Afghanistan Contingency Group (AHACG/2);
- Fifty First Conference of Directors General of Civil Aviation, Asia and Pacific Regions (DGCA/51);
- Third Meeting of the Asia/Pacific Regional Search and Rescue Task Force (APSAR/TF/3); and
- Fourth Meeting of the Regional ATM Contingency Plan Task Force (RACP/TF/4).

2.2 The SAIOACG/5 meeting noted that since 2013, States had reported their implementation status of AIM Transition Steps; however every State was behind the expected implementation progress in terms of AIS-AIM Phase 1 and 2, and some regions such as South Asia and Southeast Asia had made poor progress (**Figure 1**).

2.3 In particular, South Asian nations such as Afghanistan, Bhutan, India, Maldives, Nepal and Pakistan in South Asia were identified as being deficient in this area. Both Phase 1 and 2 would be subject to APANPIRG Deficiencies in 2016, as Phase 2 elements had been included in Amendment 37 to Annex 15 (effective November 2013). Moreover, the Asia/Pacific Seamless ATM Plan expected States to implement Phase 1 and 2 by 12 November 2015.



Figure 1: Asia/Pacific AIM (Phase 1 and 2) Implementation Progress

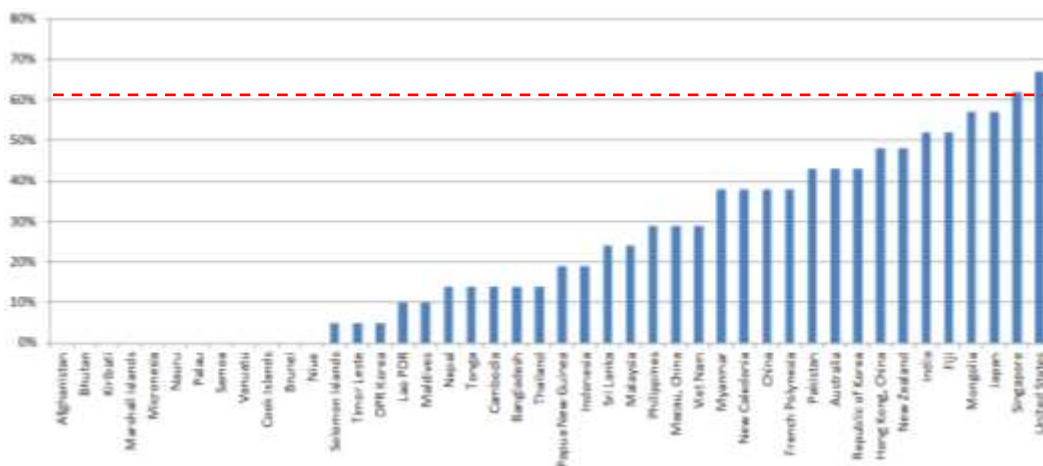


Figure 2: Asia/Pacific Overall AIS-AIM (Phase 1, 2 and 3) Implementation Progress

2.4 **Figure 2** provides information on the overall progress of Asia/Pacific States towards Phase 1, 2 and 3. SARPS related to Phase 2 elements were included in Amendment 37 to Annex 15 (effective November 2013). Given that States should have completed 13 of the 21 AIM elements (Phase 1 and 2), the dashed red line indicates this approximate value of 62% progress. It should be noted, however, that no State had completed all Phase 1 and 2 elements. Since the inception of the AIM Transition Table, the following States had provided no information: Bhutan, Brunei Darussalam, Kiribati, Marshall Islands, Micronesia, Nauru, Samoa and Tonga.

2.5 The SAIOACG/5 meeting noted the benefits of regional ATFM as reported by the IATA study report to ATFM/SG/4 as being USD600-800 million and of regional and domestic ATFM as being USD1.1-1.4 billion by 2019.

2.6 The SAIOACG/5 meeting was informed that ATFM/SG was not currently developing a Regional ATFM Interface Control Document (ICD). However, agreed ATFM terminologies were being developed, and the Flight Information Exchange Model (FIXM) had been agreed as the regional standard for ATFM information exchange. The Aerodromes and Operations Working Group (AOP/WG) would take responsibility for regional airport collaborative decision making (A-CDM), and would work in coordination with ATFM/SG to ensure the harmonization of interfaces between ATFM and A-CDM systems and processes.

2.7 The SAIOACG/5 meeting noted that FIT-Asia/3 had agreed that monitoring, analysis and reporting of data-link performance was essential for the achievement and maintenance of system performance required for the application of RNP based separations. In the event that data-link services were implemented without a competent CRA service and a robust program of post-implementation performance monitoring, the service did not comply with Annex 11. In these cases as observed by the FIT-Asia/3 in South Asian States such as Myanmar, the Maldives and Sri Lanka may have this recorded as an APANPIRG Deficiency.

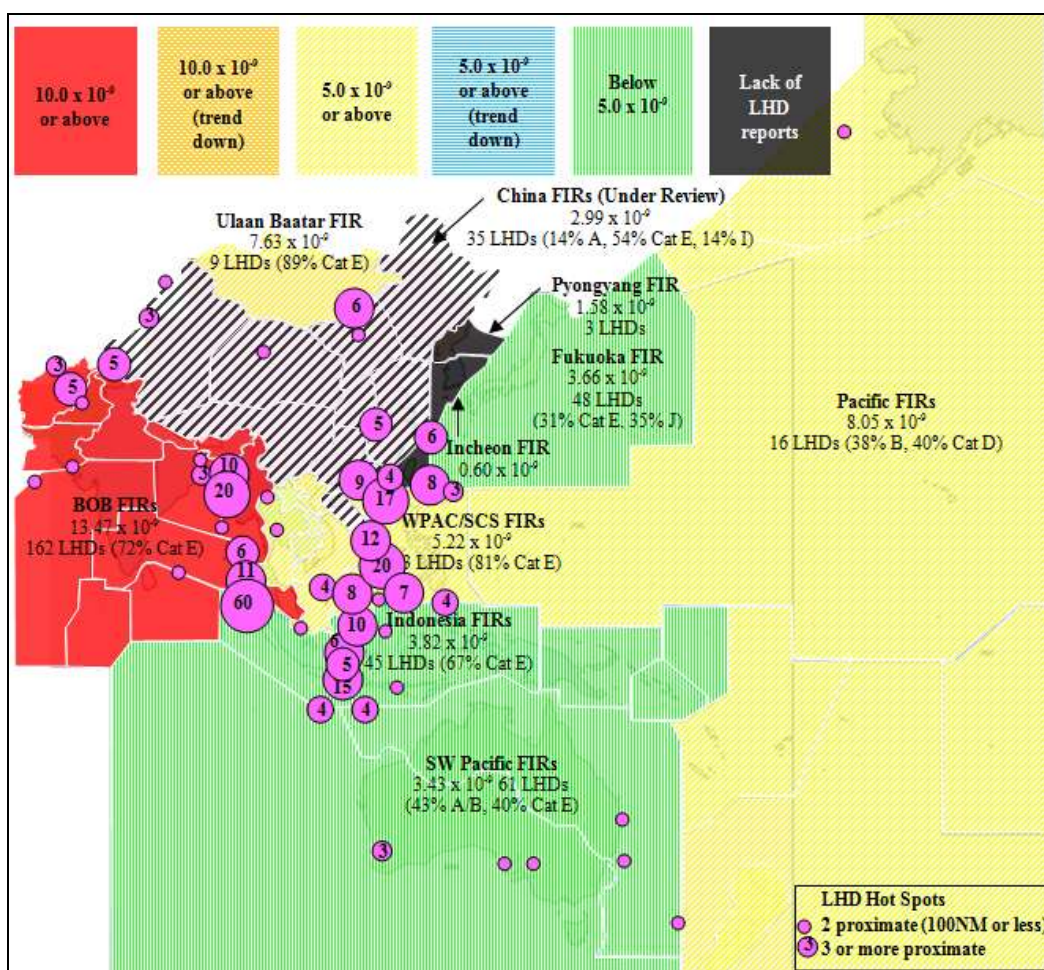


Figure 3: Asia/Pacific TLS compliance reported to RASMAG/19

2.8 **Figure 3** indicated the following sub-regional regional trends to RASMAG/19 for South Asia. India had dramatically increased its reporting rate, resulting in a large increase in estimated risk (reflecting the true nature of risk). This revealed the extent of interface problems between Indian Flight Information Regions (FIRs) and Bangladesh, Myanmar, Malaysia and Indonesian FIRs. Apart from the implementation of ATS Inter-facility Data Communications (AIDC) between the States concerned, significant urgent action appeared to be necessary to reduce ATC operational errors and to increase communications and ATS surveillance coverage/data exchange.

SAIOACG/5
Report on Agenda Items

2.9 In particular, the RASMAG/19 meeting noted that a Special Coordination Meeting (SCM) should be conducted involving Bangladesh, India, Indonesia, Malaysia, and Myanmar to, *inter alia*, investigate the installation of Automatic Dependent Surveillance-Broadcast (ADS-B), Very High Frequency (VHF) communications and sharing data from a site on Great Nicobar Island, which was close to the Indian, Indonesian and Malaysian FIR boundaries. The First Bangladesh, India, Malaysia, Thailand Coordination Meeting (BIMT/1) was successfully held at Bangkok, Thailand, from 18 to 19 August 2014 on this subject. India would present a paper to the ATM/SG/3 on progress made.

2.10 RASMAG/19 noted that Asia/Pacific States with the majority of non-RVSM airframes identified by the Asia/Pacific RMAs to be operating within the RVSM stratum without proof of RVSM approval were from China, India, Indonesia, Pakistan and the Philippines. **Table 1** compares the number of non-RVSM airframes reported by each RMA:

Report	AAMA	China RMA	JASMA	MAAR	PARMO
RASMAG/18	98	43	47	118	15
RASMAG/19	90	33	40	130	19

Table 1: Trend of Non-RVSM airframes Observed by Asia/Pacific RMAs

2.11 Overall, the number of non-RVSM aircraft had marginally reduced by 3% in the past year. This indicated that there was considerable work to do and APANPIRG *Conclusion 24/6 Repetitive Non-RVSM Approved Aircraft Operating as RVSM Approved Flights* which encouraged States to deny entry to operate within RVSM airspace for aircraft that have been confirmed as non-RVSM approved over a significant length of time, or by intensive checking, except where a specific non-RVSM operation was authorized, had not yet been effective.

2.12 The SAIOACG/5 meeting noted the work being undertaken by the Regional Office (RO) to populate or develop the new Asia/Pacific electronic Regional Air Navigation Plan (eANP), so agreement on its content might be reached by mid-2015. In this regard, the States noted the need to review the draft material and to advise the RO of any issues contained therein.

2.13 Regarding the AHACG/1 meeting, it had been noted with concern that the lack of experienced Afghan air traffic controllers was the main issue affecting the continuity of the ATS. It was anticipated that after the five year contract, Afghanistan would transition to all ANS being provided by local controllers. However, NATO had stated that the Afghanistan Civil Aviation Authority (ACAA) had made great strides in developing an organization that conformed to ICAO Standards and Recommended Practices (SARPs) but still lacked human capacities to control the airspace and operate major airports. It was also highlighted that, from a NATO viewpoint, that the Afghans were not capable of performing full safety oversight of the civil sector and there was no Safety Management System (SMS) in place.

2.14 NATO had developed a contingency plan using tactical command and control procedures, in order to support ongoing military operations and the NATO-led *Resolute Support* Mission from 2015. Although the AHACG/1 meeting had noted that Kabul Tower was already staffed by some Afghan controllers, they were not at the supervisory or management level. From the military point of view, there would be no ANS available for civil traffic. Furthermore, there would be a lack of adequate Communications, Navigation, Surveillance (CNS) infrastructure at Kabul International Airport (KAIA), as it would only have non-controlled VFR operations. The SAIOACG/5 were informed that the following potential contingency schemes were being focussed on by the AHACG:

- **Scenario B:** *Kabul FIR Contingency Services* – no ATC service. Upper airspace is not affected by military or security concerns, and a number of restrictions are applied (IATA reported that a number of airlines indicated to them that they would prefer to divert around the Kabul FIR if there were no ATC services); and

- **Scenario C: Iranian Airspace Routes** – routing via Iranian airspace due to a number of ‘hot spots’ in Syrian, Iraq and European airspace using a high density Organized Track System (OTS) – this scenario was discussed in AHACG/2/WP05.

2.15 Iran noted that the AHACG/1 meeting had discussed proposals for an effective traffic management scheme that could manage increased traffic within the Tehran FIR, should aircraft need to avoid the Kabul FIR (AHACG/1/WP04). After careful analysis, Iran had agreed at the AHACG/2 meeting that they would implement the following Organized Track System (OTS, henceforth referred to as the ‘Royal Road’ OTS) with required levels and speeds. **Figure 4** illustrates the OTS.

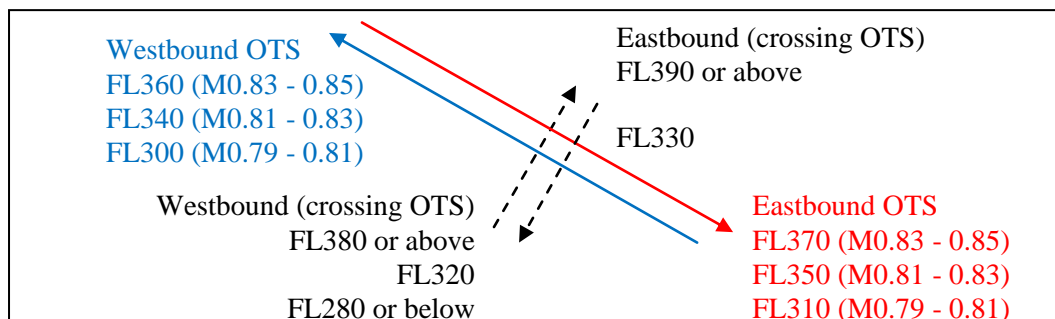


Figure 4: Royal Road OTS

2.16 The SAIOACG/5 meeting noted that Afghanistan may be unwilling to delegate management of its airspace to another State. Thus, the airspace may be available with contingency services, or not available. It was further noted that it was necessary for Pakistan to be engaged in the contingency plan. ICAO was requested facilitate Pakistan’s attendance at future meetings.

2.17 **Figure 5** provides a regional SAR overview at APSAR/TF/3.

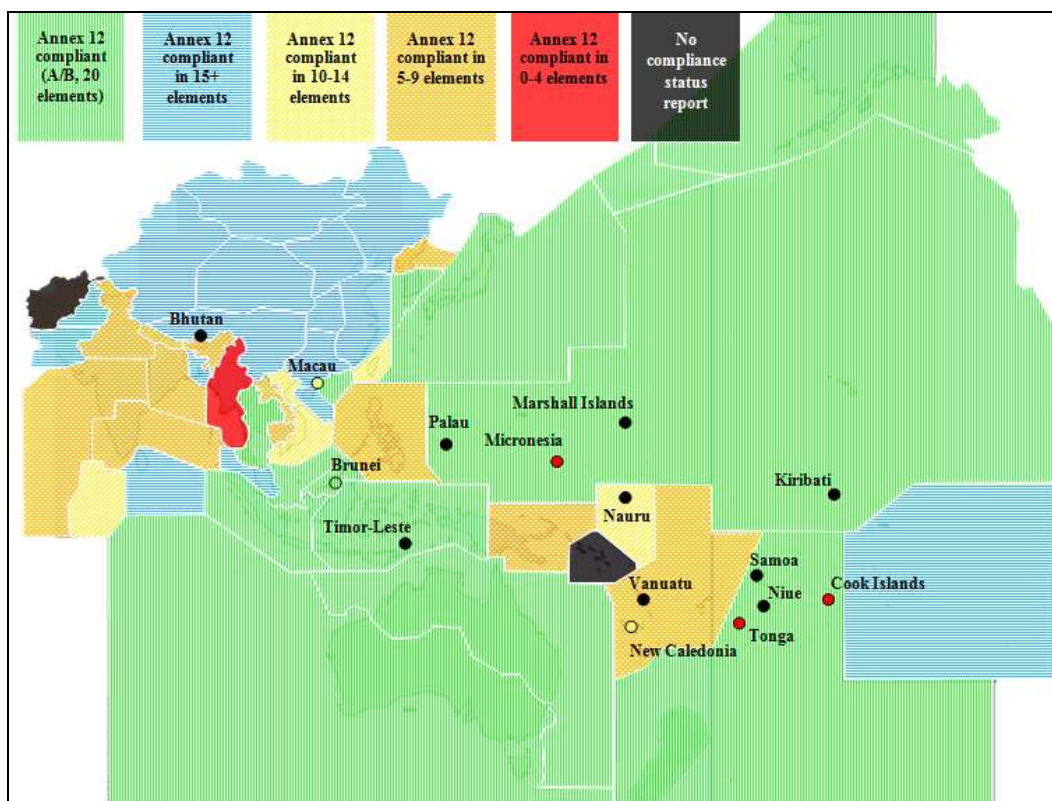


Figure 5: APSAR/TF/3 Asia/Pacific Regional SAR Overview

2.18 **Figure 5** indicated that significant Annex 12 weaknesses remained in the South Asia area and the Southwest Pacific (improvements were noted in Bangladesh, Indonesia, Fiji and Pakistan). There were also parts of Southeast and East Asia that indicated a need for compliance improvement.

2.19 **Figure 6** provides a graph of SAR capability based on the SAR Capability Table category A (fully meets Annex 12) and B (meets Annex 12 in most areas) classifications only.

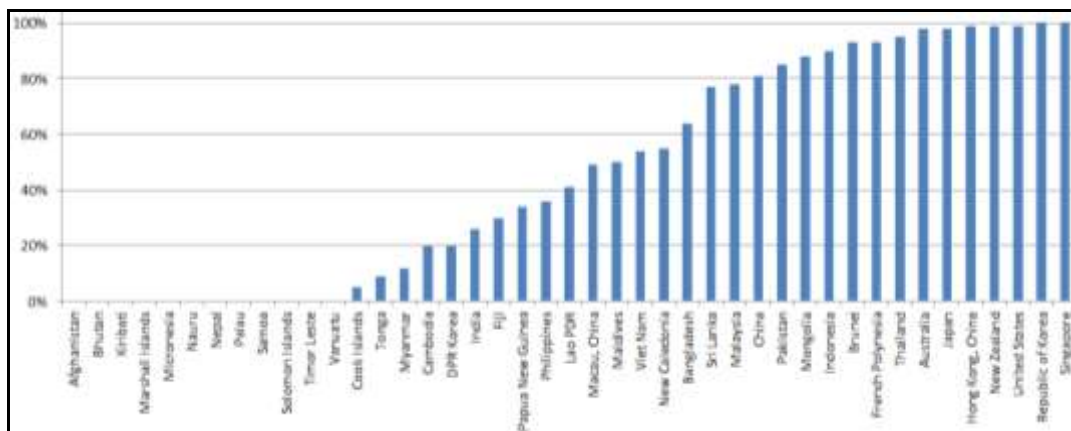


Figure 6: SAR Capability

2.20 The Task Force reviewed and discussed the list of new States and Administrations with SAR compliance deficiencies proposed for APANPIRG/26's attention (to add to existing SAR deficiencies registered for the Cook Islands and the Maldives after APSAR/TF/4) as follows:

- South Asia: Afghanistan, Bhutan, India, Myanmar, Nepal;
- Southeast Asia: Cambodia, Lao PDR;
- East Asia: DPR Korea, Macau China, Philippines; and
- Pacific: Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor Leste, Tonga and Vanuatu.

2.21 The SAIOACG/5 was informed of the continued development of the Asia/Pacific SAR Plan, including the latest draft for consideration by the APSAR/TF/3. The draft SAR Plan was extensively reviewed by the meeting over the course of an entire day, and was expected to be finalised by APSAR/TF/4.

2.22 The SAIOACG/5 noted the progress during the RACP/TF/4 of the Draft Regional ATM Contingency Plan, including further development of harmonized (where practicable) sub-regional ATS contingency routes and flight level allocation schemes (FLAS), and an agreed performance improvement plan with a provisional implementation target of 10 November 2016.

2.23 The SAIOACG/5 Chairperson commented that States needed greater urgency in implementing AIS QMS, and involvement in the ATFM/SG. He noted the importance of States taking action to reduce LHDs, especially the early implementation of AIDC and sharing of communications and surveillance data.

2.24 Regarding the eANP changes, the SAIOACG/5 Chairperson urged States to respond to the ICAO request to check draft eANP data (particularly FIR details).

2.25 SAIOACG noted the necessity for English Language proficiency training and assessment. IATA stated that if there was a language issue with a particular airline, they were prepared to assist.

Agenda Item 3: Review of Current Operations and Problem Areas

Air Navigation Service Deficiencies List (WP03)

3.1 ICAO presented a WP on specific deficiencies in the air navigation field recognised by APANPIRG. The 21st meeting of APANPIRG (APANPIRG/21, September 2010) reviewed the updated List based on information provided by concerned States to ATM/AIS/SAR/SG/20 (July 2010, Singapore). The meeting urged States who had not taken firm corrective action to eliminate the deficiencies, and adopted the following Conclusion *APANPIRG21/ 53 – Elimination of ATM Air Navigation Deficiencies*.

3.2 SAIOACG/5 reviewed an updated List of APANPIRG Air Navigation Deficiencies in the ATM, AIS and SAR fields and States were requested to provide updates on their progress in closing the deficiencies noted and comment on the new proposed SAR capability deficiencies proposed by the APSAR/TF/3 in grey highlight:

- **Afghanistan**
 - AIS QMS
 - SAR Capability (no data)
 - WGS-84
- **Bangladesh**
 - AIS QMS
 - Provision of data for monitoring height-keeping performance of aircraft
 - WGS-84
- **Bhutan**
 - AIS QMS
 - SAR Capability (no data)
 - WGS-84
- **India**
 - SAR Capability
- **Maldives**
 - AIS QMS
 - SAR Capability
 - WGS-84
- **Myanmar**
 - SAR Capability
- **Nepal**
 - AIS QMS
 - SAR Capability
- **Pakistan**
 - AIS QMS
 - WGS-84

3.3 SAIOACG/5 participants had not comment about the proposed deficiencies.

3.4 On the matter of IFALPA deficiencies, Bangladesh commented that further investigation into Aircraft Collision Avoidance System (ACAS) matters was required to clarify the issue raised by IFALPA. They further commented that deficiency statements relating to poor ATC procedures and English language issues must be supported by specific examples, and should be reported directly to the authority concerned.

Agenda Item 4: Implementation of New CNS/ATM Systems

Seamless ATM Planning and Reporting (WP04)

4.1 WP04 presented an overview of the Seamless ATM planning and reporting required by States, and provides an update on the progress towards the performance-based monitoring regime being implemented during 2014/2015. The Seamless ATM Plan version 1.0 was endorsed by APANPIRG in June 2013 (Conclusion 24/54). Seamless ATM Implementation Guidance Material was adopted at APANPIRG/25.

4.2 SAIOACG/5 noted that there were a total of 18 Air Navigation Reporting Forms (ANRF) corresponding to the 18 Aviation System Block Upgrade (ASBU) elements were endorsed by APANPIRG/25 – these replaced the earlier Performance Framework Forms (PFF).

4.3 The importance of Seamless ATM Plan implementation progress reporting in accordance with APANPIRG Conclusion 24/55 c) was agreed by SAIOACG/5 as being crucial for:

- airspace users (for planning of equipage and fleets);
- neighbouring Flight Information Regions (FIRs, for harmonisation of progress);
- Regional Office (to update the Seamless ATM Plan and for APANPIRG); and
- ICAO HQ (to update the GANP in response to regional implementation feedback).

4.4 The ICAO Asia/Pacific Regional Office had developed a web-based tool in an effort to ease the submission of Seamless ATM reports for States, and reap the benefits of data analysis for ICAO. This tool is available at https://portal.icao.int/RO_APAC/Reporting/Pages/default.aspx, and would provide the ability to submit up to four reports times a year, as well as exporting and archiving functions. It would be possible for users to prepare a report based on the previous submissions, which should minimize the input workload.

4.5 Thus far, a total of nine States and Administrations (Australia, French Polynesia, Hong Kong China, India, Japan, Macao China, Singapore, Thailand, and United States) had submitted a Seamless ATM report, while other States and Administrations (Bangladesh, China, Malaysia, New Zealand, Philippines, Republic of Korea and Sri Lanka) were known to be in the process of completing their submissions (forms in preparation). States that had not notified their points of contact and submitted their reports were urged to do so at the earliest opportunity. This allowed two levels of regional monitoring, a Regional Performance Dashboard, and a Regional Picture, one level below, allowing corrective actions by APANPIRG on the implementation.

4.6 Export functions including calculation were provided to the ICAO Regional Office staff members to analyse the inputs from States/Administrations and later on, feed a GIS-based regional picture that would present a regional picture (i.e. a regional map with the progress on each item for all States/administrations). However this project was frozen, due to the lack of resources at ICAO HQ.

4.7 The SAIOACG/5 meeting was informed of the Performance Dashboards, which presented up-to-date regional implementation results, highlighting what States and groups of States were achieving in collaboration with their respective Planning and Implementation Regional Groups (PIRGs) and Regional Aviation Safety Groups (RASGs). Their ultimate intention, besides ICAO's basic measurement, accountability and transparency goals, was to help motivate aviation groups and stakeholders to continue to participate in and improve upon the applicable cooperative programmes being implemented at the regional level. The Performance dashboards were available at: <http://www.icao.int/safety/Pages/Regional-Targets.aspx>. This link would be provided in the dedicated State/administration web-based Reporting Process Home page as well.

4.8 The Planning and Implementation Regional Groups (PIRGs) and RASGs Global Coordination Meeting (GCM) was held in Montreal on 19 March 2013. The PIRG/RASG GCM urged each PIRG to establish regional priorities and targets, and to develop action plans for regional priorities. In addition, APANPIRG Contributing Bodies should be discussing action plans for each ASBU element.

4.9 Regarding the priority ASBU elements, the following areas were discussed by SAIOACG, in order to develop action plans and monitor progress:

- a) B0-NOPS (primary responsibility – ATM/SG via the ATFM/SG):
- the following States should submit progress reports to the ATFM/SG on their ATFM status to meet the target date of 12 November 2015 for implementation of an effective ATFM system, and if assistance is required, to detail the barriers and requested assistance that might be necessary –
 - **China** (Beijing FIR, Guangzhou FIR, Hong Kong FIR, Kunming FIR, Shanghai FIR, Shenyang FIR, Sanya FIR, Taipei FIR, Wuhan FIR);
 - **India** (Delhi and Mumbai FIRs);
 - **Indonesia** (Jakarta FIR);
 - **Japan** (Fukuoka FIR);
 - **Laos** (Vientiane FIR),
 - **Malaysia** (Kuala Lumpur FIR, Kota Kinabalu FIR);
 - **Philippines** (Manila FIR);
 - **Republic of Korea** (Incheon FIR);
 - **Thailand** (Bangkok FIR);
 - **Singapore** (Singapore FIR);
 - **Viet Nam** (Hanoi and Ho Chi Minh FIRs);
- b) B0-DATM (primary responsibility – ATM/SG via the AAITF):
- **All Asia/Pacific States** should submit progress reports to the AAITF on their AIS – AIM transition progress to meet the target date of 12 November 2015 for implementation of Phase 1 and 2 in accordance with the Seamless ATM Plan (note the information in WP02 Attachment A), and if assistance is required, to detail the barriers and requested assistance that might be necessary;
- c) B0-FRTO (primary responsibility – ATM/SG):
- **All Asia/Pacific States** which have military operations should submit progress reports to the ATM/SG through the Seamless ATM reporting system (re paragraph 2.5) on their progress on implementing the following elements to meet the target date of 12 November 2015 in accordance with the Seamless ATM Plan, and if assistance is required, to detail the barriers and requested assistance that might be necessary:
 - A mechanism is established for the regular review of Special Use Airspace (SUA) to minimize the effect of SUA on civil air traffic;
 - A body is formed to conduct strategic civil/military cooperation; and
 - A mechanism is established to conduct tactical (day-to-day) civil/military cooperation liaison between military and civil activity.

Kolkatta Upper Airspace Harmonisation and Benefits (WP09)

4.10 India provided information on their implementation of new upper airspace improvements within the Kolkata FIR. The project included ATS automation, improved ATS surveillance coverage with installation eight ADS-B ground receivers to compliment nine radars, surveillance sensor integration, data link departure clearances, RNP 10, RNAV 5 and RNAV 2 ATS routes, RNAV 1 Standard Instrument Departures (SIDs) and Standard Instrument Arrivals (and STARs), and the establishment of a single upper airspace continuum above FL255. Each of the four Indian FIRs would have only one Area Control Centre (ACC), thereby amalgamating 12 ACCs into four ACCs initially and subsequently into two ACCs.

4.11 The new automation system had been operational from 11 August 2014. The new technique of cross coupling of VHF facilitates creation of multiple sectors operated from Kolkata. ATS Inter Facility Data Communication (AIDC) permits automatic exchange of aeronautical data among ATC units, thereby reducing ATS coordination significantly. The Kolkata Upper Airspace Harmonisation (UAH) had been validated by the TAAM simulation tool, developed jointly by Jeppesen and Boeing.

4.12 Benefits of the UAH include harmonized ATM procedures and reduction in separation between aircraft resulting in increased airspace capacity utilization and enabling aircraft to get Preferred Flight level and more direct routings, which were estimated to save some USD332,000 per month. The ATS surveillance integration greatly facilitated Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO), thereby saving fuel and reducing carbon emissions. The UAH also facilitated an even distribution of ATC workload by consolidating and deconsolidating sectors dynamically, depending on traffic. IATA congratulated India on the ATM improvements.

4.13 After the installation of automation system and surveillance sensors integration, India advised the SAIOACG that 70% of aircraft were achieving their planned flight level, and 98% of aircraft were getting levels within 2000ft of their planned levels.

4.14 India stated that the estimated benefits of two RNAV-2 city pair routes (Kolkata – New Delhi and Mumbai – Kolkata) were 6.2 million and 2.3 million kilograms fuel per month, mainly due to the achievement of preferred flight level (USD6.59 million and 22.83 million per month, based on USD0.99 per kilogram). Moreover, the fuel saved in CDO/CCO trials at Kolkata from 30 January 2015 until 24 February 2015 was 23,981 kilograms (daily average of 920 Kg of fuel per day). This figure was estimated to rise to an average of 2,000 kilograms per day once CDO/CCO was fully operational with Arrival Manager (AMAN), translating into 730,000 kilograms fuel saving per annum, reducing carbon emissions by 2,299,500 kilograms per year, and potentially saving \$USD28,490,000.

4.15 India emphasized the safety benefits of a better distributed ATC workload, and the reduction of ATC manual coordination using AIDC (**Figure 7** and **Figure 8**).

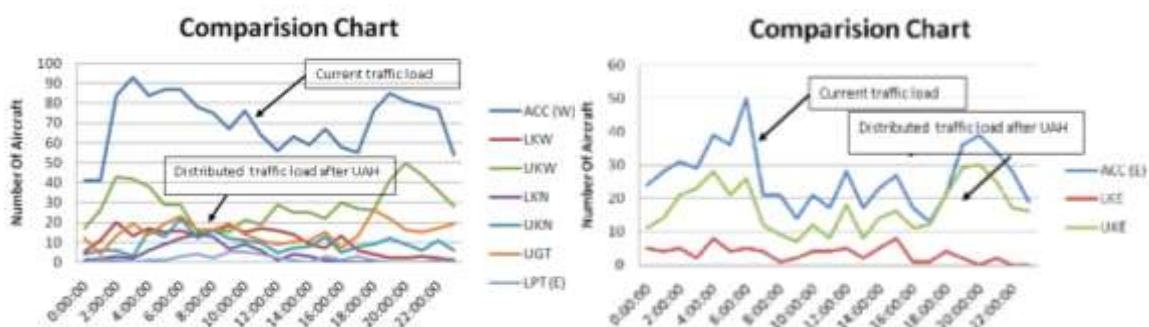


Figure 7 and Figure 8: ATC Traffic Loading Charts

4.16 SAIOACG/5 noted that WP09 included economic and environmental benefits, providing information on tangible improvements resulting from this project. The meeting discussed the methodology for calculating the economic and environmental benefits, noting that the ICAO Fuel Savings Estimation Tool (IFSET), was available on the ICAO website. IATA advised that they could also assist States in performing these calculations (noting that calculating kilograms of CO₂ was an approximate 3.1 multiplier from kilograms of fuel).

Upper Airspace Harmonisation within the Delhi FIR (IP04)

4.17 India presented information on their UAH within the Delhi FIR. They noted that Chennai UAH had been completed successfully, and now the emphasis was on Kolkata and Delhi FIRs. The objective was primarily to structure the entire upper airspace at and above F260 as one continuum, free from operational discontinuities, inconsistencies and differing rules and procedures, to facilitate the implementation of:

- common and uniform level of facilities and ATM automation system and tools;
- uniform ATC separation standards;
- introduction and better utilization of data link communications, improved flight plan processing systems, and advanced airspace management coordination tools and message exchange capabilities, leading to progressively more flexible and dynamic management of airspace

4.18 Overlapping seamless VHF coverage had been planned within the entire Delhi FIR Upper Airspace. In addition, Delhi FIR would be provided with seamless and overlapping ATS surveillance coverage from several radars and ADS – B stations, strategically positioned for this purpose (**Figure 9**).

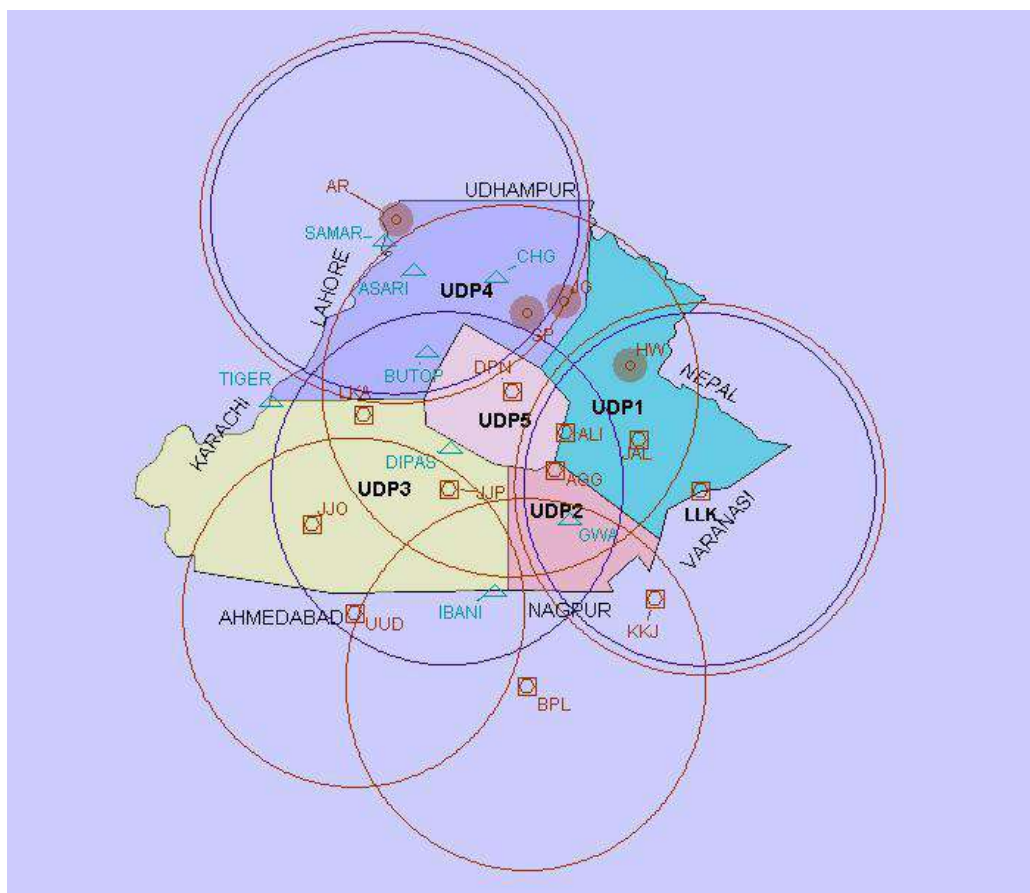


Figure 9: Delhi FIR ATS Surveillance Sites

Update on ATM Activities in the Maldives (IP02)

4.19 Maldives has established AIDC test connections to Mumbai, Chennai, Colombo and Melbourne. The issues observed during trials had been forwarded to the ATM equipment supplier. Among these issues was incompatibility between AIDC versions used in Maldives and neighbouring States. India offered to assist the Maldives as they had experience with similar equipment.

4.20 As part of the efforts to enhance the efficiency and safety of air traffic services, the Maldives has completed installation and commissioning of four ADS-B ground stations which had been integrated into the ATM automation system (due to be replaced by November 2016, with the current Mode C Radar at INIA replaced with a Mode S radar by August 2017). Issues have been observed such as random label swapping between IFR and VFR tracks and ghost tracks which needed to be addressed and resolved prior to commencing any ADS-B operation. ADS-B surveillance services were planned to be augmented with multilateration (MLAT) surveillance by March 2017.

4.21 The Automatic Dependent Surveillance-Contract (ADS-C) track splitting issue when a flight was connected was another major issue. These issues had been brought to the attention of equipment suppliers.

4.22 The meeting discussed the need for States to ensure that ATM systems procurement processes included clear requirement for AIDC and other technical interface versions. It was noted that the Pan-Regional AIDC ICD task force had completed its work, and that the Regional AIDC Implementation Task Force would hold its first meeting from 16 to 18 June 2015.

Agenda Item 5: ATS Route Developments

ATS Route Catalogue (WP05)

5.1 The Secretariat presented draft Version 14 of the *Asia and Pacific Region ATS Route Catalogue* for review and update. The meeting noted the transition of Chapter A (ATS routes that had been designated by the Council) was being moved into the eANP (WP02 refers), and that the remaining proposals within the ATS Route Catalogue could be updated by the Regional Office without reference to an APANPIRG Conclusion in future. SAIOACG/5 agreed to the following Draft Conclusion for consideration by the ATM Sub-Group and APANPIRG:

Draft Conclusion SAIOACG5/SEACG22-1: ATS Route Catalogue Version 14

That Version 14 of the *Asia and Pacific Region ATS Route Catalogue* replaces Version 13 on the Asia/Pacific Regional Office's web site, noting that:

- Chapter A had been transitioned to the electronic Air Navigation Plan (eANP); and
- the remaining ATS route proposals in the ATS Route Catalogue may be amended by the ICAO Regional Office without reference to an APANPIRG Conclusion in future.

Airspace User Review of the Asia Pacific Regional ATS Route Catalogue (WP06)

5.2 IATA provided the results of a user review of the Asia/Pacific Regional ATS Route Catalogue Chapter 1- 'South Asia'. The meeting noted the ATS Route Catalogue changes to be made as a result of the review.

Central Air Traffic Flow Management in India (IP03)

5.3 India presented IP03, on the establishment of a Central Air Traffic Flow Management (C-ATFM) system within the Delhi, Kolkata, Chennai and Mumbai FIRs. India commented that there had been sustained growth of air traffic during the last decade and this trend was likely to continue; thus there was need to utilize system capacity efficiently by Demand and Capacity Balancing (DCB). India noted that while ATFM had been proven to enhance safety and provide measurable efficiency gains, it was also viewed as a transformational concept that introduced new levels of Collaborative Decision Making (CDM) and offered potential for harmonizing seamless airspace operations.

5.4 During Phase 1, the C-ATFM baseline system would be in place by end of 2015, providing significant capabilities to perform strategic, pre-tactical, and tactical ATFM and CDM using data such as flight plans, weather, and aerodrome and airspace capacity. The C-ATFM system will consist of a Central Command and Control Center (CCC) at Delhi networked with Traffic Management Units (TMU) at six major airports (Delhi, Mumbai, Bangalore, Chennai, Kolkata and Hyderabad).

5.5 In Phase 2, a nationwide ATFM system covering airports throughout India would become operational by the end of 2016. Finally, in Phase 3 before 2018 the C-ATFM system will have capabilities to expand as a sub-regional or regional ATFM system. The system would also have scope for interfaces for seamless data exchange with other ATFM systems in the sub-region and region, thus supporting evolution of an international ATFM system. The specific functionality will be developed in collaboration with the States and ANSPs working together for international ATFM integration. India foresaw an international ATFM system that optimized available capacity on a sub-regional basis. They stressed the need for highly trained ATFM personnel and a proactive regulatory framework reaching across the national boundaries for harmonized implementation of a trans-national and seamless ATFM system.

5.6 IATA acknowledged that India was collaborating with airlines in the development of the C-ATFM.

5.7 The meeting noted that ATFM should not be put in place at the expense of capacity improvements, which should be prioritised. India's work in establishment of central flow and improving capacity were recognized. ICAO advised the meeting on the availability of capacity examples in ICAO Doc 9971 and within the draft ATFM Framework in response to a question.

5.8 It was noted that AIDC provided not only safety benefits, but also improved ATC capacity, and compatibility of AIDC versions was essential to gaining its benefits in cross-border capacity and ATFM processes.

5.9 Bangladesh stated that the tender for their new automated ATM system will be finalised for advise to ATM/SG/3. Nepal advised that their ATM automation programme was being established and would provide an update to the ATM/SG.

ATFM Ops Trial based on Distributed Multi-Nodal CDM-ATFM Concept (Flimsy 1)

5.10 Thailand presented a flimsy on behalf of Australia, China, Hong Kong China, Indonesia, Malaysia, Singapore, Viet Nam, IATA, CANSO, and IFATCA. The flimsy provided an overview of the collaborative planning for the ATFM Operational Trial between the nations involved, based on a Distributed Multi-Nodal ATFM/CDM Network concept. The concept aimed to enhance operational efficiency, to optimize capacity and to pave the way for a regional harmonized Cross-Border ATFM solution for the Asia/Pacific Region.

Agenda Item 6: ATM Contingency Plans and Search and Rescue

Update on ATM Activities in the Maldives (IP02)

6.1 The Maldives had developed a draft ATM Contingency Plan for Male FIR in accordance with Annex 11 and Annex 15 provisions to allow international flights to transit the Male FIR without disruption, in the event of a natural disaster, man-made disaster or any other event which makes the air traffic and services provided by the Male Area Control Centre (ACC) partially or totally unavailable.

6.2 The meeting was advised that the RACP/TF was drafting a Regional ATM Contingency Plan including a template for internal contingency plans, and for cross-border contingency arrangements. Meeting participants were requested to ensure that any ATS contingency route or flight level allocation scheme (FLAS) structures were provided to RACP/TF for inclusion in the Regional Contingency Plan.

6.3 The Australian Government had commenced a three year program called Search and Rescue (SAR) Capability Partnership Program (SCPP) to assist the Maldives, Mauritius and Sri Lanka to enhance our SAR capability. Under this program, the Australian Maritime Safety Authority (AMSA) officials had already visited the Maldives and conducted a SAR gap analysis.

Agenda Item 7: ANSP Coordination and Civil/Military Cooperation

Flexible Use of Airspace (WP10)

7.1 India presented WP10, which updated the SAIOACG on developments in civil/military cooperation in India and in particular, on Flexible Use Airspace (FUA).

7.2 India described their *FUA Manual-India Version 1.0* and its acceptance by the National High Level Airspace Policy Body (NHLAPB). The NHLAPB had representatives from the FUA Secretariat (Airports Authority of India), Indian Air Force (ATS and Aerodromes), Indian Navy (ATS) and DGCA (ANS). The NHLAPB used the *FUA Manual* as its baseline document providing detailed guidelines on FUA implementation at all three levels of airspace management [Level 1 (strategic), Level 2 (pre-tactical) and Level 3 (tactical)].

7.3 The National Airspace Management Committee (NAMAC) drew members from Airports Authority of India, Indian Air Force, Indian Navy, DGCA, airlines and ISRO (Indian Space Research Organization). The NAMAC had reviewed each and every aspect of the *FUA Manual* and came to agreement on the procedures and protocols therein after detailed deliberations. A training project is planned to familiarize civil/military cooperation stakeholders in the process of FUA implementation.

7.4 India agreed to provide a short, step-by-step summary of their experience of civil/military cooperation implementation to the Regional Office by 01 April 2015, and a WP to the ATM/SG/3 with a copy of the FUA Manual so it could be considered as regional guidance material.

7.5 NHLAPB had also constituted a sub-committee to prepare a report containing a 'Gap Analysis' for system integration, with a flow chart including details of harmonizing Integration Protocols and Interface Control Documents (ICD) to ensure civil military systems interoperability.

7.6 India noted that the implementation of FUA had enabled more efficient route design and realignment of restricted and danger areas. Implementation of FUA had also enabled establishment of Conditional Route J1 between Kajuraho and Jaipur and RNAV5 City Pair Q16/Q17 between Bhopal and Mumbai.

Agenda Item 8: Review of SAIOACG / SEACG Task List

SAIOACG and SEACG Task Lists (WP07)

8.1 The Secretariat presented WP10, which contained the SAIOACG Terms of Reference (ToR, **Appendix C**) and SAIOACG Task List (**Appendix D**) to review. The draft ToR had a minor amendment to reflect proposed changes to the Major Traffic Flow numbering as contained in the eANP (**Figure 10**).

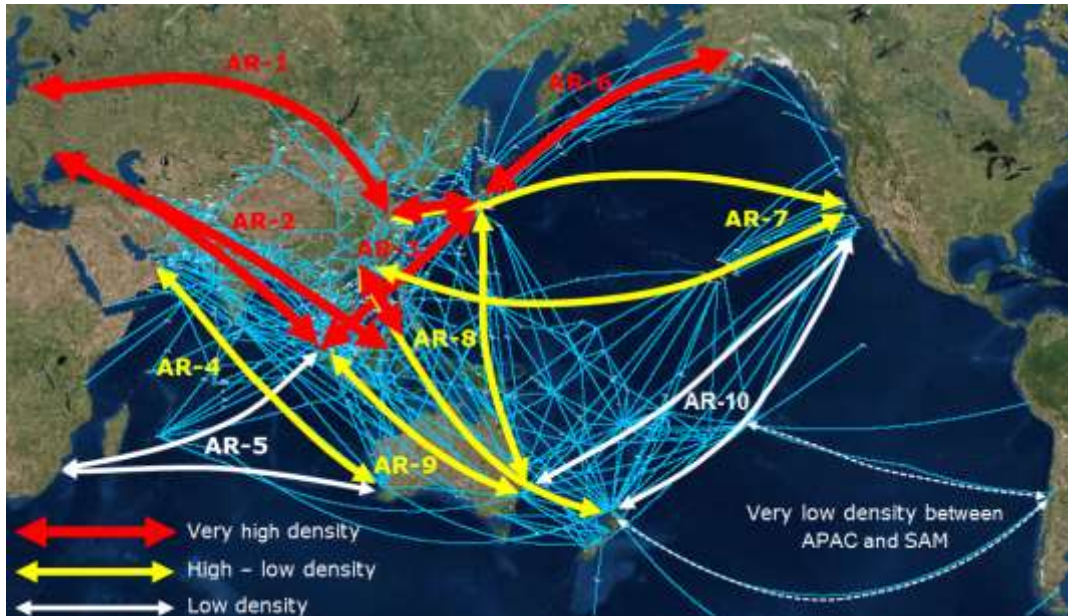


Figure 10: eANP Major Traffic Flow Depiction

8.2 SAIOACG/5 agreed to the following Draft Conclusion regarding the minor amendment to the ToR:

Draft Decision SAIOACG5-2: SAIOACG Terms of Reference

That South Asia Indian Ocean Air Traffic Management Coordination Group (SAIOACG) Terms of Reference be amended in accordance with **Appendix C** to the Report.

Agenda Item 9: Any other business

9.1 There was no other business discussed at the meeting.

Agenda Item 10: Date and Venue of the Next Meeting

Future of the APANPIRG ATM Coordination Groups (WP08)

10.1 SAIOAG/5 discussed the future of the meeting with the presentation of WP08 by ICAO. It noted that the Bay Of Bengal ATS Co-ordination Group (BBACG) first met in the mid-1990s in response to the challenges posed by the CNS/ATM (Communications Navigation Surveillance Air Traffic Management) concept being evolved at the time.

10.2 Moreover, the Bay of Bengal, Arabian Sea, Indian Ocean (BOBASIO) had been developed as an ATS coordination group by India. The Third BOBASIO was conducted at Hyderabad, from 22 to 24 October, 2013. The report of BOBASIO/3 noted that ‘informal’ (non-ICAO) meetings acted as a catalyst for quick changes and excellent solutions to pending ATM issues, and discussed numerous items of interest from other bodies such as the SAIOACG, Arabian Sea Indian Ocean ATS Coordination Group (ASIOACG) and Indian Ocean Strategic Partnership to Reduce Emission (INSPIRE). It was clear that there was considerable cross-over in these meetings and a general discussion suggested that there would be benefit in consolidating meeting efforts. It was also evident that so-called ‘informal’ meetings in the Pacific, the IPACG (Informal Pacific ATC Coordinating Group) and ISPACG (Informal South Pacific ATS Coordinating Group), often led the world in implementing new technologies and procedures.

10.3 ICAO expected to maintain an active role in supporting ATM coordination meetings, including attendance when required and also through the presence of the APAC Regional Office and/or Regional Sub-Office (RSO) if this is possible. The Regional Sub-Office has been building more capability in managing day to day implementation matters, including crucial areas such as Performance-based Navigation (PBN), ATS route development, Air Traffic Flow Management (ATFM) and Airspace Organisation and Management (AOM). Therefore, from 2016 it appeared that the RSO was best placed to manage the SAIOACG and SEACG Secretariat.

10.4 IATA expressed the strong view that regardless of whether the Regional Office or the RSO provided the Secretariat service, the ATM Coordination meetings must continue to be held at the Regional Office in Bangkok, to continue to take advantage of the associated accessibility, cost and convenience that permitted all relevant States to more readily attend. The SAIOACG/5 agreed with this view.

10.5 The RSO highlighted that their staff were seconded from States and mission travel costs borne by the seconded State, emphasising that available funding might not be able to support many missions out of Beijing.

11. Closing of the meeting

The Chairman thanked the meeting participants for their work during the meeting program.

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List of Participants

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International Civil Aviation Organization

**The Fifth Meeting of the South Asia/Indian Ocean ATM Coordination Group
(SAIOACG/5)**

Bangkok, Thailand, 03-06 March 2015

LIST OF WORKING AND INFORMATION PAPERS

(Presented by the Secretariat)

WORKING PAPERS

NUMBER	AGENDA	WORKING PAPERS	PRESENTED BY
WP01	1	SAIOACG/5 Provisional Agenda	Secretariat
WP02	2	Relevant Meeting Outcomes	Secretariat
WP03	3	Air Navigation Service Deficiencies List	Secretariat
WP04	4	Seamless ATM Planning and Reporting	Secretariat
WP05	5	ATS Route Catalogue	Secretariat
WP06	5	Airspace User Review of the Asia Pacific Regional ATS Route Catalogue	IATA
WP07	8	SAIOACG Task List	Secretariat
WP08	10	Future of the APANPIRG ATM Coordination Groups	Secretariat
WP09	4	Kolkatta Upper Airspace Harmonisation and Benefits	India
WP10	7	Flexible Use of Airspace	India

INFORMATION PAPERS

NUMBER	AGENDA	INFORMATION PAPERS	PRESENTED BY
IP01	-	List of Working and Information Papers	Secretariat
IP02	4/6	Update on ATM Activities in the Maldives	Maldives
IP03	5	Central Air Traffic Flow Management In India	India
IP04	4	Upper Airspace Harmonisation Within the Delhi FIR	India

FLIMSYS

FL01	5	ATFM Operational Trial Based on the Distributed Multi-Nodal CDM/ATFM Concept	Australia, China, Hong Kong China, Indonesia, Malaysia, Singapore, Thailand, Viet Nam, IATA, CANSO, and IFATCA
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South Asia/Indian Ocean ATM Coordination Group (SAIOACG) Terms of Reference

- 1) The scope and objective of the SAIOACG is to identify, plan and implement Air Traffic Management improvements within airspace serving the Asian Regional Major Traffic Flows:
 - AR-4.2 (Europe – Southeast Asia);
 - AR-4.4 (Africa – Southeast Asia/Australia);
 - AR-4.5 (Middle East – Southeast Asia/Australia).

- 2) To meet this objective the Group shall:
 - a. review and recommend improvements to relevant airspace and ATS route structures, in order to optimize the safety and efficiency of ATC operations;
 - b. review and recommend improvements to ATS facilities such as communication and surveillance capability in support of flight operations;
 - c. research and plan airspace and facility requirements based on future technologies, Performance Based Navigation and other capabilities that enhance flight operations;
 - d. coordinate with other bodies to establish appropriate navigation specifications;
 - e. identify ATM deficiencies with respect to ICAO Standards and Recommended Practices (SARPs), and make recommendations to achieve compliance;
 - f. cooperate with other bodies as required, to facilitate Seamless ATM;
 - g. create working groups as required to manage specific ATM-related projects; and
 - h. research and recommend appropriate means of minimizing the environmental consequences of flight operations.

- 3) The SAIOACG reports to the ATM Subgroup of APANPIRG.

The membership of the SAIOACG is open to States that provide ATS within the scope of airspace of SAIOACG, International Organizations and ICAO. The membership is also open to participants from outside the airspace or organizations that can contribute to SAIOACG by invitation from SAIOACG (such as military organizations that can facilitate civil/military cooperation).

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SAIOACG — TASK LIST

(last updated SAIOACG/5)

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
18/2	Chennai/Colombo FIR boundary harmonization	2012	India, Sri Lanka Regional Office	Closed	India informed BBACG that this matter now under consideration by the Govt of India. Timeframe to be updated at the BBACG/22. SAIOCG/2. This was an inter-governmental issue.
18/4	Contingency Planning	2012	All States in the region, Regional Office	Closed	States in co-ordination with its neighbouring States, develop a contingency plan or plans for their airspace, taking into account Conclusion 17/11 Adoption of Model National ATM Contingency Plan. States to update contingency plan status at BBACG/22 SAIOACG/2. RACPTF was addressing the issue.
18/7	Specify RVSM airspace as Class A	Update SAIOACG/3	States Regional Office	Closed	India expected to upgrade airspace to class A. To be done in 2015. India will implement by mid-2015.
18/8	Lowering MEA on G792 from FL310 to FL300 to be in alignment with P628 in India	Update SAIOACG/5	India, Pakistan, ICAO APAC Regional Office, IATA	Open	This matter is in coordination between Pakistan and India. Update at SAIOACG/5. Proposal to have a SCM at the same time as the AHACG/3 will be discussed.
18/9	Search and Rescue Agreements between States	Update BBACG/22	Regional Office All States	Closed	<p>a) States, in conjunction with their neighbouring State (s), will develop Search and Rescue Agreements, for the purpose of providing a more efficient response to a search and rescue action and increase the possibility of a successful search and rescue mission; States conduct joint training and exercises, as appropriate, to maximize proficiency;</p> <p>b) a State, together with a neighbouring State, establish common SAR procedures, where practicable; and</p> <p>c) Pakistan scheduled to meet with I.R. of Iran and Afghanistan on harmonization of SAR Plans</p> <p>SAR agreements are reviewed at APANPIRG.</p> <p>BOBASIO/1 meeting addressed SAR agreements with India's neighbouring States</p>

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ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
					Now monitored by APSAR/TF
19/5	<p>Establishment of Indian Ocean UPR (Southern Africa to Southeast Asia)</p> <ol style="list-style-type: none"> 1. Australia - Compile Contact List 2. Australia - Develop Operational Concept which identifies Operators; City Pairs; & Aircraft types for interim application (March 2008) 3. Singapore Airlines to provide Flight Plan Data JNB – CPT - SIN 	2012	Australia, IATA, affected States	Closed	<p>Assist ASIOACG members with this work.</p> <p>Primary coordination point is Mr. Phil Mayo of Airservices Australia, email: (Phil.Mayo@AirservicesAustralia.com)</p> <p>ASIOACG/4 Report contains record of positive progress so far. 2 routes implemented from Sumatra to Johannesburg.</p> <p>Data has been provided to ASIOACG. IATA informed meeting that operational UPRs were planned in June 2012. UPR Zone established 2012.</p>
20/1	Ensure BOBCAT flight plans and movement messages (DEP, CHG, CNL, etc) of flights subject to ATFM procedures (BOBCAT) are addressed by AFTN to Bangkok ATFMU	Update SAIOACG/3	States, IATA	Closed	Improvement noted in BBACG/21, but departure messages are still not being consistently received from certain airports. AEROTHAI to communicate with the relevant ANSPs and airlines. Action by ATFM SWG. Thailand acknowledged an improvement in SAIOACG/4
20/3	<p>Poor on time performance of BOBCAT aircraft subject to ATFM procedures has direct impact on efficiency of ATFM procedures. All parties to undertake investigation as to reason for poor on-time performance including:</p> <ol style="list-style-type: none"> a) Incorrect flight planned EET, b) Non compliance with BOBCAT AWUT – early and late departures c) Non compliance with BOBCAT Kabul entry time – early and late at Kabul entry fix. 	Update SAIOACG/5	Affected States, IATA	Closed	<p>Poor punctuality performance is actively being monitored and rectified where possible by IATA/States.</p> <p>SAIOACG/5: this is still problematic. Action by transferred to ATFM/SG</p>
20/4	India to consider approving use of existing ATS route west of Chennai as connector route for N571/N877 for bypass traffic on L510 to enable efficient and BOBCAT metered traffic feed to UL333 in Kabul FIR	Update SAIOACG/5	India, Regional Office, Malaysia	Open	India to update Regional office by SAIOACG/5 6. Still under consideration.
20/5	Progress bulk ANP amendment proposal for re-designation of BBACG conventional routes to RNAV routes (BBACG/20 Appendix M refers). Target date for implementation is June 2011.	Update BBACG/22	Affected States, Regional Office	Closed	Affected routes in Phase 1 and 2 of the 50NM longitudinal separation

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ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
SAIOACG2/1	Flights will be spaced 50nm longitudinally at points where routes converge instead of 10 minutes currently required. Where necessary to ensure separation to apply vertical separation instead. LOAs to be amended to reflect this agreement.	Immediate	Between Afghanistan and Pakistan	Open	<p>Note: State which is sending traffic on converging routes into an adjoining FIR is responsible for ensuring that the flights have 50nm longitudinal separation prior to transferring control. Request to ICAO office to facilitate meeting if required.</p> <p>LOA Delhi Lahore signed 12 January 2012.</p> <p>RSO will initiate communications to convene a meeting with the concerned parties, IATA to be advised of the outcome. SAIOACG/5: the RSO has not managed to have any communication with Pakistan.</p>
2/2	LOA India /Oman: To Sign LOA and implement 50/50 on P570,M300,N563,P574,L301	Immediate	India/Oman	Open	<p>LOA signed. However 50/50 implementation held in abeyance pending resolution of issues relating to aircraft equipage as filed in FPLs, and other operational issues between Mumbai and Muscat ACC.</p> <p>Oman reports ready to implement 50/50NM eastbound by July 2012. SAIOACG reports that this did not happen.</p>
2/3	Afghanistan to review requirement for blocking FL290 and FL300 in Kabul FIR. Data required on flights which had to avoid Kabul airspace as a consequence of FL 290 &FL300 blocked.	Immediate	IATA, ICAO	Open	IATA has updated Afghanistan authorities. A review meeting is scheduled in late May. Partial lifting of restrictions with FL320 being made available. To be discussed during ICAO Mission to Afghanistan April 2014..
2/4	FL330 Blocked on G325. NOTAM action to rescind the requirement	15 May 2012	Pakistan	Closed	Pakistan removed the requirement in late 2012.
2/5	Resolve the communications issues between Pakistan and Afghanistan ACCs	Immediate	Pakistan Afghanistan ICAO CNS	Open	Pakistan to host a meeting comprising Afghanistan, Pakistan and ICAO CNS, CHECK WITH LI PENG.
2/6	M890-to implement 50nm longitudinal separation in India	Immediate	India	Closed	India to consider. To conduct safety assessment as appropriate. Safety assessment completed. On ATS Route M890. 50NM longitudinal separation in India is implemented.
	To implement 50nm longitudinal separation on L509 between Lahore /Delhi FIR	12 Jan 2012	India/Pakistan	Closed	<p>L509 available from 1900-2130 at or above F320.</p> <p>Note: Pakistan has issued an A series NOTAM to make L509 available from 1500-2130UTC.</p>

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ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
	To sign LOA to Implement 50/50 on N563,P574 between Jakarta /Chennai	12 Jan 2012	India /Indonesia/Malaysia	Closed	Completed. India /Indonesia signed the LOA. Malaysia/India the signed LOA. Implemented 3 May 2012
	To sign LOA and implement 50/50NM on P570 and M300	Sept 2012	Indonesia/Sri Lanka	Closed	Indonesia completed and implemented on 3 MAY. Sri Lanka unable to implement due unreliable CPDLC. New date to be decided after commissioning of new ATC Centre. LOA to be signed by Sri Lanka .
2/7	Implement 50/50 on 14 routes as described in TF6 Meeting	8 March 2012	India	Closed	Routes are P570,M300,N563,P574,N877,L759,L510,L759,P646,L509,M770,L301,N895,L507 in Kolkata, Delhi, Chennai and Mumbai FIR.
2/8	DCPC by Jakarta ACC. To confirm whether DCPC capability is via CPDLC or extended range VHF	Immediate	Indonesia	Closed	Indonesia confirms VHF coverage within FIR for DCPC
	CPDLC Yangon ACC. To confirm availability	Immediate Aug 2012	Myanmar	Open	Reported as having connectivity issues due to aging equipment and issues with Service Provider. Discussions with SITA were on-going.
	CPDLC MALAYSIA. To confirm availability	Immediate	Malaysia	Closed	Confirms CPDLC serviceable and implemented 50/50. Integrating into ATC system.
	Sri Lanka CPDLC. To confirm availability	Sept 2012	Sri Lanka	Closed	Reported as moving to new ACC. CPDLC unreliable at this time. Sri Lanka reported the system is now operational at SAIOACG/4
2/9	Lahore/Delhi FIR new routes. Implement additional routes M875, L333	TBN	India/ Pakistan	Open	No agreement on implementation date. Discussions to continue.
	Lahore/Delhi FIR new routes. PRA SERKA		India/ Pakistan	Open	Regional office to follow up with Pakistan to activate the segment in Pakistan. India offer to provide connectivity for westbound thru A325/B210 and N893/G208. India ready to implement within Indian airspace. Draft LOA for connectivity has been sent to Pakistan for consideration.

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ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
					India exploring A325 as bidirectional to accommodate eastbound. India, Pakistan and IATA are exploring interim alternative options to PRA-SERKA
	Lahore/Delhi FIR new routes. 50/50 for eastbound flights on N893		India/Pakistan	Open	India can accept eastbound flights on N893 via TELEM. Response from Pakistan required.
2/10	Investigate capability and timeline to implement 30/30	2013	All States	Open	India has implemented 30/30NM on four ATS routes in the near term. Adjacent States should consider a coordinated implementation of 30NM/30NM .
2/11	RNP airspace as opposed to RNP operations on specific routes	2013	All States	Closed	
2/12	WP07: ATFM SWG- Airlines should avoid changing of routes within the Delhi FIR	2013	IATA, India	Open	IATA would follow up if any State advised them of non-conforming aircraft and would issue a reminder to airlines about using the suggested routes as far as practicable. India suggested that they would encourage controllers to report non-participating airline problems with BOBCAT. India would ensure ACCs were reminded of the requirement to comply with BOBCAT slot allocation as far as practicable.
2/13	WP07: ATFM SWG- More information from BOBCAT to be made available for tactical decisions in addition to the Kabul FIR entry	2013	Thailand, India	Closed	Thailand will communicate with stakeholders about an upgrade in terms of sharing information more like a CDM system. It needs to be clear that the extra information was not a 'controlling' tool. Transfer to ATFM/SG
2/14	WP07: ATFM SWG- suggestion that FL280 and FL300 should be exclusively reserved for Delhi (and possibly Mumbai) and Lahore departures.	2013	Afghanistan, India, ICAO	Open	India would provide information on how much of a problem this was, supported by data. If the data supported a need to change, the Regional Office would communicate to Pakistan about allowing aircraft to transition through their airspace to BOBCAT allocated levels. In any case the airspace authority in Afghanistan may change military-reserved levels from FL300-310 to FL290-FL300. Data provided by India as part of WP03
2/15	WP07: ATFM SWG- Mandatory BOBCAT requirements	2013	All States	Closed	The meeting discussed the need for States to promulgate the mandatory requirements for BOBCAT compliance if they had not done so, and flights which plan to enter Kabul FIR without an AWUT and entry slot will be accommodated only after flights with slots have been processed. Such flights should expect delayed pushback and start clearances, non-preferred routes and/or flight levels, enroute holding and/or diversion around Kabul FIR
2/16	WP07: ATFM SWG- BOBCAT slot allocation may be considered beyond 2000 – 2359UTC	2013	India	Open closed	India to provide data to support an extension. All involved to consider operational impact. Thailand to consider operational impact of the extension – need to share data and airlines to look at impact. Such change will require a 90-day notice. Data provided by India as part of WP03 Transferred to ATFM/SG

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ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
2/17	WP07: ATFM SWG- Traffic distribution on all Delhi exit points should be balanced	2013	IATA	Closed	IATA asked that some routes be made more efficient so airlines use them. IATA had been consciously trying to encourage the spread of traffic.
2/18	WP07: ATFM SWG- 50NM longitudinal should be accepted for all aircraft on routes P628, L333, M875 and L509.	2013	India, ICAO	Closed	India would provide data on the amount of times 50NM was not accepted. The Regional Office may be able to follow up. It was noted that data-sharing and Seamless ATM would help. Data collection in progress. To date India unable to find traffic for 50NM on LAJAK track during 1900 to 2130 UTC.
3/1	<p>A Pakistan-India-Afghanistan Special Coordination Meeting should be conducted by ICAO to address:</p> <ul style="list-style-type: none"> • more uniform application of 50NM separation whenever this was possible; • removal of unnecessary altitude and timing restrictions on ATS routes; • availability of FL280 and FL300 within the Kabul FIR outside BOBCAT hours; • new ATS route (WP10 and Flimsy 1 refers); • the status of communications and ATS surveillance facilities to support ATS surveillance-based separations and procedures; • transition towards a more comprehensive ATFM service; and • prioritisation of BOBCAT approved aircraft and their level allocation. <p>Consideration should be made to include Iran.</p>	2013	Pakistan-India-Afghanistan, ICAO, IATA, possibly Iran and Thailand	Closed	ATFM SWG item
3/2	IATA would support India to improve the uptake of on-airport	2013	IATA	Open	SUR SWG item. India would consider a mandate.

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ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
	data-link services.				
4/1	SEACG/21 - Lahore requires acceptance by Kabul before accepting transfers from India, and FL280 was still not available within the Kabul FIR.	May 2014	ICAO Pakistan Afghanistan	Closed	ICAO to discuss with Afghanistan on mission to Kabul 15-16 April 2014
4/2	India to review Bay of Bengal confections and remove FLAS with Pt Blair ADS-B operational if possible	July 2014	India	Open	India to update ATM/SG/3.
4/3	Study sub-regional South Asia TA in the order of 13,000ft	August 2014	South Asian States	Open	India to update ATM/SG/3
4/4	India to present paper on the follow up actions of tasks identified in SAIOACG/4 SEACG21 Appendix E	August 2014	India	Open	
5/1	India to present paper to the ATM/SG on the installation of ADS-B, VHF and sharing data from a site on Great Nicobar Island.	August 2015	India	Closed	India to update ATM/SG/3
5/2	India offered to assist the Maldives in ATM project management in the areas of ADS-B and ADS-C, as well as AIDC.	SAIOACG/6	India	Open	India had experience with similar equipment (SAIOACG/5/IP02).
5/3	India to provide a short, step-by-step summary of their experience of civil/military cooperation implementation to the Regional Office by 01 April 2015, and a WP to the ATM/SG/3 with a copy of the FUA Manual so it could be considered as regional guidance material.	August 2015	India	Open	

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