International Civil Aviation Organization

The Twenty-Second Meeting of the APANPIRG ATM/AIS/SAR Sub-Group (ATM/AIS/SAR/SG/22)

Bangkok, Thailand, 25 – 29 June 2012

Agenda Item 4: Review outcome of relevant meetings

REVIEW OF BOBASIO/02 MEETING AT CHENNAI

(Presented by India)

SUMMARY

This paper presents a brief review of the Second Bay Of Bengal, Arabian Sea And Indian Ocean Region (BOBASIO/02) held at Chennai, India Between 11th & 13th April, 2012.

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-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-12 Functional integration of ground systems with airborne systems
GPI-17 Data link applications
GPI-21 Navigation systems
GPI-22 Communication infrastructure

1. INTRODUCTION

1.1 The first ATS Coordination meeting of the ANSPs within Bay of Bengal, Arabian Sea and Indian Ocean Region (BOBASIO/1) was held in New Delhi from 5th to 6th May, 2011. The Second ATS Coordination Meeting of the Bay of Bengal, Arabian Sea and Indian Ocean (BOBASIO) Region was held at Chennai, India from 11th to 13th April 2012. ANSPs from APAC, MID and SEAF Region met for the first time in this excellent platform for implementing seamless ATM in the BOBASIO Region.

1.2 The meeting was attended by 61 participants including 24 international delegates from Nepal, Bangladesh, Thailand, Singapore, Indonesia, Maldives, Seychelles, Oman, IATA and IFATCA. ICAO also encourages such informal groups to sort out ANS issues of common interest. Fifteen (15) Working Papers (WPs) and six (6) Information Papers (IPs) were presented in the meeting.

2. DISCUSSION

The following topics were discussed during the three day meeting.

2.1 Post Implementation Analysis on 50 NM RHS

The first phase of the Bay of Bengal Reduced Horizontal Separation (BOBRHS) project was implemented on 30 June 2011 on two routes N571and P762 out of the proposed four routes. The second Phase of the 50 NM RHS on ATS routes P570, M300, N563, P574, N877, L759, L510, L759, P646, L509, M770, L301, N895 and L507 in Kolkata, Delhi, Chennai and Mumbai FIR was implemented on 15th December 2011.

India, Indonesia and Oman analyzed the problem areas as to why 50NM RLS could not be implemented on certain RNP10 routes as planned in BOB-RHS/TF06 meeting. India and Indonesia has signed the LOA for implementation of 50NM RLS from 3rd May 2012 on N563.The LOA for P574 route is being signed between Malaysia, Indonesia and India. Colombo and Pakistan did not attend the meeting hence the problems pertaining to P570, M300 and the routes in the North West transiting Karachi and Lahore could not be discussed in the meeting.

2.2 Role of (BOBASMA) in implementing 50 NM Reduced Longitudinal Separation in BOBASIO Region.

BOBASMA conducted the pre-implementation Airspace Analysis and Safety Assessment for the introduction of 50 NM Reduced longitudinal separations on Phase1 and phase2. The meeting was informed that Asia Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) in its 22nd meeting in September 2011 vide Decision D 22/14 endorsed BOBASMA as an En-route Monitoring Agency.

BOBASMA informed that since 1st July 2010, till date there has been no report of occurrence of either LLDs or LLEs. South East Asia Safety Monitoring Agency (SEASMA) in its report to RASMAG/16 for the period 1st December 2010 to 30th November 2011 reported occurrence of 2 LLDs. The Pacific Approvals Registry and Monitoring Organization (PARMO) which serves as the EMA for Anchorage and Oakland oceanic FIRs had in its report for the period December 2010 to November 2011 reported occurrence of 4 LLDs and 1 LLE. It was opined that controllers need to be sensitized to report LLD/LLE correctly.

2.3 BOBCAT operations in India post RVSM Afghanistan & RHS

India made following suggestions:

- ✓ Bobcat slot allocation be made mandatory between 2000-2359 UTC.
- ✓ Bobcat slot allocation be considered beyond 2000-2359 UTC.
- ✓ Airlines to plan their flight plan to ensure traffic is evenly distributed over the four exit points in Delhi FIR based on their entry points in Kabul FIR.
- ✓ The BOBCAT slot allocation sheet should specify the time and level restrictions over the exit points in Delhi FIR, viz., SAMAR, GUGAL, TIGER & VIKIT.
- ✓ Aircraft may expect delays/re-routings if they are not adhering to east west aligned routes for effective ATFM.

India has agreed to take up the extension of the route to include BOBCAT hours with military authorities.

2.4 **Follow-Up Items from the First India-Myanmar-Thailand ATM Coordination Meeting (IMT-ATM/CM/1)**

An ATS Route parallel to L301 was proposed south of the current L301 route to ease congestion of what has become known in the Asia-Pacific region as Major Traffic Flow AR-10 (Middle East – Southeast Asia).India expressed concerns on military areas involved in the vicinity to the Chennai – Kolkata FIR boundary and Chennai – Mumbai – Kolkata FIR boundary as well as potential radar coverage issues. Notwithstanding these concerns, India agreed to study potential possibility of the proposed route.

The meeting discussed potential increase of capacity on L301 as a part of Phase 2 reduced horizontal separation initiative led by ICAO Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF) targeted in 2011 – 2012 timeframe. There were proposal to split P646/N895 which currently split in Yangon FIR into two separate routes along with realignment of L507 further north.

2.5 ATM Contingency Plan of India and its Linkage with Adjacent FIRs

India informed that the first ATM Contingency plan for Indian FIRs in February 2008.Further it was revised as Level-1in accordance with the guidelines issued by ICAO during twenty first meeting of the Bay of Bengal ATS coordination group (BBACG/21). The revised ATM Contingency plan was placed in BOBASIO/1 and updated as second edition of ATM Contingency plan which was presented in twenty first ATM/AIS/ SAR subgroup meeting in Bangkok which was held from 27th June to 1st July 2011, and was circulated to all neighbouringstates.

India proposed that the contingency route structure provided in this paper may be adopted for regional ATM contingency plan for level 2 and level 3, as connectivity has been provided to all neighbouring states.

2.6 **India’s Preparedness for New ICAO FPL 2012**

India presented an update on the implementation of the NEW ICAO flight plan (FPL) format 2012 in AFTN, AMHS and ATM Automation Systems in India. India informed its readiness to assist neighboring states in developing software for AFTN system, provided the system is compatible with Indian system interface.

Seychelles informed that they will participate in testing once their system is ready. Air India also expressed their willingness to participate in the testing after due coordination with AAI. IATA also informed that most of their member airlines are ready and they will also participate in the testing of New FPL 2012.

2.7 **India’s Preparedness Towards Implementation of ADS-B and Outcome of SEA/BOB ADS-B WG/7 on ADS-B Data Sharing**

India informed about its plan to enhance the surveillance through the use of ADS-B on major air routes and in terminal areas by installing 14 ground stations in the first phase and 7 in the second phase. ADS-B ground stations at these locations will be with redundant configuration and will be integrated with the ATC Automation system for the purpose of supplementing the coverage of the existing Radars.

India is considering to issue mandate for carriage and use of ADS-B equipment in the entire Indian airspace and to operationalise ADS-B stations by December 2013 as per Asia/Pacific regional plan. India also expressed its willingness to share ADS-B data with neighbouring States. Neighbouring States were requested to consider sharing of ADS-B data with India and operators were urged to equip their aircraft suitably in a time-bound manner to facilitate implementation of ADS-B in the Region.

2.8 **Upper Airspace Harmonization Of Chennai FIR (India)**

India presented the 'Upper Airspace Harmonization of Chennai FIR', which was successfully launched on 22nd September, 2011, creating one continuum of airspace of 2.46 Million Sq. Km area, which facilitated uniform application of methods, procedures and separation standards. Apart from enhancing efficiency and capacity of the airspace, it will benefit operators and environment through an annual savings of fuel worth 30 million US$ and reduction in CO2 emission by 40 million Kg.

2.9 **Bangkok-Singapore Whole-Flight CDM Initiative**

Thailand presented an overview on current progress of the Bangkok-Singapore Whole-Flight Collaborative Decision Making (Whole-Flight CDM) initiative under the auspices of Civil Air Navigation Services Organization (CANSO) and further potentials in supporting Seamless Airspace and Seamless ATM Operations principle.

2.10 **SBAS Services & Performance** and **Expansion of GAGAN in BOBASIO Region**

India presented an IP on SBAS (GAGAN which stands for GPS Aided GEO Augmented Navigation)Services and Performance Characteristics explaining the various recommendations of ICAO. The meeting was informed that the footprint of the GAGAN space segment covers large portion of the Asia-Pacific region and that India is working towards attaining APV1.0 capability over the entire landmass.

GAGAN addresses equatorial iono-anomaly regions (all the BOBASIO states) through a unique IONO model (IGM-MLDF), which has been programmed after years of research and data collection. It is with this unique algorithm, India proposed to assist the BOBASIO states through a feasibility study for implementation of GAGAN Signal-in-space for aviation within the jurisdiction of the states in a time bound manner for states to consider the implementation of SBAS services.

India proposed to prepare and provide a draft Memorandum of Understanding (MOU) to all BOBASIO states by 10th May 2012 and states were urged to provide feedback on the draft MOU by 10th June 2012 in order to take the GAGAN expansion program forward for the mutual benefit of both aviation and non-aviation users of BOBASIO states.

2.11 **Indian Ocean Strategic Partnership to Reduce Emissions (INSPIRE)-creating a Seamless ATM Environment:**

The INSPIRE Agreement was signed by three partners, viz, the Air services Australia (ASA), Air Traffic and Navigation Services of South Africa (ATNS) and Airports Authority of India (AAI) on 7th March, 2011

A Co-ordinated plan for an efficient traffic handling strategy meeting Global "Best Practices" will provide a framework for the concept of Seamless ATM Environment in a collaborative manner. Hence a "Joint (multi state)" Simulation/analysis would strongly support INSPIRE/ ASIOACG strategic work plan to implement UPR Geographical Area in BOBASIO region.

Seychelles, Maldives and Indonesia were urged to participate in this green initiative by India along with IATA for effective implementation of the programme for the benefit to the users, which is huge in terms of fuel savings, as the programme is for long haul flights.

2.12 **Civil Military Cooperation for seamless ATM**

A high level delegation was constituted by Government of India to study best practices in advanced states for implementation of flexible use of airspace through efficient Civil Military cooperation. Based on the recommendation of the high level delegation formation of High level Airspace Policy body (HLAPB) to assess the National airspace usage is under consideration of Government of India. The body will consist of representatives from DGCA, AAI, IAF, Navy, MOD, ISRO, Airline representative and Secretary Ministry of Civil Aviation will be Chairman.

2.13 <u>Proposals and Agreements in BOBASIO /02 meeting</u>

2.13.1 Group-A- India and Seychelles

Both the states agreed to exchange investigation reports on Incidents of coordination failures to identify deficiencies for remedial action. Point of Contact of both the ANSPs was exchanged for follow-up action.

LOA was signed between Airports Authority of India for Mumbai OCC and Civil Aviation Authority of Seychelles after updating coordination procedure between the two centres.

Exchange of ADS/CPDLC addresses between Seychelles Civil Aviation Authority and Airports Authority of India for configuring the adaptation data for address forwarding and to conduct bench test was finalized.

Seychelles Civil Aviation Authority and Airports Authority of India agreed to exchange details regarding AIDC application capabilities and if feasible agreed to commence testing of AIDC in July 2012.

APAC BANP for routes L756 and L785 was discussed between Seychelles Civil Aviation Authority and Airports Authority of India wherein Seychelles agreed to follow it up through BANP of EASF Region for continuity of the route with same nomenclature.

Controller's Exchange visit program was discussed and both the countries agreed in principle for the above said programme. India agreed to provide the details of the training program being conducted at Civil Aviation Training College, Allahabad, India to Seychelles Civil Aviation Authority.

2.13.2 Group-B- India and Somalia

Somalia informed that there is only a single IDD line for coordination between Mogadishu ACC and Mumbai OCC. AAI informed that discussions is being held with the service provider (TATA TELECOM) for converting the existing VSAT data line between Kenya (Nairobi) and Mumbai OCC into submarine cable with 2 MBPS dedicated line for voice communication.

Somalia requested India to consider removing FLAS but India expressed its compulsion to have FLAS i.e. FL300 (west bound) and FL330 (east bound) due to communication limitation and majority of the aircraft are still non ADS/CPDLC capable. However, AAI assured that efforts will be made to expedite the process of level allocation other than FLAS to Mogadishu by sensitizing the OCC controllers about the difficulties being experienced by Mogadishu ACC.

Revision of LOA for making AFTN as primary and IDD as secondary mode of coordination and mandating ADS/CPDLC for flights above FLAS was discussed. Finally it was decided to maintain status quo until a dedicated line for ATS coordination is made available.

2.13.3 Group-C- India and Maldives

Male informed that AIDC Trail operations may commence from June, 2012 on routes R329 and R457 between Chennai ACC (UTV) and Male ACC. AIDC exchange between will be explored on Route R458 after successful completion of the trial run between Chennai and Male. AAI expressed willingness to assist Maldives in impending AIDC. India and Maldives signed MOU for trial operation of AIDC between Chennai ACC and Male ACC.

Maldives expressed concern over the flight level allocation on R329 over POXOD. India requested Maldives to provide sample data for analysis and initiating remedial measures. Non availability of flight plan data with Mumbai resulted in increased coordination and workload was reported by MAPL.AAI agreed to address this issue immediately.

Due to frequent failure of VSAT line between India and Maldives, it was requested by MAPL to have an alternate voice communication through different operator for Upper Chennai or Trivandrum. AAI agreed to examine the proposal for converting VSAT to submarine cable.

Maldives presented their plan for installing ADS-B through an Information Paper (IP5). Maldives expressed their willingness to share ADS-B data with India. India requested Maldives to site the ADS-B at Hanimadhoo to have overlapping coverage with Chennai Upper ACC and Trivandrum ACC and would facilitate reduction of separation in the area.

2.13.4 Group-C- India and Oman

India and Oman agreed to resolve the issues within a time frame of two months so as to implement 50NM RLS on routes for M300, P574 and L301to begin with and subsequently on all other routes.

2.13.5 Group-D- India and Indonesia

2.13.6 LOA between Airports Authority of India and Directorate General of Civil Aviation of Indonesia for Jakarta ACC was signed by updating coordination procedure between the two centres. The date of implementation of LOA was decided as 3rd May 2012 so as to coincide with Indonesian AIRAC cycle and also give sufficient time for controller sensitization programme.

2.13.7 The meeting agreed that the membership of BOBASIO group shall include ANSPs of India, Pakistan, Nepal, Bangladesh, Myanmar, Thailand, Malaysia, Singapore, Indonesia, Sri Lanka, Maldives, Seychelles, Mauritius, Somalia, Yemen and Oman. The members of the BOBASIO group may include but not be limited to airlines and airspace users of the member states and IATA, IFATCA and CANSO in view of the crucial role of states in the BOBASIO region in the implementation of seamless ATM and ASBU concept,

2.13.8 It was agreed that the BOBASIO/03 meeting would be held at Kolkata in May2013.

2.14 Support to BOBASIO Meeting by ICAO APAC Office

The ICAO Regional Office supported BOBASIO meeting as it provided a platform for the states to work together to solve the matters of mutual concern in a timely manner. It was suggested that the informal meetings like BOBASIO was an appropriate forum for much of the detailed technical discussion for short to medium term issues.

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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