



International Civil Aviation Organization

The Eleventh Meeting of the FANS Implementation Team for South-East Asia (FIT-SEA/11) and the Eighteenth Meeting of the South-East Asia ATM Coordination Group (SEACG/18)

Bangkok, Thailand, 3 – 6 May 2011

Agenda Item 3: Review Outcomes of Related Meetings

OUTCOMES OF SEA-RR TF/4

(Presented by the Secretariat)

SUMMARY

This paper presents outcomes of the SEA RR TF/4, for the meeting's review.

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-17 Data link applications

1. INTRODUCTION

1.1 This working paper presents a summary of discussion at the Fourth Meeting of the Southeast Asia Route Review Task Force (SEA-RR/TF/4), which was held at the ICAO Asia and Pacific Regional Office, Bangkok, Thailand from 22 to 26 November 2010.

1.2 Forty-nine (49) participants from Cambodia, China, Hong Kong China, Indonesia, Lao PDR, Malaysia, Nepal, Philippines, Singapore, Thailand, Viet Nam, IATA and IFATCA attended the meeting.

2. DISCUSSION

Unidirectional Crossing Routes in the South China Sea

2.1 The use of unidirectional routing in the South East Asia (SCS) was extensively discussed during previous SEA-RR/TF meetings; however, agreement to introduce this concept had not eventuated despite the agreement that the concept of unidirectional routes had unanimous support.

2.2 The significant benefits were once again highlighted such as safety considerations, more efficient use of flight levels, controller workload and advantages to airlines to optimize the use of flight levels.

2.3 The primary focus for the meeting were the four crossing routes mentioned below:

- a) M768 Brunei to TSN
- b) L628 Manila to PCA
- c) A461 Manila to Hong Kong
- d) B462/B348 Manila to Taipei

2.4 It was also noted that Malaysia supported the concept of the unidirectional crossing route structure; however, in regard to M768 from Brunei to TSN in Viet Nam, Malaysia considered that the additional unidirectional route be implemented Northeast of the present M768 due to several conflicts with other routes in the area to the Southwest.

2.5 Two common principles were agreed to. In order that aircraft are not required to change flight levels as they approach each pair of crossing routes, flight level allocation on either the primary routes or the crossing routes should be harmonious across the whole route structure in the area under consideration. In addition, pairs of crossing routes should remain laterally separated prior to and until clear of all primary routes.

2.6 The meeting noted that, with more routes being proposed, this could have an impact on operational issues during the typhoon season when Large Scale Weather Deviations (LSWDs) often take place. This matter would need to be taken into consideration when planning and developing these unidirectional routes. Careful management as these situations arise, should overcome any perceived obstacles.

2.7 It was further mentioned that statistical data, which was currently being collected from all States on a monthly basis which would play an important role in obtaining real time information on aircraft movements in the area. Small Working Group (SWG/1), which had been formed at a previous meeting, were tasked to consider these issues.

2.8 With regard to the four proposed unidirectional crossing routes mentioned in paragraph 2.3, the following coordination has taken place between States concerned and in some cases with IATA assistance:

- a) Preliminary discussions on A461 (Manila to Hong Kong) had taken place between Hong Kong China and Manila with further work required;
- b) IATA would discuss with Malaysia, the proposal of a new unidirectional route northeast of the present M768. Future discussions required with Viet Nam;
- c) Discussions will be required between Manila and Taipei regarding B462/B348 (Manila to Taipei); and

- d) Discussion are required between Philippines and Viet Nam on L628 (Manila to PCA),. These have not as yet commenced due to some operational issues within Viet Nam airspace.

2.9 The meeting was further requested that the work programme should also include the following:

- a) introduction of RNP10 horizontal separation where applicable;
- b) unidirectional RNAV routes on the described crossing tracks;
- c) data collection and analysis on most project items to ensure that qualified data indicates a reason to proceed;
- d) necessary safety related issues which are required to be addressed before implementation; and
- e) realistic target dates to complete all projects within the overall framework of the SEA-RR/TF.

Further Reduction of Minimum Longitudinal Spacing A1/P901

2.10 China and Hong Kong, China submitted a proposal to reduce the longitudinal spacing from 40 NM to 30NM on A1/P901 to take advantage of the communication and surveillance capabilities of the ANSPs along these routes. Further, it was noted that these two routes had now been multi-layered with A1, a conventional ATS route up to FL280 and RNAV route P901 above FL280 in the Sanya and Hong Kong FIRs.

2.11 China and Hong Kong China agreed that the reduction of longitudinal spacing on A1/P901 was a first step in the overall reduction of longitudinal spacing in this high profile area.

2.12 Advice was given that Taipei ACC had already indicated their readiness to implement 30NM longitudinal spacing for flights operating between Southeast Asia via A1/P901 and Taipei.

2.13 Hong Kong China also advised that they were in discussion with Taipei ACC and Japan in designating the portion of A1 between CH DVOR and reporting point ELATO to the east of Hong Kong FIR as an RNAV5 route.

Traffic Data Analysis by the Data Collection and Analysis Small Working Group 1 (SWG/1)

2.14 The meeting was presented with the traffic analysis based on the one week traffic data supplied by the States each month from January to September 2010, with particular consideration to the AR9 flow of traffic.

2.15 It was noted that while approximately 40 percent of the traffic on L628 were serving connections between the Bangkok FIR and the Manila FIR, the route L628 also services traffic from Manila to various destinations in the Middle East. Due to the traffic on A1 being the second highest in the region covered by the combined TSD among bi-directional routes, a study of A1 crossing with W1 in the Ha Noi and Ho Chi Minh FIRs was undertaken.

Report on Small Working Group 2 (SWG/2)

2.16 Several States raised the issue of the timescale for a change of designator with regard to the ICAO Regional PBN Plan and the benefits for the ANSPs and operators of any change at this stage. It was emphasised that the Regional PBN Plan includes requirements for en-route RNAV capabilities by aircraft and the implementation of appropriate procedures by ANSPs in the short, medium and long term. A unidirectional route structure to maximise the efficient use of airspace using most efficient lateral spacing should be based on the PBN concept. Therefore States should be actively considering their options for implementing RNAV routes as part of their overall preparation for handling increasing traffic in the future and the further demands from operators for a more efficient and environmentally effective service.

Use of Domestic Route Designators

2.17 It was noted that many States have a number of domestic routes with the ICAO Internal Route Designator ‘W’. However several adjacent States have allocated same names to domestic routes, e.g. ATS Routes W6 and W15 are both used by Cambodia, Thailand and Vietnam. As most modern aircraft have Flight management Systems (FMS) as their primary navigation system, the provision of accurate and unambiguous data is essential. The multiple use of the same ATS Route name could lead to errors or misunderstanding when inputting data into the FMS. States were recommended to review Annex 11 in regard to the use of ATS route designator, especially within their own domestic airspace.

New and Revised Routes

2.18 Vietnam’s proposals for new and revised routes were discussed which included three routes: Ha Noi - Yangon; Ha Noi - Siem Reap and Ho Chi Minh - Siem Reap.

Result of the Discussion between Singapore and Thailand on M752

2.19 The meeting was informed on the outcomes of a side meeting between Singapore and Thailand to further progress the development of RNAV Route M752 (SVB – UTAPAO – ENREP), which was presented to the SEA-RR/TF/3 meeting held in August 2010. Both Singapore and Thailand agreed to establish the RNAV Route M752.

2.20 Thailand and Singapore agreed on further collaboration to enhance surveillance for aviation in this region commencing with discussions of ADS-B data sharing and VHF radio communications at future ADS-B Task Force meetings as well as other future collaborations.

ATS Route Development

Traffic analysis in Hanoi and Ho Chi Minh FIRs

2.21 Viet Nam are in the process of studying changes to some major sub-regional ATS/RNAV routes which have been discussed at this and previous meetings of the task force. These included A1/P901, A202, L642, M771 and R474.

2.22 Thailand, Lao PDR and Cambodia advised that they had received the respective letters on Viet Nam’s proposals and are studying these proposals in coordination with their military authorities.

2.23 China advised that Cat Bi – Nankang and Phu Cat – LENKO proposals may not be attainable in the short term. Nevertheless, China would be willing to coordinate with Viet Nam in other meetings or by other means to optimize routings in the future.

Route Proposals submitted by IATA

2.24 The meeting was reminded that the SEA-RR Task Force was established by the ATM/AIS/SAR Sub-Group in order to provide route enhancements supporting the ICAO AR-9 traffic flow. The first meeting of this TF was held in December 2009.

2.25 It was therefore considered appropriate to summarise the proposals with the idea of establishing some priorities for the task force as well as a proposed implementation plan.

2.26 The meeting was advised that, while these proposals have all been subject to discussion, the Task Force is yet to agree on the implementation of most regional route proposals. To achieve some progress, it was proposed that the proposals are progressed and assigned a tentative timeline for each project, based on the potential benefits and the perceived ease of implementation.

2.27 To begin this process the meeting was requested that the following items be considered high priority from the user perspective.

- a) establish Un-directional flow/realignment A1;
- b) establish Unidirectional crossing route MNL – BKK;
- c) availability of 30/30 NM separations where appropriate;
- d) upgrading of non RNAV to RNAV routes;
- e) HAN – RGN, HCM – REP, HAN – REP;
- f) realignment of L642/ M771 between Sanya and HKG FIR (with the long term vision to make use of RNAV 5 Capability).

Reduced Horizontal Separation on RNAV Routes between Indonesia and Singapore

2.28 Taking advantage of the availability of Direct Controller – Pilot Communication (DCPC) facilities throughout these two routes, Indonesia and Singapore focussed on a series of proposed changes to the route structure of M774 and A576. The first step to be considered was to redesignate ATS route A576 as an RNAV10 route M635. This route would be implemented with allowance for sufficient lateral spacing with the adjacent routes. Similarly, RNAV10 route M774 would be realigned accordingly to achieve a lateral route spacing of 60NM. The proposed route spacing of 60NM between M635 and M774 would allow flexibility for future increase of capacity utilizing higher PBN specifications such as RNP4.

2.29 The timeline mentioned below includes changes to the ATM systems, conduct of safety assessment by the South East Asia Safety Monitoring Agency (SEASMA) and also the training of the controllers.

2nd Quarter 2011

- Implementation of RNAV10 route M635 and realignment of RNAV10 route M774 in Jakarta and Singapore FIR
- Implementation of 50NM lateral separation between M635 and M774.

3rd Quarter 2011

- Implementation of 50NM longitudinal separation on both M635 and M774.

Implementation of Himalaya-2 Route

2.30 Nepal presented a paper on a proposal to implement the Himalaya – 2 route between Kathmandu in Nepal and Kunming in China. This route was proposed during the introduction of the EMARSSH structure project in 2001. Unfortunately, this proposal was not able to gain approval at that time from China. The route is presently documented in the Asia/Pacific Region ATS Route Catalogue as a future requirement.

2.31 The meeting was advised that the proposed Himalaya 2 Route had been further augmented in the context of fulfilling ICAO's strategic objectives on environmental protections and enhancing the efficiency of aviation operations by developing, coordinating and implementing air navigation plans that reduce operational unit cost and facilitate increased traffic.

2.32 China advised that they would seriously study the proposal from Nepal.

Date and Venue for the next meeting

2.33 As there had been relatively small progress with respect to the Terms of Reference of the Task Force. It was considered that further analysis would be required in relation to the work and timelines of this task force and as such, the date and venue of the next meeting would need further consideration.

3. ACTION BY THE MEETING

3.1 The meeting is invited to discuss the outcomes of the SEA-RR/TF/4 Meeting.

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