



International Civil Aviation Organization

**The Third Meeting of the Regional Airspace Safety Monitoring Advisory Group
(RASMAG/3)**

Bangkok, Thailand, 6 – 7 June 2005

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- Agenda Item 4: Review the airspace safety monitoring arrangements in the Asia/Pacific Region and the activities of regional airspace safety monitoring agencies**
Agenda Item 7: Funding of Regional Safety Monitoring Activities

**SAFETY ASSESSMENT FOR RNP10 IN SOUTH CHINA SEA, AND
SAFETY MONITORING AGENCY AND CENTRAL REPORTING AGENCY
FOR SOUTH EAST ASIA**

(Presented by the Secretariat)

SUMMARY

This paper updates the situation in regard to the status of the safety assessment for RNP10 operations in the South China Sea and progress towards the establishment of a Safety Monitoring Agency (SMA) and a Central Reporting Agency (CRA) for South-East Asia operations.

1 INTRODUCTION

1.1 During RASMAG/1 (April 2004), it was agreed that it was necessary to establish safety monitoring agencies to undertake safety management programmes for the application of data link services and related horizontal separation minima. The following areas were identified as requiring a safety monitoring group(s) to be established for airspace safety monitoring services and safety assessments in the Asia Region:

- a) South China Sea area, for the safety assessment of the RNP 10 route structure and reduced horizontal separation, and application of data link services;
- b) RNP 10 routes across the Bay of Bengal area, for the safety assessment and monitoring of the routes, reduced horizontal separation, and application of data link services; and
- c) RNP 10 routes from South-East Asia to the Middle East, for the safety assessment and monitoring of the routes, reduced horizontal separation, and application of data link services.

1.2 The Twelfth Meeting of the South East Asia ATS Coordination Group (SEACG/12, May 2005) was updated in respect of the status of the safety assessment for RNP10 operations in the South China Sea (SCS) area. SEACG/12 also considered the progress towards establishing a sub-regional Safety Monitoring Agency (SMA) for the for the safety assessment of the South China Sea route structure and reduced horizontal separation, and the establishment of a Central Reporting Agency (CRA) in order to provide technical assistance in respect of the application of data link services to the South East Asia.

2 DISCUSSION

Safety assessment for RNP10 Operations in the SCS area

2.1 In regard to the need to establish safety assessment services for implement of RNP 10 operations in the SCS in November 2001, a safety analysis was carried out in order to confirm that the navigation accuracy and other safety considerations expected to be achieved would meet the agreed TLS of 5×10^{-9} fatal accidents per flight hour. As this task required mathematical expertise that was not generally available within the South China Sea ATS Route Structure Implementation Task Force, assistance from Australia to carry out the safety assessment was requested.

2.2 In October 2001, the Regional Office was informed that safety assessment conducted by Airservices Australia concluded that the lateral collision risk would be less than the TLS of 5×10^{-9} fatal accidents per flight hour, provided agreed weather deviation procedures were followed. Accordingly, all the States concerned were notified of this result.

2.3 SCS/TF/7 (January 2002) noted that the results of this safety assessment suggested that a new traffic movement sample should be collected to complete the safety assessment once the revised route structure had been implemented because the traffic data used for this preliminary assessment did not reflect the revised route structure. The Task Force agreed that a further safety assessment for RNP 10 operations in the revised South China Sea ATS route structure based on the actual traffic movement should be conducted.

2.4 SCS/TF/8 (December 2002) endorsed the position described above. Follow-up action on this matter was expected to be taken by SEACG/11(May 2004). In this regard, SEACG/11 considered the matter and added an action item to the SEACG Action Plan, noting that MAAR and Airservices Australia were in consultation about setting up an SMA capable of doing this work.

2.5 APANPIRG/15 noted that SEACG/11 had agreed to update the safety assessment in relation to the implementation on 1 November 2001 of RNP 10 and 60 NM lateral separation on the South China Sea routes. APANPIRG/15 also noted that RASMAG/1 had identified a need for a safety monitoring group to be responsible for safety assessment activities, and that there would be a need to designate such a safety organization for the SCS area.

2.6 The Regional Office pointed out that ongoing safety monitoring services and updating of safety assessments had not been put in place for the SCS route structure RNP 10 routes where 60 NM route spacing was applied. As no updated safety assessment had been undertaken since implementation of the route system in November 2001, a review of the safety assessment was long overdue.

2.7 The SEACG/12 meeting, noting the background to the present situation, agreed that setting up of safety monitoring services was essential and this would be given priority. As RASMAG was the body with appropriate expertise, the meeting requested RASMAG's assistance. Detailed information was required on the cost of setting up and operating a SMA. The main area of interest was regarding the cost issue and arrangements to obtain funding. It was felt that the overall cost would be less than that for an RMA and in the case of the SCS airspace which was relatively small and involved a few States, the cost would not be significant and could be readily funded.

2.8 The Secretariat advised SEACG/12 that ICAO through the Air Transport Bureau had the expertise to assist States set up an organization and provide for its funding. There were a number of examples where this had been done, details of which had been presented to the FIT-BOB and FIT-SEA meetings. To take the next step, States were requested to consider pursuing this at ATM/AIS/SAR/SG/15 (July 2005). At ATM/AIS/SAR/SG/15, the Regional Officer Air Transport could be made available to assist. SEACG/12 agreed to follow-up at ATM/AIS/SAR/SG/15.

Establishment of a Safety Monitoring Agency (SMA)

2.9 SEACG/12 recognized that ICAO provisions required that implementation of specified reduced separation minima, e.g. 50 NM lateral and longitudinal separation using RNP 10, and 30 NM horizontal separation based on ADS using RNP 4, required a TLS to be established for the airspace and safety assessments including collision risk modeling performed prior to implementation and periodically for ongoing operations.

2.10 In considering what organizations could provide SMA services, SEACG/12 noted that to date monitoring for RVSM, reduced horizontal separation minima, data link services, and the performance of safety assessments had been carried out by a few specialized teams made up of technical experts and contractors supporting States within the region. The Secretariat drew attention to the requirement that States were responsible for the provision of safety services for their FIRs, noting that commercial service providers could be employed by a State or group of States to provide regional airspace safety monitoring agency services.

2.11 Hong Kong, China queried SEACG/12 as to whether contracting services to commercial companies was endorsed by ICAO, as such services would be subject to commercial considerations, and it was possible that companies could go out of business at short notice or not renew contracts. This could raise questions about the availability of essential information and safety data. The Secretariat drew attention to the many areas within the air navigation services where commercial companies operated and this included a number of critical areas of service provision such as communications, satellite services, AIS provision, etc. It was the responsibility of States to ensure adequate arrangements existed to protect sensitive safety data and provision of essential services. In principal, there were no barriers for commercial companies to provide such services. As States bore sole responsibility for the air navigation services, they could provide these services themselves. However, it was recognized that there were commercial vulnerabilities and as Hong Kong, China suggested, this should be part of a risk assessment exercise when planning these activities.

2.12 The Secretariat presented information to the SEACG/12 meeting on behalf of commercial provider CSSI, regarding its interest in assuming the duties and responsibilities associated with the provision of airspace monitoring in connection with RNP-based horizontal separation minima. The meeting was informed of CSSI's capabilities and experience as they related to the region's need for safety monitoring. As CSSI was a commercial company, it would be necessary to charge for its services.

2.13 The Secretariat advised SEACG/12 that AEROTHAI, who had been appointed by APANPIRG to operate the RVSM regional monitoring agency (RMA) for the Asia Region was also interested in providing SMA services for the Bay of Bengal area. In addition to their RMA activities, AEROTHAI was studying the issues concerning the setting up of SMA services for the safety assessment work and monitoring activities related to the horizontal plane (i.e. RNP 10 and 50 NM lateral and longitudinal separation), and to include consideration of future separation reduction of 30 NM based on ADS and RNP 4.

Establishment of a Central Reporting Agency (CRA)

2.14 SEACG/12 was informed that Japan had confirmed that it would be willing to provide the CRA services for the FIT-SEA and requested the SEACG/12 meeting to consider this offer.

2.15 The provision of CRA services would be an extension of the existing CRA Japan activities in the Tokyo FIR as aircraft were operating from the Tokyo FIR to the South-East Asia area. This would also provide continuous CRA services across this geographical area. CRA Japan advised FIT that initially there would be no charge for setting up and operating the CRA, but consideration would need to be given for funding its ongoing service, and this matter should be taken into account in the CRA funding discussions in due course.

2.16 In regard to the formalities to establish the CRA, the Secretariat advised SEACG/12 that this was a matter for the States concerned to decide as they were responsible for the provision of the CRA services. In this case, as CRA Japan was an established CRA, the States could all agree through the FIT-SEA to appoint CRA Japan. The Secretariat also advised that acceptance of the offer of FIT-SEA CRA services by the CRA Japan would not require a formal approval of APANPIRG.

2.17 The Philippines, Singapore, IATA and IFALPA thanked CRA Japan for their offer to set up the CRA and the preparation work that they had done, and supported the proposal. The Secretariat also expressed its appreciation and endorsed CRA Japan's proposal. Viet Nam and Indonesia requested that the Regional Office inform the respective DGCA's officially of the financial, technical and operational aspects of the CRA and seek their position on CRA Japan's offer.

3 ACTION BY THE MEETING

3.1 The meeting is invited to;

- a) note the information contained in this paper;
- b) note that no follow up safety assessment has been completed in regard to the operation of the RNP 10 and 60NM route structure in the South China Sea since implementation in November 2001;
- c) note the request for assistance from SEACG/12 in respect of the establishment of a SMA; and
- d) discuss issues arising from the paper with a view to moving forward in regard to the safety issues identified in South East Asia.

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