



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

SOUTH-EAST ASIA ROUTE REVIEW TASK FORCE OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents the outcomes from the Sixth Meeting of the South-East Asia Route Review Task Force (SEA-RR/TF/6, Bangkok, Thailand, 30 April 2012). The Nineteenth Meeting of the South-East Asia ATM Coordination Group (SEACG/19) was consequently held from 1 to 4 May 2012 at the same venue.

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-5 RNAV and RNP (Performance-based navigation)
- GPI-6 Air traffic flow management
- GPI-7 Dynamic and flexible ATS route management
- GPI-17 Data link applications
- GPI-18 Aeronautical information
- GPI-19 Meteorological Systems
- GPI-21 Navigation systems
- GPI-22 Communication infrastructure

1. INTRODUCTION

1.1 Fifty-six (56) participants attended the SEA-RR/TF/6 meeting from Cambodia, China, Hong Kong China, Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand, Viet Nam, IATA, IFATCA and ARINC.

1.2 Five (5) working papers (WP) and one (1) information paper (IP) were presented to SEA-RR/TF/6. One Draft Decision was developed by the SEA-RR/TF/6.

2. DISCUSSION

ATS Route Structure Review

2.1 Hong Kong, China presented an update on the application of 30 Nautical Mile (NM) separation minimum on Routes A1 and A202 after the proposal by China and Hong Kong, China to reduce minimum longitudinal spacing on A1 from 40NM to 30NM in order to increase capacity at the SEA-RR/TF/4 meeting. The 30NM standard had been implemented since 5 April 2012. Hong Kong, China reported smooth operations and highlighted a positive increase in capacity of 25% as a result of this project. China noted that this was just a first step, but it was a good change to enhance route capacity.

2.2 The meeting noted that while 30NM was a good improvement, the area was covered by Air Traffic Services (ATS) surveillance, so separation should be based on this capability, not a procedural spacing (Asia/Pacific Air Navigation Concept of Operations refers). Moreover, the Seamless ATM initiative was expected to drive the application of a uniform lateral and longitudinal spacing based on surveillance in areas of radar, multilateration (MLAT) and Automatic Dependent Surveillance – Broadcast (ADS-B) coverage.

2.3 The meeting reviewed the Southeast Asia Implementation Plan developed at SEA-RR/TF/4 and was updated on implementation progress as follows:

Route Structure 1: successful implementation. In a couple of cases airlines and controllers did not have knowledge of the new routes.

Route Structure 2: Hong Kong, China advised that 30NM longitudinal separation had been implemented on 5 April 2012, and was serving approximately 200 flights per day. Lao PDR reported that the 30NM separation standard was working well and Viet Nam noted that the implementation had been a success.

Route Structure 3: completed.

Route Structure 4: completed.

Route Structure 5: This route proposal was transferred to SEACG, as the completion date was in the 2013 to 2014 timeframe.

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

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

Route Structure 8: Discussion was expected to be completed during 2012. The route would be discussed at the next Mekong ATM Coordination meeting. Myanmar would be invited to attend this group to facilitate this discussion. The meeting noted the importance of informal meetings, in that States could progress matters bi-laterally or multi-laterally in-between formal ICAO meetings, whether ICAO attended or not.

Route Structure 9: China had not attended TF/5 but was committed to the objective of improving capacity. The Mekong ATM Coordination Group had discussed this proposal and would also consider this matter at the next meeting.

Route Structure 10: The Philippines stated that there had been no progress on this proposal, and recommended that this item be added to the SEACG Task List. Viet Nam preferred to reduce the separation standard rather than establishing a new route, confirming that they could use 10NM radar-based separation. Cambodia had no objections to the route proposal. The meeting noted that the main purpose of the parallel route was not to address capacity on the proposed routes, but to increase the levels available on the main north-south routes that crossed, and thus amend the flight level allocation scheme.

Route Structure 11: This proposal was the same as Structure 10, except Malaysia and Singapore were involved. Viet Nam emphasized that they had radar surveillance and were happy to use improved separation as required. Malaysia noted that there were crossing track issues within the Kota Kinabalu Flight Information Region (FIR).

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

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

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

Route Structure 15: The proposal was similar to Route Structure 14.

Route Structure 16: This proposal had already been implemented on 12 January 2012. Thailand and Malaysia did not report any problems with this change.

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

2.5 IATA stated that there were two separate issues (reduction in separation standard and track shortening), and that in their opinion track shortening was the most important due to the saving in fuel and emissions. However, IATA also stated that a reduction of separation was helpful, especially in managing capacity.

2.6 **Table 1** indicates the overall results of the SEA-RR/TF/6 route review:

Route Proposal	Complete	SEACG	Bilateral	Mekong	EATMCG
1	✓				
2	✓	✓			
3	✓				
4	✓				
5		✓			
6			✓		
7				✓	
8				✓	
9		✓			
10		✓			
11		✓			
12			✓		
13					✓
14		✓			
15		✓			
16	✓				
Total	5	7	2	2	1

2.7 The Task Force reviewed the task list and resolved all outstanding tasks. A copy of the SEA-RR/TF Task List is appended as **Appendix A**.

2.8 Hong Kong, China noted that within its own constraints, the SEA-RR/TF had done a lot of work, and any subsequent work needed to pursue the objectives, and report progress to the SEACG. Indonesia was concerned about the continued work needed to address route improvements. The meeting noted that any outstanding work would continue in other bodies, and an 'empowered' SEACG would be able to maintain a strategic view of the tasks as they progressed. The meeting agreed to the following Draft Decision for approval by the ATM/AIS/SAR SG:

Draft Decision SEA-RR/TF 6/1 – Dissolution of the Southeast Asia Route Review Task Force

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

2.9 The Secretariat acknowledged the positive work that had been done to complete one third of the route improvements, while significantly progressing the other projects. The Chairman echoed these comments and thanked everyone for their work.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss and agree Draft Decision SEA-RR/TF 6/1, regarding Dissolution of the SEA-RR/TF; and
- c) discuss any relevant matters as appropriate.

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SEA-RR/TF Task List

SN	Activity	Group Responsible	Start	Present Status	Completed
	Identify Operational Need				
	Agree on operational needs for a route review in South China Sea area	States	Dec. 09	ongoing	Completed
	Safety Assessment				
	Review available summary data (non-compliant aircraft, aberrant aircraft etc)	SEASMA	Dec. 09	ongoing	Completed
	Examine history of navigational errors and assess possible impact on safety				
	Confirm collision risk model assumptions/parameters are consistent with airspace where the routes are being reviewed	SEA-RR/TF	Dec. 09	ongoing	Completed
	Collect weather and turbulence data for analysis	States	TBD	ongoing	Completed
	Report monthly navigational errors (including operational errors) to Enroute Monitoring Agency	States	Dec. 09	ongoing	Completed
	Collect traffic sample data for safety assessment for the routes under review.	SEA-RR/TF	Aug. 10	ongoing	Completed
	Conduct a Safety Assessment	SEASMA	TBD	TBD	Completed
	Feasibility Analysis				
	Examine the operational factors and workload associated with the routes under review	SEA-RR/TF	Dec. 09	ongoing	Completed

Determination of Requirements (airborne & ground systems)

States assess the impact of the routes to be implemented on controller automation systems and plan for upgrades/modifications.	SEA-RR/TF	Dec. 09	ongoing	Completed
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Aircraft & Operator Approval Requirements

Promulgate the operational approval process of PBN requirements (not within SEA/RR/TF TOR)	SEA-RR/TF	TBD	ongoing	Not Applicable
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Notify States when significant changes occur to the documentation (not within SEA/RR/TF TOR)	SEA-RR/TF	TBD	ongoing	Not Applicable
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Perform Rulemaking (if required)

Recommend State airspace regulatory documentation (not within SEA/RR/TF TOR)	States	TBD	TBD	Not Applicable
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Perform Necessary Industry & International Co-ordination

Establish target implementation date	SEA-RR/TF	TBD	TBD	Completed
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Report to ATM/AIS/SAR/SG	SEA-RR/TF	June 11	ongoing	Completed
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Process Doc 7030 amendment	SEA-RR/TF	TBD	ongoing	Not required
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Publish advance AIC	States	TBD	-	Not Applicable
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Publish AIP Amendment on separation/policy procedures Supplement	SEA-RR/TF States	TBD	ongoing	States
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Review inter-facility coordination procedures (LOA)	SEA-RR/TF	TBD	TBD	States
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Finalize changes to Letters of Agreement (LOA)	States	TBD	ongoing	States
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Approval of Aircraft & Operators

Establish approved operations readiness targets	SEA-RR/TF IATA	Jun. 11	-	Completed
Assess operator readiness	SEA-RR/TF IATA	Jun. 11	-	Completed

Develop Pilot & ATC Procedures

Review weather and contingency procedures (safety assessment).	SEA-RR/TF States		ongoing	Not Applicable
Conduct simulation modelling to assess impact	SEA-RR/TF States	Jun. 11	ongoing	Not Applicable
Report on simulation activity	SEA-RR/TF States	Jun. 11	ongoing	Not Applicable
Develop procedures for handling non-compliant aircraft in ATS documentation	SEA-RR/TF	Mar. 11	ongoing	Not Applicable
Develop mutually acceptable ATC procedures for non-approved State acft to transit the reviewed routes	SEA-RR/TF	Mar. 11	ongoing	Not Applicable
Implement procedures for suspension of the reviewed routes.	SEA-RR/TF	Mar. 11	ongoing	Not Applicable
Liaise with State defense authorities regarding military operations	States	Mar. 11	ongoing	Not Applicable

~~Pilot & ATC Training~~

Provide Pilot/ATC training documentation and training based on past experience	SEA-RR/TF States	Mar. 11	TBD	Not Applicable
Conduct local training for air traffic controllers	States	Mar. 11	TBD	Amalgamated

Perform System Verification

Navigation performance monitoring needed to undertake initial safety analysis	SEASMA	Jun. 11	ongoing	Completed
Provide representative traffic movement data to Safety Monitoring Agency	SEA-RR/TF	Aug. 10	ongoing	Completed
Undertake initial safety analysis	SEASMA	Mar. 11	ongoing	Completed
Prepare/maintain regional status report detailing the routes	SEA-RR/TF	Mar. 11	ongoing	Not Applicable

Final Implementation Decision

Review aircraft navigational performance and operational errors (this is not a uniform implementation)	States	TBD		Not Applicable
Complete ATS State documentation	States	TBD		Not Applicable
Publish Trigger NOTAM (this is automatic)	SEA-RR/TF and States	TBD		Not Applicable
Complete readiness assessment	SEA-RR/TF and States	TBD		Not Applicable
Complete safety analysis	SEASMA States	TBD	Ongoing	

~~Declare Initial Operational Capability~~

Not Applicable

Monitor System Performance

Perform Follow-On Monitoring	SEA-RR/TF States SEASMA			Not Applicable
Adopt New route and associated separation	SEA-RR/TF and States			Not Applicable

Declare Full Operational Capability

SEA-RR/TF
and States

TBD

Not
Applicable

Meetings

SEA-RR/Task Force/1/2/3/4/5 (Bangkok)

Dec. 09-
October 11

ongoing

Completed