



ICAO

*International Civil Aviation Organization***Twelfth Meeting of the South China Sea Traffic Flow Review Group (SCSTFRG/12)**

Bangkok Thailand, 11 – 12 November 2024

Agenda Item 4: Discussion on PBN Routes Development and FLAS/FLOS Optimization**CURRENT AND FUTURE SCSTFRG TASKS**

(Presented by IFATCA)

SUMMARY

This paper presents a brief overview of the past work of SCSTFRG and the outcomes of the completed tasks and the status of some ongoing work that will be discussed further at this meeting. It then presents some thoughts on the future direction the Group could consider when reviewing the SCS FLAS/FLOS issue which is the remaining item on the Group's task list.

1. INTRODUCTION

1.1 The Group was established as the South China Sea Major Traffic Flow Review Group (SCSMTRG) at the SEACG/22 Meeting in 2014 and the first SCSMTRG meeting was held in Putrajaya, Malaysia in January 2015. The Terms of Reference of the Group include:

- Identify current and planned CNS/ATM capabilities and implementation timelines of States concerned;
- Make recommendations to SEACG on implementation plans for route structures, airspace, FLAS/FLOS and separation solutions to meet the expectations of the Asia/Pacific Seamless ATM Plan.

1.2 As we are aware, FLAS/FLOS that was established in 2001 based on three major routes (Singapore-Hong Kong, Singapore-Republic of Korea and Singapore-Japan) and other 'subsidiary' routes. Due to the rapid growth of a number of low cost carriers starting from 2012, a developing network of flights on the subsidiary routes between other cities in the region generate congestion and delays for the operators and an increase in ATC workload across the region.

1.3 At the second SCSMTRG meeting in July 2015, it was agreed that the review should not be limited to just the major routes, but the entire route structure encompassing the subsidiary routes should also be reviewed. Hence the title of the Group was revised to South China Sea Traffic Flow Review Group (SCSTFRG).

2. DISCUSSION

2.1 At the third SCSTFRG meeting three primary tasks were determined and at meeting number seven in 2018, a fourth task was added with a note that work on the first three Priority Areas should be completed first:

Priority Area 1 – A1 The implementation of 20NM spacing and creation of a parallel route structure for A1.

Priority Area 2 – L642/M771 The implementation of 20NM spacing and creation of another parallel route.

Priority Area 3 – A461/A583 and L642/N892 The implementation of 50NM spacing with further reduction to 30NM or less.

Priority

Area 4 – Revision of South China Sea FLAS/FLOS.

2.2 After 11 meetings, the status of these tasks is shown in the following table.

Area	Routes	FIRs Involved	Status 2024
1	A1	HoChiMinh, Sanya, Hong Kong	20NM spacing implemented in 2020
	A1	Bangkok, HoChiMinh, Hong Kong, Sanya, Vientiane	On going discussion, waiting for a decision from one State
2	L642/M771	Singapore, HoChiMinh	20NM spacing implemented in 2018
		HoChiMinh, Hong Kong, Sanya	20NM spacing implemented in 2024
		HoChiMinh, Hong Kong, Sanya, Singapore	Hong Kong considers with revised spacing additional parallel route not required at this time. No further work at this time
3	A461/A583	Hong Kong, Manila	50NM spacing implemented 2019
	A461	Hong Kong, Manila	30NM spacing implemented 2023
	A583	Hong Kong, Manila	30NM spacing implemented 2024
	L642/N892	Manila	Reduction of spacing postponed
4	All	All	Initial discussion

2.3 As can be seen, although there are four Priority Areas, they can be sub-divided into ten individual tasks, of which six have been satisfactorily completed with one that is not currently being considered.

2.4 Of the remaining three tasks, a solution on the establishment of a parallel route has been accepted by the majority of States concerned, but one State has counter proposed other methods of providing a parallel route. It is hoped that this item can be resolved at this meeting and a conclusion acceptable to all States will soon be agreed. It is also hoped that an update on the outstanding task on the implementation of PBN procedures will be forthcoming at this meeting. This leaves the final task that should be reviewed when the work on the other Priority Areas has been completed.

2.5 With the work on the other items concluded or nearing conclusion, at the eleventh SCSTFRG meeting last year, there was some initial discussion on Priority Area 4 - the review of the non-standard SCS FLAS/FLOS. It was accepted by the meeting that this topic involved every member of the Group due to the interconnectivity of the SCS airspace structure with the FLAS/FLOS procedures and the transitions to the standard FLOS of adjacent FIRs. It was agreed that rather than have a number of individual tasks to resolve this item, a holistic view was required.

2.6 Although IFATCA was an active participant in promoting options for the revision of the SCS FLAS/FLOS at that meeting, Table 1 clearly shows that the good work that has been achieved by the Group has taken over 10 years as the but progress has been slow, and in the case of some tasks, it is still on-going.

2.7 Replacing non-standard procedures with current published ICAO compliant practices could be a lengthy process. Based on past experience, it could take another 10 years to agree on ways to revert to compliant ATM procedures. Therefore, instead of looking at current problems and trying to resolve them with existing solutions, perhaps we should be looking to the future with ways to design out all the non-standard procedures by utilising the advantages the new systems and processes will provide. The Regional Office already has a comprehensive programme of SWIM and FF-ICE meetings, seminars and workshops describing how TBO, UPR and FRA will change the way ATM will be delivered within the Region within the coming 10 years.

2.8 Therefore IFATCA proposes that upon conclusion of the two tasks mentioned above (para 2.4), the Group should advocate how the new procedures and practices that will be introduced with the new automated systems and processes can resolve the current non-standard procedures in SCS airspace.

2.9 When Priority Area 4, the Review of FLAS/FLOS was added to the Group's scope of work in 2018, we were not fully cognizant of the impact the major changes that ICAO were planning to introduce through the Global Air Navigation Plan and Global Air Traffic Management Operational Concept, and the timeline for the introduction of SWIM and FF-ICE practices.

2.10 As demonstrated by the numerous dedicated SWIM or FF-ICE related meetings that are now listed in the Regional Office Meetings Schedule – there have been seven meetings in the past 18 months, including the 9th SWIM Implementation Task Force Meeting – the introduction of new means of transferring data and flight information accurately and speedily will facilitate radical reforms to long established ATC principles.

2.11 It is suggested the SCSTFRG could become a catalyst in what is currently a primarily technical-led programme for the introduction of new ATM services in the operational field. The Group could become a conduit for a multi-State project in airspace away from the oceanic or remote airspace that provide a less challenging environment for new procedures, including TBO UPR, FRA practices.

2.12 There are a few States within the APAC Region are being proactive in the introduction of some of these new procedures, including:

- Singapore and Indonesia in October 2023 implemented cross-border Direct Routing Operations (DRO) with UPR operations on some routes;
- India, Sri Lanka, Australia and New Zealand have commenced an operational trial for UPR in Indian Ocean and Melbourne airspace;
- Japan has revised the sectorization of their airspace with the introduction of high-level sectors (above FL335) to facilitate TBO and CPDLC operations.

These examples are similar to the new European open airspace structure and ATM procedures with direct routings for flights transiting numerous FIRs whenever possible.

2.13 The introduction of similar practices within SCS airspace would be challenging, and require substantial revisions to current airspace structure and ATC procedures, with new ATM systems, the full utilisation of current ATM facilities, advanced aircraft systems and operator cooperation. However, the SCS airspace could then progress directly from non-standard ICAO procedures to new advanced ICAO open airspace concepts and plans. This Group, with the active involvement and cooperation of each State, could build a phased strategy for the introduction of an airspace plan in line with the new ICAO practises which would align with neighbouring States' airspace in accordance with the Regional Office Asia/Pacific Seamless ANS Plan.

2.14 This would be a challenging task, but with the current ICAO timeline for SWIM implementation by 2030 and FF-ICE with dynamic flight planning in place by 2032, in this five to seven year window it would be impracticable to continue to pursue the task of reviewing FLAS/FLOS and proposing revisions to resolve the present SCS structure, knowing that a totally new airspace structure plan is being processed by other groups within the APAC region with possibly a similar timeline.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) consider the option of pursuing the Priority Area 4 task in a ‘silo’ environment, or work with other ICAO groups, through SAIOSEACG, to integrate SCS airspace into the Asia/Pacific Seamless ANS Plan to resolve the SCS FLAS/FLOS issue.
- b) discuss any relevant matters as appropriate.

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