



International Civil Aviation Organization
The Second Meeting of South China Sea Major Traffic Flow Review Group
(SCS-MTFRG/2)
Haikou, China, 22-24 July 2015

Agenda Item 5: Discussion on PBN Routes Development and FLAS/FLOS Optimization

**REVIEW OF ROUTES INVOLVING FLIGHTS OPERATING FROM/THROUGH
NORTHEAST OF MALAYSIA**

(Presented by MALAYSIA)

SUMMARY

This paper presents the request by airspace users for route review in the South China Sea to optimize airspace capacity and enhance operational efficiency.

1. INTRODUCTION

1.1 Currently, aircraft operating between Kuala Lumpur FIR and Kota Kinabalu FIR have to utilize existing routes, i.e. M758 and M761. However, further improvement through collaborative planning between stakeholders and States involved would greatly benefit the industry by reducing distances to fly, aircraft fuel burn, flight time and carbon emissions.

1.2 Additionally, the existing bi-directional route structure between KL International Airport (KUL) to Tan Son Nhat International Airport (SGN) and beyond is limited to R208, between IKUKO to IGARI. It is proposed that a uni-directional parallel route structure be established for this sector which would involve the realignment of R208.

1.3 The operational requirements of non-legacy airlines also requires a fresh approach to allow for greater flexibility in terms of managing the traffic in the South China Sea airspace.

2. DISCUSSION

New Airway between IKUKO and ENREP

2.1 AirAsia commenced flights between Kota Bharu Airport (within Kuala Lumpur FIR) and Kota Kinabalu International Airport/Kuching International Airport (within Kota Kinabalu FIR). In order to cater for airlines operational flexibility and capacity enhancement, it is proposed that a new airway be establish between IKUKO and ENREP.

2.2 It shall be noted that all AirAsia aircraft are equipped with ADS-B and have operational approval.

2.3 Recognizing the density of the traffic flow in the South China Sea and the limited FLAS/FLOS allocated for each airway, the expected flight level for IKUKO – ENREP would be dependent on the availability of surveillance coverage and adequate communications.

2.4 The potential savings of such direct routing is as below:

Eastbound:

Fuel (kg)	Time (Hours)	Carbon Emission (Tons)
16,061	31.2	49.7

Westbound:

Fuel (kg)	Time (Hours)	Carbon Emission (Tons)
98,317	52	304.8

2.5 The figures quoted above would contribute to a potential savings of USD 161,349 annually.

2.6 Taking into account the current FLAS/FLOS for major traffic flow in the South China Sea, and leveraging on surveillance capabilities, it is anticipated that the proposed routing would not increase the complexity of existing routes structure.

Uni-directional Parallel Route Structure and Realignment of R208

2.7 The proposal for a direct routing to harness readily available DSC between FIRs, VHF DCPC and radar surveillance to establish a direct route between city pairs Kuala Lumpur to Hong Kong and beyond was presented at the Twenty first Meeting of the South East Asian ATM Coordination Group (SEACG/21), although the discussion then was to establish a direct track between PIBOS and IDOSI (Hong Kong FIR).

2.8 After careful consideration of the earlier proposal, it was agreed that the establishment of a uni-directional parallel routing between KL International Airport (KUL) to Tan Son Nhat International Airport (SGN) and beyond would be more feasible to cater for traffic flow both in the South China Sea airspace as well as within Kuala Lumpur FIR. It shall be noted that the new route proposal does not change significantly within the Ho Chi Minh FIR as it will still be almost parallel to L642, M771, N892 and L625, and should complement the 4 parallel routes rather than interfere with those routes.

2.9 The proposed parallel route and the realignment of existing R208 is as below:

AIRWAY	WAYPOINT	DIRECTION
R208	VKR – BITOD	Eastbound
New parallel route	IGARI – LASOB	Westbound

2.10 Furthermore, this proposal would be in line with the restructuring of Kuala Lumpur FIR route structure, in which segregation between eastbound and westbound flows has been implemented as far as possible to reduce ATC workload and to alleviate the conflict between reciprocal traffic on R208.

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.