

INTERNATIONAL CIVIL AVIATION ORGANIZATION



REPORT OF THE SECOND MEETING OF THE SOUTH ASIA, INDIAN OCEAN AND SOUTHEAST ASIA ATM COORDINATION GROUP (SAIOSEACG/2)

BANGKOK THAILAND, 20 – 24 MARCH 2023

The views expressed in this Report should be taken as those of the
Meeting and not the Organization

Approved by the Meeting
and published by the ICAO Asia and Pacific Office, Bangkok

SAIOSEACG/2 Meeting Report
Table of Contents

CONTENTS

INTRODUCTION	i
Meeting	i
Attendance	i
Officers and Regional Office	i
Opening of the Meeting	i
Documentation and Working Language	i
Draft Conclusions, Draft Decisions and Decisions of SAIOSEACG – Definition	ii
List of Decisions and Draft Conclusions/Decisions.....	ii
REPORT ON AGENDA ITEMS.....	1
Agenda Item 1: Adoption of Agenda.....	1
Agenda Item 2: Review of Outcomes of Related Meetings.....	1
Agenda Item 3: Review of Current Operations and Problem Areas	6
Agenda Item 4: Review of Current Operations and Problem Areas	14
Agenda Item 5: ATS Route Developments.....	21
Agenda Item 6: ATM Contingency Plans and Search and Rescue	24
Agenda Item 7: ANSP Coordination and Civil/Military Cooperation.....	27
Agenda Item 8: Review of SAIOSEACG Task Lis.....	27
Agenda Item 9: Any Other Business.....	28
Closing and the Next Meeting	28

SAIOSEACG/2 Meeting Report
Table of Contents

APPENDIXES

Appendix A:	List of Participants.....	A-1
Appendix B:	List of Working and Information Papers	B-1
Appendix C:	Draft Asia/Pacific ATS Route Catalogue Version 22.1.....	C-1
Appendix D:	SAIOSEACG Task List.....	D-1
Appendix E:	ATM Points of Contact.....	E-1

INTRODUCTION

Meeting

1.1 The Second Meeting of the South Asia, Indian Ocean and South East Asia ATM Coordination Group (SAIOSEACG/2) was held in Bangkok Thailand, from 20 to 24 March 2023.

Attendance

2.1 The meeting was attended by 65 participants from Australia, Bangladesh, Cambodia, China, Hong Kong China, India, Indonesia, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Philippines, Singapore, Thailand, United States of America, Viet Nam, IATA, IFATCA and ICAO.

2.2 A list of participants is appended at **Appendix A** to this report.

Officers and Regional Office

3.1 Mr. Gabriel Cheng, Chief of Procedures and Evaluation, Air Traffic Management Division, Civil Aviation Department of Hong Kong China, and Mr. K. Vasudevan, Executive Director – ATM, Directorate of Air Space Management, Airports Authority of India presided over the meeting throughout its duration as Co-Chairs of SAIOSEACG.

3.2 Mr. Xu Zhifeng, Regional Officer Air Traffic Management (ATM), ICAO Asia and Pacific Regional Sub-Office was the Secretary for the meeting. He was assisted by Mr. Manjunath Krishna Nelli, Regional Officer ATM/ ATFM, Dr. Hyuk Jin Kwon, Regional Officer Air Traffic Management ATM and Ms. Yang Siqi, Programme Assistant. The meeting was also supported by Mr. Shane Sumner, Regional Officer ATM/Aeronautical Information Management (AIM), Mr. Takata Hiroyuki, Regional Officer ATM, Mr. Ying Weng Kit, Associate ATM Officer and Ms. Prakayphet Chalayonnawin, Programme Analysis Associate, ATM, of the ICAO Asia/Pacific Regional Office.

Opening of the Meeting

4.1 Mr. Gabriel Cheng and Mr. K. Vasudevan welcomed participants to the meeting.

4.2 On behalf of Mr. Tao Ma, Regional Director of ICAO Asia and Pacific Office, Mr. Xu Zhifeng also welcomed participants to the meeting.

4.3 **DISCLAIMER:** The presentation of material in this report does not imply the expression of any opinion whatsoever on the part of ICAO, APANPIRG, the ATM Sub-Group of APANPIRG or SAIOSEACG concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.

Documentation and Working Language

5.1 The working language of the meeting and all documentation was English. 26 Working Papers (WP), 9 Information Papers (IP) and one presentation were considered by the meeting.

5.2 The list of Working and Information Papers is attached at **Appendix B** to this Report (IP01).

Draft Conclusions, Draft Decisions and Decisions of SAIOSEACG – Definition

6.1 SAIOSEACG recorded their actions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

- a) **Draft Conclusions** deal with matters that, according to APANPIRG terms of reference, require the attention of States, or action by the ICAO in accordance with established procedures;
- b) **Draft Decisions** deal with the matters of concern only to APANPIRG and its contributory bodies; and
- c) **Decisions** of SAIOSEACG that related solely to matters dealing with the internal working arrangements of these bodies.

List of Decisions and Draft Conclusions/Decisions

7.1 List of Draft Conclusions/Draft Decisions

Nil

7.2 List of Decisions

Nil

REPORT ON AGENDA ITEMS

Agenda Item 1: Adoption of Agenda

Election of Chairperson

1.1 Thailand formally nominated Mr. Gabriel Cheng, Chief of Procedures and Evaluation, Air Traffic Management Division, Civil Aviation Department of Hong Kong China, to be the Co-Chair of SAIOSEACG. The nomination was seconded by Singapore and China. Indonesia formally nominated Mr. K. Vasudevan, Executive Director – ATM, Directorate of Air Space Management, Airports Authority of India, to be the Co-Chair of SAIOSEACG. The nomination was seconded by Bangladesh, Maldives, and Malaysia. As no other nominations were received, Mr. Gabriel Cheng and Mr. K. Vasudevan were duly elected as the Co-Chairs of the Group.

Adoption of Agenda (WP01)

1.2 The provisional agenda for the Meeting (WP01) was adopted by the meeting. The List of Papers (IP01) was noted.

Agenda Item 2: Review of Outcomes of Related Meetings

Relevant Meeting Outcomes (WP02)

2.1 ICAO presented information relevant to the SAIOSEACG/2 meeting from recent ICAO meetings (not including safety matters under the Regional Airspace Safety Monitoring Advisory Group – RASMAG), including the:

- Thirty-third Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/33, held at Bali, Indonesia from 22 to 24 November 2022)
- Tenth Meeting of the APANPIRG Air Traffic Management Sub-Group (ATM/SG/10, held via video teleconference, from 17 to 21 October 2022); and
- Twenty-Sixth Meeting of the Communications, Navigation and Surveillance Sub-group of APANPIRG (CNS SG/26, held via video teleconference, from 5 to 9 September 2022).

2.2 Other topics that were discussed at the ATM/SG/10 such as Air Navigation Service Deficiencies List, Air Navigation Services USOAP Update, Aeronautical Information Management, Search and Rescue and contingency planning, Application of ATC Separation Minimums, Regional Air Navigation Plan Update, Seamless ANS Plan Update, Air Traffic Flow Management Update, Asia/Pacific Region ATS Route Catalogue were provided to this meeting in separate papers.

2.3 The Philippines reminded the meeting that the ATS surveillance and VHF radio coverage of the SCS area in figure 3 and 4 of WP02 represented the collective capability of member States in the area and not necessarily the capability of a State in its FIR.

2.5 The meeting noted the updates on ADS-C/CPDLC and PBCS implementation in the area:

- 2.6 Indonesia provided an insight into their successful implementation of a User-Preferred Route (UPR) trial operation based on the FREE ROUTE concept, where airspace users could freely plan a route between a defined entry point and a defined exit point, with the possibility to route via intermediate waypoints without referring to the Air Traffic Services (ATS) route network.

2.7 ICAO presented the Bay of Bengal Flight Level Allocation Scheme (FLAS) Chart (Figure 1), and urged the States concerned to review the current FLAS operations and plan for improved FLAS to enhance airspace efficiency in the BOB airspace. This review would fulfil the tasks specified in the BOBTFRG Terms of Reference relating to the Asia/Pacific Seamless ANS Plan and expected traffic recovery from the COVID-19 pandemic.

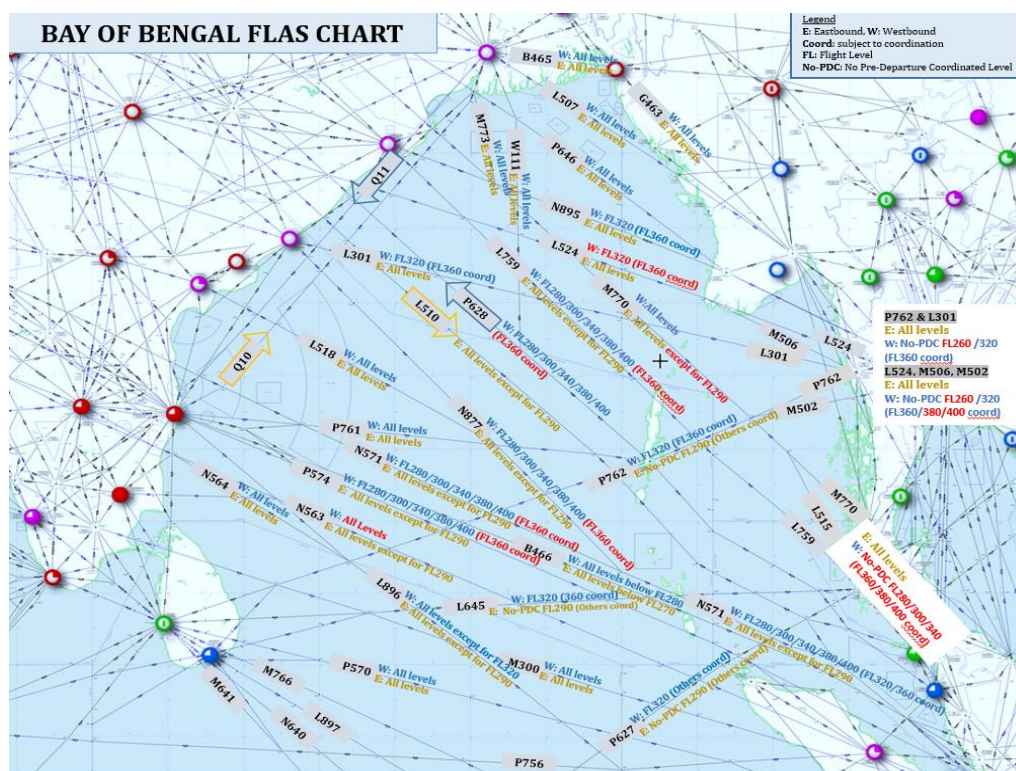


Figure 1: Bay of Bengal FLAS Chart

2

data. The meeting was invited to prioritise implementation of the most efficient standards according to demonstrated performance capabilities.

2.9 ICAO reminded the meeting that BOBTFRG Priority Areas 1 and 2 were developed and agreed upon at the BOBTFRG/2 meeting (Bangkok, Thailand, 08 – 10 October 2019). The BOBTFRG/3 (VTC, 14 -15 December 2022) had agreed to update the implementation timelines for each priority to reflect the changed factors by COVID-19.

2.10 To ensure both Air Navigation Service Providers (ANSPs) and airspace users were ready for and capable of PBCS, and to develop a more detailed plan with feasible implementation timelines for all concerned Stakeholders including flight level band BOBTFRG/4 had formed ***Draft Decision/4-1: Form of The Bay of Bengal Route Network Small Working Group***. Forming a small working group This matter was further discussed under WP/09.

The Establishment of the Bay of Bengal Route Network Small Working Group (WP09)

2.11 The meeting noted that two meetings of the aforementioned *Bay of Bengal Route Network Small Working Group (SWG)* have been held before this meeting and participated by Bangladesh, India, Indonesia, Malaysia, Myanmar, Pakistan, Thailand, Singapore, Sri Lanka, Thailand, USA, IATA and ICAO.

2.12 The SWG recognised that despite available capabilities, some States still apply conservative separation standards than available, contributing to the growing congestion. Based on the availability of current capability RNAV 10 (RNP 10, in order to apply 50 NM longitudinal separation as soon as possible, the preparation meeting reached the following consensus:

- As requested by India, Myanmar agreed to review the possibility of implementing 50 NM longitudinal separation to be applied based on the current capability RNAV 10 (RNP 10) among the routes L301 (WB:FL320 & FL360; EB all levels) and L507 (All levels) as prescribed in the of LoA.
- India and Malaysia to enhance and optimise the utilisation of 50 NM longitudinal separation among their cross-border routes.

2.13 Regarding the trial implementation of 30 NM longitudinal spacing, with confirmed the readiness of the Member States and understood the constraints in the BOB area, the SWG had planned for the first step:

- India and Malaysia to start the trial on Route N571 between RNP4/RNP2 approved aircraft on an opportunity basis between Kuala Lumpur and Chennai, with a possibility to extend to other routes at a later stage.

2.14 It was noteworthy that as the counterpart of the trial, according to IATA, Airlines welcomed the initiative by BOB States, and the willingness to participate have been received from many airlines operating in the BOB area, including SIA, UAE, QTR, ETD, FIN, FDX, SWR, KLM, DLH, and AFR. Based on the survey done by IATA, the large majority of the airlines operating in the BOB region reported the fleets' capability and regulatory approval to operate under PBCS, mostly with the PBN capability of RNP4 or better.

2.15 Regarding the tentative timeline of trial implementation of 30 NM, Malaysia updated the meeting that the Aeronautical Information Circular (AIC) has been drafted and would be shared with India. Hence, the implementation date would be decided once both parties come to an agreement.

2.16 In the matter of the establishment of the *BOB Route Network Small Working Group*, the meeting considered that the existing TOR of the BOBTFRG adequately covered the task of the *Small Working Group*, and it was not necessary to form another SWG to undertake such duplicated work.

Therefore, the meeting decided that the task of the SWG should continue to be undertaken by the BOBTFRG itself.

2.17 In that regard, the meeting agreed to the suggestion that other than the plenary meeting of BOBTFRG, more supplementary meetings could be held throughout the year on a flexible and frequent basis to carry out the necessary discussion in an efficient manner.

SCSTFRG Meeting Outcomes (WP04)

2.18 The outcomes from the Tenth Meeting of the South China Sea Traffic Flow Review Group (SCSTFRG/10, VTC, 31 May – 2 June 2022) were presented for review and action by the meeting.

2.19 The meeting noted updated information on the SCSTFRG Priority Areas:

- Priority Area 1: A1/A202. 20 NM longitudinal spacing had been implemented on ATS routes A1 and A202 (between Ho Chi Minh and Sanya ACCs; and Hong Kong ATCC and Sanya ACC). For the implementation of the parallel uni-directional route to A1, Viet Nam indicated that further assessment was needed.
- Priority Area 2: L642/M771. 20 NM longitudinal spacing had not been fully implemented until now, pending discussion and confirmation of the proposed changes amongst concerned States and Administrations along the routes. For further updates refer to Agenda Item 3, WP11 of this report.
- Priority Area 3: A461/A583/L625/N892. 50NM longitudinal spacing had been successfully implemented on routes A461 and A583 (between Hong Kong ATCC and Manila ACC). The phased trial implementation of 30 NM longitudinal spacing was ongoing and targeted to be completed in Q4 2023. Philippines informed the meeting that the optimisation of N892 and L625 was dependent on setting up the new ATC sector in Manilla, which was planned in Q4 2023. For further updates refer to Agenda Item 3, WP12 of this report.
- Priority Area 4: Review of Existing FLAS/FLOS Operating within the South China Sea. SCSTFRG/10 recalled the history of the inception of the SCS FLAS/FLOS operation in 2002 and its revision in 2007. The circumstances in air traffic flow had changed considerably over time, ranging from traffic flow demand increase in the secondary crossing routes to the improved CNS/ATM capabilities and advanced fleet equipage. The expectation of airspace users for higher capacity and efficiency in airspace management had increased accordingly.

2.20 Regarding Priority Area 4, ICAO requested all States/Administrations to take appropriate action to review the existing FLAS/FLOS in SCS airspace as agreed at the SCSTFRG/7 meeting. After extensive discussion, SCSTFRG/10 had agreed on the following Decision.

Decision SCSTFRG/10-1: Review of the existing South China Sea Flight Level Allocation Scheme (FLAS) and Flight Level Orientation Scheme (FLOS).

That, recognizing the need for high capacity traffic flow routes, and the effect of the existing modified single alternative Flight Level Orientation Scheme (FLOS) and the complimentary Flight Level Allocation Scheme (FLAS) that causes safety issues in conflictions at the transition points at the boundaries of SCS FLOS airspace, ATC human errors and workload in South China Sea airspace, all SCSTFRG States:

- a) study and review the current SCS FLAS/FLOS operation with all neighboring FIRs with a view to enhancing efficiencies;*
- b) provide the current FLAS/FLOS and no-PDC Flight Level data in SCS FLAS/FLOS Chart to the ICAO APAC Regional Sub-office (APAC-RSO@icao.int); and*

c) *report the review result including the possible improvement proposals to the SCSTFRG/11 meeting.*

2.21 The FLAS/FLOS arrangements in the South China Sea area was further discussed under Agenda Item 3, WP10.

2.22 SCSTFRG/10 had reviewed the current and planned CNS/ATM capabilities and identified associated reduced horizontal separations in the SCS area.

- Indonesia had presented its initiative to support seamless Air Navigation Services within the South China Sea (SCS) area by optimizing infrastructure in Ujung Pandang FIR and Jakarta FIR.
- Philippines provided a progress update on its airspace capacity enhancement in Manila FIR, including the implemented activities and those planned in the future. SCSTFRG/10 was informed that 30 NM longitudinal spacing would be implemented on the route segment of M646 between Manila and Taipei FIR in Q4 of 2022.
- Malaysia presented an update on the training for New KL FIR airspace and the immigration to Kuala Lumpur's new CNS-ATM Complex (KLATCC) on 17th June 2021 and 31 August 2021, respectively. The corresponding theoretical and simulation training to ensure controllers' competency to cater to the post-pandemic operational requirements was also elaborated in detail.
- At the SCSTFRG/9 in 2021, Singapore proposed to review the existing city pair restriction on ATS route L644 to allow airliners to optimise flight routing, maximise route capacity and contribute towards reducing fuel burn. With no objection by States concerned and acceptance by Indonesia at SCSTFRG/10 in 2022 on the proposal to remove the current flight planning restriction for ATS route L644, Singapore confirmed that it would require the amendment of AIP, which however would also require the agreement of all affected States to materialise this initiative.

2.23 The meeting noted the following:

Decision SCSTFRG/10-1: Review of the existing South China Sea Flight Level Allocation Scheme (FLAS) and Flight Level Orientation Scheme (FLOS).

2.24 The Philippines commented on paragraph 2.17 bullet 3 of WP04 that M772 was heading to the west inside Manila FIR and therefore the suggestion of ICAO to use of odd flight levels is no longer applicable. The meeting was also reminded that, when standard FLOS is applied on M772 as reiterated by ICAO in the same paragraph, a flight level transition procedure would become necessary since M772 changes direction from east to west, and this flight level change procedure needed to be performed by either Singapore or Malaysia. Furthermore, the Philippines cited that M772 was conceptualized from the start to use SCS FLAS since it was established after the implementation of SCS routes structure with non-standard FLOS. With the use of FLAS in M772, change of route direction was not an issue.

2.25 The Philippines invited the SCS member states to holistically review the implementation of FLAS/FLOS in the whole SCS route structures instead of a portion of a single route in one FIR.

2.26 Malaysia updated the meeting on their joint initiative with Indonesia to reduce longitudinal spacing over their common boundaries. The safety assessment on the optimization of the relevant routes has been done internally, and it was proposed to push forward this process together with Indonesia.

Agenda Item 3: Review of Current Operations and Problem Areas

Air Navigation Service Deficiencies List (WP05)

3.1 ICAO provided information on the current Air Navigation Deficiencies in the Air Traffic Management (ATM) and Airspace Safety fields, as approved by the Thirty-Third Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/33). APANPIRG Deficiencies had been issued in the following areas:

- Aeronautical Information Management (AIM);
- Airspace Classification;
- Air Traffic Services (ATS) Messages and Flight Planning;
- Search and Rescue (SAR);
- ATS Datalink; and
- airspace safety reporting.

3.2 Details of the ATM and Airspace Safety Deficiencies agreed by APANPIRG/33 were provided in **SAIOSEACG/2 WP/5 Attachment A**.

3.3 In response to inquiry from the Chair, ICAO clarified that IFALPA and other recognized International Organizations were invited to provide information to the ICAO APAC Regional Office in specific ATM and/or Airspace Safety-related cases for follow-up and possible resolution, if the non-compliance was not addressed after the matter was raised with the aeronautical authority after, further assessment would then be conducted by ICAO Regional Office.

3.4 Regarding the designation of Restricted Areas Deficiencies, India asked Australia to provide an update on their resolution of the deficiency. In response, Australia informed the meeting that they were expecting to designate 101 RAs as Military Operating Areas (MOAs, as a subset of Danger Areas) to acquit the ICAO deficiency, which was still under coordination.

3.5 India also informed the meeting that they were working to remove the deficiencies regarding restricted Airspace and non-submission of Datalink performance monitoring data for Mumbai FIR with upgraded system of Mumbai ATCC.

3.6 The Chair advocated that all States/administrations take practical actions to move towards the removal of the deficiencies and enhance the safety of the whole region.

Airspace Safety Monitoring (WP06)

3.7 The Twelfth Meeting of the Future Air Navigation Services (FANS) Interoperability Team-Asia (FIT-Asia/12) and the Twenty-Seventh Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/27) were held by video teleconference from 25 to 28 July 2022 and 22 to 25 August 2022 respectively.

FIT-Asia/12 Meeting Outcomes

3.8 FIT-Asia/12 had been informed that the reduced number of data link problem reports (PRs) submitted in the last 12 months reflected the dramatic decrease in air traffic due to the impact of the COVID-19 pandemic.

3.9 FIT-Asia/12 had agreed to adopt the FANS1/A CPDLC latency timer value of 300

seconds, which was also implemented under trial for several years in the NAT Region, and was now formalized in the North Atlantic Operations and Airspace Manual. The RASMAG/27 meeting had agreed to the following Conclusion drafted by FIT-Asia/12: **Conclusion RASMAG/27-1: CPDLC Latency Monitor Value.**

3.10 A total of 19 APAC Administrations had responded to the annual Survey of the Status of Current and Planned Implementation of Performance-Based Horizontal Separation Minima prior to FIT-Asia/11 (2021). Only Australia, Indonesia, Singapore and Thailand provided their annual survey response for 2022. ICAO had provided further information on the need for an update of the survey form, and had proposed that the annual submission date for both the survey form and the PBCS performance monitoring data (ANSP to FIT) be brought forward to 28 February each year.

3.11 The RASMAG/27 meeting had agreed to **Conclusion RASMAG/27-2:** Updated Reporting of PBCS Implementation Status and Performance Monitoring Data, supporting the revised survey form and the revised survey and performance data reporting date.

3.12 Overall Actual Surveillance Performance (ASP) and Actual Communications Performance (ACP) for the region had met the 95% criterion. While the volume of the data count had slightly increased in 2021, the trend of regional performance in both the 95% and 99.9% criteria had generally improved.

RASMAG/27 Meeting Outcomes

3.13 The Monitoring Agency for the Asian Region (MAAR) had presented a combined summary of the safety analysis results for the Asia/Pacific Region, on behalf of the Asia/Pacific Regional Monitoring Agencies (RMAs) and Enroute Monitoring Agencies (EMAs). This report covered the Asia area only.

3.14 The estimated vertical collision risk for 2021 for the Asia area met TLS (Table 1). The overall risk continued to decline since 2017 due to various safety improvement initiatives.

Asia Area – annual flying hours = 5,404,154 hours			
Source of Risk	Risk Estimation	TLS	Remarks
Vertical Technical Risk	0.32×10^{-9}	2.5×10^{-9}	Below Technical TLS
Vertical Operational Risk	3.71×10^{-9}	-	-
2020 Vertical Overall Risk	4.03×10^{-9}	5.0×10^{-9}	Below TLS

Table 1: Asia Area Vertical Collision Risk 2021

3.15 The Asia vertical collision risk estimates had been above TLS each year from 2016 to 2019 and trending downwards since 2017. In 2020 there was a significant fall in the risk estimate, while still remaining above TLS, reflecting the reduction in traffic volumes caused by the COVID-19 pandemic (Table 2). The 2021 vertical collision risk estimate was below TLS. There was a total of 379 LHDs reported in the Asia area in 2021, with total duration 339 minutes and 115 levels crossed.

Year	Vertical Overall Risk Estimate (x 10⁻⁹ FAPFH)	Remark
2021	4.03	Below TLS
2020	7.42	Above TLS
2019	12.88	Above TLS
2018	15.50	Above TLS
2017	27.30	Above TLS
2016	12.53	Above TLS

Table 2: Asia Area Vertical Collision Risk Estimates 2016 – 2021

3.16 The estimated horizontal collision risk for 2021 for the Asia area met TLS in all longitudinal and lateral risk categories. There was one LLD reported in the Asia area in 2021, with a duration of 29 minutes.

3.17 RASMAG/27 considered that all current Large Height Deviation (LHD) hot spots should be retained due to the continuing reduced traffic resulting from the COVID-19 pandemic. The hot spots would be reviewed at RASMAG/28.

3.18 Noting that the process of identifying, monitoring and removing LHD hot spots had been developed informally over several years to focus RASMAG attention on areas that required special attention, a draft process for identifying, monitoring and removing LHD hot spots had been developed by the Monitoring Agencies Working Group (MAWG). The regional monitoring agencies had trialled the draft process in their safety reports for RASMAG/27. It had been noted by RASMAG/27 that the trial hotspot identification process was subjective to some degree and difficult to standardize, but supported continuation of this activity with a view to its future formalization.

3.19 RASMAG/27 provided a list of rogue State aircraft (from States under MAAR responsibility) that were reported on the European Air Navigation Region Bulletin (version 17.7, updated July 15 2022). These aircraft were identified as RVSM non-approved aircraft operating within the European region by filing 'W' in their flight plan but did not have matching RVSM approval records in the global RVSM approval combined snapshot.

3.20 Germany had requested that the EUROCONTROL Integrated Initial Flight Plan Processing System (IFPS) reject flight plans for such aircraft planning to operate in RVSM designated airspace over Germany. A proposal to extend the scheme throughout the area covered by the IFPS would be submitted to EANPG.

Air Navigation Service USOAP Update (WP07)

3.21 The Secretariat provided information on the ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA). The paper discussed the Protocol Questions (PQs) used to assess a State's safety oversight system, and an annual update of ANS USOAP status.

3.22 **Figure 2** provides an average level of Effective Implementation (EI) for the 37 States¹ in APAC region that had been audited or received a USOAP activity in the Area of ANS. The average ANS-related EI of APAC region is 64.24% (February 2023). The data source was the USOAP Continuous Monitoring Approach (CMA) Online Framework (OLF)², which reflected the 2020 version of PQs and recent USOAP activities such as CMA Audit (CMAA), ICAO Coordinated Validation Mission (ICVM), and Off-Site Validation Activity (OSVA).

¹ Cook Islands, Kiribati and Tuvalu have not yet been audited in the ANS area.

² The USOAP CMA OLF is restricted access only to National Continuous Monitoring Coordinator (NCMC) and State users. Similar data is provided on the ICAO portal website, integrated Safety Trend Analysis and Reporting System (iSTARS 3.0); however, it may take time for the data to be updated.

SAIOSEACG/2 Report on Agenda Items

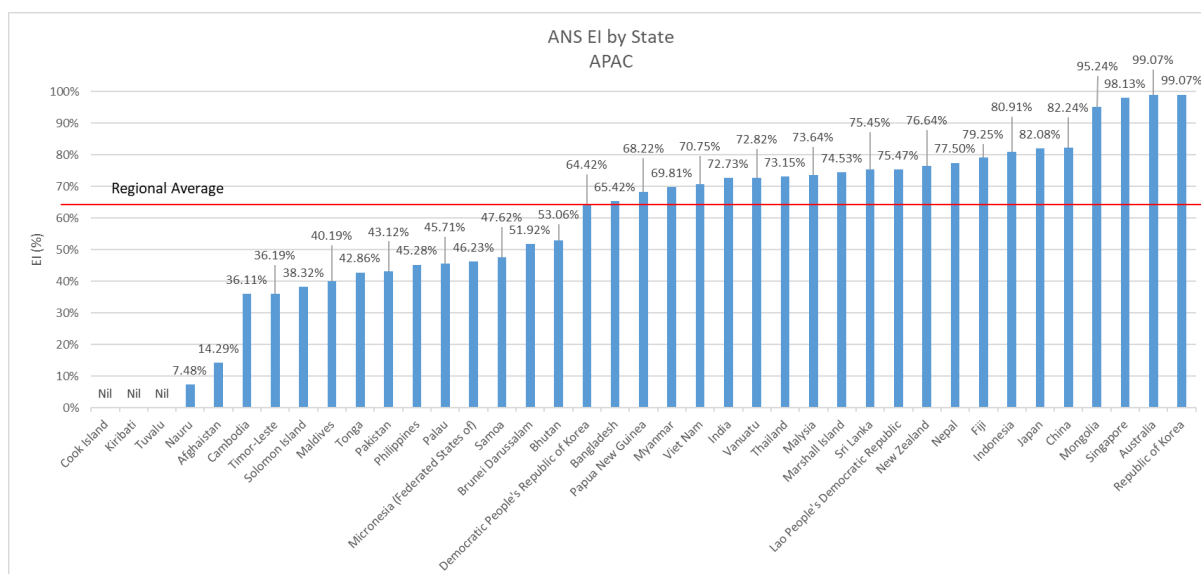


Figure 2: USOAP EI Comparisons by State (February 2023)

3.23 **Figure 3** provides information on the Asia/Pacific Region's EI by Area/Critical Element.

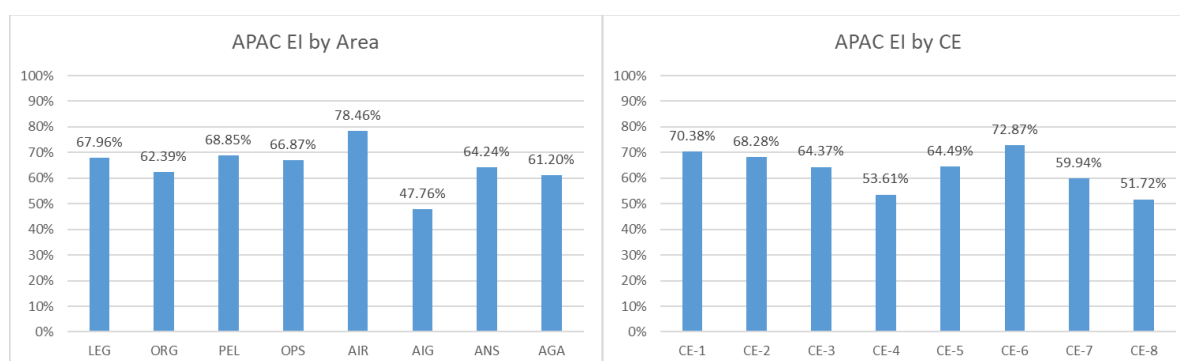


Figure 3: APAC EI by Area and Critical Element (February 2023)

3.24 The Chair emphasized that States/Administrations should progressively enhance safety oversight capability to achieve at least 75% EI in USOAP CMA, and to achieve an APAC average overall USOAP EI score higher or equal to the global average [by 2024].

Application of ATC Separation Minimums (WP08)

3.25 The ATC Separation survey requested respondents to advise the minimum horizontal separation minimums authorized for use by controllers within Category R (remote), Category T (terminal operations serviced by direct ATS communications and surveillance) and Category S (surveilled by radar, Automatic Dependent Surveillance-Broadcast [ADS-B] or Multilateration [MLAT]), and the minimum horizontal spacing authorized by Air Traffic Services Letter of Agreement (ATS LOA) or other instruments on each of your Flight Information Region (FIR) inbound transfer of Control (TOC) points.

3.26 The number of responses to the latest survey has decreased from 21 to 18 (compared to last reporting period). Q1 of the survey requested the minimum horizontal separation standard within State/administration's FIR and the criteria for analysis are shown below:

- Category R - Acceptable standard: ≤ 50 NM
- Category S - Acceptable standard: 5 NM

- Category T - Acceptable standard: 5 NM

3.27 The survey showed that 30% (13 of 44) of APAC States and Administrations have all categories of airspace within the FIR with minimum separation compliant with the APAC Seamless ANS Plan. Some States still utilize more than 5NM in Category S & T airspace.

3.28 Q2 of the survey looked at three categories of separations at Inbound FIR TOC points shown below and the criteria for analysis.

- Category R/S → R TOC- Acceptable standard: ≤ 50 NM
- Category R → S TOC - Acceptable standard: ≤ 50 NM
- Category S → S TOC - Acceptable standard: ≤ 10 NM

3.29 In the comparison of inbound TOC points, there were 179 in Category R/S airspace to Category S FIR TOC Point had the highest rate of compliance in APAC region whereas for the non-compliant TOC points, there were 453 in Category S airspace to Category S FIR TOC Points. Even with surveillance coverage, the separation minimum of more than 10NM were currently implemented at TOC points in the APAC region. With the recovery of air transport seat capacity and passengers to 80% of pre-pandemic levels, APAC States and Administrations were urged to address this key aspect of capacity and efficiency within their National Air Navigation Plans.

3.30 In response to a query from Bangladesh, the meeting was informed that ICAO had received Bangladesh's ATC separation survey data before the deadline, but the data had been inadvertently missed from this working paper.

3.31 In addition, ICAO had received the ATC separation survey responses from Australia, Cambodia, China and Malaysia after the deadline. Therefore, the analysis for the ATC separation including the tables, figures and charts would be updated with this data for ATM/SG.

3.32 Pakistan proposed to reduce TOC separation with India from 50NM to 30NM initially, except for traffic outbound to Kabul FIR due to existing Afghanistan situation. In response, India intended to evaluate the proposal for 30NM TOC Separation.

State of Aviation Post-COVID-19 (IP02)

3.33 IATA presented a summary of economic and traffic data illustrating the impacts of COVID-19 on the airline industry and the progress of recovery since States have re-opened international borders.

3.34 The meeting noted that based on IATA's assessment, all markets were beginning to show strong recovery. Notwithstanding a relapse of pandemic conditions, and relying on geopolitical events to be resolved, air traffic globally is expected to be fully recovered by 2025 with Asia Pacific being in the later stage. It was expected that analyses of current quarter operations will show significant increases again, particularly for inter and intra-international air connectivity for Asia Pacific.

Concept Review of South China Sea Airspace Structure (WP10)

3.35 Following extensive discussion at SCSTFRG/10 on the review of existing FLAS/FLOS operation in SCS airspace, IFATCA provided a concept for the phased introduction of a number of significant upgrades to the South China Sea airspace through the implementation of established ICAO Standards and Recommended Practices (SARPS) and Procedures.

3.36 The meeting recalled that the current South China Sea (SCS) airspace structure was

introduced in 2002 as part of the major airspace revision associated with the implementation of RVSM in the region, Showing in Figure 4 below. It was based on a parallel route network based on RNAV10 principals linking major city pairs. It has been stressed that the airspace structure used a non-standard Flight Level Orientation System (FLOS) and a complex Flight Level Allocation System (FLAS) providing vertical separation between the major routes and the less-busy crossing routes to overcome lengthy pre-departure coordination procedures.

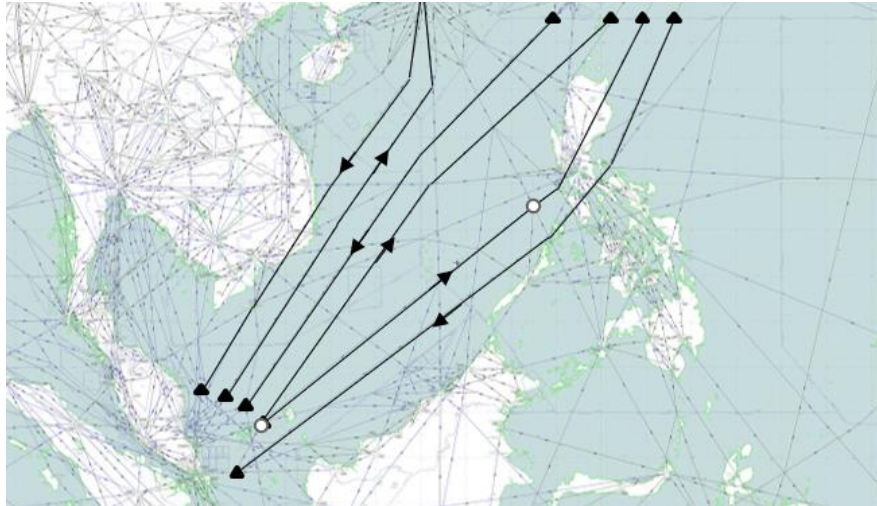


Figure 4: 2002 South China Sea Three Primary Parallel RNAV 10 Routes

3.37 With the understanding that any change to the FLAS/FLOS procedures of the current route structure in one area could have a ‘ripple’ effect throughout the whole SCS area and involve extensive coordination between a number of parties. IFATCA proposed a phased approach for a review of the FLOS, the SCS route structure (**Shown in Figure 5**) and the FLAS for one set of parallel routes at a time. The proposed phases are:

- (a) Phase 1 Tokyo - Singapore, also serving Manila
- (b) Phase 2 Seoul - Singapore, also serving Taipei
- (c) Phase 3 Hong Kong – Singapore

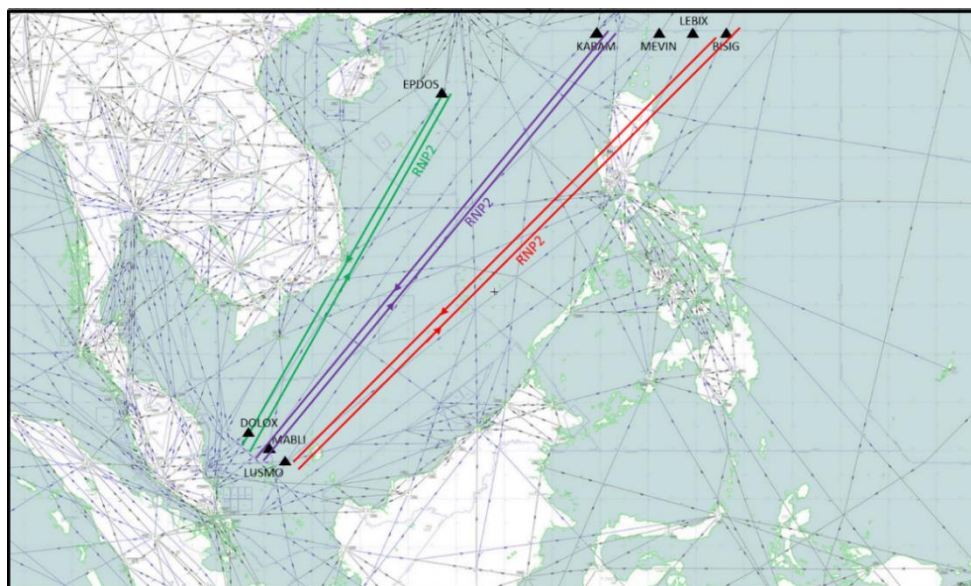


Figure 5: 2030 Concept of South China Sea Three Parallel RNP2 Routes

3.38 IFATCA stated that the concept was offered as a basis for further constructive thoughts and positive discussions on a complex subject that must be addressed to comply with the *Asia/Pacific Seamless ANS Plan* that all States had signed up to. It was also pointed out that this year could be the last opportunity to address the issue before the inevitable resurgence in traffic throughout the region and a return to the holding, ground delays and work overload of 2019. These proposals could be implemented by the States adopting established ICAO procedures and practices to provide a safe and effective ANS service beneficial to both ANSPs and air space users.

3.39 IATA welcomed the concept proposed by IFATCA, especially the possible track-mile saving, which could contribute to fuel-burning savings and environmental protection. It was pointed out that, based on the survey done by IATA, more than 50% of aircraft in their database were reported as RNP2 capable.

3.40 Singapore stated that such extensive proposals would potentially require the re-structure of the SCS main traffic flows, as such, necessitated a comprehensive evaluation of the benefits and safety risks jointly conducted by all stakeholders.

3.41 Cambodia supported IFATCA's concept of airspace capacity improvement to adapt to the foreseeable further traffic resurgence and growth. Given that the optimization of FLAS was not easy, practical work should be focused on the critical matter to avoid mess up.

3.42 Hong Kong China pointed out their concern about the sequence of phased plans for such a massive restructuring. IFATCA replied that the primary tasks of the concept were to rectify the use of non-standard FLOS and the removal of FLAS. The sequence for revising the route structure would be dependent on coordination and cooperation amongst the respective States. This will be discussed further at SCSTFRG/11.

3.43 ICAO stressed that the concept of the parallel routes system based on RNP2 operation was in accordance with the APAC Seamless ANS plan and in tune with the regional expectation. The decision of SCSTFRG/10 to review FLOS/FLAS operation was also recalled. States/Administrations were urged to provide accurate data to ICAO Regional Sub-office for better analysis and discussion.

3.44 India welcomed the concept and expressed that lack of fleet capability was hindering the establishment of RNP2/RNP4 Routes and the application of reduced separations in the region. They also proposed that ICAO may consider conducting a Workshop on the PBN implementation in en-route environments, and it was seconded by Pakistan.

Progress Update on Capacity Optimization of Air Routes L642 and M771 (WP11)

3.45 Hong Kong China reported to the meeting on their effort to optimize the airspace capacity of major trunk routes L642 and M771. The optimization plan was to reduce the minimum aircraft separation from 50 NM to 20 NM. Hong Kong China completed a comprehensive evaluation on reducing the 50 NM separation to 20 NM within the Hong Kong FIR in the second quarter of 2022. As a result, it was confirmed that the airspace capacity would be doubled. Environmental improvements and economic benefits were expected through reduced separation minima. IATA expressed their intention to actively support this plan.

3.46 Being recognized as the priority 2 area of SCSTFRG, there was an urgent need to expedite the implementation of 20NM longitudinal spacing along MTR L642 and M771 to prepare for traffic resurgence and air traffic growth in the APAC region. It was stressed that only with the active participation and contribution by all States/Administrations concerned, the implementation of 20NM longitudinal spacing could be materialised while maintaining a safe and orderly flow of air traffic.

3.47 With regard to the side meeting proposed by Hong Kong China to further discuss this

issue, China, Singapore and Viet Nam agreed to participate. ICAO thanked Hong Kong China and all relevant States for promoting the initiative which has been identified as the Priority 2 of SCSTFRG.

The side meeting between China, Hong Kong China, Singapore and Viet Nam

3.48 As requested by Hong Kong China, a side meeting was conducted on 23rd March 2023 at Meeting Room 2, ICAO APAC regional office from 0900-1100 (Bangkok time) to discuss the proposal of implementing 20NM longitudinal spacing on ATS Routes L642 and M771. The meeting participants include representatives from China, Hong Kong China, Singapore and Viet Nam.

3.49 Hong Kong China gave a presentation regarding the proposal for the implementation of 20NM longitudinal spacing on L642 and M771.

3.50 China supported Hong Kong China's proposal to reduce the longitudinal spacing. In the meanwhile, they also expressed some concerns in the detail and proposed to discuss the usage of FL390 for both L642 and M771 and establish AIDC transfer with Vietnam as soon as practicable. Furthermore, they indicated that all LOAs should be signed simultaneously. Hong Kong China acknowledged the concerns of China and stated they might consider further discussing the usage of FL390 on L642 and M771.

3.51 Vietnam supported the implementation of 20NM longitudinal spacing and shared the current situation and challenges for this project, such as the development of AIDC with China. Vietnam also discussed with China the experience of spacing reduction from 50NM to 20NM on A1. China acknowledged the positive outcomes, especially the operation experience during night time when the traffic demand on A1 was high.

3.52 Singapore also supported the implementation of 20NM longitudinal spacing and shared the handling procedures for implementation of 20NM longitudinal spacing with Vietnam, including handling of catch-up situations and weather deviation. Singapore recalled that at SAIOSEACG/1 in 2022, the consensus was to focus on the reduction of longitudinal spacing for ATS routes L642 and M771. However, Singapore remains ready for the implementation of RNAV 2 navigation specification for ATS routes L642, M771 and N892.

3.53 China suggested updating the point of contact of all participants as necessary, which would increase the effectiveness of coordination.

3.54 Hong Kong China suggested to finalize details for the trial implementation of 20NM longitudinal spacing on L642 and M771 before the coming *South China Sea Traffic Flow Review Group Meeting* (SCSTFRG/11) targeted to be held in July 2023. Vietnam expressed that they need to report this issue to higher authority, and also need the time for conducting the internal assessment. Viet Nam also wished China to work closely with them in AIDC testing on A1, L642, and M771 routes. The point of contact for China was provided to Vietnam for further AIDC technical coordination with Sanya ACC after the side meeting.

Optimisation of Air Routes A461, M501 and A583 (WP12)

3.55 The meeting was updated on the progress of enhancing the longitudinal spacing requirements along air routes A461, M501 and A583 within Manila FIR and Hong Kong FIR. Noted that the enhancement of the 30 NM longitudinal spacing utilization on air routes A461 and M501 has been successfully accomplished.

3.56 Hong Kong China would continue working closely with the Philippines to reduce the spacing on ATS route A583 to 30NM, which was targeted to be completed by Q4 2023 tentatively to prepare for the traffic resumption to pre-COVID level forecasted to take place in 2024.

3.57 The Philippines confirmed that the optimization of the aforementioned routes has already been prioritized. As response, Indonesia also expressed their willingness to cooperate with the Philippines on the optimisation of ATS route A461.

3.58 In response to a question from India on the satisfied fleet equipage to start the trial implementation of RNP 4 based 30NM separation, Hong Kong China verified it was over 80%.

Proposal Implementation of 30 Nm or Closer Spacing (IP03)

3.59 Based on the positive result from IATA's survey on fleet equipage, combined with the improvement of the surveillance coverage in Ujung Pandang FIR (only a small portion of airspace is still in category R airspace¹), Indonesia reported to the meeting that they were ready to apply 30 NM separation and appealed to neighbouring FIRs which has the same airspace category to implement ATC separation standards among their common boundaries.

3.60 ICAO thanked Indonesia for the initiative and invited them to present a WP on this topic to the upcoming SCSTFRG/11 for further discussion.

Indonesia's Corrective Action to Manage Missing Departure Messages (IP04)

3.61 Indonesia had analyzed the missing departure messages that occurred during the six months of 2021 and introduced the causes and follow-up measures. There were two main factors that caused the problem; improperly handled departure messages by the system, and unpaired radar & FPL data.

3.62 Regarding the corrective action, Indonesia indicated that their system was improved to minimize missing departure messages, including the automatic message-sending system, and alerting of failed departure messaging following which the ATS Reporting Office staff could directly send the departure message.

3.63 In response to an inquiry from the Chair, Indonesia clarified that the ATS system would send the failure messages, and the ATS Reporting Office staff would monitor these.

3.64 ICAO thanked Indonesia for undertaking such corrective action.

Agenda Item 4: Review of Current Operations and Problem Areas

Proposal of Provision of Separation Minima Using ATS Surveillance Systems Where VHF Voice Communications are Not Available (IP05)

4.1 India discussed its plan to implement separation minima using Space-Based ADS-B (SADS-B) ATS surveillance System in their oceanic airspace where VHF Voice Communications was not available, according to the criteria of a new separation minima in the 9th amendment to *PANS-ATM(Doc.4444)*.

¹ Asia/Pacific Seamless ANS Plan refers.

4.2 Based on the plan, after verifying all the requirements, Mumbai FIR would initially start the pilot trial application of 20 NM longitudinal separation between eligible pairs of aircraft on routes L301 and L639, and expand to other routes within Kolkata and Chennai FIRs depending on the results obtained. More specifically, the trial would be carried out on eligible aircraft also allowing aircraft approved for RNP10 to operate in the same route at first, and with the "Better Equipped - Better Served" principle in the future. India also stated that the carriage of CPDLC, PBCS, RNP4/RNP2 were low in the routes and emphasized on mandates. IATA also confirmed the low equipages.

4.3 The Chair encouraged India to keep updating the progress of implementation through subsequent meetings.

Update on IATA Equipage Survey (WP13)

4.4 IATA updated the meeting on its *Aircraft equipage and Capacity Survey* conducted in 2022 for Asia-Pacific and North Asia, and with an update from previous reports after several more airline fleets have been added to the database.

4.5 The survey specifically asked for aircraft fleet capabilities and operating approvals in the domains of PBCS, Performance-Based Navigation (PBN), Global Navigation Satellite System (GNSS) Augmentations, Mode Select Secondary Surveillance Radar (Mode S SSR) and System-Wide Information Management (SWIM).

4.6 Regarding PBCS, the percentage of entire fleets in the database that were reported as CPDLC and ADS-C equipped had increased from 56% to almost 68% which had pushed the total percentage of equipped aircraft up to 61.23%. For PBN, All new aircraft added to the database were equipped with some type of PBN capability with regulatory approval. RNP2 capability for en-route increased from approximately 45% to over 50%.

4.7 IATA stated that the survey data needed to be closely analysed with respect to the FIR-specific / airway-specific flight data to derive desired equipage assessment. Operational and/or financial data from ANSPs played a vital link in this assessment. It was also important to note that the assessment results were indicative which could be supportive for decision-making on NAV specifications and CNS/ATM requirements.

4.8 Considering the important reference value of the en-route PBN capability, Hong Kong China and India requested that IATA consider providing more detailed illustrations of the type of PBN. Both of them suggested the presentation to be in the form of Bar Chart instead of Pie Chart for a clearer understanding of the equipage which IATA agreed to consider for future data analysis.

Regional Air Navigation Plan Update (WP14)

4.9 ICAO informed the meeting that the now superseded ICAO Doc 9673 Asia/Pacific Regional Air Navigation Plan did not provide a legal description of the FIRs in the first place. It was therefore very important for States to understand that this process of checking, alignment and validation of data for inclusion in the current Asia/Pacific Air Navigation Plan (ANP) Vol I was crucial if they would like a formal basis for their FIRs. Furthermore, the Proposal for Amendment (PfA) for Search and Rescue Region (SRR) data would provide the formal basis for the establishment by States of SRRs under the provisions of Annex 12.

4.10 The exercise to review the ANP with FIR & SSR coordinates should be based on ICAO historical records and not new proposals for changes. Some States had submitted major amendments to their FIRs during the review process. These would only be considered if the change only affected their national airspace and not the neighbouring airspace, or if all parties agreed with the change proposal before submission to ICAO.

4.11 Thirty FIR PfAs and six SRRs were approved by President of the Council and incorporated in the ATM Table I-1 of the eANP, Vol, I. Three FIRs and seven SSRs, PfAs received by the ICAO Regional Office were being processed and were expected to be circulated to ICAO HQ for review. There were issues in some locations affecting the resolution of three areas in the South China Sea and South Asia/Indian Ocean areas affecting progress, some with a political dimension.

4.12 In response to India's query on Kolkata FIR, ICAO informed the meeting that even though the Kolkata/Dhaka FIR interface had been confirmed and aligned between India and Bangladesh, it was normal practice to ensure that the boundary points of neighbouring PfAs match as a whole prior the submission of PfAs in conjunction to ICAO Council. ICAO would further explore an alternative to process the Kolkata FIR PfA without waiting for Dhaka FIR PfA finalisation.

4.13 With reference to Para 2.12 (a) of this WP, Pakistan requested India to respond against revised coordinates submitted to India for Lahore/Karachi FIR and Delhi FIR boundary point. India acknowledged and intended to respond.

Seamless ANS Plan Update (WP15)

4.14 The meeting was informed of the proposed process for the update of the Asia/Pacific Seamless ANS Plan. As agreed by APANPIRG/33 in 2022, in order to improve the workflow and the review of the Plan by APANPIRG Sub-Groups, the review cycle of the Plan would be revised, with review falling due in the year immediately following approval by the ICAO Assembly of major updates of the Global Air Navigation Plan (GANP). In the year following each Seamless ANS Plan review all other ATM-related regional plans would be reviewed (Figure 6).

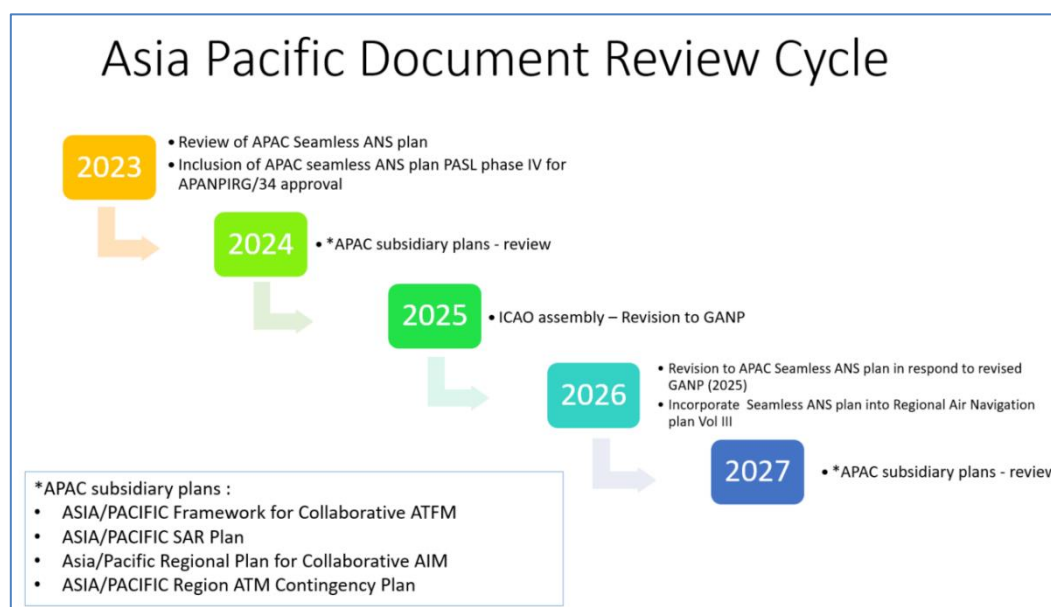


Figure 6: Proposed ATM-Related Document Review Cycle

4.15 A summary of initial considerations for the 2023 update of the Plan was provided in SAIOSEACG/2 WP/13 Attachment 1.

4.16 A new Seamless ANS Plan implementation status reporting interface had been made available for ICAO internal review and testing before proceeding to final stages of development.

4.17 Noting the ICAO Council's expectation that regional plans approved by APANPIRG such

as the Seamless ANS Plan be migrated into the Asia/Pacific Air Navigation Plan (ANP) Vol III, it was initially proposed that this migration be conducted as a separate project. However, ICAO considered it may be feasible to undertake this work simultaneously with its 2023 update.

4.18 APAC Administrations had been invited to provide details of their single point of contact (SPOC) for participation in the review activity by not later than 24 March 2023 (ICAO State Letter AP039/23 – ATM)

Air Traffic Flow Management Update (WP16)

4.19 The meeting was informed of the outcomes of the 12th Meeting of the Air Traffic Flow Management Steering Group (ATFM/SG/12), held by VTC from 13 to 16 September 2022.

4.20 The meeting also noted that the APAC regional missing DEP messages analysis was conducted on 31 October 2022 based on the number of FPLs and missing DEP messages provided by Australia, Hong Kong China, India, Japan, Mongolia, Singapore and Thailand.

4.21 Based on the analysis, it concluded that the five States' improvement to meet the criterion was observed. Therefore, the following modification on the DEP message transmission deficiency was approved by APANPIRG/33.

- Deletion – Bangladesh, India, Malaysia, Nepal and the United States.

4.22 The analysis was based on ONE day's data from a limited number of States. Therefore, the meeting was requested that more States would take part in the subsequent regional analysis planned for June 2023.

4.23 A summary of the ATFM implementation status of APAC Administrations was provided, reported against the performance objectives of the Regional Framework for Collaborative ATFM. Annual implementation status reports, due by 28 February 2023, were received from 20 APAC Administrations: Bhutan, Cambodia, China, Hong Kong China, Macao China, Fiji, France (French Polynesia), India, Indonesia, Japan, Malaysia, Mongolia, New Zealand, Pakistan, Philippines, Republic of Korea, Singapore, Thailand, United States, Viet Nam.

4.24 Based on reports received, States were assessed as having *Robust* (90-100%), *Marginal* (70-89%) or *Incomplete* (0-69%) implementation. Cambodia, China, Hong Kong China, Japan, the Republic of Korea, Singapore, Thailand, and the USA were assessed as having Robust implementation. India, New Zealand, and Viet Nam were assessed as having Marginal implementation.

4.25 Indonesia informed the meeting of its analysis and corrective action plan to minimize missing departure messages. Indonesia also expressed its willingness to take part in the planned regional analysis to collect more extensive data.

AIS – AIM Implementation Update (WP17)

Regional Implementation Status of AIM Performance Expectations

4.26 Outcomes from the 17th Meeting of the ICAO AIS – AIM Implementation Task Force (AAITF/17, 20 to 23 June 2022), as subsequently reviewed by ATM/SG/10, were provided to the meeting.

4.27 AAITF/17 had reviewed APANPIRG Air Navigation Deficiencies in the AIS/AIM field and reiterated ongoing, deep concern about poor quality management of aeronautical information in the APAC Region, and the apparent lack of organizational priority for this safety-critical obligation of all States. The criteria used by the Regional Office to determine whether an AIS QMS-related Deficiency

could be recommended for deletion were provided in SAIOSEACG/2 WP/17 Attachment 1.

4.28 An update was provided on the status of implementation of the performance expectations of the APAC Regional Plan for Collaborative AIM, which were expected to be implemented in three phases: Phase I (immediately), Phase II (07 November 2019) and Phase III, (27 November 2025).

4.29 Japan and Singapore had reported the implementation of all Phase I elements. Only Singapore reported the implementation of all Phase II elements. Figures 7 and 8 illustrated the overall regional implementation of Phases I and II.

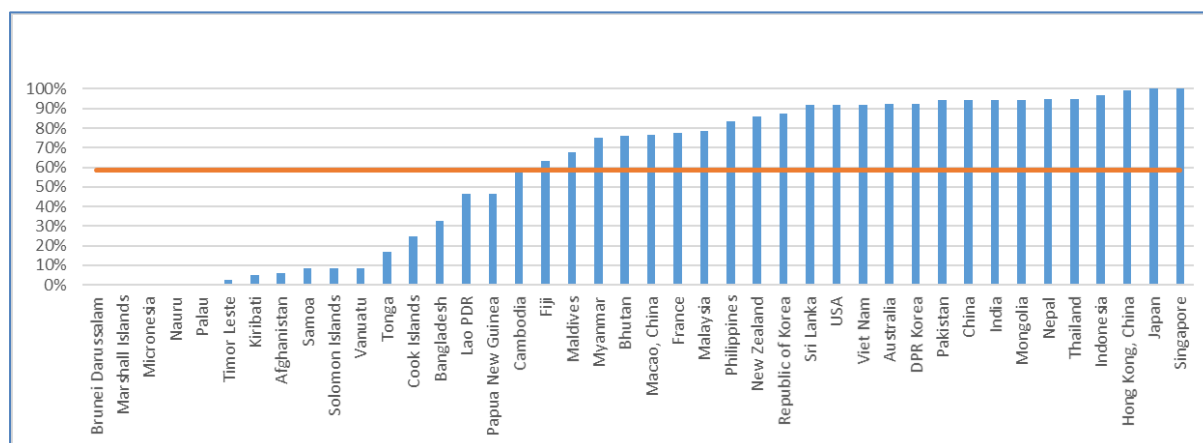


Figure 7: Regional Phase I Implementation Progress (updated 10 March 2023)

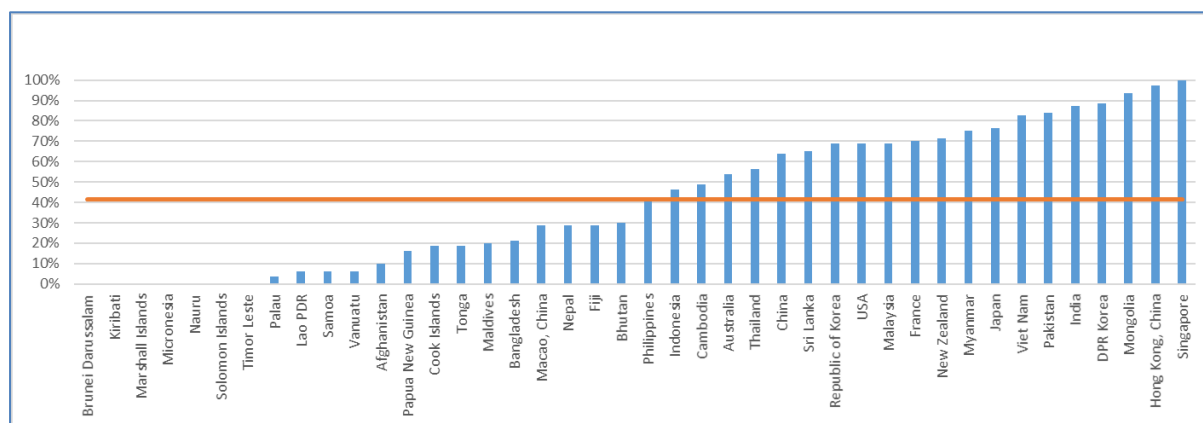


Figure 8: Regional Phase II Implementation Progress (updated 10 March 2023)

4.30 The meeting was invited to note that there had been very little overall regional progress in AIS/AIM implementation for several years.

AIS Workshop – WGS-84 and Data Accuracy

4.31 The meeting was informed of discussion outcomes from the AIS Workshop – WGS-84 and Data Accuracy, which had included a proposed regional WGS-84 sampling program to be conducted by the ICAO Regional Office, the reasons for re-collection of WGS-84 data, the impact of non-maintained WGS-84 data on terminal procedures and aircraft Terrain Awareness Warning Systems (TAWS), various methods of maintaining and revalidating data, and data quality requirements (DQR) for aeronautical information.

4.32 ATM/SG/10 had adopted the following Conclusion, drafted by AAITF/17:

Conclusion ATM/SG/10-9: Revalidation of Coordinate Data

That, noting the factors that cause WGS-84 coordinate data to change over time, States are urged to ensure that all surveyed and calculated coordinate data published in AIP or used in Instrument Flight Procedure design is revalidated:

1. each five years; or
2. after a major natural event such as an earthquake or volcanic eruption; or
3. following construction of critical airport elements,

whichever is the sooner, by ground survey, Light Detection and Ranging (LIDAR) survey, or imagery collection.

NOTAM Proliferation Analysis

4.33 AAITF/17 had discussed the proliferation of NOTAMs, using information provided by IFAIMA in collaboration with ICAO and referencing the ICAO Global Campaign on NOTAM Proliferation. Figures 9 and 10 provided information on the total number of NOTAMs 'old' NOTAMs (more than three months' duration) and 'very old' NOTAMs (more than one year duration) issued by APAC NOTAM Offices (NOFs).

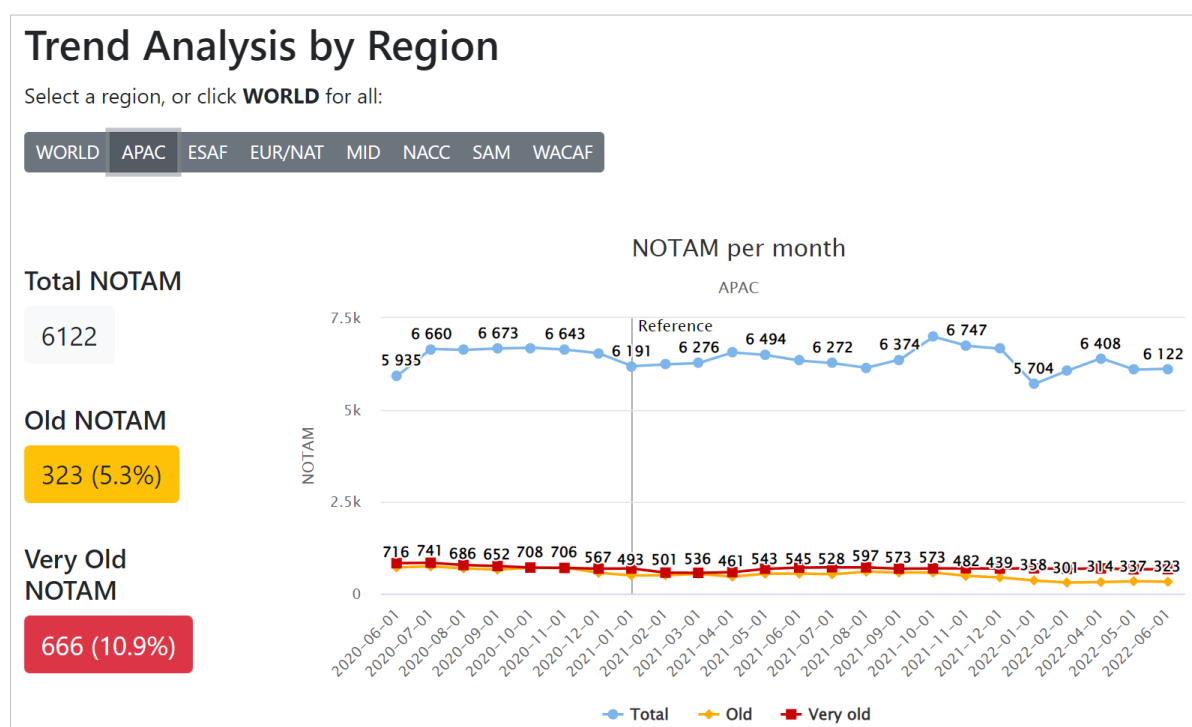


Figure 9: APAC NOTAM Statistics (Total, old and very old) 01 June 2022

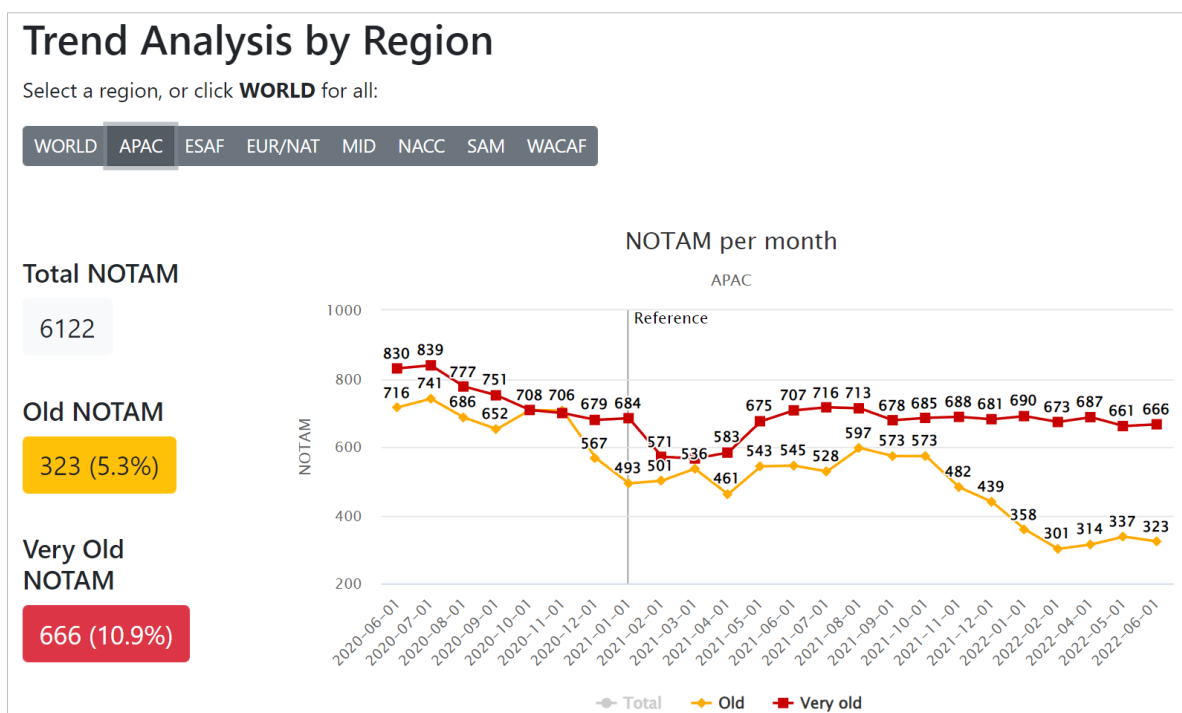


Figure 10: APAC NOTAM Statistics (old and very old) 01 June 2022

4.34 The meeting was also informed of the percentages of old and very old NOTAMs for the top 10 NOTAM-promulgating APAC Administrations, and the top 10 poorest-performing Administrations which together were responsible for 92.6% of old and very old NOTAMs in the region.

4.35 The meeting was reminded of previous discussion at AAITF and ATM/SG meetings, wherein ICAO had informed the meetings that further analysis and action was planned to address incorrect use of NOTAMs which contributed not only to NOTAM proliferation but also to safety risks:

- ‘Bad’ NOTAMs promulgating information that Annex 15 Standards require to be promulgated by AIP Amendment under the Aeronautical Information Regulation and Control (AIRAC) system;
- Unnecessary NOTAMs promulgating information that should not be promulgated in operational information (i.e. administrative or other non-operational matters); and
- ‘Recycled’ NOTAMs of three months’ duration that are replaced more than once by another identical NOTAM of three months’ further duration to ‘work around’ PANS-AIM 6.1.4 provisions.

Asia/Pacific Region ICARD Status and 5LNC Duplicate Resolution

4.36 The meeting was informed of ICAO activities on the use of the ICAO International Codes and Route Designators (ICARD) application in the APAC Region and the resolution status of 5-letter name code (5LNC) duplicates used to identify significant points, which Annex 11 required be globally unique.

4.37 In response to **Conclusion ATM/SG/10-10: State Reports of 5LNC Status**, the following Administrations had provided updated information on their published 5LNCs:

Australia, Bhutan, Cambodia, Fiji, France (French Polynesia), Hong Kong China, India, Indonesia, Maldives, Mongolia, New Zealand, Pakistan, Philippines, Republic of Korea,

Sri Lanka, USA, Viet Nam.

AIS Guidance Documents

4.38 The Regional Guidance for Postponement of Changes to Aeronautical Information had been adopted by ATM/SG under Conclusion ATM/SG/10-11.

4.39 ICAO also informed the meeting of the availability of AIS-related global guidance documents:

- Doc 8126 AIS Manual (updated);
- Doc 9839 Manual on the Quality Management System for AIS; and
- Doc 9991 Manual on AIS Training.

4.40 Bangladesh stated that they could not improve their AIM Performance until the AIM automation system was established, which was expected by 2025, and asked ICAO if there was any scope to improve the Phase II implementation before that time. ICAO proposed to further discuss the matter offline.

4.41 In response to the inquiry from India regarding the differences between 5LNC coordinate data resolution registered in ICARD and the data published in AIP, ICAO advised that the matter should be further discussed by the AAITF.

Agenda Item 5: ATS Route Developments

Asia/Pacific Region ATS Route Catalogue (WP18)

5.1 WP18 described the review process conducted by the ICAO APAC Regional Sub-Office for the *Asia/Pacific Region ATS Route Catalogue*, including correspondence with all concerned States/Administration requesting status updates on relevant route proposals.

- HIMALAYA 02
 - a) Nepal reiterated that they would like to retain their initial proposal if IATA's proposal is not acceptable and pointed out that Nepal would put further efforts into discussing with the relevant States to see the further possibilities without deviating much from the initial proposal. IATA supported.
 - b) Considering the divergence on the segment, in terms of FMS load for track change from KTM to KMG, Bangladesh requested IATA to reconsider their proposal for the segment from: Kathmandu (KTM)- Saidpur (SDP)- SYT- Imphal (IIM).
 - c) Myanmar stated they did not agree with the road segment from IIM – LSO – LINSO.
 - d) China commented that there was no plan to establish a new entry/exit point so far.
 - e) Given that the situation had not changed for more than 15 years, India suggested Nepal re-evaluate this proposal. In response, Nepal stated that they would re-evaluate the proposal, and if there would be a possibility for modification, they would present a working paper accordingly in the next

appropriate ICAO forum.

- BOB01
 - a) India and IATA had no objection to Bangladesh's counter-proposal in principle.
 - b) In response to India's concern about the handover separation, Bangladesh confirmed that they could accept the transfer separation from Yangon FIR.
 - c) Myanmar suggested to consider Bangladesh's counter proposal: A599 – CHILA– CB (Coxs Bazar) – DOPID – TATUX - KAGUL Q11, and pointed out that the optimization of the FLAS operation was the major issue which needed to be addressed before the establishment of the new route.
 - d) Bangladesh suggested the resolution on the new route would be finalized considering the revision of LOA between Bangladesh-India and Bangladesh-Myanmar.
 - e) IATA suggested Bangladesh and India to consider an interim solution – making BOB01 an Eastbound airway, establishing eastbound air traffic on present A599 and B465 airways before entering into Yangon FIR; till the time Myanmar raised FLAS issues are sorted out, then enabling BOB01 for Westbound flights.
- BOB02
 - a) The meeting agreed that BOB02 be retained in the route catalogue.
- SCS11:
 - a) Regarding the additional proposal by IATA to further line up the IPRIX to VIGEN, Viet Nam declined based on their safety and efficiency evaluation.
- AFG01:
 - a) Pakistan preferred that this route proposal should be retained in the catalogue and be re-activated according to the situation in Afghanistan. Pakistan also affirmed that airway T400 starting from point SULOM (TOC with India) - INDEK – NONIB – PS providing connectivity with P500 (MOTMO-FIRUZ) was already operational and available for flights. The portion between PS-BIMIS is approved but further connectivity to/from PS-BIMIS (TOC with Afghanistan) is subject to the response from Afghanistan.

5.2 As formally submitted by Malaysia and Thailand (refer to WP19 & WP20), the meeting considered the six new ATS route proposals to be incorporated in the *Asia/Pacific Region ATS Route Catalogue*. The Route Catalogue as updated by the meeting (Draft Version 22.1) is provided in **Appendix C** to the Report.

The Upgrade of Conventional Routes to Regional PBN Routes for En-Route Airspace Proposal (WP19)

5.3 Malaysia introduced their phased PBN route construction progress according to ICAO Asia-Pacific PBN Implementation Plan and reported additional expansion plans to the meeting. Plans were announced to extend three existing routes by changing them to PBN routes and to establish new routes by changing two conventional routes to PBN routes.

5.4 In addition, Malaysia reported to the meeting on their plan to apply 20NM longitudinal separation to TOC points between neighbouring FIRs within category S airspace as well as their goal of improving all ATS routes to RNAV2 within the surveillance and DCPC covering range together with

the application of 10NM separation in the future. To this end, Malaysia has proposed that all aircraft using PBN routes be equipped with at least RNAV5 level equipage to improve safety and efficiency.

5.5 Thailand indicated its full support for the extension of M757. Indonesia expressed their favourable consideration of the 3 route proposals which were relevant and indicated further assessment was needed.

5.6 IATA thanked Malaysia for its initiatives to improve efficiency and noted that it would continue to conduct analysis on the fleet equipage and feedback on the priorities for the proposals in the route catalogue.

5.7 India enquired if RNAV2/RNAV5 routes could be established in the oceanic area as they were categorised for continental airspace. It was also stated that there was no categorisation for PBN routes when VHF and Surveillance were available in oceanic airspace. India reiterated the need of a workshop by ICAO preferably in face-to-face format on en route PBN/PBCS route design.

5.8 Subsequently, the above-mentioned 5 new ATS route proposals were incorporated into *Asia/Pacific Region ATS Route Catalogue* (Version 22.1) as **SCS19, SCS20, SCS21, SCS22, and SCS23**.

Development of VPH-ROT Route (WP20)

5.9 Thailand introduced the cooperation processes among States concerned to realize the operation of direct routes connecting Hanoi, Bangkok, and Phnom Penh. They emphasized that the direct route would provide clear benefits to the user. Viet Nam Airlines' analysis showed that it could reduce flight time by 12 minutes and save 750 kg of fuel per flight.

5.10 Viet Nam supported the initiative by Thailand, and added that the new route would be further realigned with the existing primary routes within Hanoi FIR. For the update, the approval procedure of the route proposal by its higher authority is in progress, and which expected to be completed soon. It was suggested that a tripartite meeting involving all States concerned should be conducted to further discuss the detail.

5.11 Subsequently, the above-mentioned new ATS route proposals were incorporated into *Asia/Pacific Region ATS Route Catalogue* (Version 22.1) as **Mekong01**.

Realignment of ATS Route N877 (IP06)

5.12 The meeting noted the cooperation between India and Malaysia regarding the realignment of ATS Route N877, together with a series of optimization on adjacent routes, which could bring more efficiency in flight operation in the Bay of Bengal route network.

5.13 Based on the agreement, the realignment and the consequent changes would take effect from 18th May 2023 as per the AIRAC Cycle.

5.14 Malaysia informed the meeting that the draft of the addendum to the Letter of Agreement would be sent to India for review. IATA thanked the efforts done by India and Malaysia.

Progress On User-Preferred Route (UPR) Implementation in Indonesia (IP07)

5.15 Indonesia presented information regarding the User Preferred Route (UPR) implementation progress within Indonesian airspace and the initial cross-border UPR implementation between Indonesia and the United States. Indonesia also informed the meeting of their experience in implementing UPR and their willingness to further explore cross-border UPR cooperation with adjacent

States.

5.16 The United States congratulated Indonesia for their effort and cooperation on the implementation of cross-border UPR between Ujung Pandang and Oakland, and they also indicated that they were ready to support other APAC States which had initiatives to implement cross-border UPR.

Agenda Item 6: ATM Contingency Plans and Search and Rescue

Contingency Route Designator (WP21)

6.1 India informed the meeting of the discrepancy between *ICAO APAC Regional Contingency Plan* and the Annex-11 provisions on the contingency route designator.

6.2 It was pointed out, that the Contingency Route designator suggested in *ICAO APAC Regional ATM Contingency Plan* contains 8 characters which could not be processed by the ATM Automation system and AMSS. India advised that ICAO consider the designator to be consistent with Annex-11 for acceptance by ATM Automation System and AMSS/AMHS.

6.3 ICAO recognized this as an issue and informed the meeting that it would be addressed in the updated version of the Regional ATM Contingency Plan.

Regional ATM Contingency Planning (WP22)

6.4 ICAO presented information on the Annex 11 Air Traffic Services standard requiring that States develop and promulgate contingency plans, the Asia/Pacific Regional ATM Contingency Plan and State reporting of implementation of its performance expectations, an outline of Annex 11 Attachment C Material Relating to Contingency Planning, and discussion of the formation and communications expectations of Contingency Coordination Teams (CCTs). Information was also provided on the ongoing Kabul FIR contingency operation.

6.5 The *Regional ATM Contingency Plan* is available on the ICAO Asia/Pacific Regional Office e-Documents web-page, included among its performance objectives and the expectation that States would report their implementation status at least once annually using the Regional ATM Contingency Plan Monitoring and Reporting Form. The performance expectations of the plan were expected to be implemented by 10 November 2016, reflecting the Annex 11 standard that had been applicable since 2003.

6.6 Only Australia, Indonesia, Singapore and the United States were assessed as having robust implementation, i.e. 90% or more of the regional performance expectations implemented.

6.7 18 Administrations had never provided an implementation status report.

Afghanistan, Brunei Darussalam, China, Cook Islands, DPR Korea, India, Kiribati, Lao PDR, Marshall Islands, Micronesia, Nauru, Palau, Samoa, Solomon Islands, Timor Leste, Tonga, Tuvalu, Vanuatu.

6.8 **Figure 11** illustrated the overall regional implementation status:

SAIOSEACG/2
Report on Agenda Items

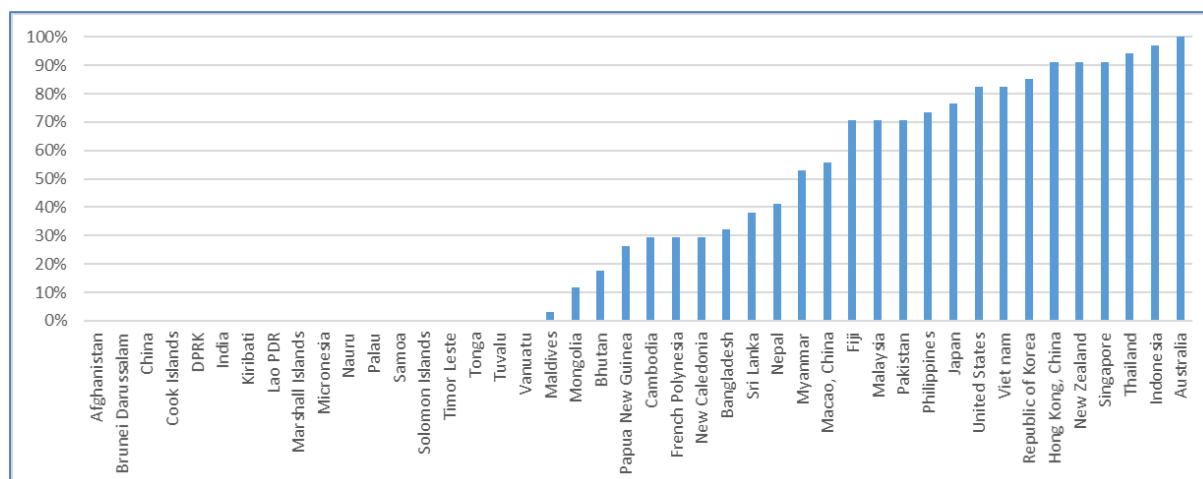


Figure 11: Regional ATM Contingency Plan – Overall Implementation Status

6.9 Information was provided on the Annex 11 provisions relating to the formation of Contingency Coordination Teams (CCTs) and the responsibilities of States and ICAO that were outlined in Annex 11 Attachment C – Material Relating to Contingency Coordination Teams. The meeting was also informed of the expectations for communication with State CCT points of contact, who were requested to ensure they provide an up-to-date email address and that their Administration ensured their nominees for this purpose were enabled to receive and respond appropriately to official email communications out-of-hours.

6.10 The meeting was updated about the ongoing Kabul FIR contingency operations (since August 2021), and on Action Item 57/19 arising from the 57th Conference of Directors General of Civil Aviation of the Asia/Pacific Region (DGCA/57, Incheon, Republic of Korea, 04 to 08 July 2022).

6.11 An update of the Regional ATM Contingency Plan in 2023 would include inter alia lessons learned from four major ATM contingency events in the Asia/Pacific Region in the last two to three years.

Asia/Pacific Search and Rescue Update (WP23)

6.12 The meeting was provided with an update of Search and Rescue (SAR) matters for the Asia/Pacific Region, including outcomes from the Seventh Meeting of the Asia/Pacific Regional SAR Working Group (APSAR/WG/7, 24 to 27 May 2022).

6.13 Information was provided on the progress of the Location of an Aircraft in Distress Repository (LADR), and a Cospas-Sarsat update on deployment of the Emergency Locator Transmitter (Distress Tracking) – ELT(DT) developed to support the Global Aeronautical Distress and Safety System (GADSS).

6.14 An analysis of the 16 revised SAR-related USOAP Protocol Questions (PQs) indicated the overall Effective Implementation (EI) for SAR had decreased when compared to the previous assessment. Regional average EI scores for the last three years (2020 and 2021 – 26 SAR-related PQs, 2022 – 16 merged PQs) were:

- May 2020 – 60%
- April 2021 – 59%
- May 2022 – 55%

6.15 Noting that the same analysis undertaken in July 2015 had yielded an average EI of 51%,

the general trend of improvement was welcomed.

Regional SAR Plan Implementation Status

6.16 The following 24 APAC Administrations submitted SAR Plan implementation status reports in 2022/23:

Australia, Bangladesh, Bhutan, Cambodia, Hong Kong China, Macao China, Fiji, French Polynesia, Indonesia, Japan, Malaysia, Maldives, Mongolia, Nepal, New Zealand, New Caledonia, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States, and Viet Nam

6.17 **Figure 12** illustrates the regional implementation status of the performance expectations of the SAR Plan as at 07 March 2023.

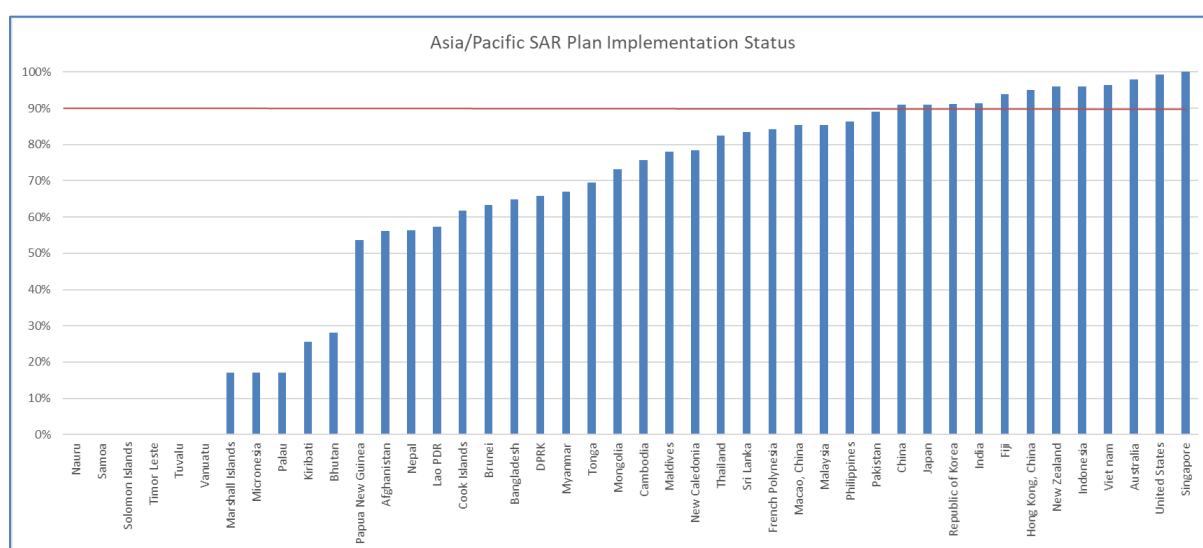


Figure 12: Asia/Pacific SAR Plan Implementation Status as at 07 March 2023

6.18 Regional policy (Asia/Pacific Air Navigation Plan Vol II Section 3.1) established that States below 90% implementation would be considered to have an APANPIRG ANS Deficiency recorded for SAR implementation. Since APSAR/WG/6 (2020) there was an increase from 10 to 12 Administrations that had reported implementation of 90% or more, when compared to APSAR/WG/6:

Australia, China, Fiji, Hong Kong China, India, Indonesia, Japan, New Zealand, Republic of Korea, Singapore, USA and Viet Nam.

6.19 **SAIOSEACG/2 WP/23 Attachment 2** provided details of the SAR implementation status of each APAC Administration at the time of the APSAR/WG/7 meeting.

GADSS Workshop Outcomes

6.20 Resulting from the GADSS workshop that was held in conjunction with APSAR/WG/7, ATM/SG/10 had adopted **Conclusion ATM/SG/10-12: Checklist of Considerations in Readiness for Autonomous Distress Tracking**. The checklist was provided in **SAIOSEACG/2 WP/23 Attachment 4**.

6.21 An updated version of the Asia/Pacific Regional SAR Plan, prepared jointly by Australia, Singapore, USA and ICAO had been agreed by ATM/SG/10 under Conclusion ATM/SG/10-13: Revised Asia/Pacific Regional SAR Plan. The updated SAR Plan was available on the ICAO

Asia/Pacific Regional Office eDocuments web-page:

<https://www.icao.int/APAC/Pages/eDocs.aspx>

Agenda Item 7: ANSP Coordination and Civil/Military Cooperation

Civil/Military Cooperation in The ATM Contingency Operation (WP24)

7.1 Indonesia introduced lessons learned from major ATM contingency events in the last three years which might lead to the urgency of updating the Regional ATM Contingency Plan.

7.2 The example case of complex coordination with the military authority to help manage traffic that had entered Indonesia's airspace was provided, together with subsequent efforts that had been made by Indonesia to improve civil/military cooperation to minimize the occurrence and impact of such an abnormal situation.

7.3 Indonesia highlighted that The *Asia Pacific Regional ATM Contingency Plan* expected that the Central Coordinating Committee function should include relevant representation including Military Authorities. Indonesia urged the APAC States/administrations to develop close cooperation and collaboration with airspace users, military authorities, and civil aviation authorities responsible for adjacent FIRs in a harmonized manner.

7.4 Singapore thanked Indonesia for the WP and highlighted that in addition to close civil-military cooperation during an ATM Contingency Operation, implementing new capabilities to improve the resilience of the ATM system in the region during such contingency scenarios was also important. The implementation of Flight and Flow Information for a Collaborative Environment (FF-ICE) and System Wide Information Management (SWIM) in the region would help mitigate the issues faced when an ATM Contingency Plan was activated.

7.5 ICAO stressed that the appropriate contingency management body should be in place for contingency coordination, and emphasized the importance of conducting exercises for the contingency operation.

Benefits of Flexible Use of Airspace in India (IP08)

7.6 India informed the meeting that they were actively operating civil-military cooperation units called Regional Airspace Management Cells (RAMC) under the Flexible Use of Airspace concept and achieved significant economic benefits and carbon dioxide reduction effects. They also revealed plans to establish additional operating organizations for civil-military cooperation units in the eastern and western regions.

Agenda Item 8: Review of SAIOSEACG Task Lis

Review of SAIOSEACG Task List (WP25)

8.1 The SAIOSEACG Task List as reviewed by the meeting is provided in **Appendix D**.

Agenda Item 9: Any Other Business

The Implementation of a New Runway and Changes to The Airspace (IP09)

9.1 The Maldives reported to the meeting that they had constructed an additional runway adjusted for ICAO Code 4F at Velana International Airport (VIA). Through this the airport capacity was increased, leading to enhanced traffic handling capacity of the runway and reduced occurrence of air traffic delays. The application of RNAV1 up to 160 NM from the airport had promoted improved safety, such as reducing conflicts between departing and arriving aircraft.

ATM Points of Contact (WP26)

9.2 The Secretariat presented the current *ATM Points of Contact List* (**Appendix E**), and requested that administrations update this information as required.

Closing and the Next Meeting

The co-Chairs thanked the meeting participants for their significant contribution during the meeting.



International Civil Aviation Organization

The Second Meeting of the South Asia, Indian Ocean and Southeast Asia ATM Coordination Group (SAIOSEACG/2)

(Bangkok, 20 March – 24 March 2023)

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SAIOSEACG/2-Final Report
Appendix A

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SAIOSEACG/2-Final Report
Appendix A

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SAIOSEACG/2-Final Report
Appendix A

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ICAO

International Civil Aviation Organization

The Second Meeting of the South Asia, Indian Ocean and Southeast Asia ATM Coordination Group (SAIOSEACG/2)

Bangkok, Thailand, 20 – 24 March 2023

PROVISIONAL LIST OF WORKING AND INFORMATION PAPERS

(Presented by the Secretariat)

WORKING PAPERS

Number	Agenda	WORKING PAPERS	Presented By
WP01	1	Election of the Chair and Provisional Agenda	Secretariat/Chair
WP02	2	Review of Relevant Meeting Outcomes	Secretariat
WP03	2	Bay of Bengal Traffic Flow Review Group Outcomes	Secretariat
WP04	2	South China Sea Traffic Flow Review Group Outcomes	Secretariat
WP05	3	Air Navigation Service Deficiencies List	Secretariat
WP06	3	Airspace Safety Monitoring	Secretariat
WP07	3	Air Navigation Services USOAP Update	Secretariat
WP08	3	Application of ATC Separation Minimums	Secretariat
WP09	3	The Establishment of the Bay of Bengal Route Network Small Working Group	Chairperson of BOBTFRG
WP10	3	Concept Review of South China Sea Airspace Structure	IFATCA
WP11	3	Progress Update on Capacity Optimisation of Air Routes L642 And M771	Hong Kong China
WP12	3	Optimisation of Air Routes A461, M501 And A583	Hong Kong China/Philippines
WP13	4	Update on IATA Equipage Survey	IATA
WP14	4	Regional Air Navigation Plan Update	Secretariat
WP15	4	Seamless ANS Plan Update	Secretariat
WP16	4	Air Traffic Flow Management Update	Secretariat
WP17	4	AIS - AIM Implementation Update	Secretariat
WP18	5	Asia/Pacific Region ATS Route Catalogue	Secretariat
WP19	5	The Upgrade of Conventional Routes to Regional PBN Routes for En-Route Airspace Proposal	Malaysia
WP20	5	Development of VPH-ROT Route	Thailand
WP21	6	Contingency Route Designator	India
WP22	6	Regional ATM Contingency Planning	Secretariat
WP23	6	Asia/Pacific Search and Rescue Update	Secretariat

Number	Agenda	WORKING PAPERS	Presented By
WP24	7	Civil/Military Cooperation in The ATM Contingency Operation	Indonesia
WP25	8	Review of SAIOSEACG Task List	Secretariat
WP26	9	ATM Points of Contact	Secretariat

INFORMATION PAPERS

Number	Agenda	INFORMATION PAPERS	Presented By
IP01	1	Provisional List of Working and Information Papers	Secretariat
IP02	3	State of Aviation Post-COVID-19	IATA
IP03	3	Proposal Implementation of 30 NM or Closer Spacing Within Ujung Pandang FIR Based on Surveillance	Indonesia
IP04	3	Indonesia's Corrective Action to Manage Missing Departure Messages	Indonesia
IP05	4	Proposal of Provision of Separation Minima Using ATS Surveillance Systems Where VHF Voice Communications Are Not Available	India
IP06	5	Realignment of ATS Route N877	India
IP07	6	Progress On User-Preferred Route (UPR) Implementation in Indonesia	Indonesia
IP08	7	Benefits of Flexible Use of Airspace in India	India
IP09	9	The Implementation of a New Runway and Changes to The Airspace	Maldives

FLIMSIES

Number	Agenda	FLIMSIES	Presented By
Flimsy 01			

PRESENTATIONS

Number	Agenda	PRESENTATIONS	Presented By
PR01	3	(WP10) Concept Review of South China Sea Airspace Structure	IFATCA
PR02	3	(IP02) State of Aviation post-COVID-19	IATA

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ASIA/PACIFIC REGION ATS ROUTE CATALOGUE



INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA/PACIFIC REGIONAL OFFICE

VERSION 22.1

March 2023

Table of Contents

Table of Contents	2
Foreword	4
Amendment Record	6
Chapter 1: South Asia	8
HIMALAYA 02	9
IND 07 (N877 Extension)	13
BOB 01	15
BOB 02	19
Chapter 2: Southeast Asia	21
SCS 01	22
SCS 02	24
SCS 11	26
SCS 14	28
SCS 15	29
SCS 16	30
SCS 18	31
SEA 12	32
VIET NAM 02	33
SCS19	35
SCS20	36
SCS21	37
SCS22	38
SCS23	39
MEKONG 01	40
Chapter 3: East Asia	41
CHA 01	42
CHA 02	43
CHA 12	44
IATA 02	45
SCS 08	46
TPE 01	48
Chapter 4: Trans-Regional (South Asia)	50
AFG 01	51
AFG 02	54
MID 02 (a)	55
Chapter 5: Trans-Regional (East Asia)	56
FE0008 / RDGE 15.003 / APAC RUS 5	57
FE0021 / RDGE 13.028 / APAC RUS 4	58
FE0049 / RDGE 20.010	59
FE0050 / RDGE 20.011	60
FE0051 / RDGE 20.012	61
FE0052 / RDGE 20.013	62
FE0053 / RDGE 20.014	63
FE0054 / RDGE 20.015	64
FE0055 / RDGE 20.016	65
FE0056 / RDGE 20.017	66
Chapter 6: Pacific	67

WPC 01..... 68

Foreword

1.1 The *Air Navigation Plan – Asia and Pacific Regions* (Doc 9673) has been superseded, in electronic form by the electronic Air Navigation Plan (eANP), which contains a table of regional ATS routes in Volume II (*Table ATM II- APAC- 1 – Asia and Pacific Regions ATS Routes*).

1.2 The Fourteenth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/14, August 2004) under Conclusion 14/5 established the ATS Route Network Review Task Force (ARNR/TF) to review the Asia and Pacific ATS route network to determine present and future route requirements. To facilitate the amendment process and keep track of route implementation and future requirements, and with the objective of providing more up to date information on route developments, ARNR/TF prepared the draft Asia/Pacific Region ATS Route Catalogue.

1.3 APANPIRG/16 (August 2005, Bangkok), recognizing the value of a consolidated reference document for the regional ATS routes and future route requirements of States and airspace users, accepted the Asia/Pacific Region ATS Route Catalogue under Decision 16/9. The ATS Route Catalogue is intended to be a living document, supplementing the eANP and maintained by the ICAO Asia and Pacific (APAC) Regional Sub-Office on behalf of the ICAO Asia and Pacific Office. Communication related to the ATS Route Catalogue should be made via email to apac-rso@icao.int.

1.4 A Contracting State or qualifying International Organization identifying a need for a new route requirement to be included in the eANP or to change an existing route contained in the eANP, may submit an amendment proposal to the ICAO APAC Regional Office in accordance with established procedures summarized below and the template provided on the ICAO APAC website.

1.5 Appropriately presented and documented proposals to amend the eANP are submitted to the ICAO Secretary General through the Regional Office and circulated to States and International Organizations for comment. If, in reply to the ICAO Regional Office's inquiry, no objection is raised to the proposal by a specified date, it will be deemed that a regional agreement (involving the relevant PIRG) on the subject has been reached. The Regional Office will inform States and International Organizations concerned of the approval and the eANP will be amended accordingly.

1.6 If, in reply to the ICAO Regional Office's inquiry, any objection is raised, and if objection remains after further consultation, the matter will be documented for discussion by APANPIRG and, ultimately for formal consideration by the Air Navigation Commission, if it remains unresolved. If the Commission concludes that the amendment is acceptable in its original or other form, it will present appropriate recommendations to the Council.

1.7 The APAC Regional Sub-Office, which is responsible for maintaining the ATS Route Catalogue, will update the ATS Route Catalogue from time to time as amendment proposals are presented, progressed and agreed or not agreed. The revision number and date shown on the cover page of the Catalogue. The Asia/Pacific Region ATS Route Catalogue is posted on the ICAO APAC website at (<https://www.icao.int/APAC/Pages/default.aspx>).

1.8 The Asia/Pacific Region ATS Route Catalogue is now as follows: Chapter 1: South Asia; Chapter 2: Southeast Asia; Chapter 3: East Asia; Chapter 4: Trans-Regional (South Asia); Chapter 5: Trans-Regional (East Asia); and Chapter 6: Pacific.

1.9 Regional ATS route proposals affecting Asia/Pacific airspace should be presented as part of a paper to ATM coordination groups or other suitable bodies, and then may be entered into the Asia/Pacific Region ATS Route Catalogue by the Regional Office. The APAC Regional Office or Regional Sub-Office will periodically present to appropriate ATM coordination groups or other suitable bodies the proposals within their geographical area of interest for review.

1.10 The Asia/Pacific Region ATS Route Catalogue contained proposals for route changes that had not yet been agreed and implemented.

1.11 States in APAC were required to reclassify the routes as:

- **Priority A – Short Term i.e. it could be implemented within 12 months;**
- **Priority B – Medium Term i.e. it could be implemented within 13 to 36 months;**
- **Priority C – Long term i.e. more than 36 months; and**
- **Priority D – Cannot be implemented (reasons to be provided).**

As some States were not represented, these routes were classified as Priority C and will be updated when more information becomes available.

1.12 IATA has also prioritised the routes in terms of efficiency and environmental benefits as:

- **HIGH** – one of top priorities for airlines; or
- **MEDIUM** – has significant benefits but can wait until high priority proposals are implemented; or
- **LOW** – the route proposal may be deleted if the State cannot implement within 36 months.

1.13 After review, the Asia/Pacific Region ATS Route Catalogue may be updated by:

- deletion of the proposal when the proposal has been agreed and entered into the eANP; or
- deletion of the proposal when it has been decided that there is no possibility of implementation in the foreseeable future [i.e.: the proposal has had no progress in the past five years, or it is a Priority C or D (more than 36 months) by States and is assigned a LOW priority by IATA]; or
- amendment with the addition of supplementary information; or
- addition of a new ATS route proposal.

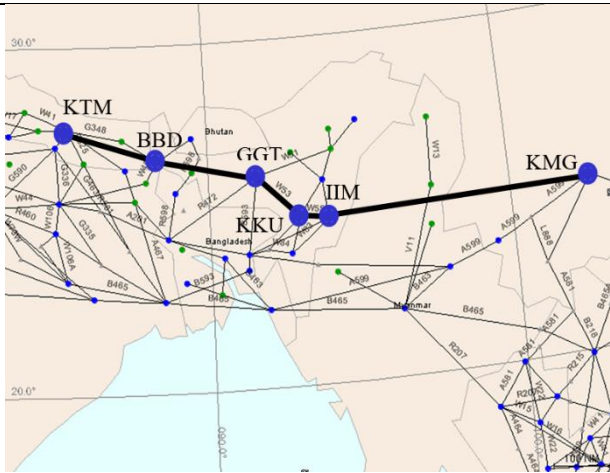
Amendment Record

Version	Date	Amended by	Comments
0.1	14 February 2005	-	ARNR/TF/2 developed draft version.
0.2	5 May 2005	ARNR/TF/3	Finalized format following contribution from members.
0.3	29 July 2005	ATM/AIS/SAR/SG/15	Sub-Group concluded the Catalogue be adopted (Draft Conclusion 15/3).
1	26 August 2005	APANPIRG/16	APANPIRG/16 decided that the Catalogue be accepted (Decision 16/9).
2	24 January 2006	BBACG/17	Reviewed and updated the Catalogue.
3	19 May 2006	SEACG/13	Reviewed and updated the Catalogue.
4	26 January 2007	BBACG/18	Reviewed and updated the Catalogue.
5	23 May 2008	SEACG/15	Reviewed and updated the Catalogue.
6	15 May 2009	SEACG/16	Reviewed and updated the Catalogue.
7	27 May 2010	SEACG/17	Reviewed and updated the Catalogue.
8	10 March 2011	BBACG/21	Reviewed and updated the Catalogue.
9	6 May 2011	SEACG/18	Reviewed and updated the Catalogue.
10	22 September 2011	SAIOACG/1	Reviewed and updated the Catalogue.
11	22 June 2012	ATM/AIS/SAR/SG/22 APANPIRG/23	Reviewed, reformatted, and updated the Catalogue, approved by APANPIRG/23.
12	26 June 2013	SAIOACG/SEACG, ATM/SG	Reviewed, reformatted, and updated the Catalogue, approved by APANPIRG/24.
13	11 September 2014	SAIOACG/SEACG, ATM/SG APANPIRG/25	Reviewed subsequent to Easter Island being transferred out of the Region; added trans-regional proposals
14	September 2015	SAIOACG/SEACG, ATM/SG APANPIRG/26	Removal of Chapter A (BANP routes).
15	September 2016	SAIOACG/SEACG, ATM/SG APANPIRG/27	Reviewed and updated the Catalogue.
16	August 2017	SAIOACG/SEACG, ATM/SG	Reviewed and updated the Catalogue.
17	September 2018	SAIOACG/SEACG, ATM/SG	Reviewed and updated the Catalogue, incorporated IATA inputs, added State and IATA priority label.
18	April 2019	SAIOACG/9, SEACG/26	Reviewed and updated the Catalogue.

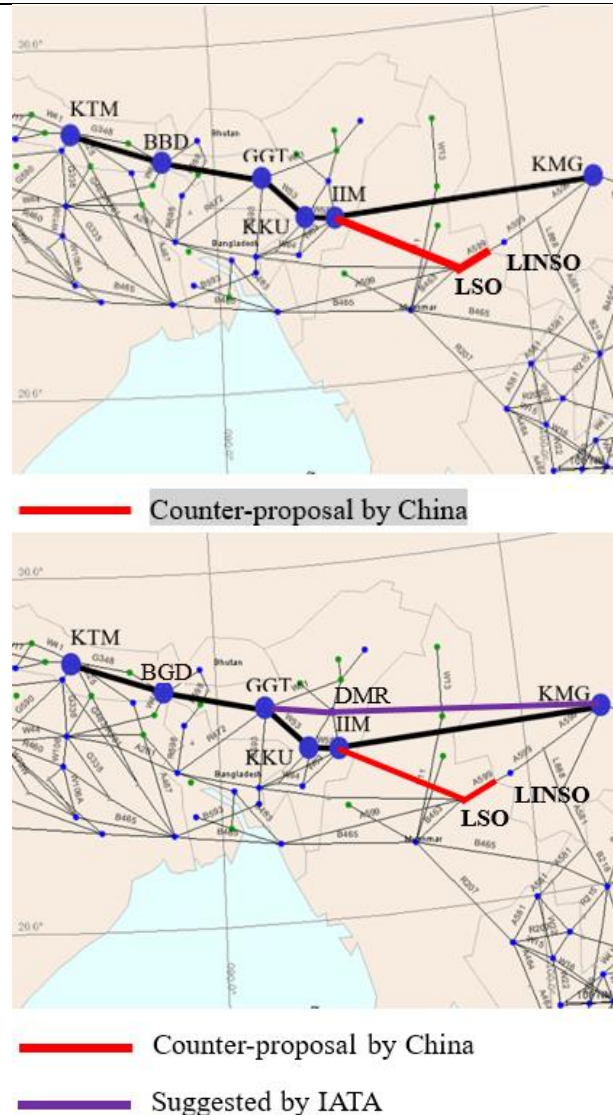
19	September 2019	ATMSG/7, AIRARD TF/4	Reviewed and updated the Catalogue.
20	December 2020	ATMSG/8	Reviewed and updated the Catalogue.
21	November 2021 March 2022, October 2022 December	SAIOACG/10, SEACG/27, ATM/SG/9, SAIOSEACG/1, ATM/SG/10 BOBTFRG/4	Reviewed and updated the Catalogue.
22	March 2023	SAIOSEACG/2	Reviewed and updated the Catalogue.

Chapter 1: South Asia

**(referred to: SAIOACG, BOBASIO, ASIOACG as
appropriate for review)**

ATS Route Name	HIMALAYA 02
State Priority	D
IATA Priority	HIGH
Requested by (when)	Nepal (01/09/2018)
States/Administrations Involved	Nepal, India, Myanmar, China (Kathmandu, Kolkata, Yangon, Kunming FIRs)
Route Description	Kathmandu (KTM) 2740.5N 08521.0E – Bagdogra (BGD) 264118N 0881934E – Guwahati (GGT) 2606.1N 09135.3E – Silchar (KKU) 2454.8N 09258.9E – Imphal (IIM) 2446.0N 09354.5E – Kunming (KMG) 2501N 10244E Alternate proposal by IATA: Kathmandu (KTM) 2740.5N 08521.0E – Bagdogra (BGD) 264118N 0881934E – Guwahati (GGT) 2606.1N 09135.3E – Dimapur (DMR) 255251.30N 0934655.29E – Kunming (KMG) 2501N 10244E
Flight Level Band	
Benefit (fuel, environmental)	110 NM / 15 minutes, 520 kg fuel, 1640 kg CO₂ per flight Potential to save 19 to 25 minutes per flight and assist in decongesting A599/Lashio.
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: IATA North Asia Office approached China who have indicated this route will be considered as part of the overall China route review – no timeline was given. China advised that they would seriously look at the proposal and would coordinate with Nepal (ref. para 8.4 of the SEA-RR/TF/4 report). At SAIOACG/9: with the improvement of surveillance capability, Myanmar would review this proposal. At ATMSG/7: Under consideration by China; and Myanmar commented this route proposal would be dependent on the enhancement of surveillance and communication coverage in the area. 26/09/2020: Nepal updated this route proposal was under discussion with Myanmar, and they were optimistic that communication and surveillance capabilities would be available in Yangon FIR in the near future to support the implementation of this route. 20/11/2020: China	

commented that it was not possible to establish a new entry/exit point, and counter-proposed to re-align IIM – LSO – LINSO (existing entry/exit point between Yangon and Kunming FIRs). At ATM/SG/8: In response to China's counter-proposal, Myanmar provided their disagreement; and India commented the existing established routes in Kolkata FIR (i.e. W137, W53 and W55) was for domestic operations only, and India would need to review the possibility of opening these routes for international operations. India also suggested that in light of this, and the delay of more than nine years and the positions of Myanmar and China, Nepal may wish to consider a new proposal. At ATM/SG/9: IATA commented that based on detailed re-assessment conducted by airlines, it confirmed a **'HIGH'** priority to HIMALAYA 02. In addition, IATA suggested an alternate proposal which had potential to save up to 19 to 25 minutes, and would also help to decongest ATS route A599/Lashio (LSO) and save additional 88 NM compared with IIM – LSO – LINSO route. IATA also requested India to consider keeping ATS route J7 (CDR2/3 route between GGT – DMR) available based on traffic demand timings. Nepal supported the alternate proposal as suggested by IATA, and would coordinate and hold a consultation meeting with the various stakeholders. China commented that it was not possible to establish a new entry/exit point. At BOBTFRG/3: Myanmar supported the proposal by IATA; India expressed its concern in getting a favourable response from its military authorities for the route between Guwahati



(GGT) – Dimapur (DMR) – Kunming (KMG). According to India, implementing the route from Imphal (IIM) to Kunming (KMG) was more feasible. Given the fact that China had revised the priority as “D”, IATA was requested to consider the position of China before pursuing the proposal; and Bangladesh suggested IATA to consider: Kathmandu (KTM) – Saidpur (SDP) – Silchar (KKU) – Imphal (IIM) – Kunming (KMG). 27/1/2022: Nepal is having in-house discussion and consultation with different stakeholders and planning to coordinate with the affected States soon.

1/3/2022: IATA may request that China explores possibility in near future of opening up additional entry/exit as this has direct savings to flights from Nepal and China.

3/3/2022: China commented there is no status update.

In August 2022, China commented that there was no plan to establish a new entry/exit point and suggested considering the route proposal based on the current existing entry/exit point LINSO.

BOBTFRG/4: Noting that with the upgradation of Bangladesh’s CNS/ATM system, full coverage of communication in Dhaka FIR would be available shortly, so taking consideration of China’s counter-proposal, Bangladesh proposed two route options as: Kathmandu (KTM)- Saidpur (SDP)-SYT-LSO or, Kathmandu (KTM)- Saidpur (SDP)-SYT-Imphal (IIM)-LSO. India commented that further meaningful discussion of this proposal should be based on the basic agreement between China and Myanmar.

Before SAIOSEACG/2, Nepal implied that they would like to insist on their initial proposal if



[Map provided by ICAO]

IATA's proposal is not acceptable and pointed out that Nepal would put further efforts to discuss with the Chinese Authority to see the further possibilities without deviating much from the initial proposal.

At SAIOSEACG/2

a) Nepal reiterated that they would like to retain their initial proposal if IATA's proposal is not acceptable and pointed out that Nepal would put further efforts into discussing with the relevant States to see the further possibilities without deviating much from the initial proposal.

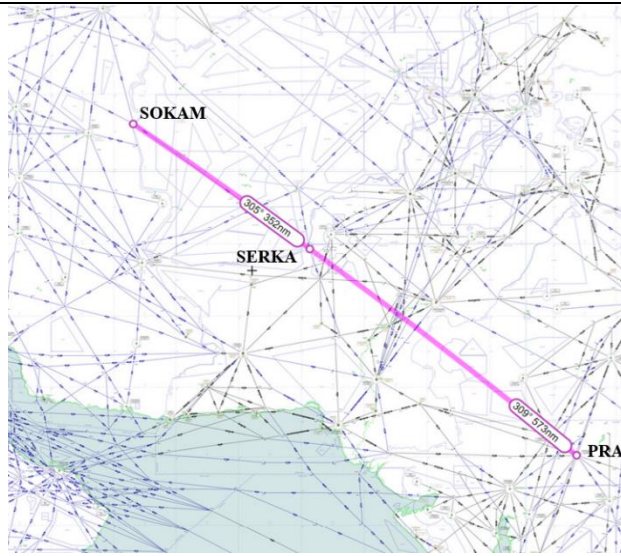
IATA supported.

b) Considering the divergence on the segment, in terms of FMS load for track change from KTM to KMG, Bangladesh requested IATA to reconsider their proposal for the segment from: Kathmandu (KTM)- Saidpur (SDP)- SYT- Imphal (IIM).

c) Myanmar stated they did not agree with the road segment from IIM – LSO – LINSO.

d) China commented that there was no plan to establish a new entry/exit point so far.

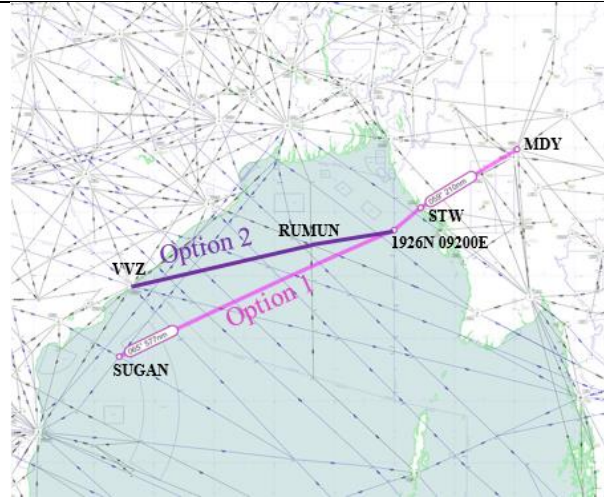
e) Given that the situation had not changed for more than 15 years, India suggested Nepal re-evaluate this proposal. In response, Nepal stated that they would re-evaluate the proposal, and if there would be a possibility for modification, they would present a working paper accordingly in the next appropriate ICAO forum.

ATS Route Name	IND 07 (N877 Extension)
State Priority	D
IATA Priority	MEDIUM
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	India, Pakistan, Afghanistan (Mumbai, Delhi, Karachi, Kabul FIRs)
Route Description	Pratarah (PRA) 2401.8N 07445.0E – SERKA 2951.0N 06615.0E – SOKAM 3313.3N 06037.9E
Flight Level Band	28,000 - 46,000 ft
Benefit (fuel, environmental)	51 NM / 7 minutes, 835 kg fuel, 2,630 kg CO ₂ per flight, 3,387 tonnes fuel, 10,668 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	LH, KL KUL/SIN – Middle East – East/Europe
Remarks: This proposal predates the extension of UL333 through Kabul FIR and has been under consideration for a number of years. The extension of UL333 is under utilised against other Kabul routes largely due the 45 NM ‘penalty’ in track mileage the current route structure requires. The route’s primary benefit at this stage will be westbound and during BOBCAT traffic flow. Extension completed SERKA to SOKAM. Update 08/02/13: PRA – SERKA has been approved by India after lengthy consultation with the military, complementary action from Pakistan awaited. At SAIOACG/9: Pakistan commented this route proposal was very unlikely to be implemented. Future of this route would be decided at SAIOACG/10 in 2020. Update from India on 02/08/2019: Since the proposal is pending concurrence of Pakistan for a long time, India need to renegotiate the proposal with military after comments from Pakistan. 17/08/2020: The designated established military areas in Karachi FIR and route structure (crosser routes near the boundary with Delhi and Kabul FIRs) does not allow the establishment of this route. Pakistan proposed for deletion. At ATMSG/8: IATA preferred this route proposal to be retained in the Catalogue. At BOBTFRG/3: Pakistan re-affirmed that the designated established military areas in Karachi FIR and route structure (crossing routes near	

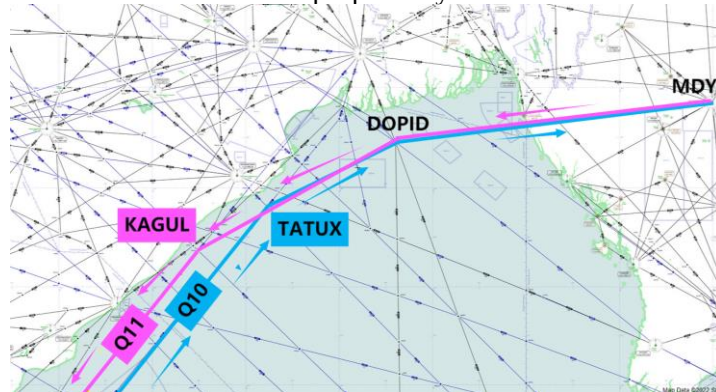
the boundary with Delhi and Kabul FIRs) would not permit the establishment of this route. 1/3/2022:IATA wants this proposal to be archived and reintroduced if/when future possibilities permit its success. BOBTFRG/4: Pakistan reaffirmed that the proposed route was not feasible and supported archiving this proposal for future possibility, and IATA had no objection.	
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ATS Route Name	BOB 01
State Priority	
IATA Priority	HIGH
Requested by (when)	IATA (05/11/2021: ATM/SG/9)
States/Administrations Involved	India, Bangladesh, Myanmar (Chennai, Kolkata, Dhaka, Yangon FIRs)
Route Description	Option 1: SUGAN 152500N 0825045E – New Waypoint 192600N 0920000E (FIR BDRY between Kolkata and Yangon) – Sittwe (STW) – Mandalay (MDY) Option 2: Vishakhapatnam (VVZ) 174003.90N 0831510.00E – RUMUN 185805N 0891420E – New Waypoint 192600N 0920000E (FIR BDRY between Kolkata and Yangon) – Sittwe (STW) – Mandalay (MDY) Counter proposal by India: Eastbound: Q10 - TATUX - DOPID - MDY. Westbound: MDY - DOPID - KAGUL - Q11. Counter proposal by Bangladesh: TATUX-DOPID-Cox's Bazar -CHILA-A599- LSO-LINSO
Flight Level Band	All suitable bi-directional flight levels. Else, at least suitable eastbound flight levels. (airline operators preferred flight level would be FL330 as primary and FL310 as secondary)
Benefit (fuel, environmental)	Option 1: Narrow body fleet: 94 NM / 12 minutes, 456 kg fuel, 1.5 tonnes CO₂ per flight, 166 tonnes fuel, 548 tonnes CO₂ annually Wide body fleet: 94 NM / 12 minutes, 900 kg fuel, 3.0 tonnes CO₂ per flight, 329 tonnes fuel, 1095 tonnes CO₂ annually Option 2: Narrow body fleet: 71 NM / 9 minutes, 344 kg fuel, 1.1 tonnes CO₂ per flight, 126 tonnes fuel, 402 tonnes CO₂ annually Wide body fleet: 71 NM / 9 minutes, 679 kg fuel, 2.2 tonnes CO₂ per flight, 248 tonnes fuel, 803 tonnes CO₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	About 110 flights per week Africa/South Asia – Far East, Southern India – East Coast of the United States

Remarks: The proposed routes would efficiently connect South West Bay of Bengal traffic and Far East. At BOBTFRG/3: In order to conduct better assessment, India requested IATA to provide the analysis of the fleet equipage in ADS-C/CPDLC and PBCS. IATA provided its analysis result on fleet readiness of its members in the SAIOSEACG/1 meeting (Mar. 2022). (8/8/2022) India in its assessment on BOB01 & BOB02 commented the proposed routes are outside the SUR and VHF coverage imposing unnecessary restrictions for all other cross-cutting routes. Therefore proposed alternatives as below:
Eastbound aircraft via Q10: TATUX - DOPID - MDY.
Westbound aircraft: MDY - DOPID - KAGUL - Q11.
India stated this would improve the availability of getting optimum flight levels (well covered by SUR and VHF in Kolkata FIR) and require the approval of Bangladesh and Myanmar.
ATMSG/10: Bangladesh commented that India's counter-proposal overflies the designated established military areas, so Bangladesh needs to consult with the military authorities.
BOBTFRG/4: Bangladesh noted that the consultation with the military authority was still under process. To avoid the Danger area, two more alternative options are proposed with a connection to the new DVOR (Cox's Bazar, CXB), which is under construction and

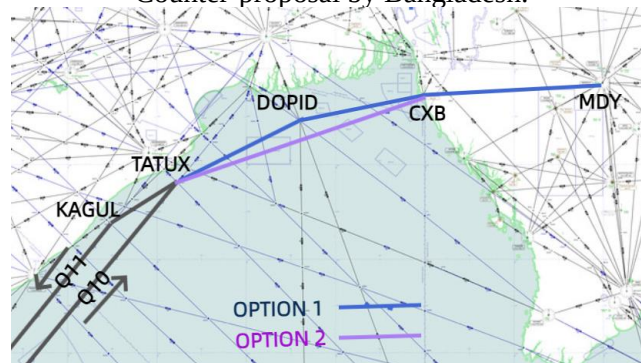


Counter-proposal by India:



[Map provided by ICAO]

Counter-proposal by Bangladesh:



[Map provided by ICAO]

Counter-proposal by IATA:

would be available in three months, detailed as follow:
DOPID-Cox's Bazar (CXB DVOR)-MDY or,
TATUX-Cox's Bazar (CXB DVOR)-MDY.

In response to Bangladesh's counterproposal, IATA suggested specifying a new waypoint at the position of Cox's Bazar instead of waiting for the availability of the new DVOR and proposed the following route connecting Cox Bazar-APAGO-CHILA and onwards joining ATS Route A599:

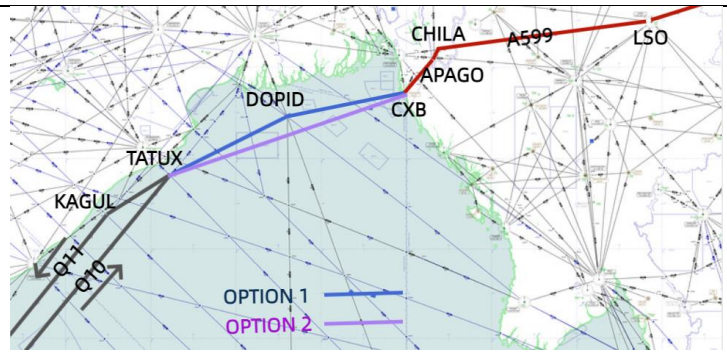
TATUX-DOPID-Cox's Bazar -APAGO-CHILA-A599- LSO-LINSO

Before SAIOSEACG/2, all stakeholders had extensive discussion on the BOB01. IATA affirmed its proposal: A599 – CHILA - APAGO – CB (Coxs Bazar) – DOPID – TATUX - KAGUL Q11. Bangladesh suggested to skip the waypoint “APAGO”.

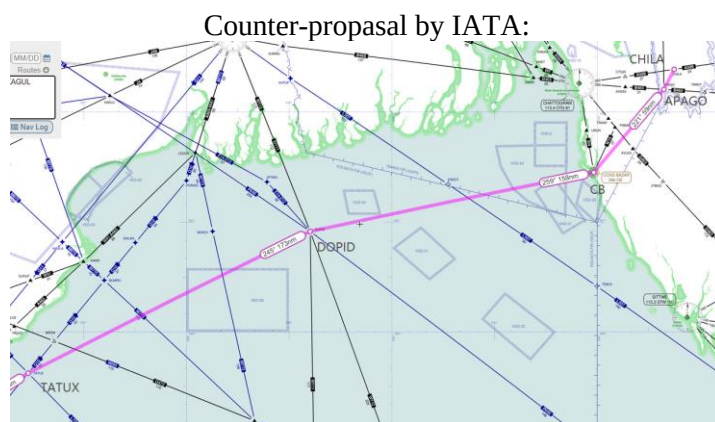
At the SAIOSEACG/2:
a) India and IATA had no objection to Bangladesh's counter-proposal in principle.

b) In response to India's concern about the handover separation, Bangladesh confirmed that they could accept the transfer separation from Yangon FIR.

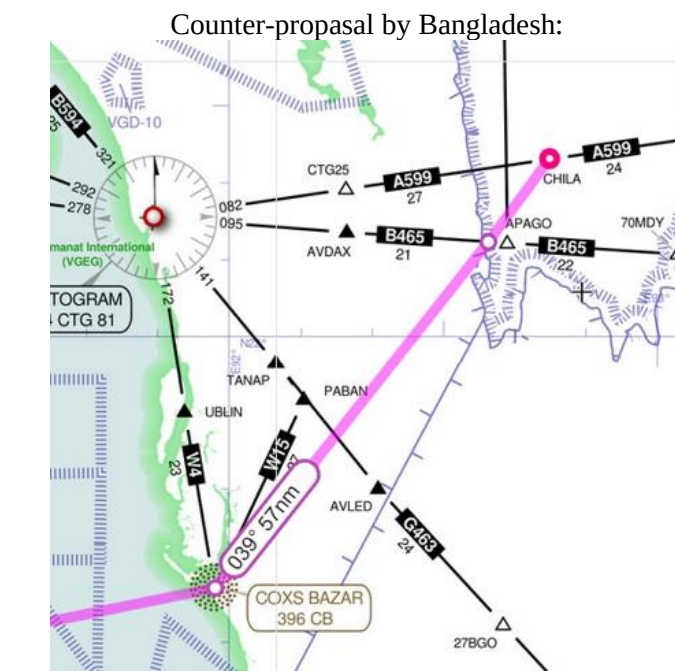
c) Myanmar suggested to consider Bangladesh's counter proposal: A599 – CHILA– CB (Coxs Bazar) – DOPID – TATUX - KAGUL Q11, and pointed out that the optimization of the FLAS operation was the



[Map provided by ICAO]

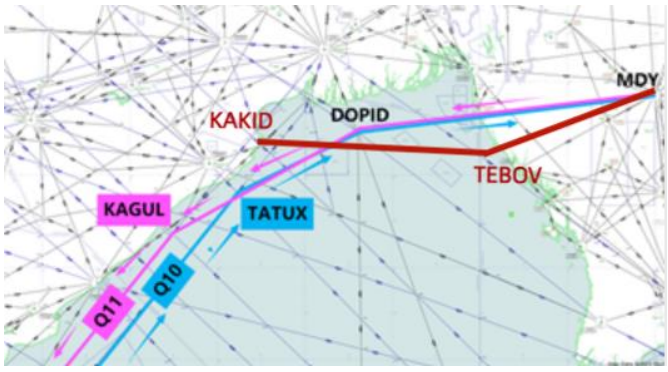


[Map provided by ICAO]



[Map provided by IATA]

major issue which needed to be addressed before the establishment of the new route. d) Bangladesh suggested the resolution on the new route would be finalized considering the revision of LOA between Bangladesh-India and Bangladesh-Myanmar. e) IATA suggested Bangladesh and India to consider an interim solution – making BOB 01 an Eastbound airway, establishing eastbound air traffic on present A599 and B465 airways before entering into Yangon FIR; till the time Myanmar raised FLAS issues are sorted out, then enabling BOB01 for Westbound flights.	
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ATS Route Name	BOB 02
State Priority	
IATA Priority	HIGH
Requested by (when)	IATA (05/11/2021: ATM/SG/9)
States/Administrations Involved	India, Bangladesh, Myanmar (Kolkata, Yangon FIRs)
Route Description	KAKID 203833N 0865951E – TEBOV 202504N 0915949E – Mandalay (MDY) Counter proposal by India: Eastbound: Q10 - TATUX - DOPID - MDY. Westbound: MDY - DOPID - KAGUL - Q11.
Flight Level Band	All suitable flight levels
Benefit (fuel, environmental)	Narrow body fleet: 50 NM / 6 minutes, 228 kg fuel, 750 kg CO₂ per flight, 83 tonnes fuel, 274 tonnes CO₂ annually Wide body fleet: 50 NM / 6 minutes, 450 kg fuel, 1.5 tonnes CO₂ per flight, 164 tonnes fuel, 548 tonnes CO₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	About 110 flights per week Africa/South Asia – Far East, Southern India – East Coast of the United States
Remarks: The proposed route would not only provide efficient connection over Bay of Bengal, but it would also help in de-congesting ATS routes A791, B465, Q19 and Q20. At BOBTFRG/3: In order to conduct better assessment, India requested IATA to provide the analysis of the fleet equipage in ADS-C/CPDLC and PBCS. (08/08/2022)India in its assessment on BOB01 & BOB02 commented the proposed routes are outside the SUR and VHF coverage imposing unnecessary restrictions for all other cross-cutting routes. Therefore proposed alternatives as below: Eastbound aircraft via Q10: TATUX - DOPID - MDY. Westbound aircraft: MDY - DOPID - KAGUL - Q11. India stated this would improve the availability of getting optimum flight levels (well covered by SUR and VHF in Kolkata FIR) and require the approval of Bangladesh and Myanmar.	 Counter-proposal by India vs original proposal by IATA:  [Map provided by ICAO]

ATMSG/10: Bangladesh commented that India's counter-proposal overflies the designated established military areas, so Bangladesh needs to consult with the military authorities.

(16/11/2022) In response to India's concerns about SUR and VHF coverage, IATA suggested that with the issuing of the ADS/C & CPDLC mandate, PBCS-equipped aircraft could operate on this proposed route. Regarding the military area, IATA pointed out that the danger area VGD-31 was permanently removed; thus, the possible route connecting DOPID (India proposed waypoint)-TEBOV is not affected by the consequent restrictions(see the Map provided by IATA).

Considering the complexity of this airspace, IATA preferred this route to be retained separately and discussed in tandem with BOB01.

BOBTFRG/4: Considering the complexity and constraints in the area, Bangladesh and India wanted to focus on Bangladesh's counter-proposes for BOB 01 in the first place.

Since the SWG has prioritised the BOB01 as the primary task, it was proposed by IATA that BOB02 to be archived for future possibility.

The SAIOSEACG/2 agreed that BOB02 be retained in the route catalogue.

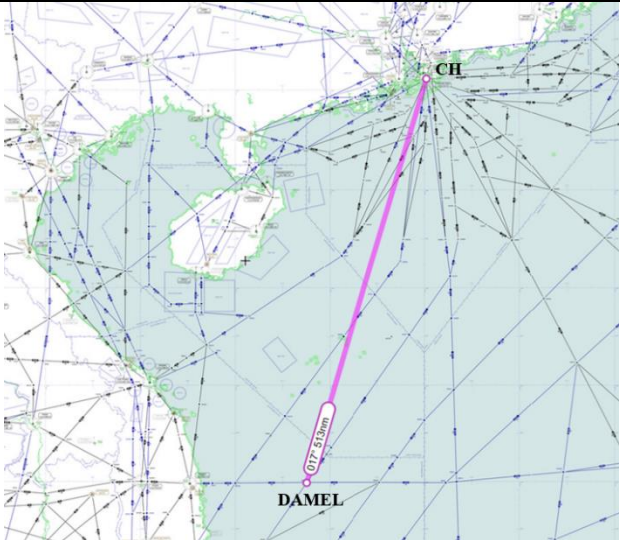
Possible route overflies VGD-31(permanently removed):

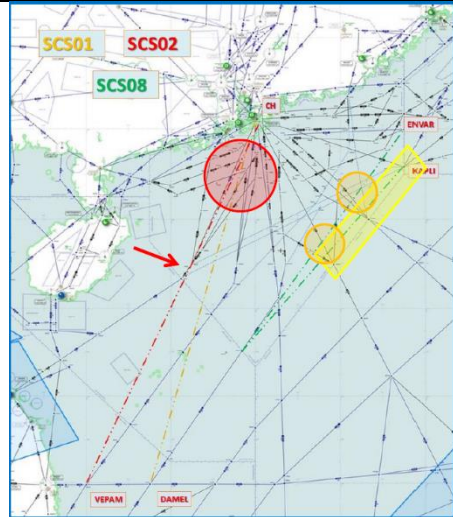


[Map provided by IATA]

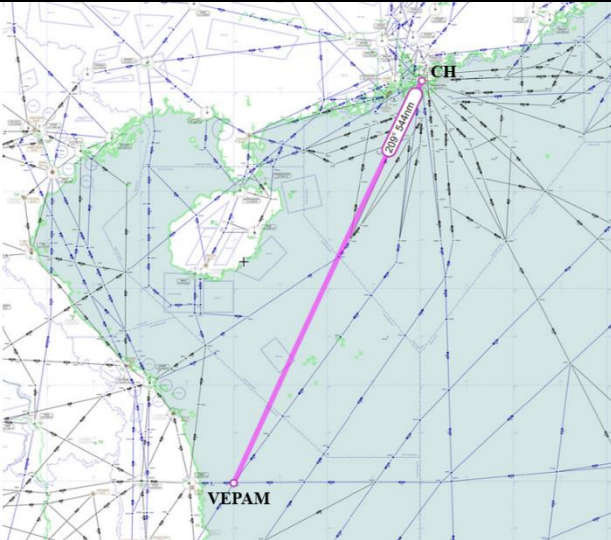
Chapter 2: Southeast Asia

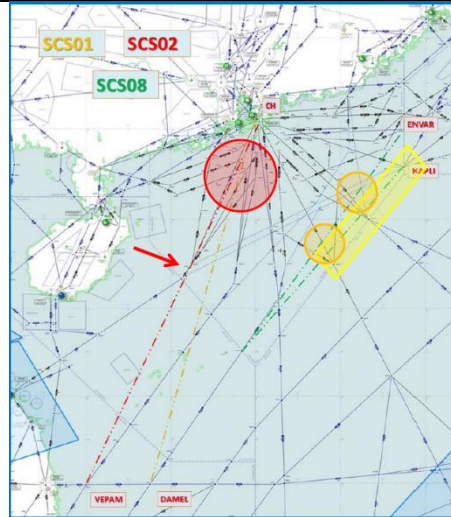
(referred to SEACG for review)

ATS Route Name	SCS 01
State Priority	D
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Viet Nam, China, Hong Kong China (Ho Chi Minh, Sanya, Hong Kong FIRs)
Route Description	DAMEL 1358.7N 11130.6E – Cheung Chau (CH) 2213.2N 11401.8E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	23 NM / 4 minutes, 300 kg fuel per flight, 1,560 tonnes fuel, 4,914 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	CX, KA, MH, SQ More than 100 flights per week SIN – Pearl River Delta airports
Remarks: Proposed route shortening for M771 into the Pearl River Delta area. During SEACG/19 in WP09 Hong Kong China advised they had studied the proposal for track shortening and advised the proposed change would reduce capacity of A1/P901. It would also require an extensive change in the flight route system and ATC sectors in Hong Kong FIR. However, Hong Kong China would continue to study this proposal for the implementation of RNP4/2. At SEACG/26: Hong Kong China commented they would need to review the integration of this route proposal with its planned airspace enhancement projects. Update from Viet Nam on 22/07/2019: Viet Nam has no objection, subject to agreement from China and Hong Kong China. 23/10/2020: China commented the proposal was under consideration. 30/10/2020: Hong Kong China commented SCS 01 and SCS 02 were conflicting with each other (see the red circle in the figure below). The two routes would create additional conflict points in the most congested ATC sector and ATS route segment in the Hong Kong FIR (see the red circle and arrow in the figure below). Therefore, these two routes were not recommended.	

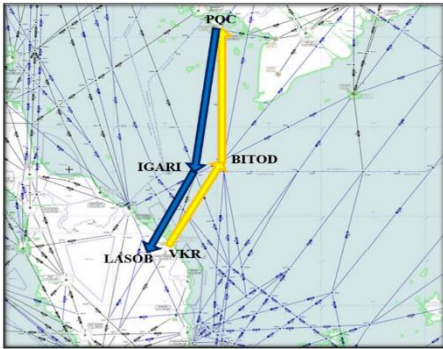
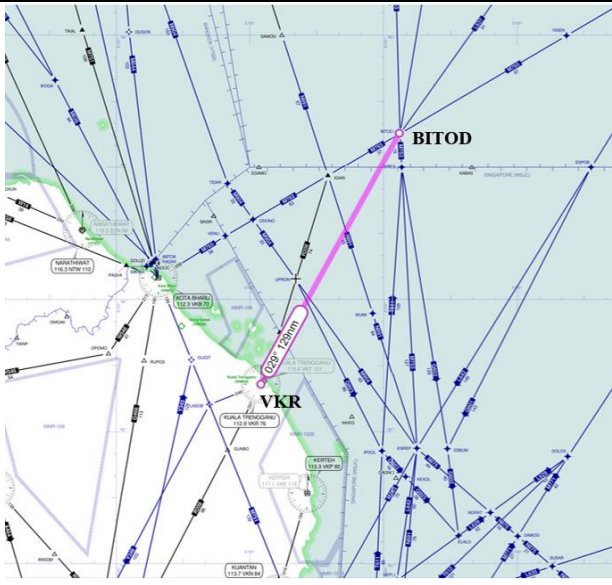


At ATMSG/8: IATA provided updates on IATA priority; implementation benefits; and operational information. 29/09/2021: China commented SCS 01 would create conflict with existing ATS routes A1, L642 and M771, and therefore not recommended for implementation. At ATM/SG/9: IATA provided update on the route operational information.

ATS Route Name	SCS 02
State Priority	D
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Viet Nam, China, Hong Kong China (Ho Chi Minh, Sanya, Hong Kong FIRs)
Route Description	VEPAM 1358.0N 11000.0E – Cheung Chau (CH) 2213.2N 11401.8E
Flight Level Band	28,000 – 46,000 ft
Benefit (Environmental)	12 NM / 1 minutes, 200 kg fuel per flight, 2,080 tonnes fuel, 8,580 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	CX, KA, MH, SQ More than 200 flights per week SIN – Pearl River Delta airports
Remarks: Proposed route shortening for L642 out of the Pearl River Delta area. During SEACG/19 in WP09 Hong Kong China advised they had studied the proposal for track shortening and advised the proposed change would reduce capacity of A1/P901. It would also require an extensive change in the flight route system and ATC sectors in Hong Kong FIR. However Hong Kong, China would continue to study this proposal for the implementation of RNP4/2. At SEACG/26: Hong Kong China commented they would need to review the integration of this route proposal with its planned airspace enhancement projects. Update from Viet Nam on 22/07/2019: Viet Nam has no objection, subject to agreement from China and Hong Kong China. 23/10/2020: China commented the proposal was under consideration. 30/10/2020: Hong Kong China commented SCS 01 and SCS 02 were conflicting with each other (see the red circle in the figure below). The two routes would create additional conflict points in the most congested ATC sector and ATS route segment in the Hong Kong FIR (see the red circle and arrow in the figure below). Therefore, these two routes were not recommended.	



At ATMSG/8: IATA provided updates on implementation benefits; and operational information.
29/09/2021: China commented SCS 02 would create conflict with existing ATS routes A1, L642 and M771, and therefore not recommended for implementation.
At ATM/SG/9: IATA provided update on the route operational information.

ATS Route Name	SCS 11
State Priority	B
IATA Priority	LOW
Requested by (when)	IATA (10/03/2015: SEACG/22)
States/Administrations Involved	Viet Nam, Singapore, Malaysia (Ho Chi Minh, Singapore, Kuala Lumpur FIRs)
Route Description	Kuala Terengganu (VKR) 0521.6N 10304.9E – BITOD 0715.4N 10407.1E
Flight Level Band	
Benefit (fuel, environmental)	6 NM / 0 minutes, 23 kg fuel per flight, 167 tonnes fuel, 527 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	MH, VN At least 20 flights per week KUL – HAN/PNH/SGN
Remarks: At SEACG/26: Malaysia, Singapore and Viet Nam had agreed in principle the feasibility of the route proposal. The States concerned would meet to further discuss the proposal in due time, and Malaysia agreed to become the lead coordinator. Update from Viet Nam on 22/07/2019: Viet Nam proposed the following route proposals for consideration by Malaysia and Singapore: Uni-directional eastbound route VKR – BITOD – PQC; and uni-directional westbound route PQC – IGARI – LASOB.  At ATMSG/7: Malaysia would lead the tripartite meeting, expected during the SCSTFRG/8 in September 2019. At ATMSG/8: This route proposal was under consideration by Viet Nam; and IATA provided updates on IATA priority, implementation benefits and operational information. 08/10/2021: Malaysia commented they would host the meeting between Malaysia, Singapore and Viet Nam in Q4 2021 or Q1 2022. 22/2/2022: the tripartite meeting btw Malaysia, Singapore and Viet Nam	

was canceled and will be rescheduled to report the discussion outcome to SCSTFRG/10 meeting (scheduled 31/5 – 1/6 2022)

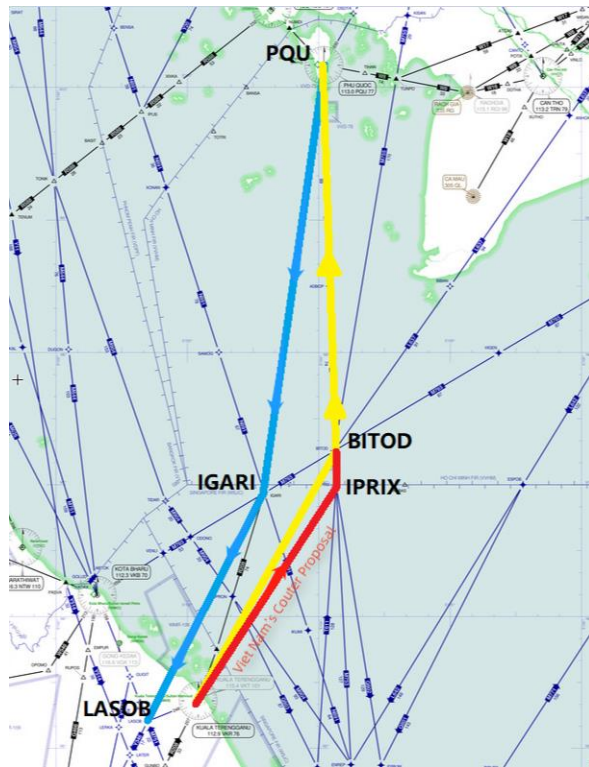
In the tripartite meeting in Sept 2022, Viet Nam proposed the following route proposals:
unidirectional Eastbound: VKR-IPRIX-BITOD-PQU; and
unidirectional Westbound: PQU-IGARI-LASOB.

Upon agreement by States concerned (Malaysia and Viet Nam), IATA proposed an extension from IPRIX to VIGEN to this proposal for smooth joining to M765 saving 5-6 NM for eastbound flights.

Before SAIIOSEACG/2, Malaysia indicated that Malaysia, Singapore and Vietnam have broadly agreed to the proposal. Malaysia's proposal for the Coordination Procedure has been agreed by Singapore pending Viet Nam acknowledgement.

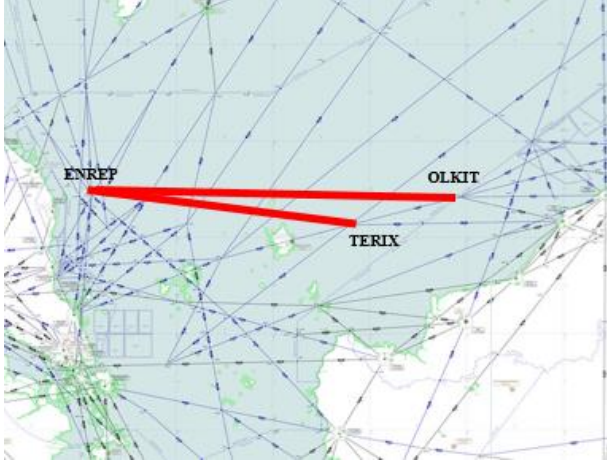
At SAIIOSEACG/2, regarding the additional proposal by IATA to further line up the IPRIX to VIGEN, Viet Nam declined based on their safety and efficiency evaluation.

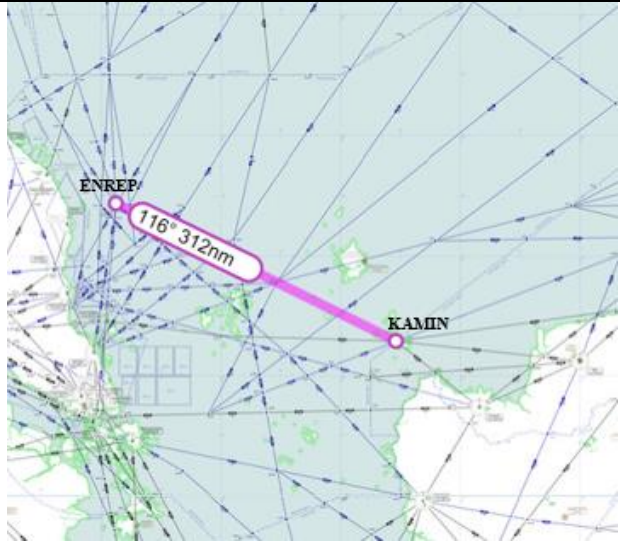
Counter-proposal by Viet Nam:

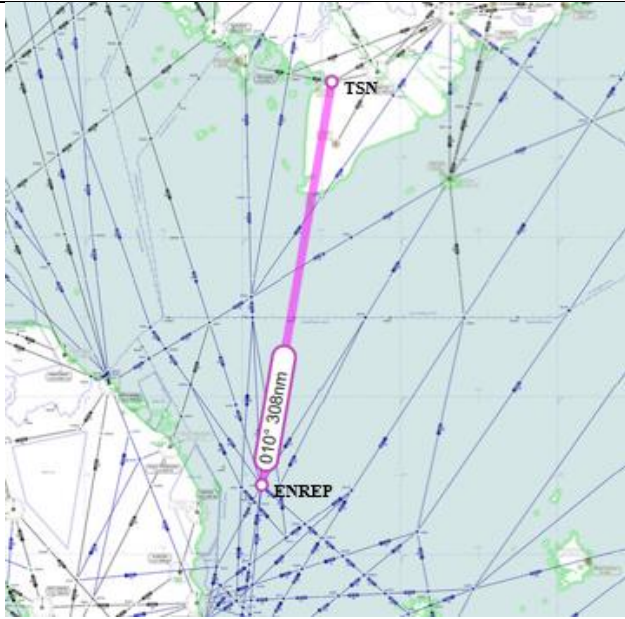


Suggested by IATA:

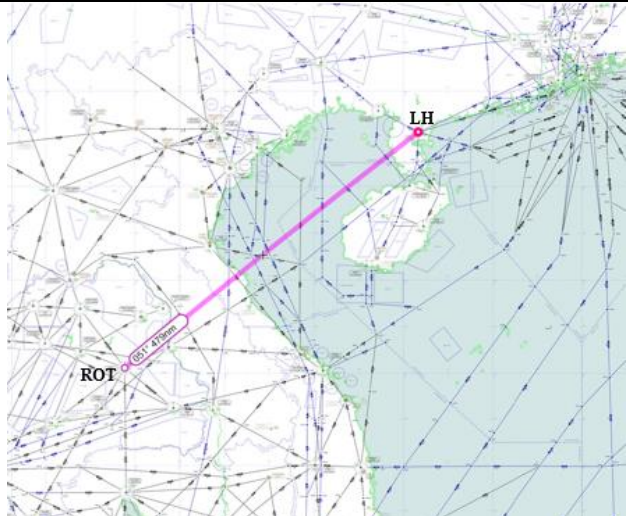


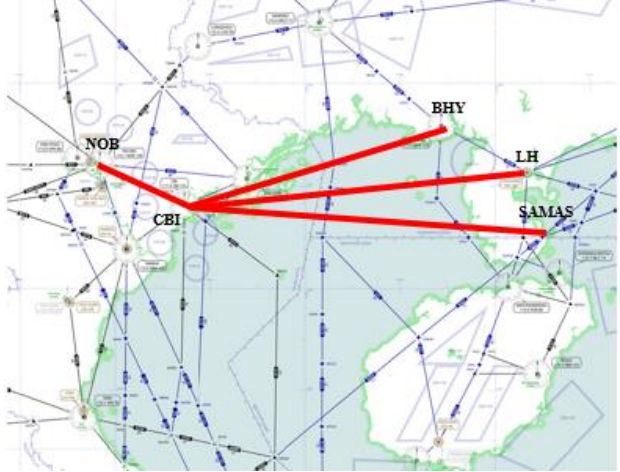
ATS Route Name	SCS 14
State Priority	B
IATA Priority	LOW
Requested by (when)	Malaysia (26/03/2018: SAIOACG/8 & SEACG/25)
States/Administrations Involved	Malaysia, Singapore (Kota Kinabalu, Singapore FIRs), Indonesia
Route Description	ENREP 045223.88N 1041442.00E – OLKIT 045012.12N 1115118.00E or ENREP 045223.88N 1041442.00E – TERIX 041520.88N 1093455.92E
Flight Level Band	At or below 29,000 ft
Benefit (fuel, environmental)	107 NM / 12 minutes, 365 kg fuel, 1,153 kg CO ₂ per flight, 266,450 kg fuel, 841,982 kg CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	BKI – KBR
Remarks: Purpose is to circumnavigate major confluence of air traffic at VPK thus providing better efficiency for flight operating from/to KBR. Operation at 29,000 ft and below to avoid crossing traffic within the South China Sea airspace. At SEACG/26: Singapore commented implementation of this route would be possible with the implementation of space-based ADS-B in Singapore FIR, planned by end of 2019; and IATA would assign its priority after a comprehensive review of the Catalogue by its focus group. 15/05/2020: discussion on this route proposal would be conducted when the COVID-19 situation improved, and a face-to-face meeting could be conducted between Malaysia and Singapore. At ATMSG/8: Indonesia commented future discussion on this route proposal would require their involvements; and IATA assigned “ LOW ” priority and recommended for deletion. 16/09/2021: Singapore commented that, as the COVID-19 situation had not improved, the face-to-face meeting between the States involved had yet to materialise.	

ATS Route Name	SCS 15
State Priority	B
IATA Priority	LOW
Requested by (when)	Malaysia (26/03/2018: SAIOACG/8 & SEACG/25)
States/Administrations Involved	Malaysia, Singapore (Kota Kinabalu, Singapore FIRs)
Route Description	ENREP 045223.88N 1041442.00E – KAMIN 023441.88N 1085536.12E
Flight Level Band	At or below 29,000 ft
Benefit (fuel, environmental)	107 NM / 12 minutes, 365 kg fuel, 1,153 kg CO ₂ per flight, 266,450 kg fuel, 841,982 kg CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	KCH – KBR
Remarks: Purpose is to circumnavigate major confluence of air traffic at VPK thus providing better efficiency for flight operating from/to KBR. Operation at 29,000 ft and below to avoid crossing traffic within the South China Sea airspace. At SEACG/26: Singapore commented implementation of this route would be possible with the implementation of space-based ADS-B in Singapore FIR, planned by end of 2019; and IATA would assign its priority after a comprehensive review of the Catalogue by its focus group. 15/05/2020: discussion on this route proposal would be conducted when the COVID-19 situation improved, and a face-to-face meeting could be conducted between Malaysia and Singapore. At ATMSG/8: Indonesia commented future discussion on this route proposal would require their involvements; and IATA assigned “ LOW ” priority and recommended for deletion. 16/09/2021: Singapore commented that, as the COVID-19 situation had not improved, the face-to-face meeting between the States involved had yet to materialise.	

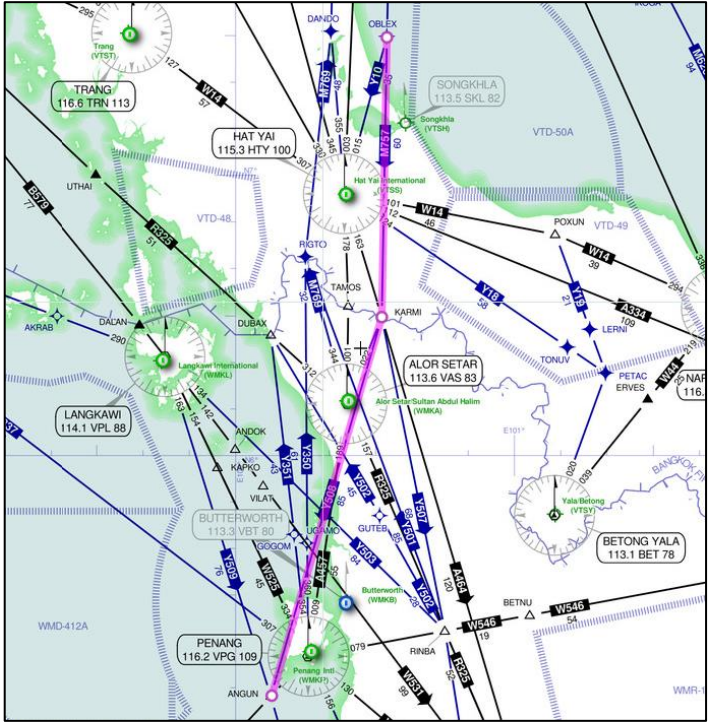
ATS Route Name	SCS 16
State Priority	C
IATA Priority	MEDIUM
Requested by (when)	Viet Nam (01/04/2019: SEACG/26)
States/Administrations Involved	Singapore, Viet Nam (Singapore, Ho Chi Minh FIRs)
Route Description	Implementation of new uni-directional northbound ATS route: ENREP 045223.88N 1041442.00E – New Waypoint (FIR BDRY between Singapore and Ho Chi Minh) – Tan Son Nhat (TSN) 104859.20N 1063844.10E
Flight Level Band	
Benefit (fuel, environmental)	48 NM / 6 minutes, 252 kg fuel, 794 kg CO ₂ per flight, 576,576 kg fuel, 1,816 tonnes CO ₂ annually Reduction in Distance/Time/Fuel/CO ₂ by 19NM/2MIN/600LBS/860KGS per flight with B744ERF for SIN/SGN portion on the basis of annual average wind conditions.
Operational Information (potential airlines, flight frequency, potential city pairs)	SIN – SGN
Remarks: Update from Viet Nam on 22/07/2019: Due to crossing routes, this route proposal would be possible subject to the enhancement of surveillance and ATFM capabilities in the concerned area. At ATMSG/8: Viet Nam commented this route proposal was under consideration; and IATA assigned “MEDIUM” priority. 11/2/2022: Singapore commented the concerned area is fully covered by ADS-B to support the proposal and ready to discuss on the implementation. 11/02/2022: Viet Nam commented they will continue to assess a necessity of this ATS/PBN route requirement adding ATS surveillance (SSR and ADS-B) capability has been enhanced by cooperation btw Viet Nam and Singapore, and new ATM automation/AFTM capability will be enhanced with a long-term plan	

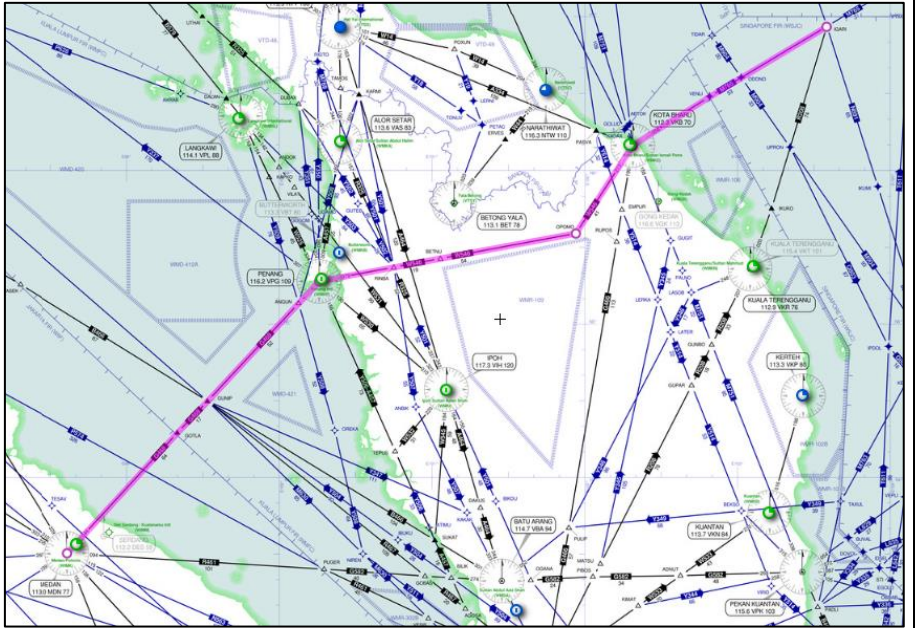
ATS Route Name	SCS 18
State Priority	C
IATA Priority	LOW
Requested by (when)	Viet Nam (01/04/2019: SEACG/26)
States/Administrations Involved	Viet Nam, China, Hong Kong China (Ho Chi Minh, Sanya, Hong Kong FIRs)
Route Description	Phu Cat (PCA) 135726.00N 1090233.60E – IKELA 183942.00N 1121442.00E or Phu Cat (PCA) 135726.00N 1090233.60E – LENKO 172456.88N 1101800.00E
Flight Level Band	
Benefit (fuel, environmental)	52 NM / 5 minutes, 220 kg fuel per flight, 435 tonnes fuel, 1,370 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	KA, MH At least 30 flights per week KUL – SGN – East Asia
Remarks: At ATMSG/7: China proposed to concentrate on the implementation of parallel route to A1 (SCSTFRG Priority Area 1). This route proposal may not be needed, if the parallel route to A1 is implemented. 23/10/2020: No update (SCSTFRG/9 postponed to 2021). At ATMSG/8: IATA provided updates on IATA priority; implementation benefits; and operational information. At ATM/SG/9: No update (discussion on planned implementation of parallel route to A1 was still ongoing at the SCSTFRG meeting).	

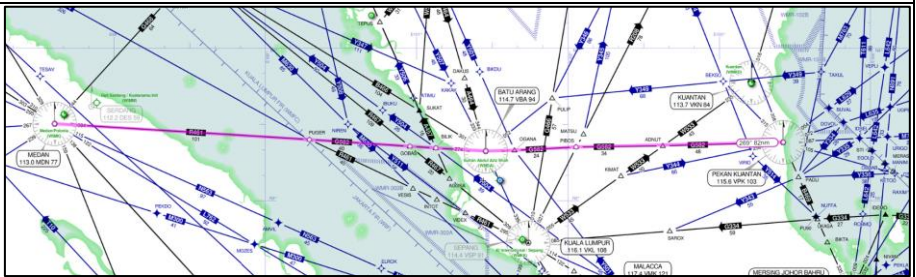
ATS Route Name	SEA 12
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Thailand, Lao PDR, Viet Nam, China (Bangkok, Vientiane, Hanoi, Sanya, Guangzhou FIRs)
Route Description	Roiet (ROT) 1607.0N 10346.7E – Huguang (LH) 2107.9N 11020.2E
Flight Level Band	29,000 – 46,000 ft
Benefit (fuel, environmental)	14 NM / 2 minutes, 208 kg fuel, 655 kg CO ₂ per flight, 1,731 tonnes fuel, 5,451 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	CX 160 flights per week JKT/KUL/PNH/SIN – HKG/SYX
Remarks: Provide parallel to the A202 route. At SEACG/26: Viet Nam proposed to concentrate on SCSTFRG Priority Area 1: parallel route to A1 proposal. This route proposal to be reviewed at a later stage. 23/10/2020: No update (SCSTFRG/9 postponed to 2021). At ATM/SG/9: No update (discussion on planned implementation of parallel route to A1 was still ongoing at the SCSTFRG meeting).	

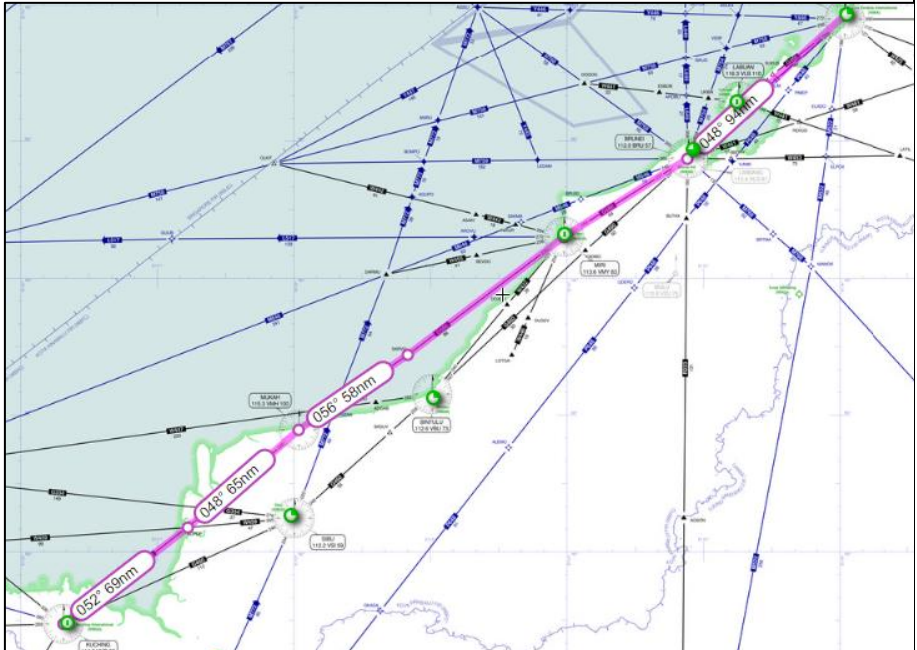
ATS Route Name	VIET NAM 02
State Priority	D
IATA Priority	HIGH
Requested by (when)	Viet Nam (01/09/2018)
States/Administrations Involved	Viet Nam, China (Hanoi, Sanya, Guangzhou FIRs)
Route Description	Noi Bai (NOB) 2112.8N 10550.1E – Cat Bi (CBI) 2049.1N 10642.5E – SAMAS 2030.3N 11029.7E or Noi Bai (NOB) 2112.8N 10550.1E – Cat Bi (CBI) 2049.1N 10642.5E – Huguang (LH) 2107.9N 11020.2E or Noi Bai (NOB) 2112.8N 10550.1E – Cat Bi (CBI) 2049.1N 10642.5E – Nankang (BHY) 2135.2N 10925.9E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	48 NM / 6 minutes, 252 kg fuel, 794 kg CO ₂ per flight, 576,576 kg fuel, 1,816 tonnes CO ₂ annually For ZGGG-VVNB with B789, Vietnam02 can reduce the flight distance by 73NM, reduce the flight time by 9 minutes, and save 700Kg of fuel.
Operational Information (potential airlines, flight frequency, potential city pairs)	CX 44 flights per week
Remarks: Because of small traffic demand and cost/benefit considerations, this route is impossible and cannot be implemented at present. Retain proposal for long-term planing (Viet Nam). Retention discussed at SEACG/22. At SEACG/26: China commented that this route proposal was very unlikely to be implemented, and recommended for this route proposal to be deleted from the Catalogue; and Viet Nam proposed alternate option: Noi Bai (NOB) 2112.8N 10550.1E – Cat Bi (CBI) 2049.1N 10642.5E – Nankang (BHY) 2135.2N 10925.9E to serve traffic between Ha Noi/Cat Bi/Van Don (new international airport in Viet Nam) and destinations in China and beyond. 23/10/2020: China commented the proposal was under consideration. At ATMSG/8: IATA preferred this route proposal to be retained in the Catalogue. 29/09/2021: China commented the proposal was still under consideration. 1/3/2022:IATA preferred this route proposal to be retained in the Catalogue. Despite currently low traffic due to the epidemic, as traffic	

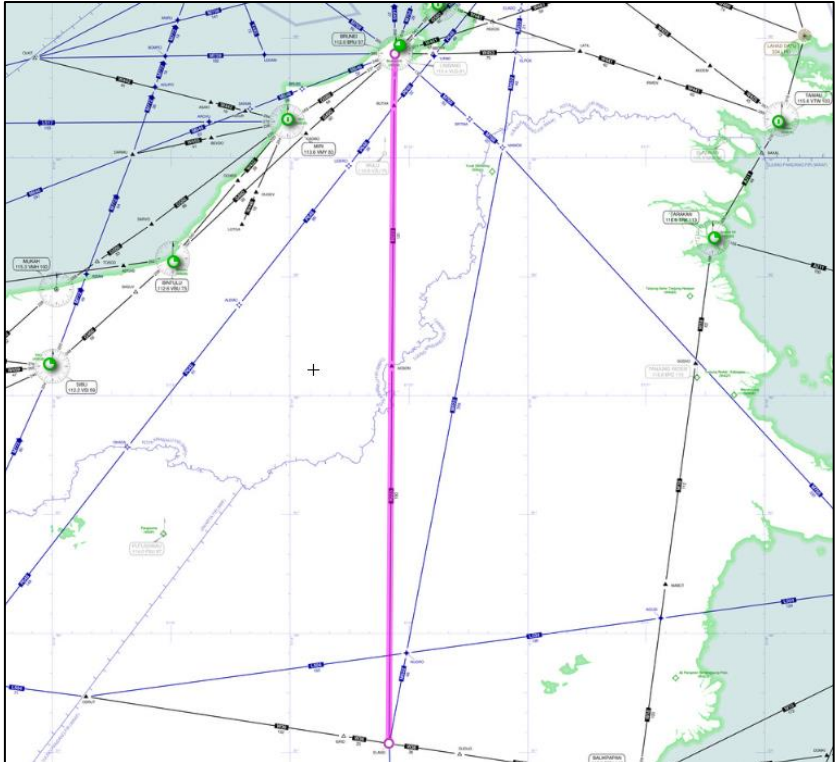
returns this proposed route can give airlines more flight route options between China and Vietnam and beyond. 3/3/2022: China proposed for deletion due to inconsistency with overall flight flow.	
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ATS Route Name	SCS19
State Priority	A
IATA Priority	HIGH/MEDIUM/LOW
Requested by (when)	Malaysia (20/Mar/2023)
States/Administrations Involved	Malaysia, Thailand
Route Description	This proposal essentially focuses on extending M757 to replace the conventional route Y508
Flight Level Band	
Benefit (fuel, environmental)	The implementation of PBN Airspace and to simplify FPL in Kuala Lumpur FIR.
Operational Information (potential airlines, flight frequency)	
Remarks: At SAIOSEACG/2, Thailand indicated its full support for the extension of M757.	

ATS Route Name	SCS20
State Priority	B
IATA Priority	HIGH/MEDIUM/LOW
Requested by (when)	Malaysia (20/Mar/2023)
States/Administrations Involved	Malaysia, Singapore, Indonesia, Viet Nam
Route Description	This proposal essentially focuses on extending M765 to replace the conventional routes W546 and G468.
Flight Level Band	
Benefit (fuel, environmental)	The implementation of PBN Airspace and to simplify FPL in Kuala Lumpur FIR.
Operational Information (potential airlines, flight frequency)	
Remarks: At SAIOSEACG/2, Indonesia expressed its favourable consideration on this proposal, further assessment was needed.	

ATS Route Name	SCS21
State Priority	B
IATA Priority	HIGH/MEDIUM/LOW
Requested by (when)	Malaysia (20/Mar/2023)
States/Administrations Involved	Malaysia, Singapore, Indonesia
Route Description	This proposal essentially focuses on extending M758 to replace the conventional routes G582 and R461 (PUGER to MDN).
Flight Level Band	
Benefit (fuel, environmental)	The implementation of PBN Airspace and to simplify FPL in Kuala Lumpur FIR.
Operational Information (potential airlines, flight frequency)	
Remarks: At SAIOSEACG/2, Indonesia expressed its favourable consideration on this proposal, further assessment was needed.	

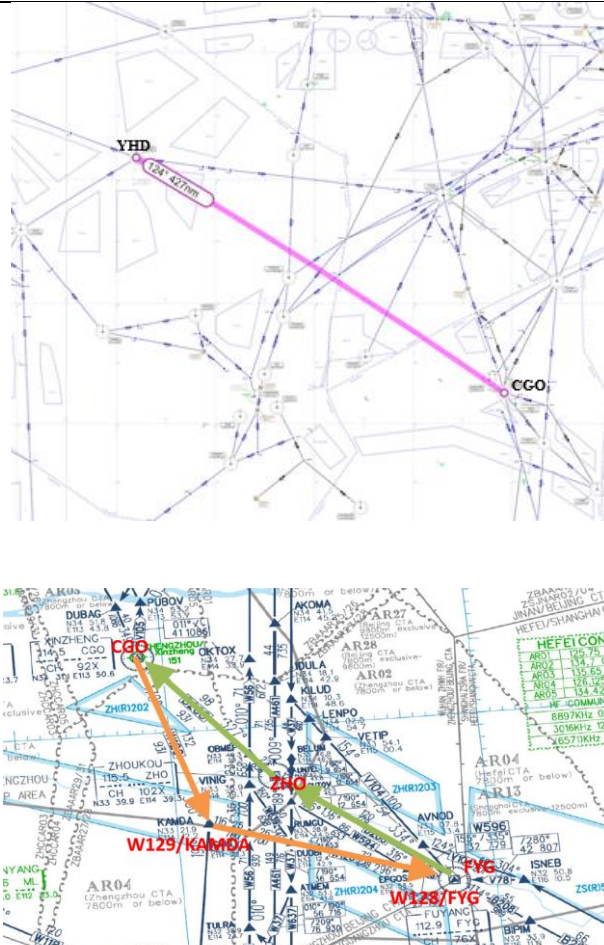
ATS Route Name	SCS22
State Priority	B
IATA Priority	HIGH/MEDIUM/LOW
Requested by (when)	Malaysia (20/Mar/2023)
States/Administrations Involved	Malaysia, Singapore, Indonesia
Route Description	Upgrade a portion of conventional ATS routes G580 (VKG to VJN) to PBN Route
Flight Level Band	
Benefit (fuel, environmental)	The implementation of PBN Airspace.
Operational Information (potential airlines, flight frequency)	
Remarks: At SAIOSEACG/2, Indonesia expressed its favourable consideration on this proposal, further assessment was needed.	

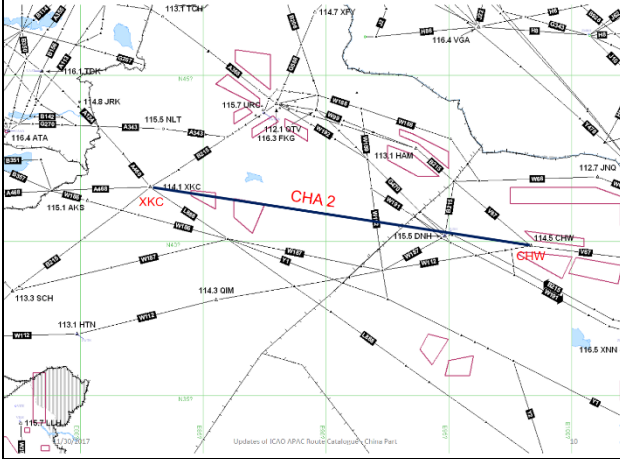
ATS Route Name	SCS23
State Priority	B
IATA Priority	HIGH/MEDIUM/LOW
Requested by (when)	Malaysia (20/Mar/2023)
States/Administrations Involved	Malaysia, Singapore, Indonesia
Route Description	Upgrade from conventional ATS routes R223 to PBN Route
Flight Level Band	
Benefit (fuel, environmental)	The implementation of PBN Airspace.
Operational Information (potential airlines, flight frequency)	
Remarks:	

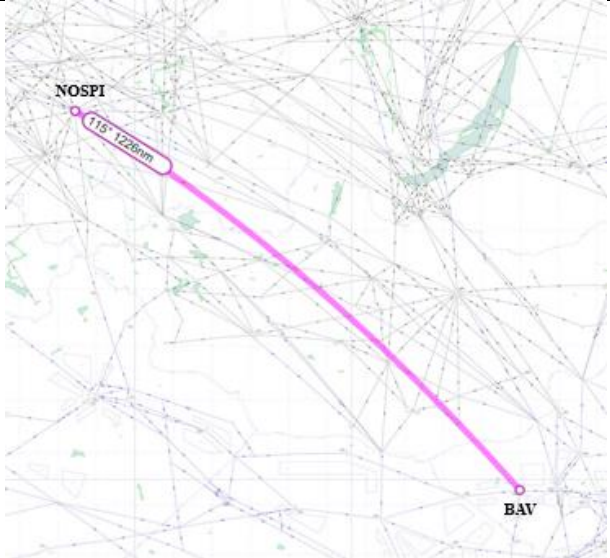
ATS Route Name	MEKONG 01
State Priority	B
IATA Priority	MEDIUM
Requested by (when)	Thailand /Vietnam (21/Mar/2023)
States/Administrations Involved	Thailand, Lao PDR, Vietnam (Bangkok, Vientiane, Hanoi)
Route Description	VINH PHUC (VPH) 211634N 1053604E – Bangkok/Vientiane FIR BDRY 174842.10N 1042043.51E - SAKON NAKHON (SKN) 171250.89N 1040812.34E – ROT-ET (ROT) 160700.59N 1034619.45E
Flight Level Band	
Benefit (fuel, environmental)	Potential to save 12 minutes and 750 kilograms of fuel per flight (VVNB – VDSR)
Operational Information (potential airlines, flight frequency)	Allow flights from Guangzhou FIR and beyond on the ATS route R474 to fly shorter distance into Bangkok FIR/VTBS/VDSR
Remarks: This route was proposed as Conditional Route (CDR) to promote international CDR arrangement among the Mekong states. The route availability will be subject to civil-military coordination in pre-tactical and tactical level. At SAIOSEACG/2, Viet Nam supported the initiative by Thailand, and added that the new route would be further realigned with the existing primary routes within Hanoi FIR. For the update, the approval procedure of the route proposal by its higher authority is in progress, and which expected to be completed soon. It is suggested that Thailand organize a tripartite meeting involving all States concerned to further discuss the detail.	

Chapter 3: East Asia

(referred to: States or EATMCG as appropriate for review)

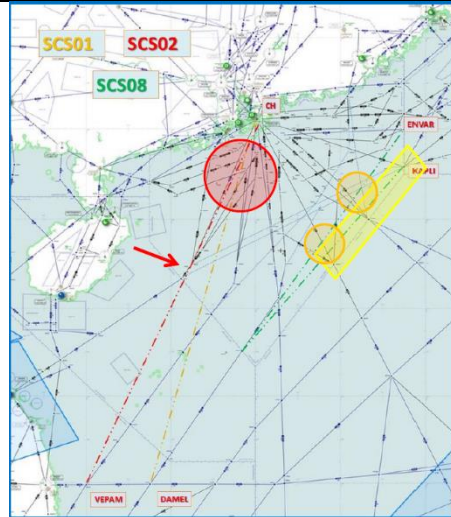
ATS Route Name	CHA 01
State Priority	D
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	China (Lanzhou, Beijing, Wuhan FIRs)
Route Description	Yinchuan (YHD) 3820.8N 10624.6E – Zhengzhou (CGO) N3431.1 E11350.6
Flight Level Band	8,400 – 15,000 meters
Benefit (fuel, environmental)	73 NM / 9 minutes, 26,645 kg fuel, 825,995 kg CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	Europe – Shanghai
Remarks: Original proposal: YHD – YAV – CGO – ZHO – SB/HFE. The route segment between CGO – ZHO – HFE has been implemented as part of ATS route B208 since 2008. Therefore, the route description was amended as YHD – CGO accordingly. <u>At ATMSG/7: China commented the proposed route would create numerous conflicts, and was not consistent with its planned route network.</u> 23/10/2020: China commented there was no progress on this proposal. At ATMSG/8: IATA preferred this route proposal to be retained in the Catalogue, and proposed the route segment between CGO – ZHO – HFE to be made available for eastbound too. In response to IATA's proposal, China commented the following uni-directional routing systems had been implemented for flight planning: (a) eastbound: <u>HFE – FYG – ZHOU – CGO</u>. (b) westbound: <u>CGO – W129/KAMDA – W128/FYG</u>. At SAIOACG/10 and SEACG/27: China proposed for deletion. 3/3/2022: China commented how the current uni-directional routing system works in actual operation (see the Map provided by China) adding that it could reduce heavy traffic and conflict over ZHO.	 [Map provided by China]

ATS Route Name	CHA 02
State Priority	D
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	China (Urumqi, Lanzhou FIRs)
Route Description	Qiuci (XKC) 4140.6N 08250.6E – Jiayuguan (CHW) 3951.3N 09821.0E
Flight Level Band	8,400 – 15,000 meters
Benefit (fuel, environmental)	93 NM / 12 minutes, 4,426 tonnes fuel, 1,372,202 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	63 flights per week Middle East/Pakistan – China/Japan/Korea
Remarks: China comment: there are existing routes between XKC and CHW. At ATMSG/7: China commented the proposed route was not possible for implementation, and proposed for deletion; and IATA would provide feedback after a comprehensive review of the Catalogue by its focus group, expected in March 2020. <u>23/10/2020: China proposed for deletion.</u> At ATMSG/8: IATA preferred this route proposal to be retained in the Catalogue.	

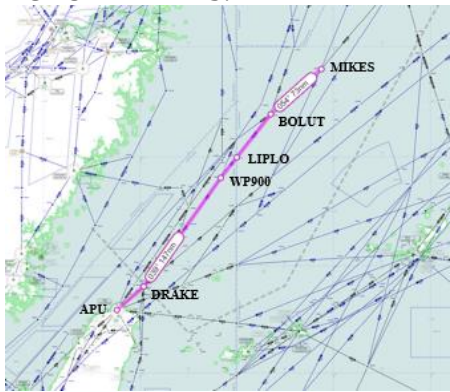
ATS Route Name	CHA 12
State Priority	D
IATA Priority	HIGH
Requested by (when)	IATA (29/08/2018)
States/Administrations Involved	Russia, Mongolia, China (Novosibirsk, Krasnoyarsk, Ulaanbatar, Beijing FIRs)
Route Description	NOSPI 534912.00N 0865248.00E – New Waypoint (FIR BDRY between Novosibirsk and Krasnoyarsk) – New Waypoint (FIR BDRY between Krasnoyarsk and Ulaanbatar) – New Waypoint (Entry/Exit Point: FIR BDRY between Ulaanbatar and Beijing) – Baotou (BAV)
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	5 minutes, 6,090 tonnes fuel, 19,185 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	85 flights per week
Remarks: New route proposal replacing the previous from Weixian to Novokuznetsk. At ATMSG/7: China and Mongolia commented the proposed route was not possible for implementation; and IATA would provide feedback after a comprehensive review of the Catalogue by its focus group, expected in March 2020. <u>23/10/2020: China proposed for deletion.</u> At ATMSG/8: IATA preferred this route proposal to be retained in the Catalogue.	

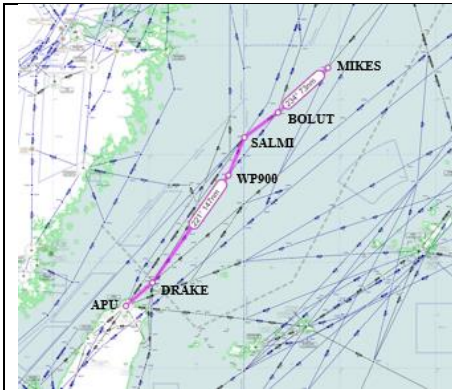
ATS Route Name	IATA 02
State Priority	D
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	China (Kunming, Guangzhou FIRs)
Route Description	OMBON 3321.4N 10416.3E – Sanjiang (SJG) 2546.6N 10936.6E
Flight Level Band	8,400 – 15,000 meters
Benefit (fuel, environmental)	14 minutes, 6,657 tones fuel, 20,636 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	56 flights per week Europe – Pearl River Delta airports
Remarks: China comments: There are existing routes between OMBON and RO. Direct route is impossible at present. <u>23/10/2020: China proposed for deletion.</u> At ATMSG/8: IATA preferred this route proposal to be retained in the Catalogue.	

ATS Route Name	SCS 08
State Priority	D
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Hong Kong China, Taipei ACC (Hong Kong, Taipei FIRs)
Route Description	DULOP 1814.2N 11432.6E – ELATO 2220.0N 11730.0E – A1 or DULOP 1814.2N 11432.6E – ENVAR 2159.5N 11730.0E – M750 or DULOP 1814.2N 11432.6E – KAPLI 2110.0N 11730.0E – G86
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	6 minutes, 850 kg fuel, 2,687 kg CO ₂ per flight, 1,863 tonnes fuel, 5,868 tonnes CO ₂ annually Note: Savings based on DULOP – ENVAR.
Operational Information (potential airlines, flight frequency, potential city pairs)	BR, CI At least 42 flights per week Southeast Asia – North Asia airports
Remarks: Supports traffic Northeast Asia – Southeast Asia. Potentially problematic as will impact South China Sea's traffic arrangements (IATA to review). During SEACG/19 in WP09, Hong Kong China advised they had studied the proposal for track shortening and advised that allowing flights to proceed from M771 DUMOL to ELATO/ENVAR/KAPLI will likely create a bottle neck at these points and result in flights not getting optimum levels or increase ground delay to departures from Hong Kong and Macao to East Asia. However, Hong Kong China would continue to study this proposal. Most preferred: DULOP – ENVAR. 30/10/2020: Hong Kong China commented these two routes are too close to the Hong Kong and Manila FIR boundary (see the yellow shaded areas in the figure below). New confliction points would be created and the distance/time available for traffic resolution is not sufficient. There are safety concerns and these proposed routes were not recommended. Therefore, the two routes are not recommended.	



At ATMSG/8: IATA preferred this route proposal to be retained in the Catalogue.

ATS Route Name	TPE 01
State Priority	C
IATA Priority	HIGH
Requested by (when)	IATA (01/09/2018)
States/Administrations Involved	Taipei ACC, Japan (Taipei, Fukuoka FIRs)
Route Description	Anbu (APU) 2510.6N 12131.3E – New Waypoint (FIR BDRY between Taipei and Fukuoka) – MIKES 2935.2N 12544.9E
Flight Level Band	28,000 – 46,000 ft
Benefit (fuel, environmental)	16 NM / 2 minutes, 107 kg fuel, 337 kg CO ₂ per flight, 1,168 tonnes fuel, 3,680 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	BR, CI 210 flights per week Southeast Asia/HKG/TPE – Fukuoka
Remarks: Supports traffic between APU and Japan. Update from Japan on 29/06/2019: Under consideration. 23/10/2020: Japan commented this proposal was under consideration. At ATMSG/8: IATA preferred this route proposal to be retained in the Catalogue. 16/09/2021: Based on information provided by the IFATCA, the proposed route TPE 01 partially overlaps ATS route Q11 and several other ATS routes that already existed in the area, and therefore it was not possible to implement a new route in Taipei FIR. Counter-proposal: Northbound traffic: APU – A1 – DRAKE – Q11 – WP900 – L4 – LIPLO – Y741 – BOLUT – MIKES.   Southbound traffic: MIKES – BOLUT – B576 – SALMI – Q11 – DRAKE – APU.	



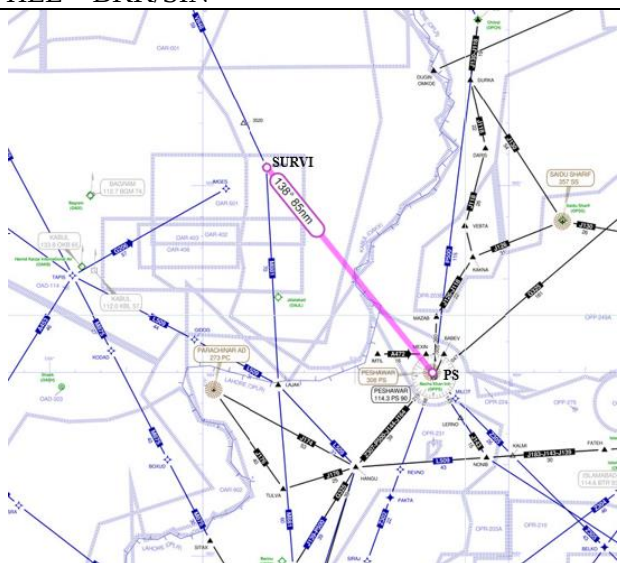
15/10/2021: Japan commented this proposal was still under consideration.

25/2/2022: Japan commented no progress at this stage, although this proposal is recognized as one of the business coordination projects by both Taipei and Fukuoka ACCs.

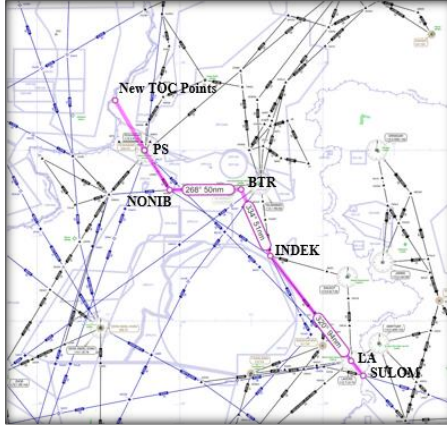
23/9/2022: IFATCA, the segment in the counter-proposal for both north and south already existing, the segment btw BOLUT and MIKES is subject to the Fukuoka FIR.

Chapter 4: Trans-Regional (South Asia)

**(referred to: States or AIRARD TF as appropriate for
review)**

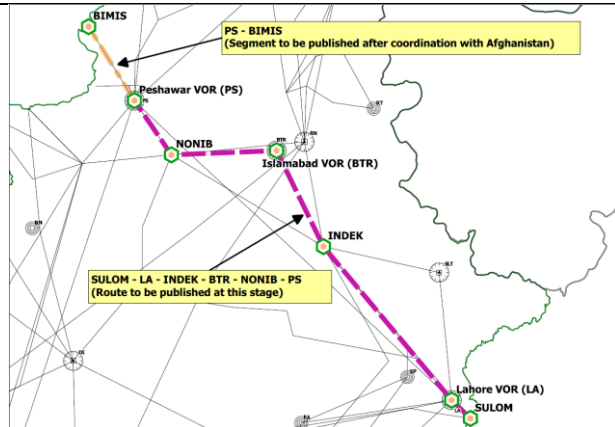
ATS Route Name	AFG 01
State Priority	B
IATA Priority	MEDIUM
Requested by (when)	Afghanistan (03/08/2019: AIRARD TF/4)
States/Administrations Involved	Pakistan, Afghanistan (Lahore, Kabul FIRs)
Route Description	Peshawar (PS) 335841.50N 0713100.90E – SURVI 350606.12N 0702512E
Flight Level Band	
Benefit (fuel, environmental)	32 NM / 4 minutes, 400 kg fuel per flight, 957 tonnes fuel, 3,014 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	AI, AY, TG About 46 flights per week (some operating during winter season only) HEL – BKK/SIN
Remarks: This is an alternative proposal to INDEK-BABEV-SURVI, which will shorten the flight distance. Original proposal: IMTIL – SURVI. At ATMSG/7: Pakistan counter-proposed for this route via SURVI – Peshawar (PS). Pakistan informed the meeting the proposed route between SURVI and PS had been submitted to the relevant authorities of Pakistan for approval. 17/08/2020: Pakistan informed this route proposal was still under consideration by the relevant authorities. At ATMSG/8: IATA assigned “ MEDIUM ” priority; implementation benefits; and operational information. IATA also proposed to review the time restrictions LAJAK-SULOM (1500-2359Z) to make proposal beneficial to more traffic. At SAIOACG/10 and SEACG/27: Pakistan informed this route proposal was still under consideration by the military authority. 15/09/2021: Pakistan informed that the military authorities of Pakistan had approved the following ATS route proposal (bi-directional), on the request of Tajikistan and Uzbekistan: SULOM – Lahore (LA) – INDEK – Islamabad (BTR) – NONIB – Peshawar (PS) – 343433N 0710533E (new TOC points between Afghanistan and Pakistan). The above route proposal was under approval process of Pakistan Federal Government and coordination process with Afghanistan and	

Tajikistan regarding further route connectivity in Afghanistan airspace and beyond from the new TOC points was ongoing.

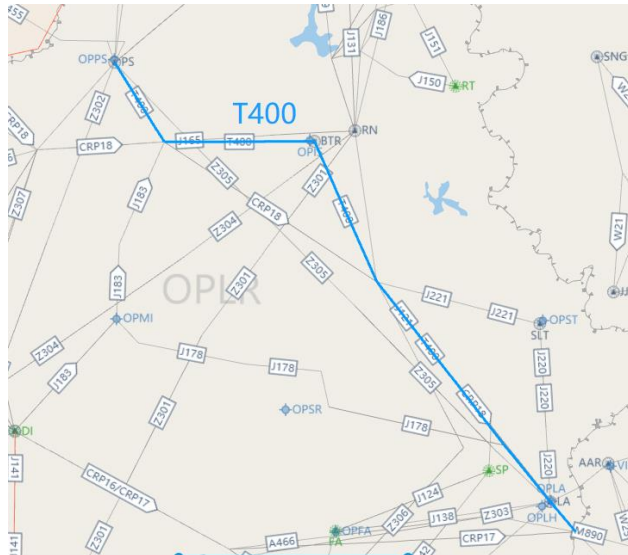


18/02/2022: Upon approval on a new RNAV bi-directional int. ATS route in Lahore FIR by the Federal Government of Pakistan, Pakistan requested a new RNAV Route designator to APAC RO awaiting the response from Afghanistan for further connectivity in Kabul FIR (the last segment from Peshawar VOR to PAK/AFGHAN new TCP BIMIS (Lahore FIR)), and saying a joint PfA will be processed. In April 2022, the segment in Lahore FIR, Pakistan was established: SULOM – Lahore VOR – INDEK – Islamabad VOR (BTR) – NONIB – Peshawar VOR as the domestic route T400. Further route connectivity in Afghanistan airspace and beyond the new TOC points will be further discussed according to the situation in Afghanistan. BOBTFRG/4: – Pakistan affirmed that airway T400 starting from point SULOM (TOC with India) - INDEK – NONIB – PS - BIMIS was already operational and available for flights at this stage after being approved by the relevant government authorities. Further connectivity to BIMIS (TOC with Afghanistan) was subject to the response from Afghanistan.

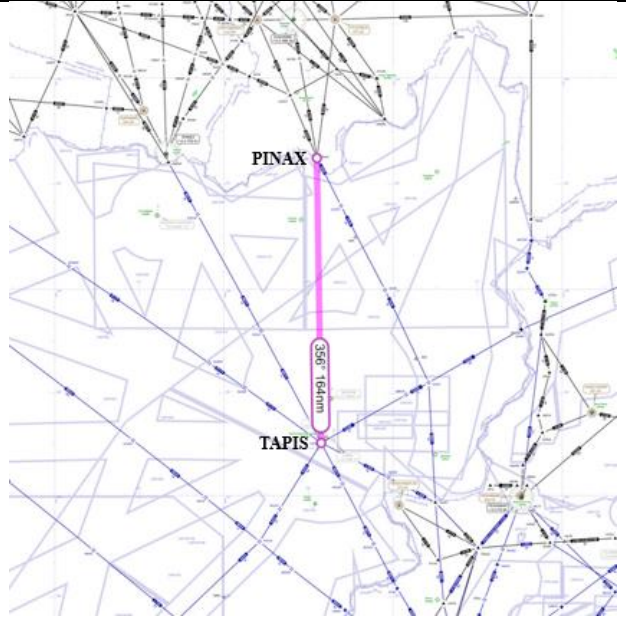
At SAIOSEACG/2, Pakistan preferred that this route proposal should be retained in the catalogue and be re-activated according to the

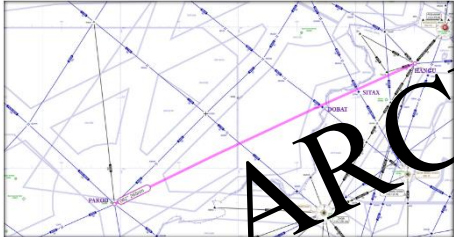
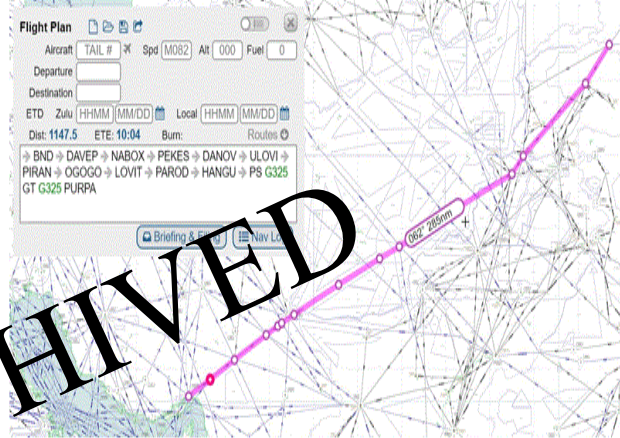


SULOM – Lahore VOR – INDEK – Islamabad VOR (BTR) – NONIB – Peshawar VOR (PS) – BIMIS 343433N, 0710533E (Pak/Afghan new proposed TCP boundary waypoint), Vertical Limit FL300 – FL410



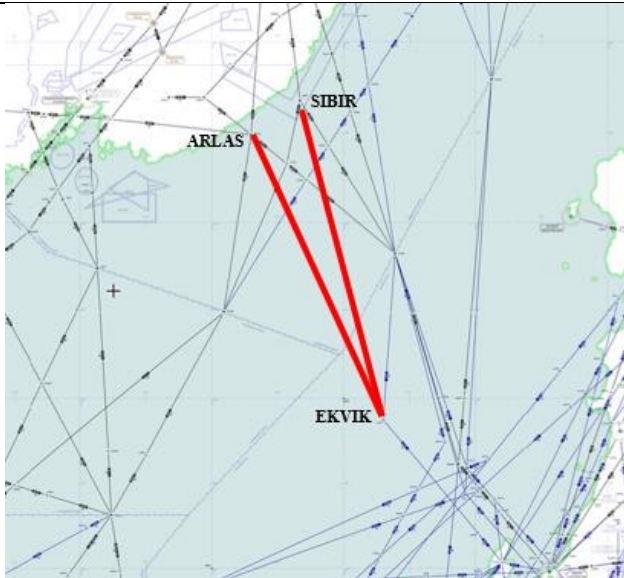
situation in Afghanistan. Pakistan also affirmed that airway T400 starting from point SULOM (TOC with India) - INDEK – NONIB – PS providing connectivity with P500 (MOTMO-FIRUZ) was already operational and available for flights. The portion between PS-BIMIS is approved but further connectivity to/from PS-BIMIS (TOC with Afghanistan) is subject to the response from Afghanistan.	
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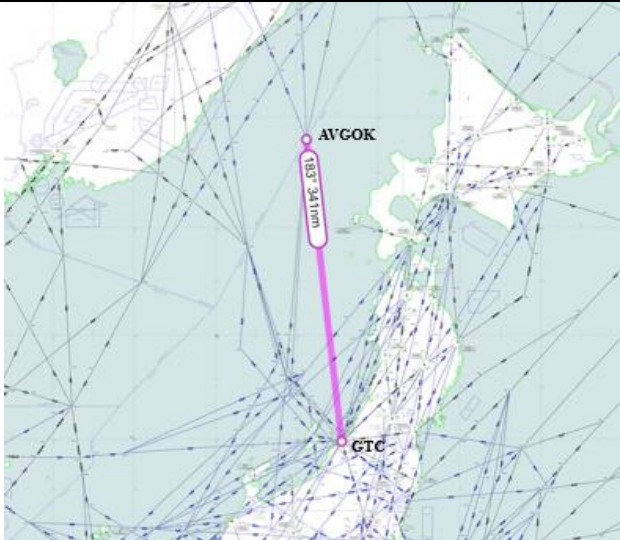
ATS Route Name	AFG 02
State Priority	C
IATA Priority	LOW
Requested by (when)	Tajikistan (03/08/2019: AIRARD TF/4)
States/Administrations Involved	Afghanistan, Tajikistan (Kabul, Dushanbe FIRs)
Route Description	TAPIS 343100.12N 0690900E – PINAX 371500N 0690600E
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Afghanistan commented that waypoint TAPIS is a converging point for two congested routes, and would review this proposal. At ATMSG/8: IATA assigned “LOW” priority and recommended for deletion. <i>Note: continuation of this proposal is 29.007 “TAPIS-PINAX-SORAM-TENRO” in RDGE Middle Asia ATS Route Catalogue.</i>	

ATS Route Name	MID 02 (a)
State Priority	D
IATA Priority	HIGH
Requested by (when)	AIRARD TF/2 (04/05/2018)
States/Administrations Involved	Iran, Pakistan, Afghanistan (Tehran, Karachi, Kabul, Lahore FIRs)
Route Description	Bandar Abbas (BND) 2711.8N 05622.0E – DAVEP 2742.4N 05720.1E – NABOX 2816.5N 05826.0E – PEKES 2859.5N 05952.3E – DANOV 2914.7N 06023.9E – ULOVI 2919.8N 06034.5E – PIRAN 2934.1N 06108.1E – OGOGO 3024.9N 06309.1E – LOVIT 3109.1N 06500.4E – PAROD 3129.0N 06554.0E – A453 – HANGU 3329.1N 07100.3E – Peshawar (PS) 3358.7N 07131.0E – G325 – Gilgit (GT) 3555.2N 07420.1E – G325 – PURPA 3656.5N 07524.4E
Flight Level Band	
Benefit (fuel, environmental)	40 NM / 3 minutes, 600 kg fuel per flight, 1,342 tonnes fuel, 4,262 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	EK, EY, QR About 43 flights per week
Remarks: High Priority MID 02 (a) preferred over MID 02 (b) if only one route is chosen. 17/08/2020: The proposed entry into Pakistan airspace allows very minimal response time (less than two minutes) for traffic de-confliction at DOBAT and SITAX and other crosser routes.  Pakistan proposed for deletion. At ATMSG/8: IATA assigned “HIGH” priority; implementation benefits; and operational information. IATA preferred this route to be retained in the Catalogue and commented this route could be used for contingency and for aircraft with limited oxygen requirements. At BOBTFRG/3: Pakistan re-affirmed that the proposed route was not feasible. BOBTFRG/4: Pakistan reaffirmed that the proposed route was not feasible and supported archiving this proposal for future possibility and IATA had no objection.	

Chapter 5: Trans-Regional (East Asia)

**(referred to: AIRARD/TF, RDGE or EATMCG as
appropriate for review)**

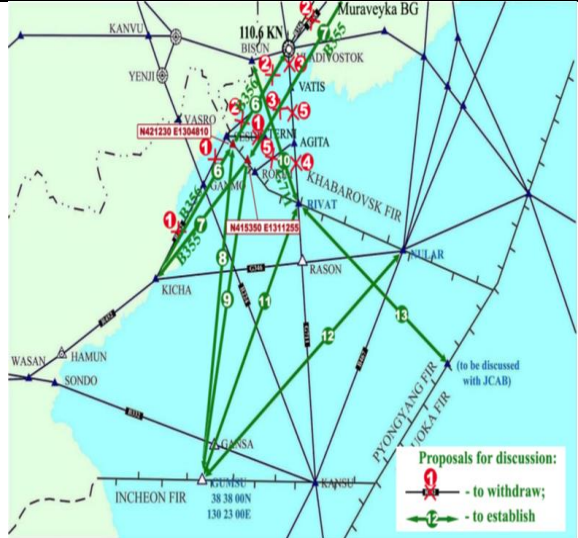
ATS Route Name	FE0008 / RDGE 15.003 / APAC RUS 5
State Priority	C
IATA Priority	MEDIUM
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, Japan (Khabarovsk, Fukuoka FIRs)
Route Description	Implementation of two new bi-directional ATS routes: a. SIBIR 432154.00N 1352024.00E – New Waypoint (FIR BDRY between Khabarovsk and Fukuoka) – New EKVİK Waypoint b. ARLAS 425906.00N 1343553.88E – New Waypoint (FIR BDRY between Khabarovsk and Fukuoka) – New EKVİK Waypoint
Flight Level Band	
Benefit (fuel, environmental)	No fuel gain but could help to reduce ground delays for HND/KIXNRT operations to Europe.
Operational Information (potential airlines, flight frequency, potential city pairs)	AF, BA, KL, LH
Remarks: To improve north-south traffic flows between Khabarovsk FIR and Fukuoka FIR, Original SIBIR – LURED – EKVİK proposal will be changed due to new position of EKVİK further east as a result of the planned airspace structure change in Japan, when both new ATS routes will be implemented, the existing B451 ARLAS – LAKTA – LURED – IGROD will be withdrawn. Based on the results from the coordination meeting between the Russian Federation and Japan in February 2017, the implementation could not be progressed as Japan indicated that no further airspace changes for the Fukuoka FIR are acceptable before the 2020 timeframe (RDGE/27). Russian Federation: New waypoint needed 404751N 1361021E (FIR Boundary), coordination with Japan (Fukuoka FIR) required. Alternative bi-directional route to EN15. 23/10/2020: Japan commented no update. At ATMSG/8: IATA assigned “ MEDIUM ” priority and recommended for this route to be retained in the Catalogue. 15/10/2021: Japan commented no update.	

ATS Route Name	FE0021 / RDGE 13.028 / APAC RUS 4
State Priority	C
IATA Priority	HIGH
Requested by (when)	Russia, IATA (01/09/2018)
States/Administrations Involved	Russia, Japan (Khabarovsk, Fukuoka FIRs)
Route Description	Implementation of new bi-directional ATS route: AVGOK – Niigata (GTC) 375729.90N 1390653.60E
Flight Level Band	
Benefit (fuel, environmental)	20 NM / 4 minutes, 440 kg fuel per flight, 2,400 tonnes fuel, 7,550 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pair)	AF, AY, JL, KL, NH About 105 flights per week HND/NRT to Europe
Remarks: During a bilateral meeting between the State ATM Corporation and the JCAB Japan (in Tokyo, November 2012), a difference in coordinates of the AVGOK waypoint was identified in the aeronautical information publications of Russia and Japan. The incorrect coordinates were confirmed by Japan and a decision was made to report this issue to the appropriate Regional ICAO Offices. The Russian Federation proposes the following coordinates (4336N and 13815E) for the AVGOK waypoint. Based on the results from the coordination meeting between the Russian Federation and Japan in February 2017, the implementation of the bi-directional ATS Route AVGOK – GTC requires further studies due to the involved military area. RDGE/27 meeting in 2017: could become a conditional route. Further discussion with Japan is required through the ICAO APAC Office. To reduce route distance of 13NM as compared to current routing AVGOK – KADBO – GTC. 23/10/2020: Japan commented no update. At ATMSG/8: IATA assigned “ HIGH ” priority and recommended for this route to be retained in the Catalogue. 15/10/2021: Japan commented no update.	

ATS Route Name	FE0049 / RDGE 20.010
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new uni-directional eastbound ATS route: KICHA 404103N 1291140E – ADNUR 421230N 1304810E – Vladivostok (KN) 432303N 1320708E
Flight Level Band	17,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Planned implementation date as part of project in 2015. Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 6)	

ATS Route Name	FE0050 / RDGE 20.011
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new uni-directional westbound ATS route for B355: Muraveyka (BG) 435303N 1331511E – VATIS 425143N 1320851E – TERNI 422213N 1314003E – BUMEP 415350N 1311255E – KICHA 404106N 1291140E
Flight Level Band	18,000 – 51,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Planned implementation date as part of project in 2015. Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 7).	

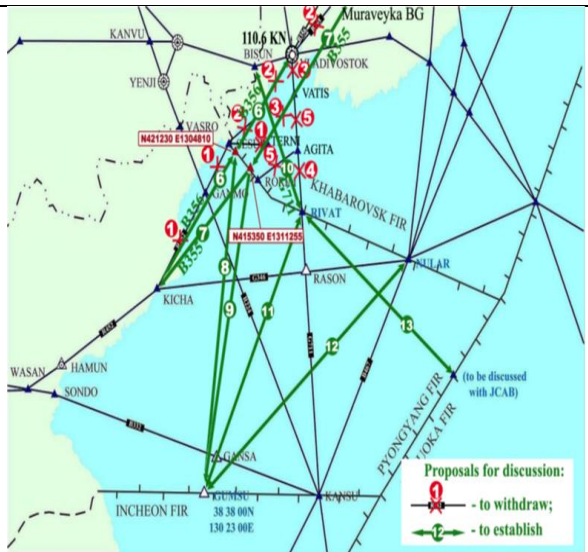
ATS Route Name	FE0051 / RDGE 20.012
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new uni-directional eastbound ATS route segment: MESOV 383800N 1302300E – ADNUR 421230N 1304810E
Flight Level Band	29,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Planned implementation date as part of project in 2015. Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 8). Implementation has not progressed as the connection/continuation of this ATS route (implemented ATS routes end at FIR border over High Seas) into Incheon FIR still missing. No information was received from DPRK and South Korea (ROK) via the ICAO APAC Office. Implementation could not be progressed as no information from DPRK at RDGE/28.	 Proposals for discussion: ❌ - to withdraw; ➡️ - to establish

ATS Route Name	FE0052 / RDGE 20.013
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	BUMEP 415350N 1311255E – MESOV 383800N 1302300E
Flight Level Band	28,000 – 51,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 9). Implementation has not progressed as the connection/continuation of this ATS route (implemented ATS routes end at FIR border over High Seas) into Incheon FIR still missing. No information was received from South Korea (ROK) via the ICAO APAC Office. Implementation could not be progressed as no information from DPRK at RDGE/28.	 The map displays the proposed ATS route FE0052 / RDGE 20.013, which is highlighted in green. The route starts at BUMEP (415350N 1311255E) and ends at MESOV (383800N 1302300E). The map shows the Khabarovsk FIR and Vladivostok FIR, with various airports and flight levels indicated. A legend in the bottom right corner states: 'Proposals for discussion: - to withdraw; - to establish'. The map also shows the Incheon FIR and the Korean Peninsula.

ATS Route Name	FE0053 / RDGE 20.014
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	New G711 BISUN 431400N 1311148E – TERNI 422213N 1314003E – RIVAT 412900N 1321600E
Flight Level Band	21,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 10). <i>Note: to verify has this route been implemented as G705?</i>	

ATS Route Name	FE0054 / RDGE 20.015
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new bi-directional ATS route: RIVAT 412900N 1321600E – MESOV 383800N 1302300E
Flight Level Band	21,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 11). Planned implementation date 11 December 2014. <i>Note: to verify has this route been implemented as N513?</i>	

ATS Route Name	FE0055 / RDGE 20.016
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK (Khabarovsk, Pyongyang FIRs)
Route Description	Implementation of new bi-directional ATS route: NULAR 405912N 1341100E – MESOV 383800N 1302300 ^E
Flight Level Band	28,000 – 53,000 ft
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 12). Planned implementation date 11 December 2014. <i>Note: to verify has this route been implemented as L771?</i>	

ATS Route Name	FE0056 / RDGE 20.017
State Priority	C
IATA Priority	
Requested by (when)	DPRK, Russia (01/09/2018)
States/Administrations Involved	Russia, DPRK, Japan (Khabarovsk, Pyongyang, Fukuoka FIRs)
Route Description	Implementation of new bi-directional ATS route segment: RIVAT 412900N 1321600E – New Waypoint (FIR BDRY between Pyongyang and Fukuoka)
Flight Level Band	
Benefit (fuel, environmental)	
Operational Information (potential airlines, flight frequency, potential city pairs)	
Remarks: Khabarovsk/Vladivostok airspace re-organisation project, (in map No. 13), for further discussion with JCAB, Japan. Planned implementation date as part of project in 2015. Implementation could not be progressed as no information from China at RDGE/28.	 Proposals for discussion: 1 - to withdraw; 1 - to establish

Chapter 6: Pacific

(referred to: IPACG, ISPACG as appropriate for review)

ATS Route Name	WPC 01
State Priority	D
IATA Priority	HIGH
Requested by (when)	IATA (30/07/2018)
States/Administrations Involved	Papua New Guinea, Indonesia, USA, Philippines, Japan, Taipei ACC (Port Moresby, Ujung Pandang, Oakland Oceanic, Manila, Fukuoka, Taipei FIR)
Route Description	Port Moresby (PY) 0927.2S 14712.9E – Vanimomo (VNO) 0240.7S 14118.2E – Koror (ROR) 0722.1N 13433.0E – ENDAX 1415.0N 13000.0E – BISIG 2027.0N 12500.0E – TINHO 2421.2N 12201.7E
Flight Level Band	FL250 – FL430
Benefit (fuel, environmental)	163 NM / 15 minutes, 1,604 kg fuel, 5,053 kg CO ₂ , 5,000 tonnes fuel, 15,700 tonnes CO ₂ annually
Operational Information (potential airlines, flight frequency, potential city pairs)	60 flights per week Taipei and beyond – Australia, New Zealand, and Papua New Guinea
Remarks: BISIG replaces the waypoint that was published in the ICAO route catalogue as that waypoint no longer exists. May also be useable as an offload route for flights between Manila and Australasia. At ATM/SG/6: PNG positive, Indonesia positive, Japan was reviewing, Philippines and Taipei yet to be discussed. At ATMSG/7: Under consideration by Philippines. 17/01/2020: Philippines supported the implementation of this route. 23/10/2020: Japan commented this route proposal was under consideration. 16/09/2021: Based on information provided by the IFATCA, implementation of this proposed route in Taipei FIR was not possible because it would cross ATS routes G581 and Q13, and traverse restricted area RCR 17. Proposed for deletion. 15/10/2021: Japan commented this route proposal was still under consideration. 25/2/2022: Japan commented no discussion, but if necessary it would be put on the agenda at future meeting. 23/9/2022: IFATCA, this proposal requires further coordination with the military.	

SAIOSEACG — TASK LIST

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
3 (SEACG)	~~Radar data sharing~~ ADS-B data sharing	SAIOSEACG/2	Lao PDR, Thailand	Open	Raised at SEACG/16. Lao PDR and Thailand agreed to share the radar data. Lao PDR and Thailand will further coordinate. To discuss at the Mekong meeting, and report to SEACG24. Task updated at SEACG/26. No report received. MEKONG to discuss and report to SEACG/27. Task updated at SAIOACG/10 and SEACG/27. No report received. Updated at SAIOSEACG/1: Thailand may need to reconsider cost and benefit of the project before going to the next step due to COVID-19 impacts. ~~Report to SAIOSEACG/2~~ Thailand has planned to implement ground-based ADS-B for ATS in 2024 and ADS-B data sharing/exchanging will be focused on instead of Radar. Lao PDR is considering its policy for this activity.
2/10 (SAIOACG)	BOB States to present the analysis outcomes of local fleet equipage and the expected PBCS implementation date for RNP4 with 30NM longitudinal and 23NM lateral performance-based separation minima. IATA to survey member airlines on their RNP and PBCS readiness for possible non-exclusive mandate of January 2024.	~~BOBTFRG/4~~ BOBTFRG/5	BOB States, IATA	Open	India has implemented 30/30NM on four ATS routes in the near term. Adjacent States should consider a coordinated implementation of similar performance-based separations, taking into account PBCS requirements. This task is also part of the BOBTFRG. <u>BOBTFRG/2 developed and agreed the implementation timeline for 30NM longitudinal spacing over BOB airspace, expected by 2024, which also require the mandating of ADS-C/CPDLC by 1 January 2023.</u> Due to the COVID-19 impact on airline operators, IATA requested for the discussion on the mandate proposal to be deferred until Q2-Q4 2021. Discussed at BOBTFRG/3 on a non-exclusive mandate of implementation timelines for the BOBTFRG Priority Areas. (Refer to Appendix E to the Report of BOBTFRG/3) Updated on 17 Mar 2022 by IATA – survey for analysis is on-going, showing majority of its member airlines are mostly PBCS capable and approved. Updated at SAIOSEACG/1 WP04 Updated at BOBTFRG/4

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
4/4 (SAIOACG)	India to present paper on the follow up actions of tasks identified in SAIOACG/4 SEACG/21 Appendix E (2014)	BOBTFRG/4	India	Closed	No progress or update since 2014
17 (SEACG)	L642/M771 to reduce longitudinal spacing 50NM to 20NM	SCSTFRG/10 SCSTFRG/11	China, Hong Kong China, Singapore, Viet Nam	Open	SEACG/21 - Reduce longitudinal separation from 50NM to surveillance-based separation on L642/M771. Hong Kong agreed to in 2016, subject to a moratorium period of six months after the NATS review 2018. Updated at SEACG/26. Discussion between Hong Kong and Sanya ACCs for implementation of 20NM longitudinal spacing in progress. SCSTFRG/9 Report re: WP/02. Updated on 14 Feb 2022 by HK China – Discussion on-going with positive progress btw Sanya and HK China, and Singapore is ready, pending Viet Nam's active engagement. Updated on 16 Feb 2022 by Viet Nam – already agreed to 20NM implementation on 23 Nov 2021 Update at SAIOSEACG/2 A side meeting was conducted 23 March 2023 hosted by Hong Kong China. All concerned parties agreed the trial implementation of 20NM reduced longitudinal spacing on L642/M771. 2 technical issues will have to be resolved before trial operation i.e. the usage of FL390 btw Sanya and HK China, and AIDC operation btw Sanya Chian and Vietnam, the trial operation is targeted to commence at or before the next SCSTFRG/11 meeting.
8/1 (SAIOACG) 27/1 (SEACG)	Resolve FIR and SRR boundary data. Report status to Regional Office	~~October 2022~~ SAIOSEACG/3	Bangladesh, Cambodia, China, Hong Kong China, India, Japan, Myanmar, Pakistan, Thailand, Viet Nam	Open	SAIOACG/8 and SEACG/25 Report re: WP07. Regional Office to Report to ATM/SG/6. SAIOACG/10 and SEACG/27 Report re: WP12. SAIOSEACG/1 Report re: WP11 SAIOSEACG/2 Report re: WP14

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
8/5 (SAIOACG)	Revise PfAs for Arabian Sea ATS Routes, and coordinate with ESAF Region	SAIOSEACG/2	India, Secretariat	Close	SAIOACG/8 and SEACG/25 Report re: WP29.
8/8 (SAIOACG)	Present final planning assurances (bypass plans) and update Contingency Coordination Team information for Afghanistan Contingency Plan	SAIOSEACG/2 SAIOSEACG/3	India, Pakistan	Open	SAIOACG/8 and SEACG/25 Report re: WP19. SAIOSEACG/2: Pakistan would request to close the action item, keeping in view the ongoing scenario in Afghanistan and action (s) taken by neighboring states and regional office; a) The flights can bypass Kabul FIR from North by utilizing ATS Route T400-P500 (SULOM-PS-MOTMO) to/from Delhi-Lahore-Dushanbe FIRs b) The flights can bypass Kabul FIR from South passing through central region of Pakistan by utilizing ATS Route G452 (MERUN/VIKIT-RK-G452) to/from Delhi- Karachi- Tehran FIRs c) The flights can bypass Kabul FIR from South passing through southern region of Pakistan utilizing ATS Route B210-P757-L124 (TASOP/RAMSA-KE-NH-PG-KEBUD) To/from Delhi/Mumbai- Karachi-Tehran FIRs d) In addition, one contingency route {RAMSA/TASOP-KE-NH-IDEBA- LAKAT- AKRIL/L506} is approved and can be made available subject to prior coordination. e) KABUL FIR Contingency Coordination Team (CCT) with participation from relevant stakeholders
8/9 (SAIOACG)	Bay of Bengal Danger Areas – tactical coordination, reduced vertical limits, correction of AIP and NOTAM promulgation to align with Annex 15	ATM/SG/10 ATM/SG/11	Bangladesh, India, ICAO	Open	SAIOACG/8 and SEACG/25 Report re: WP28. SAIOACG/10 and SEACG/27 Report re: WP23.

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
25/11 (SEACG)	Phnom Penh ATS Contingency Routes and FLAS	SCSTFRG/10 SAIOSEACG/3	Cambodia, Lao PDR, Thailand, Viet Nam	Open	SAIOACG/8 and SEACG/25 Report re: WP32. Updated SEACG/26. Task updated at SAIOACG/10 and SEACG/27. Updated at SAIOSEACG/1 – Thailand provide feedback that Cambodia, Lao PDR, Malaysia and Myanmar signed on ATS LOA for ATM Contingency Routes and FLAS, and new version published in the AIP-Thailand. Cambodia – drafted ATM Contingency Plan (effective date 1 Apr 2022) with plan for LOA coordination with Thailand, Lao PDR for revision and Viet Nam for new. Cambodia commented that they welcomed the discussion with neighbouring States and they were considering convening the bilateral / trilateral meeting with Vietnam and Thailand for this matter.
26/2 (SEACG)	Philippines to report on activity to rectify HF voice communications reliability/availability problems	SEACG/28	Philippines	Completed	SEACG/26 Report IP03. Post- SAIOACG/10 and SEACG/27 Meeting Update 12 April 2021: Philippines advised Manila Sector 9 has been implemented. Airspace users indicate CPDLC communications satisfactory in Manila FIR, but long-term unreliability/unavailability of HF voice communications persists. (refer to SCSTFRG/9 FL01)
26/7 (SEACG)	Finalize ANP PfA for SCS bypass route north from Biak	ATM/SC/10 SCSTFRG/11	Indonesia, USA, Secretariat	Open	SEACG/26 Report WP26. Task updated at SAIOACG/10 and SEACG/27. Task updated at SAIOSEACG/1

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
26/8 (SEACG)	Coordinate implementation plan RNP 2/RANV 2 nav spec on ATS routes L642, M771, N892	SCSTFRG/10 SAIOSEACG/3	China, Hong Kong, China, Philippines, Singapore, Viet Nam, IATA	Open	SEACG/26 Report WP27. SAIOACG/10 and SEACG/27 Report re: WP16 No update at SCSTFRG/9 Update by Singapore (14 Feb 2022) – ready to implement Update by Viet Nam (16 Feb 2022) – fully support, or alternatively RNP4 if not air operators equipage issue Updated at SAIOSEACG/1 - HK China wishes to go for RNP 2 after 20NM longitudinal separation
10/1 (SAIOACG)	Engage in three party discussion between India, Indonesia and Malaysia to support the mitigating of LHDs at Chennai – Kuala Lumpur interface (Hot Spot A2).	BOBTGRT/4	India, Indonesia, Malaysia	Completed	SAIOACG/10 and SEACG/27 Report re: WP04. BOBTFRG/3 Report re: WP/02. BOBTFRG/3 – Indonesia, India and Malaysia agreed to make offline discussion and would report update at SAIOSEACG/1. Updated on 8 Mar 2022 by India: LHD issue had reduced to near Zero after AIDC implementation and SB ADS-B coverage. Updated at SAIOSEACG/1 – This task to be completed with LOA amendment between States concerned regarding the coordination procedures as required. Update by Malaysia: LOA between KL and Chennai had been amended to reflect the changed coordination procedures with AIDC implementation.
10/2 (SAIOACG)	Conduct a review of Myanmar Level 2 Contingency Plan, which include an additional contingency ATS route and flight levels.	BOBTFRG/4 SAIOSEACG/3	Bangladesh, China India, Lao PDR, Myanmar, IATA	Open	SAIOACG/10 and SEACG/27 Report re: WP18. Updated at SAIOSEACG/1 - India's discussion with Myanmar is on going
10/3 (SAIOACG) 27/3 (SEACG)	Develop a consolidated Term of Reference for ATM/SG consideration.	ATM/SG/9	ICAO RSO	Completed	SAIOACG/10 and SEACG/27 Report re: WP26. Endorsed by APANPIRG/32
1/1 (SAIOSEACG)	Provide updates on BOB FLAS Chart, and review LOAs with adjacent FIRs if there is discrepancy in flight levels for allocation.	30 April 2022	BOB States	Completed	SAIOSEACG/1 WP04

ACTION ITEM	DESCRIPTION	TIME FRAME	RESPONSIBLE PARTY	STATUS	REMARKS
2/1 (SAIOSEACG)	ICAO to conduct a Workshop on the PBN implementation in en-route environments.	BOBTFRG/5	ICAO RSO	Open	Proposed by India and Pakistan at SAIOSEACG/2.
2/2 (SAIOSEACG)	IATA to consider providing more illustrations of the type of PBN.	SAIOSEACG/3	IATA	Open	Proposed by India and Hong Kong China.
2/3 (SAIOSEACG)	ICAO to address the issue of the contingency route designator in the updated version of the Regional ATM Contingency Plan.	ATM/SG/11	ICAO	Open	SAIOSEACG/2 Report re: WP21
2/4 (SAIOSEACG)	SCSTFRG States to review the existing Flight Level Allocation Scheme (FLAS) and Flight Level Orientation Scheme (FLOS). And provide relevant data to ICAO regional Sub-office.	SCSTFRG/11	SCSTFRG States	Open	SCSTFRG/10 Report re: SCSTFRG Decision10/1 Review of the existing South China Sea Flight Level Allocation Scheme (FLAS) and Flight Level Orientation Scheme (FLOS). SAIOSEACG/2 Report re: WP10.
2/5 (SAIOSEACG)	BOBTFRG to hold supplementary meetings on a flexible and frequent basis to carry out the necessary discussion on the optimization of Route Network.	BOBTFRG/5	ICAO RSO and India, with participants from BOB States and IATA.	Open	SAIOSEACG/2 Report re: WP09 Regarding the establishment of the BOB Route Network Small Working Group, the meeting considered that the existing TOR of the BOBTFRG adequately covered the task of the Small Working Group, and it was not necessary to form another SWG to undertake such duplicated work. Therefore, the meeting decided that the task of the SWG should continue to be undertaken by the BOBTFRG itself.
2/6 (SAIOSEACG)	Conduct an online meeting and review on the FLAS operation among the north BOB Area, prepare for the establishment of the ATS route proposal BOB01.	Before BOBTFRG/5	Bangladesh, India, Myanmar ICAO RSO and IATA	Open	SAIOSEACG/2 Report re: WP18 Myanmar pointed out that the optimization of the FLAS operation was the major issue which needed to be addressed before the establishment of the new route. Bangladesh seconded.

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This List of contacts at the administrative level is not intended to be used for operational purposes.

UPDATED: 27 March 2023

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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A-CDM = Airport Collaborative Decision Makring, ADM = Administration, AIS = Aeronautical Information Service, ARC = Asia/Pacific Region ATS Route Catalogue ATC = Air Traffic Control, ATFM = Air Traffic Flow Management, CCT = Contingency Coordination Team, SAF = Safety, SAR = Search and Rescue				
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CCT	Mr. Rahmat Widiyana	ATFM and CDM Planning Manager AirNav Indonesia		rachmat.widiyana@airnavindonesia.co.id ;
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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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CCT	Mr. NAKAHARA Takuya	Chief Air Traffic Control Division Japan Civil Aviation Bureau, Japan Airspace Ministry of Land, Infrastructure, Transport and Tourism 2-1-3 Kasumigaseki, Chiyodaku, Tokyo 100-8918	Tel: +81 3 5253 8749 Fax: +81 3 5253 1664	nakahara-t033w@mlit.go.jp

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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ATFM	Mr. AOTO Hajime	Special Assistant to the Director, Air Traffic Control Division, Japan Civil Aviation Bureau (JCAB), Ministry of Land, Infrastructure, Transport and Tourism 2-1-3 Kasumigaseki, Chiyodaku, Tokyo 100-8918	Tel: +81 3 5253 8749 Fax: +81 3 5253 1664	aoto-h074@mlit.go.jp ;
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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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CCT	Mdm. Nur A`fifah Binti Mansor	Senior Assistant Director, Air Navigation Services Technical Division Civil Aviation Authority of Malaysia Kuala Lumpur Air Traffic Control Centre Complex, West Wing Terminal North, Jalan CTA 3, 64000 KLIA, Sepang, Selangor.	Tel: +603 85291322 Fax: +603 85291210	afifah@caam.gov.my
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ATC	Mr. Mohd Rodzi Bin Salleh	Deputy Director (KL ATCC), Air Navigation Services Operation Division Civil Aviation Authority of Malaysia Kuala Lumpur Air Traffic Control Centre Complex, West Wing Terminal North, Jalan CTA 3, 64000 KLIA, Sepang, Selangor.	Mr. Mohd Rodzi Bin Salleh	Deputy Director (KL ATCC), Air Navigation Services Operation Division Civil Aviation Authority of Malaysia Kuala Lumpur Air Traffic Control Centre Complex, West Wing Terminal North, Jalan CTA 3, 64000 KLIA, Sepang, Selangor.

SAIOSEACG/2 – Final Report
Appendix E

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ATC	Mr. Osman Bin Md Salleh	Director (A), Air Navigation Services Operation Division Civil Aviation Authority of Malaysia Regional Office Sabah Jalan Bunga Raya P.O. Box 2065 88618 Kota Kinabalu, Sabah, Malaysia.	Mr. Osman Bin Md Salleh	Director (A), Air Navigation Services Operation Division Civil Aviation Authority of Malaysia Regional Office Sabah Jalan Bunga Raya P.O. Box 2065 88618 Kota Kinabalu, Sabah, Malaysia.
ATC	Mr. Petrus Ak Coupon Lim	Director (A), Air Navigation Services Operation Division Civil Aviation Authority of Malaysia Regional Office Sarawak LTAB Kuching P.O.BOX 1359 93728 Kuching, Sarawak Malaysia.	Mr. Petrus Ak Coupon Lim	Director (A), Air Navigation Services Operation Division Civil Aviation Authority of Malaysia Regional Office Sarawak LTAB Kuching P.O.BOX 1359 93728 Kuching, Sarawak Malaysia.
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SAF	Mr. Mohd Rashidi Bin Abdul Rahim	Acting Director, Air Navigation Services Safety Division Civil Aviation Authority of Malaysia Kuala Lumpur Air Traffic Control Centre Complex, West Wing Terminal North, Jalan CTA 3, 64000 KLIA, Sepang, Selangor.	Tel: +603 85291205 Fax: +603 85291210	rashidi@caam.gov.my
SAF	Mrs. Farhana Binti Mohamad Khairruddin	Senior Assistant Director, Air Navigation Services Safety Division Civil Aviation Authority of Malaysia Kuala Lumpur Air Traffic Control Centre Complex, West Wing Terminal North, Jalan CTA 3, 64000 KLIA, Sepang, Selangor.	Tel: +603 85291314	farhana@caam.gov.my
ARC	Mr. Abdul Rali Bin Kassim	Principal Assistant Director, Air Navigation Services Technical Division Civil Aviation Authority of Malaysia Kuala Lumpur Air Traffic Control Centre Complex, West Wing Terminal North, Jalan CTA 3, 64000 KLIA, Sepang, Selangor.	Tel: +603 85291207 Fax: +603 85291210	abdulrali@caam.gov.my

SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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ARC	Mr. Stanley Myazoe	Director Directorate of Civil Aviation Ministry of Transport and Communications		rmidca@yahoo.com ;
	MICRONESIA			
ARC	Mr. Massy Halbert	Assistant Secretary (Minister) Division of Civil Aviation Department of Transportation, Communications and Infrastructure		mas.halbert@gmail.com ;
	MONGOLIA			
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CCT	Mr. Urtnasan Doljin	Senior Officer Air Navigation Services Department, National Civil Aviation Center, Civil Aviation Authority of Mongolia, Buyant-Ukhaa, Khan-Uul district, Ulaanbaatar 17120	Tel: +976 71 283025 Fax: +976 70 049640	d_urtnasan@mcaa.gov.mn ;
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SAIOSEACG/2 – Final Report
Appendix E

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SAF	Mrs. Mandukhai Baasandorj	Head Safety Management Section, Air Traffic Services Division, National Civil Aviation Center, Civil Aviation Authority of Mongolia, Buyant-Ukhaa, Khan-Uul district, Ulaanbaatar 17120	Tel: +976 71 281174 Fax: +976 70 049640	mandukhai.b@mcaa.gov.mn ;
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SAIOSEACG/2 – Final Report
Appendix E

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ADM	Mr. Batsaikhan Nyamsambuu	Director National Civil Aviation Center, Civil Aviation Authority of Mongolia, Buyant-Ukhaa, Khan-Uul district, Ulaanbaatar 17120	Tel: +976 71 285000 Fax: +976 70 049640	n_batsaikhan@mcaa.gov.mn ;
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SAIOSEACG/2 – Final Report
Appendix E

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ARC	Ms. Li-May Uera	Secretary for Transport & Telecommunications		secretary.transport@naurugov.nr ;

SAIOSEACG/2 – Final Report
Appendix E

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ADM	Mr. Dominic Tabuna	Director of Civil Aviation Civil Aviation Authority Department of Transport Directorate of Civil Aviation Civil Aviation Head Office, Nauru International Airport Yaren District		djtabuna@gmail.com ;
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SAIOSEACG/2 – Final Report
Appendix E

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	PAKISTAN			

SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
Appendix E

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SAIOSEACG/2 – Final Report
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