



ICAO

International Civil Aviation Organization

**The Combined Tenth Meeting of the South Asia/Indian Ocean
ATM Coordination Group (SAIOACG/10) and Twenty—
Seventh Meeting of the South East Asia ATS Coordination
Group (SEACG/27)**

Bangkok, Thailand, 30 March – 03 April 2020

Agenda Item 4: Implementation of CNS/ATM Systems

AIS – AIM IMPLEMENTATION UPDATE

(Presented by the Secretariat)

SUMMARY

This paper presents an update on Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM) implementation, including a summary of the outcomes of the Fourteenth Meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force, as reported to the Seventh Meeting of the Air Traffic Management Sub-Group of APANPIRG.

1. INTRODUCTION

1.1 The Fourteenth Meeting of the ICAO Aeronautical Information Services (AIS) – Aeronautical Information Management (AIM) Implementation Task Force (AAITF/14) was held in Bangkok, Thailand, from 20 to 24 May 2019. A total of 89 participants attended the meeting. 25 working papers, 14 information papers, 15 presentations and two filmsies were presented.

1.2 AAITF/14 formed six Draft Conclusions for consideration by the Seventh Meeting of the Air Traffic Management Sub-Group of APANPIRG (ATM/SG/7, Bangkok, Thailand, 05 to 09 August 2019).

1.3 The full report of the AAITF/14 meeting, together with presentations made at the AIM Seminar held in conjunction with the meeting, is available on the ICAO Asia/Pacific Regional Office website at <https://www.icao.int/APAC/Meetings/Pages/2019-AAITF14.aspx>.

2. DISCUSSION

AIM Seminar

2.1 The meeting agenda included an AIM seminar, covering the topics of Quality Management System and AIRAC Compliance, Electronic Terrain and Obstacle Databases, Reference Systems and AIS-AIM Transition. Presentations were made by Japan, New Zealand, USA, ICAO, ASBU 4 Future, Avitech, Jeppesen and Thales.

AIS-AIM Related Air Navigation Deficiencies

2.2 The meeting was presented with the list of AIS-related Air Navigation Deficiencies updated by APANPIRG/29.

2.3 There were three deficiencies identified in the list:

- WGS-84 not implemented (12 States – no change since AAITF/13);
- AIP Format (two States – no change since AAITF/13); and
- Quality Management System not implemented (22 States, compared to 23 States at AAITF/13).

2.4 No new deficiency had been added to the list. The following Deficiency had been deleted from the list at APANPIRG/29:

- Quality Management System not implemented – Cook Islands.

2.5 The meeting was informed that evidence had been provided to support the deletion of the following Deficiency, which was subsequently agreed by APANPIRG/30:

- WGS-84 not implemented – Cook Islands.

2.6 The meeting was invited to once again note the ongoing, high level of concern about poor quality management of aeronautical information in the APAC Region, and the apparent lack of organizational priority for this safety critical requirement.

Standardized Aeronautical Information

2.7 IATA observations and recommendations to AAITF/14 for the improvement of delivery of aeronautical information, citing the need to ensure all aeronautical information was accurate, correctly updated and easily accessible by airspace users. ATM/SG/7 agreed to the following Conclusion drafted by AAITF/14:

Conclusion ATM/SG/7-11: Standardized Aeronautical Information

That, noting:

- 1. previous APANPIRG Conclusions 23/8, 24/19 and 28/7, and ATM/SG Conclusion 6/14;*
- 2. lack of conformance of many States with the provisions of Annex 15 and PANS-AIM on the presentation and promulgation of aeronautical information; and*
- 3. the safety-critical requirement for standardized presentation and content of aeronautical information;*

States are urged to immediately take all necessary steps to fully review all aeronautical information products and rectify errors and omissions, to ensure full compliance with the provisions of Annex 15 Chapter 5 and PANS-AIM Chapter 5.

Regional AIM Transition Progress and Progress Reporting

2.8 The Secretariat presented a summary of AIM transition progress in the APAC Region, as reported to the ICAO Asia/Pacific Regional Office since AAITF/13 in June 2018. Progress was measured against the transition steps outlined in the ICAO Roadmap for Transition from AIS to AIM, and was recorded in the AIM Transition Table, available on the Regional Office website at:

<http://www.icao.int/APAC/Pages/edocs.aspx>

2.9 The meeting was reminded of *Conclusion APANPIRG/22/2 – AIM Transition Table*, and *Conclusion APANPIRG/25-15: Aeronautical Information Management (AIM) Transition Reporting* which, inter alia urged States to update the information in the AIM Transition Table at least once annually, by April 30 each year.

2.10 States that had provided no information at any time were:

Brunei Darussalam, Marshall Islands, Micronesia, Nauru.

2.11 The number of reports received continued to be poor. Only 14 Administrations had provided updated information in the period since AAITF/13.

2.12 Administrations reporting progress were Australia, Bangladesh, Cambodia, Hong Kong China, Cook Islands, DPR Korea, India, Lao PDR, Mongolia, Nepal, Pakistan, Singapore, Sri Lanka and Viet Nam. **Figure 1** illustrates the overall Regional Implementation of Phase 1 of the Roadmap for Transition from AIS to AIM; approximately 74%, which was unchanged from AAITF/13.

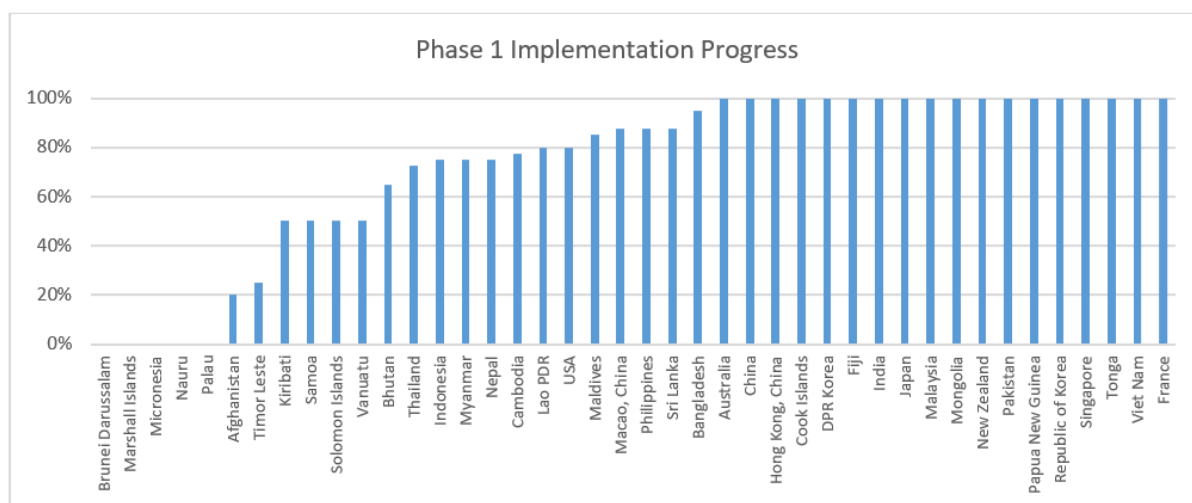


Figure 1: Regional Phase 1 Implementation Progress.

2.13 **Figure 2** illustrates the overall Regional Implementation of Phase 2 of the Roadmap for Transition from AIS to AIM – approximately 42%, compared to 39% at AAITF/13, reflecting minimal progress in region-wide terms.

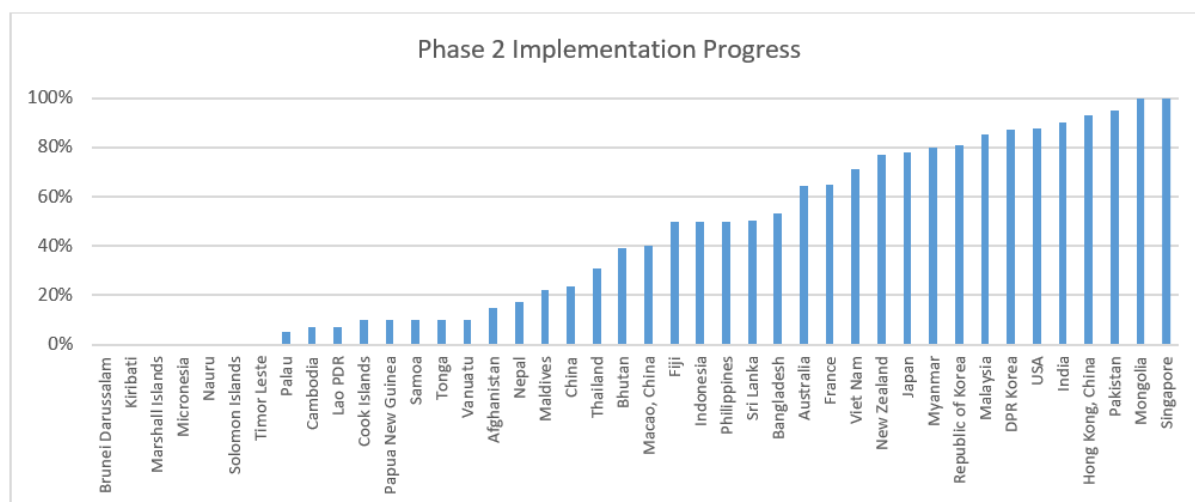


Figure 2: Regional Phase 2 Implementation Progress.

2.14 Overall Regional implementation of Phases 1 and 2 of the Roadmap was approximately 51%, compared to approximately 49% at AAITF/13.

2.15 The information provided included a cross-referencing of reported implementation steps, noting that in some cases 100% implementation had been reported for transition steps that were heavily dependent on other steps in which only minimal, or zero, implementation had been reported. The Administrations concerned (Bhutan, China, Macao China, Fiji, Nepal, Pakistan, Papua New Guinea, Republic of Korea, Tonga and USA) were requested to review their reported progress.

Regional Implementation Status of AIM Performance Expectations

2.16 A summary of the implementation progress of the AIM performance expectations in the *Asia/Pacific Regional Plan for Collaborative AIM* was provided by the Secretariat. 26 Administrations had provided information on their implementation status to the ICAO Regional Office, using the Regional AIM Implementation Monitoring and Reporting Form:

Australia, Bangladesh, Cambodia, China, Hong Kong China, Macao China, DPR Korea, India, Indonesia, Japan, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, Viet Nam, and USA.

2.17 India, Japan, Pakistan and Singapore reported full implementation of *Regional AIM Capability* Phases 1 and 2.

2.18 Regional implementation of AIM Capability Phase I (immediate implementation) and Phase II, (expected implementation 07 November 2019) were 48% and 40% respectively (**Figures 3 and 4**)

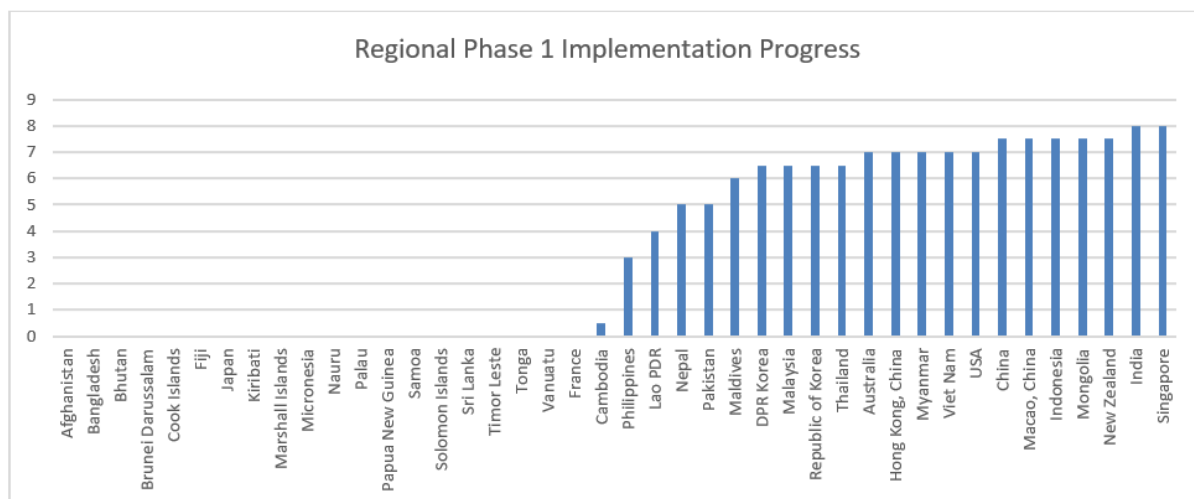


Figure 3: Regional AIM Capability Phase 1 Implementation Progress

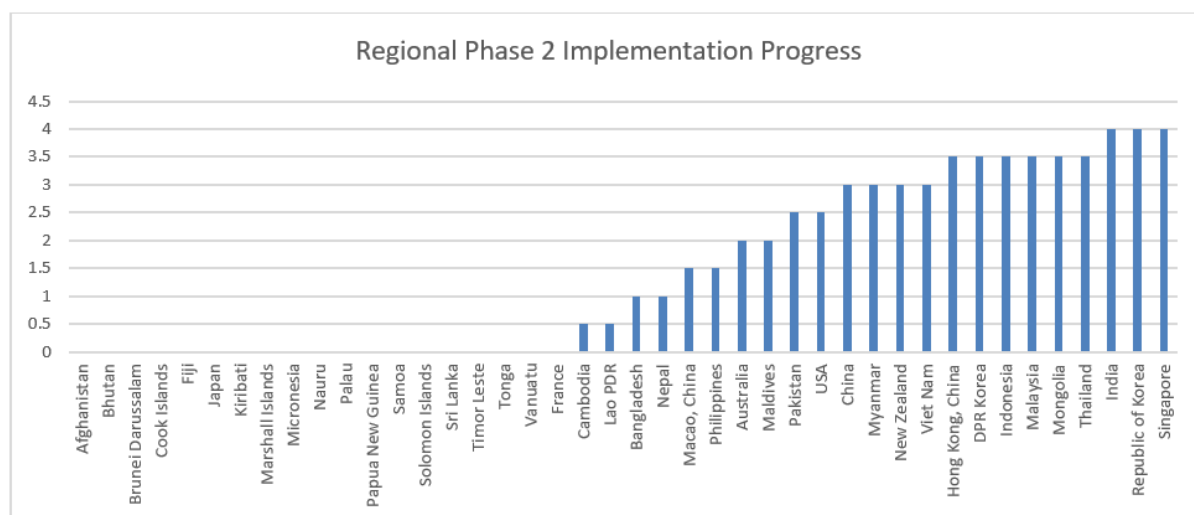


Figure 4: Regional AIM Capability Phase 2 Implementation Progress

2.19 Regional implementation progress of the AIM performance expectations from the Regional Plan for Collaborative AIM, as updated during the meeting, is recorded in **Attachment A**. The meeting agreed to a proposal to consolidate the two separate regional AIM implementation status monitoring and reporting processes into one, further discussed in paragraphs 2.62 to 2.66.

Regional USOAP-Audited AIS/AIM Status Update

2.20 The Secretariat presented information on the known AIS/AIM compliance status of Asia/Pacific Administrations measured against the Universal Safety Oversight April 2019 of the results of 36 USOAP AIS and Charts-related PQs for the Asia/Pacific Region indicated that the overall Effective Implementation (EI) was 64%, which was a 2% increase from the analysis reported to AAITF/13.

eAIP Implementation in the APAC Region

2.21 The Secretariat provided a summary of the current status of eAIP implementation in the Asia/Pacific Region. The following States had made no progress, and were encouraged to take immediate action:

Brunei Darussalam, Kiribati, Lao PDR, Marshal Islands, Micronesia, Nauru, Papua New

Guinea, Solomon Islands and Timor Leste.

2.22 The following States were requested to provide updated information on their eAIP website status, noting a range of problems related to access limitations and missing aeronautical information products:

Bhutan, Cambodia, DPR Korea, Nepal, Pakistan, Palau, Philippines, Republic of Korea, Samoa, Tonga, Vanuatu and USA.

2.23 In this regard, the meeting was invited to recall *Conclusion APANPIRG 24/19: Electronic AIP*.

Asia/Pacific Region ICARD Status and 5LNC Duplicate Resolution

2.24 ICAO provided an update on the International Codes and Route Designators (ICARD) application and participation by Asia/Pacific States, and on procedural issues related to the allocation of waypoint names for flight procedures and ATS routes.

2.25 In order to access 5-letter name codes through ICARD it was necessary for States to ensure that nominated persons were registered as ICARD_5LNC_PLANNERS for the State. The following States had no ICARD_5LNC_PLANNER registered:

Marshall Islands, Micronesia, Palau.

2.26 Information was provided on the number of duplicated 5LNC published in the AIP of Asia/Pacific Administrations, and the number that the Administration must replace (i.e., that the Administration did not have priority to retain), illustrated in **Figure 5**:

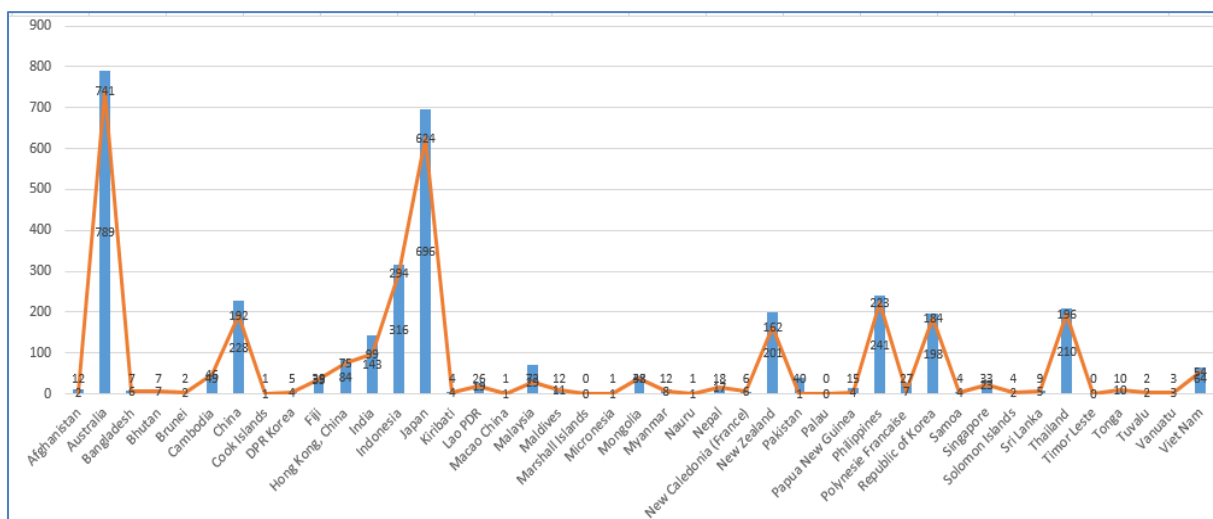


Figure 5: Duplicated 5LNC, and Number of Duplicated 5LNC Requiring Replacement, per APAC Administration

2.27 The meeting was again informed of the priority applied to replacement of duplicated 5LNC that were located within 1000 NM (**Attachment B**) and of the duplicate resolution process, as described in ICAO State Letter AN 11/45.5-17/101, distributed in August 2017

2.28 In response to a query on the prominence of the Asia/Pacific (APAC) Region, the Secretariat informed the meeting that the Asia/Pacific Region was the last of the seven Regions to be included in the global rollout of ICARD, resulting in many already published 5LNC in the APAC Region being already registered in ICARD by the other ICAO Regions before APAC had access to the

application. There was consequently a disproportionately large burden on the APAC Region, and particularly on two APAC Administrations, and that it was understood by the ICAO Regional Office that the replacement of 5LNC manner under State safety management system was expected to take a considerable period of time. However, immediate priority must be applied to the resolution of duplicated 5LNC within 1000 NM.

2.29 The meeting was also informed that Regional Office approaches to ICAO Headquarters requesting that action be taken through the appropriate technical panels to request that aircraft navigation and flight planning systems be improved to apply appropriate logic processes to manage duplicated waypoints, including *Conclusion APANPIRG 23/11 – Duplication and Amendment of 5LNC* (drafted by AAITF/7 in 2012) and recent informal approaches in 2017 and 2018, had been rejected, without consideration.

Space Vehicle Launch and Re-Entry

2.30 The Secretariat informed the AAITF/14 meeting of two space vehicle launch and re-entry events in recent weeks which highlighted the need for fully coordinated notification well in advance of the launch operation, and appropriate operational response by States receiving the notification.

2.31 Information was provided on the following launch and re-entry events:

29 April 2019 – an area affecting the Bangkok, Phnom Penh (Cambodia) and Vientiane (Lao PDR) FIRS, as notified by AIS China (**Figures 6 and 7**); and

22 May 2019 – an area affecting the Phnom Penh and Vientiane FIRS, as notified by AIS China (**Figures 8 and 9**).

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ATTENTION ON DUTY.  
AIR TRAFFIC MANAGEMENT BUREAU OF CAAC REMINDS THE RELEVANT UNITS  
OF ATTENTION.  
DUE TO SPACEFLIGHT ACTIVITIES, THE FLIGHT SAFETY OF THE AIRCRAFT  
IN FOLLOWING AREAS MAY BE AFFECTED ON APR 29, 2019.  
WE RECOMMEND THAT THE CIVIL AVIATION AUTHORITIES AND OPERATORS  
CONCERNED TAKE THE NECESSARY MEASURES TO ENSURE THE SAFETY OF  
FLIGHT.DETAILS ARE AS FOLLOWS:  
ON APR 29, 2019, FROM 2256-2314 UTC: N134218E1054536  
N135046E1050202 N150231E1051637 N145404E1060022 FOUR-POINT  
CONNECTION RANGE.  
VERTICAL ALTITUDE: GND-UNL.  
ANY CHANGES TO THE SCHEDULE WILL BE FORWARDED TO YOU IMMEDIATELY.  
THANK YOU FOR COOPERATION.  
NOF AIS CHINA
```

Figure 6: AIS China Notification – 29 April 2019 Event

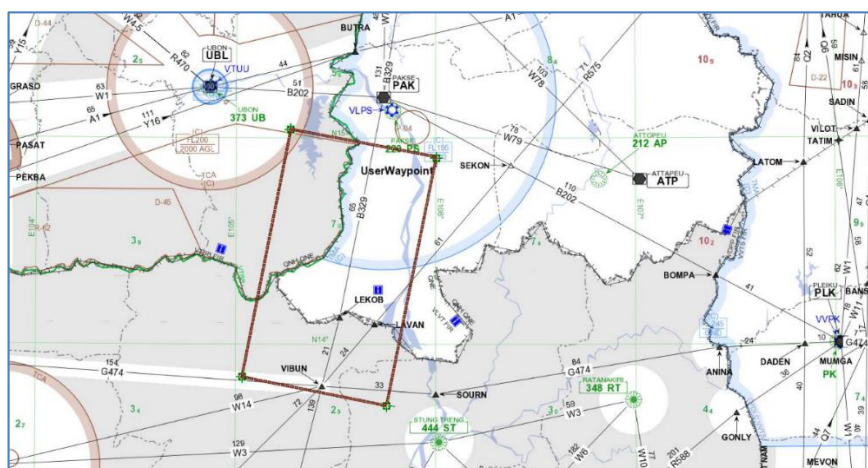


Figure 7: Area Affected by Space Vehicle Re-Entry Debris 29 April 2019

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YA00202 161133
GG VTBAYOYX
161129 ZBBBYNYX
ATTENTION ON DUTY.
AIR TRAFFIC MANAGEMENT BUREAU OF CAAC REMINDS THE RELEVANT UNITS
OF ATTENTION.
DUE TO SPACEFLIGHT ACTIVITIES, THE FLIGHT SAFETY OF THE AIRCRAFT
IN FOLLOWING AREAS MAY BE AFFECTED ON MAY 22, 2019.
WE RECOMMEND THAT THE CIVIL AVIATION AUTHORITIES AND OPERATORS
CONCERNED TAKE THE NECESSARY MEASURES TO ENSURE THE SAFETY OF
FLIGHT.DETAILS ARE AS FOLLOWS:
AREA: ON MAY 22, 2019, FROM 22:57-23:13 UTC.
N150939E1055244-N150157E1063640-N134955E1062314-N135736E1053931
,FOUR-POINT CONNECTION RANGE. VERTICAL ALTITUDE: SFC-UNL.
ANY CHANGES TO THE SCHEDULE WILL BE FORWARDED TO YOU IMMEDIATELY.
THANK YOU FOR COOPERATION.
NOF AIS CHINA
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Figure 8: AIS China Notification – 22 May 2019 Event.

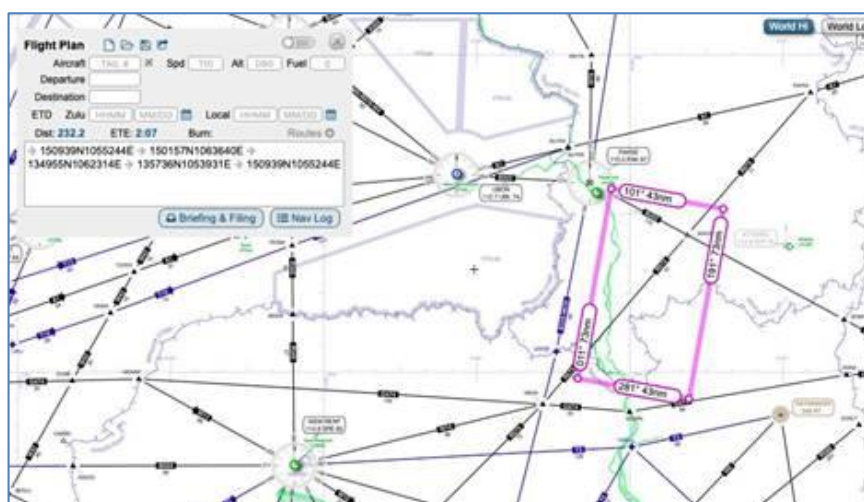


Figure 9: Area Affected by Space Vehicle Re-Entry Debris 22 May 2019

2.32 In the case of the 29 April event, the ICAO Regional Office was notified at 1349 UTC (by Thailand) of the event which would occur between 2256 and 2314 UTC. China informed the AAITF/14 meeting that the notification had been sent three days earlier. In the case of two of the affected States concerned, no operational action appeared to have been taken until prompted by ICAO. Cambodia advised that the notification message from AIS China had not been received.

2.33 The ICAO Regional Office was subsequently provided with photographic evidence of space vehicle debris found in Lao PDR.

2.34 In the case of the 22 May event, the notification was sent by AIS China six days before the event. However, the receiving States appeared to take no immediate action on the information received. ICAO Regional Office received indication on 22 May from both States that ATC coordination and NOTAM action had been undertaken.

2.35 The meeting was informed that it appeared that in both cases the advance notification expected under the APANPIRG-agreed performance expectation of the Asia/Pacific Seamless ATM Plan (element 7.60), had not occurred.

2.36 IATA commented that simple notification as occurred in these events was not adequate,

and that full consultation between all stakeholders should be undertaken.

2.37 In discussion, the meeting was informed that the upper management approval process applied within the affected States when dealing with matters of political or diplomatic concern led to significant delays in the operational response.

2.38 The Secretariat informed AAITF/14 that political matters related to the effect ballistic launch and space vehicle re-entry operations may have on the safety, security, and national integrity of affected States were beyond the scope of an ICAO technical meeting. However, ICAO was particularly concerned that it appeared that the receipt of the notification did not prompt an immediate *operational* response by the States concerned to ensure appropriate ATC and NOTAM Office action.

2.39 Regarding the coordination between the launch agency and the civil aviation authority of the launch State, the meeting was reminded that the APANPIRG-agreed Seamless ATM Plan performance expectation was that formal agreements would be established between them to ensure that the civil aviation authority was then enabled to conduct full strategic and tactical coordination with all other affected States.

2.40 Cambodia requested that China engage with Cambodia to establish points of contact to coordinate these events.

2.41 Japan informed the AAITF/14 meeting that the primary coordination obligation between States was defined in Annex 11 *Air Traffic Services*¹, and an AIS unit could not publish NOTAMs arbitrarily based on another State's unilateral AFTN message. Such NOTAMs could only be published as directed by the ATS authority for the FIR.

2.42 The following Conclusion, drafted by AAITF/14 and supported by ATM/SG/7, was subsequently agreed by APANPIRG/30:

Conclusion APANPIRG/30-10: Ballistic Launch and Space Re-Entry Notification and Response

That, States are urged to:

1. Comply with Asia/Pacific Seamless ANS Plan provisions for advance notification of ballistic launch and space re-entry activities;

2. Ensure that, in addition to the coordination specified in Annex 11, and in the Asia/Pacific Seamless ANS Plan, all notifications for ballistic launch and space re-entry are addressed to:

- a) the ATC Centres in Charge of all affected Flight Information Regions; and*
- b) the International NOTAM Office of all affected Flight Information Regions;*

¹ Annex 11 Section 2.19.1 (Coordination of activities potentially hazardous to civil aircraft) states *inter alia*:

2.19.1 The arrangements for activities potentially hazardous to civil aircraft, whether over the territory of a State or over the high seas, shall be coordinated with the appropriate air traffic services authorities. The coordination shall be effected early enough to permit timely promulgation of information regarding the activities in accordance with the provisions of Annex 15.

2.19.1.1 Recommendation.— If the appropriate ATS authority is not that of the State where the organization planning the activities is located, initial coordination should be effected through the ATS authority responsible for the airspace over the State where the organization is located.

and

3. *Ensure that NOTAMs are promulgated and tactical coordination undertaken for the management of affected airspace and traffic, immediately on receipt of notification from another State, and on receipt of any notification of changes or cancellation.*

2.43 These events, and two earlier events affecting Lao PDR and Myanmar, both of which had resulted in space vehicle debris being found, had been referred to the Council of ICAO for further action.

Processing Status of Permanent NOTAMs

2.44 Referencing *Conclusion ATM/SG/6-14: Management of NOTAMs* (drafted by AAITF/13) and the PANS-AIM section 6.1.4.4 requirement that information contained in permanent NOTAM shall be included in the relevant aeronautical information products within three months of NOTAM issuance, Viet Nam provided the following statistics from a monthly survey and collection of all PERM NOTAMs older than three months, from 01 July 2018 to 01 May 2019, for the 29 NOTAM Offices (NOFs) that had an agreement to exchange NOTAM with Viet Nam:

- Generally, numbers of PERM NOTAMs had decreased in some States;
- Some States made a significant decrease in PERM NOTAMs, e.g. from 1088 before 2017 to 328 by 01 May 2019, or from 111 to 27 for the same period;
- There was a slight increase in PERM NOTAMs in some States; and
- There were still some NOFs with more than 50 PERM NOTAMs.

2.45 India informed the meeting that, since resolving issues with the AIS system, 2058 NOTAMs and 548 AIP SUP had been cancelled.

Management of NOTAMs

2.46 The ICAO Regional Office conducted an analysis of NOTAMs, including factors leading to NOTAM proliferation, and NOTAM that were incorrectly used to promulgate significant information that was required to be promulgated by AIP Amendment or AIP SUP. In addition to the items identified in *Conclusion ATM/SG/6-14: Management of NOTAMs*, there were many NOTAMs promulgated in direct contravention of Annex 15 requirements. This constituted a safety risk, and every effort would be taken to eliminate it.

2.47 **Figure 10** illustrates the numbers of NOTAMs, and the number of PERM NOTAMs:

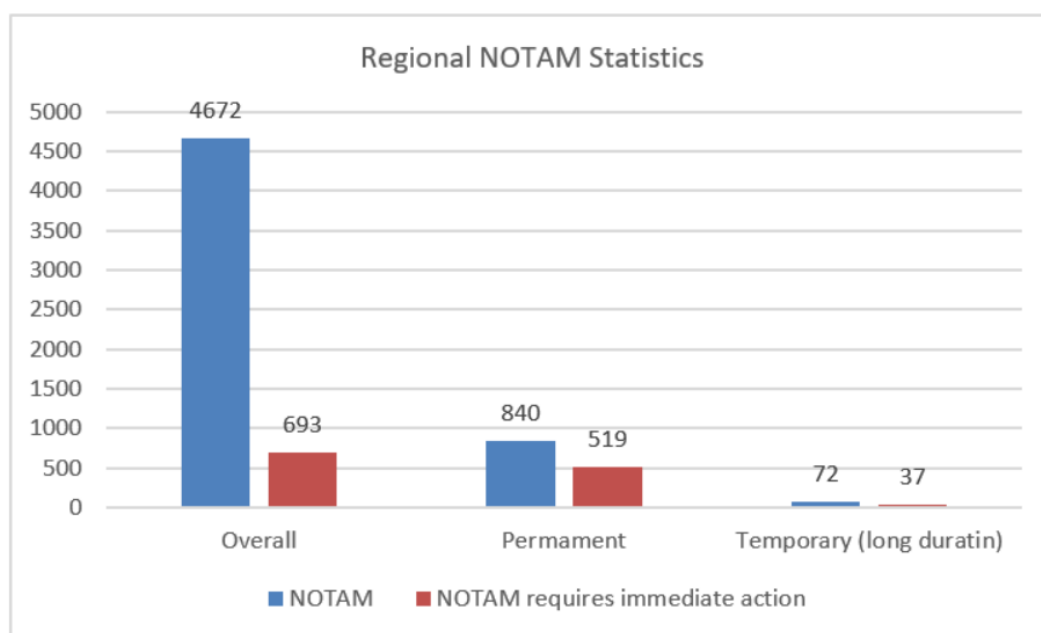


Figure 10: Regional NOTAM Statistics

2.48 The overall number of NOTAMs could be reduced by 15% by simply following current ICAO standards and procedures for the migration of PERM NOTAMs into AIP.

2.49 Several examples were provided, indicating the main factors leading to NOTAM proliferation were poor quality management by both the data originator and the AIS, poor planning by data originators, poor understanding of AIS and aeronautical information products among data originators and senior managers of the AIS, and poor senior management support for the AIS.

2.50 Many PERM NOTAMs were issued to correct nonconformities in published in AIP, AIP Amendments and AIP SUPs due to poor quality management process applied by both data originators and the AIS. A detailed range of other actions leading to inappropriate NOTAMs was provided, together with a detailed list of recommendations was provided, noting that many of them were items with which States that are signatory to the Chicago Convention shall comply.

2.51 The Secretariat informed the meeting that instances of Pre-flight Information Bulletins (PIB) of NOTAMS of 86 pages and more were examples of provision of aeronautical information that, due to its sheer scale, was rendered totally meaningless to pilots. It was entirely unreasonable for an AIS with any professional understanding of aviation to place such a burden on the (human) end user of the information.

2.52 The Secretariat further informed the meeting that inappropriate use of NOTAMs would be the subject of further, ongoing analysis, and that APANPIRG Air Navigation Deficiencies would be raised wherever appropriate.

2.53 This paper provoked significant discussion, highlighting the need for States to manage the activities of all data originators through legislation and regulation, with appropriate penalties for non-compliance, together with continuing programs of stakeholder engagement and education activities by the AIS and its regulators.

GPS RAIM Prediction NOTAM

2.54 The Secretariat provided information on NOTAMs related to Global Positioning System (GPS) Receiver Autonomous Integrity Monitoring (RAIM), including a review of currently published

NOTAMs and best practices. This paper was provided in response to an item in the AAITF Task List.

2.55 The meeting acknowledged that several States should use the information provided to review their practices in this regard, particularly the issuance of daily NOTAMs advising that no GPS RAIM outage was forecast, which contributed significantly to NOTAM proliferation.

Requirements for Promulgation of Information on Temporary Runway or Taxiway Closure

2.56 The meeting was informed of requirements for promulgation of temporary information relating to runway or taxiway closure, including information of long duration, or of short duration, or received at short notice. This information was provided in response to an item in the AAITF Task List, proposing there was a need for clarity around the requirements for promulgation of information relating to routine or non-routine works temporarily closing runways and taxiways.

2.57 The references from provided from Annex 15 and PANS-AIM, together with practical examples in the presentation, clearly demonstrated that ICAO had provided sufficient standards and procedures on the matter.

NOTAM for Flexible Use of Airspace

2.58 The Secretariat presented proposed NOTAM format templates for the promulgation of information on Flexible Use of Airspace operations, as reviewed following their discussion at the ATM/SG/6 meeting in August 2018 where India, Japan and Thailand had jointly presented a working paper on the subject.

2.59 The meeting was informed that there was some inconsistency in the definition of some terms and acronyms used in the proposed template, including Temporary Reserved Area/Airspace (TRA), Temporary Segregated Area (TSA) and Cross-Border Area (CBA). As none of these terms featured in ICAO Doc 8400 ICAO Abbreviations and Codes, they were not eligible for use in NOTAM. The templates were therefore modified to use plain language in these cases.

2.60 ATM/SG/7 agreed to the following Conclusion, drafted by AAITF/14:

Conclusion ATM/SG/7-13: NOTAM Format for FUA Operation

That,

- 1. States are urged to use the NOTAM templates provided in **Appendix I to the Report** for promulgation of Flexible Use of Airspace information; and*
- 2. The Flexible Use of Airspace NOTAM Templates be uploaded to the Asia/Pacific Regional Office eDocuments web-page, and included in the next update of the Asia/Pacific Region Operating Procedures for Aeronautical Dynamic Data.*

Addressing Issues Related to Multi-Part NOTAM Checklist

2.61 Singapore informed the meeting of issues associated with processing monthly NOTAM checklists which were issued in multiple parts. As more States moved towards automated AIM systems it was essential that such checklist NOTAMs were standardized to enable processing by ATM systems, ensuring that NOTAM databases containing foreign NOTAMs were accurate and up-to-date, for inclusion in PIBs.

2.62 A typical example was provided by Singapore, wherein a multi-part NOTAM Checklist NOTAM was missing the multi-part indicator, and was also missing items Q) to C) in its second and later parts. This had previously resulted in the NOTAMs listed in the second and later parts being automatically deleted from the NOTAM database, prior to a system re-configuration that re-directed

non-compliant Checklist NOTAM to the operator queue. This solution was not sustainable in the long term, as operations progressed towards the more digitized, automated information exchange environment.

2.63 The ATM/SG/7 agreed to the following Conclusion, drafted by AAITF/14:

Conclusion ATM/SG/7-14: Format for Multi-Part NOTAMs

That, States are urged to ensure that all multi-part NOTAMs, including multi-part NOTAM checklist NOTAMs, conform with the format described in the ICAO Guidance Manual for AIS in the Asia/Pacific Region.

Issue on Implementation of Data Catalogue

2.64 Mongolia informed the AAITF/14 meeting of their response to difficulties that had arisen in relation to the use of the data catalogue introduced in the new PANS-AIM. It was noted that there were times when data originators would not be aware of the data catalogue or how to complete it, and where AIS did not necessarily understand the information being provided. Noting there was a need for information sharing in this regard, ATM/SG/7 agreed to the following Conclusion, drafted by AAITF/14:

Conclusion ATM/SG/7-15: Aeronautical Data Catalogue

That, States are urged to:

- 1. utilize the Asia/Pacific Region AIM Information Sharing Website at <http://aim-tracking.org/> to share information and experience of the use of the Aeronautical Data Catalogue; and*
- 2. participate in a Data Catalogue workshop activity, to be conducted in conjunction with the AAITF/15 meeting in 2020.*

RNP Approach Chart Identification Transition

2.65 The AAITF/14 meeting was provided with a progress update on development of the regional transition plan for Required Navigation Performance (RNP) Approach (APCH) chart identification, including the result of discussions by the Performance-Based Navigation (PBN) Implementation Coordination Group (PBNICG). Further information is provided in a separate working paper to this meeting.

Amendment to the Regional AIM Plan – Consolidation of Performance Expectations

2.66 The Secretariat presented AAITF/14 with a proposed amendment to the *Regional Plan for Collaborative AIM*, consolidating its performance expectations to include relevant elements from the ICAO Roadmap for Transition from AIS to AIM, and updating the Regional AIM Plan Monitoring and Reporting Form.

2.67 Asia/Pacific Administrations were currently expected to provide updated information annually on progress measured against the ICAO AIM Roadmap, for recording in the AIM Transition Table (<http://www.icao.int/APAC/Pages/edocs.aspx>), and in the Regional AIM Implementation Reporting Form, to measure progress in the implementation of the performance expectations of the Regional Plan for Collaborative AIM.

2.68 Discussing the proposal, Hong Kong China and Japan noted that the proposed Phase III implementation items may be too aggressive. Subsequent examination of the proposed (at the time of the AAITF/14 meeting) GANP and ASBU update, to be considered by the Assembly of ICAO in late 2019, indicated that the performance expectations of Phase III were aligned with ASBU Block 2, with

planned implementation 2025. The proposal was therefore modified to take this into account.

2.69 ATM/SG/7 subsequently agreed to the following Conclusion, drafted by AAITF/14:

Conclusion ATM/SG/7-16: Amendment to the Regional Plan for Collaborative AIM

That:

1. *the Amendment to the Regional Plan for Collaborative AIM at **Appendix J to the Report** be adopted, and the amended Plan be posted on the ICAO Asia/Pacific Regional Office eDocuments web-page;*
2. *the revised Regional AIM Implementation Status Reporting Form (Appendix D to the Regional Plan for Collaborative AIM) be separately uploaded to the Regional Office eDocuments web-page for implementation reporting by Asia/Pacific Administrations:*
 - a. *immediately on adoption of this Conclusion; and then*
 - b. *annually, by not later than 30 April each year; and*
3. *Asia/Pacific Regional reporting against the transition steps in the ICAO Roadmap for Transition from AIS to AIM be discontinued, and the AIM Transition Table be removed from the Regional Office eDocuments web-page.*

*Note: This Draft Conclusion supersedes **Conclusions APANPIRG 22-2 and APANPIRG/25-15***

2.70 The merged regional data from the AIM Transition Table (discontinued) and the Regional AIM Plan reporting form is provided in **Attachment C**.

Asia/Pacific Air Traffic Management Contact List

2.71 The ICAO Regional Office had determined that the maintenance of a single ATM List of Contacts for all purposes such as AIS, Contingency Coordination Teams (CCT) and Search and Rescue (SAR) would be more efficient than the current practice of maintaining separate lists.

2.72 The consolidated ATM List of Contacts, including AIS contacts, is provided for review under a separate WP.

AIM Reports

2.73 The Secretariat informed the meeting that AIM Reports had been prepared for each Asia/Pacific Administration. This Regional Office activity was an extension of a similar activity conducted at the Ninth Meeting of the South Asia Indian Ocean ATM Coordination Group (SAIOACG/9) and 26th Meeting of the Southeast Asia ATS Coordination Group (SEACG/26), held in Bangkok, Thailand in March 2019. The AIM Reports are available on the AAITF/14 meeting web-page for the information of all Asia/Pacific Administrations:

<https://www.icao.int/APAC/Meetings/Pages/2019-AAITF14.aspx>

ICAO AIM Guidance Material

2.74 The following update on progress in the development and publication of ICAO AIM Guidance material was provided by ICAO Headquarters:

1. Three new volumes of ICAO Doc 8126 *AIS Manual* were in final draft form, and under initial editorial review. The unedited version should be available on the ICAO portal within approximately three months;
2. The draft Quality Management System Manual was under review of the AIM Working Group (AIM WG), with ongoing work being conducted. While the planned deadline for the project was end 2019, the Secretariat considered that more time was needed, and expected finalization some time in 2020.
3. The draft AIM Training Manual was also under review by the AIM WG, with a project deadline of Q4 2020; and
4. Volume 4 of the AIS Manual (on digital products and services) was still at the initial stage. The current project deadline was Q4 2021.

Outcomes from ICAO/EU AIS to AIM Workshops

2.75 In a collaborative effort between ICAO and the European Union, two workshops targeting sub-regional groups of States were held at the ICAO Asia/Pacific Regional Office in Bangkok:

- EASA ARISE+ AIS to AIM Workshop, 12 to 14 June 2019.
- EU-South Asia Aviation Partnership Project (EU-SA APP) AIS to AIM Workshop, 17 to 19 June 2019.

2.76 The workshops were primarily aimed at the service delivery level of AIS, and will therefore be mutually complementary to the planned FAA workshop on effective safety oversight of AIS.

2.77 At the ICAO/EU workshops ICAO introduced discussion on Results-Based Implementation support mechanisms, specifically, the use of the Go-Teams concept illustrated in **Figure 11**:

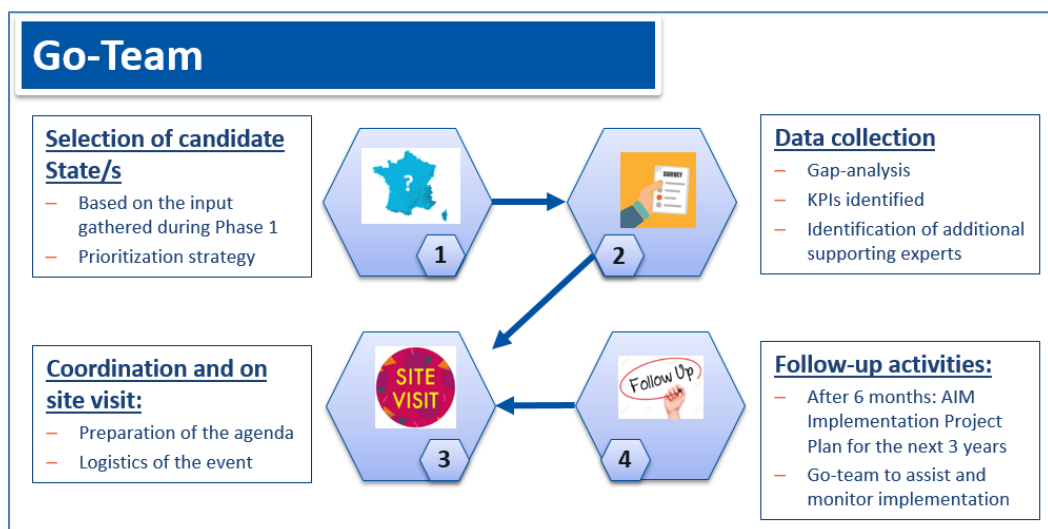


Figure 11: AIM Go-Team Process

2.78 States were requested to register interest in either receiving AIM Go-Team support, or providing experts to participate in Go-Teams. The Go-Team activity will then be prioritized according to Asia/Pacific Region AIM implementation monitoring data, USOAP audit results, workshop questionnaire responses, and ICAO Regional Office consideration of traffic volumes, number of airports, airspace complexity, terrain and other significant challenges, and APANPIRG ANS Deficiencies.

2.79 Three South Asia States expressed interest in receiving Go-Team support. Other States are also invited to contact the ICAO APAC Regional Office to indicate their interest.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) note the continuing, high level of concern about poor quality management of aeronautical information in the APAC Region;
- c) Note ***Conclusion ATM/SG/7-11: Standardized Aeronautical Information;***
- d) note the continuing poor progress of AIS/AIM implementation in the APAC Region;
- e) note the priority that is to be applied to the resolution of duplicate 5LNCs within 1,0000 NM;
- f) note the issues relating to the prior coordination of, and promulgation of information relating to, ballistic launch and space vehicle re-entry, and note ***Conclusion APANPIRG/30-10: Ballistic Launch and Space Re-Entry Notification and Response;***
- g) note the action being taken by AAITF and the ICAO Secretariat to eliminate the proliferation of NOTAMs and the inappropriate promulgation of NOTAMs in non-compliance with the provisions of Annex 15;
- h) note ***Conclusion ATM/SG/7-13: NOTAM Format for FUA Operations;***
- i) note ***Conclusion ATM/SG/7-14: Format for Multi-Part NOTAMs;***
- j) note ***Conclusion ATM/SG/7-15: Aeronautical Data Catalogue;***
- k) note ***Conclusion ATM/SG/7-16: Amendment to the Regional Plan for Collaborative AIM;***
- l) note the availability of AIM reports for APAC Administrations, on the AAITF/14 meeting web-page;
- m) note the initial planning for AIM Go-Team activities in the APAC Region, and indicate interest in receiving Go-Team support; and
- n) discuss any relevant matters as appropriate.

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Regional Implementation Status of AIM Performance Expectations

Date Last Amended: May 18, 2019

	Phase 1								Phase 2												
	1			2	3	4	5	6	7	8	9	10									
	1a	1b	1c																		
Afghanistan	0	0	0	0	0	0	0	0	0	0	0	0									
Australia	1	1	1	1	0.5	0.5	1	1	0	1	0.5	0.5									
Bangladesh	0	0	0	0	0	0	0	0	0	0	0.5	0.5									
Bhutan	0	0	0	0	0	0	0	0	0	0	0	0									
Brunei Darussalam	0	0	0	0	0	0	0	0	0	0	0	0									
Cambodia	0	0	0	0.5	0	0	0	0	0	0	0.5	0									
China	1	1	1	1	0.5	1	1	1	0	1	1	1									
Hong Kong, China	1	1	0.5	1	1	0.5	1	1	1	1	0.5	1									
Macao, China	1	1	1	1	0.5	1	1	1	0.5	0.5	0	0.5									
Cook Islands	0	0	0	0	0	0	0	0	0	0	0	0									
DPR Korea	1	0.5	1	0	1	1	1	1	1	1	1	0.5									
Fiji	0	0	0	0	0	0	0	0	0	0	0	0									
India	1	1	1	1	1	1	1	1	1	1	1	1									
Indonesia	1	1	1	0.5	1	1	1	1	1	1	1	0.5									
Japan	1	1	1	1	1	1	1	1	1	1	1	1									
Kiribati	0	0	0	0	0	0	0	0	0	0	0	0									
Lao PDR	1	1	1	1	0	0	0	0	0	0	0.5	0									
Malaysia	1	1	0.5	1	0.5	0.5	1	1	0.5	1	1	1									
Maldives	1	0.5	1	1	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5									
Marshall Islands	0	0	0	0	0	0	0	0	0	0	0	0									
Micronesia	0	0	0	0	0	0	0	0	0	0	0	0									
Mongolia	1	1	1	1	1	0.5	1	1	0.5	1	1	1									
Myanmar	1	1	1	1	0	1	1	1	0.5	0.5	1	1									
Nauru	0	0	0	0	0	0	0	0	0	0	0	0									
Nepal	1	0.5	0.5	1	0	1	0	1	0	0	0.5	0.5									
New Zealand	1	1	1	1	0.5	1	1	1	0.5	1	1	0.5									
Pakistan	1	1	1	1	1	1	1	1	0.5	1	0.5	0.5									
Palau	0	0	0	0	0	0	0	0	0	0	0	0									
Papua New Guinea	0.5	0.5	0.5	1	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5									
Philippines	0	0	0	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0									
Republic of Korea	1	0.5	1	0.5	0.5	1	1	1	1	1	1	1									

Regional Implementation Status of AIM Performance Expectations

Date Last Amended: May 18, 2019

	Phase 1								Phase 2												
	1			2	3	4	5	6	7	8	9	10									
	1a	1b	1c																		
Samoa	0	0	0	0	0	0	0	0	0	0	0	0									
Singapore	1	1	1	1	1	1	1	1	1	1	1	1									
Solomon Islands	0	0	0	0	0	0	0	0	0	0	0	0									
Sri Lanka	1	1	1	1	0.5	0.5	0.5	1	0.5	0.5	0	0.5									
Thailand	1	0.5	1	0.5	1	1	0.5	1	1	1	0.5	1									
Timor Leste	0	0	0	0	0	0	0	0	0	0	0	0									
Tonga	0	0	0	0	0	0	0	0	0	0	0	0									
Vanuatu	0	0	0	0	0	0	0	0	0	0	0	0									
Viet Nam	1	1	1	1	1	0.5	1	0.5	0.5	1	1	0.5									
USA ²	1	1	1	1	0.5	0.5	1	1	0.5	0.5	1	0.5									
France ³	0	0	0	0	0	0	0	0	0	0	0	0									

Phase 1

1 Developed policy and enacted primary legislation and supporting regulations for Annex 4 and Annex 15 SARPS including:

1a Establishment of an organizational structure for the safety oversight of aeronautical information service providers;

1b Requirements for aeronautical information/data originators;

1c Requirement for AIS quality management systems and processes to be established by all entities in the end-to-end AIS data chain.

2 Established AIS either as a separate entity within, or separated from the civil aviation administration.

3 Developed competency requirements for AIS personnel, including English language proficiency requirements, supported by a program of regular performance assessment.

4 Implemented regular programs of engagement with all stakeholders.

5 Developed and implemented quality management systems for aeronautical information.

6 Provided full access to relevant ICAO Annexes and Documents to all personnel having responsibility for the reception, management, publication and/or distribution of aeronautical information and aeronautical data.

Phase 2

7 Adapted competency development and performance assessment of AIS personnel to the needs of transition to AIM.

8 Implemented and maintained quality management systems encompassing all functions of the AIS.

9 Established formal agreements between AIS providers and aeronautical data originators.

10 Implemented an internet-accessible electronic AIP generated from a digital database of aeronautical information

List of 5LNCs Separated by Less than 1000 NM (as known at May, 2019)

Action required by APAC Administrations highlighted **yellow**

Action taken by APAC Administrations highlighted **red**

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
1	ALPHA	China India Italy Lao People's Democratic Republic Russian Federation Spain Turkey United Kingdom (2) UK (Falkland Islands), Vanuatu (11)	Lao People's Democratic Republic	China India Lao People's Democratic Republic Russian Federation Turkey United Kingdom (2) UK (Falkland Islands), Vanuatu (9)	Lao People's Democratic Republic	Lao People's Democratic Republic
2	ANGEL	Colombia/Ecuador (FIR boundary) Honduras (COCESNA) Japan Philippines Thailand (5)	Colombia/Ecuador, Honduras (COCESNA)	Colombia/Ecuador (FIR boundary) Honduras (COCESNA) Japan Thailand (4)	Colombia/Ecuador, Honduras (COCESNA)	Colombia/Ecuador or
3	AREMA	Indonesia Kenya/United Republic of Tanzania (FIR boundary) Mali Liberia (4)	Mali	Indonesia Kenya/United Republic of Tanzania (FIR boundary) Mali Liberia (4)	Mali	Mali

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
4	BAKON	Brazil China Japan Philippines United States of America (5)	Brazil, United States of America	Brazil China Japan United States of America (4)	Brazil, United States of America	United States of America
5	BAKER	Australia China Hong Kong SAR of China United Kingdom (4)	United Kingdom	Australia China Hong Kong SAR of China United Kingdom (4)	United Kingdom	United Kingdom
6	BEACH	Fiji Japan Republic of Korea United States of America (4)	Fiji, United States of America	Fiji Japan Republic of Korea United States of America (4)	Fiji, United States of America	United States of America
7	BISON	Australia China Hong Kong, China Indonesia United States of America Viet Nam (6)	United States of America	Australia China Hong Kong, China Indonesia United States of America Viet Nam (6)	United States of America	United States of America
8	BRAVO	Brazil China India Italy Syrian Arab Republic United Kingdom United Kingdom (Falkland Islands) (7)	Brazil	Brazil China India Italy Syrian Arab Republic (5)	Brazil	Brazil

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
9	CORAL	Australia Brazil China Hong Kong SAR of China Cuba France (French Polynesia) Honduras (COCESNA) Japan Mexico (9)	Brazil, Bermuda (UK), Honduras (COCESNA)	Australia Brazil China Cuba Honduras (COCESNA) Japan Mexico (7)	Brazil, Bermuda (UK), Honduras (COCESNA)	Brazil
10	CHALI	China Hong Kong SAR of China United States of America (3)	United States of America	China Hong Kong SAR of China United States of America (3)	United States of America	United States of America
11	CRANE	Australia Brazil Japan Republic of Korea United States of America (5)	United States of America, Brazil	Australia Brazil Japan Republic of Korea United States of America (5)	United States of America, Brazil	United States of America
12	DECOY	China Republic of Korea United States of America (3)	United States of America	China Republic of Korea United States of America (3)	United States of America	United States of America
13	DELTA	Bhutan India Italy Japan Lao People's Democratic Republic Liberia Sri Lanka	Suriname	Bhutan India Italy Japan Lao People's Democratic Republic Liberia Sri Lanka Suriname	Suriname	Suriname

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
		Suriname Syrian Arab Republic Vanuatu (10)		Syrian Arab Republic Vanuatu (10)		
14	GARZA	Costa Rica (COCESNA) Republic of Korea Peru United States of America Venezuela (5)	United States of America	Costa Rica (COCESNA) Republic of Korea Peru United States of America Venezuela (5)	United States of America	United States of America
15	HANKY	Australia China Republic of Korea United Kingdom United States of America (5)	United States of America, United Kingdom	Australia China Republic of Korea United Kingdom United States of America (5)	United States of America, United Kingdom	United Kingdom
16	HOTEL	Canada China Thailand Viet Nam (4)	Canada	Canada China Thailand Viet Nam (4)	Canada	Canada
17	IKUMI	Japan Malaysia Singapore (3)	Malaysia	Japan Singapore (2)	Japan	Japan
18	JEWEL	Australia Japan Republic of Korea (3)	Japan	Australia Japan Republic of Korea (3)	Japan	Japan

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
19	KALNA (resolved)	India Japan Pakistan (3)	Japan	Japan (1)	Japan	Japan
20	KARAN	China Indonesia Viet Nam (3)	Viet Nam	China Indonesia Viet Nam (3)	Viet Nam	Viet Nam
21	KIRIN	China Japan Thailand (3)	NO	China Japan Thailand (3)	China (reserved)	China (reserved)
22	KOLOK	Central African Republic Congo Thailand (3)	NO	Central African Republic Congo Thailand (3)	NO	To be determined by the 5LNC Duplicate Resolution Rules
23	LAGER	China Japan Republic of Korea United Kingdom (4)	United Kingdom	China Japan Republic of Korea United Kingdom (4)	United Kingdom	United Kingdom
24	LEMON	Hong Kong SAR of China Italy Japan Republic of Korea Thailand United States of America (6)	United States of America	Hong Kong SAR of China Italy Japan Republic of Korea Thailand United States of America (6)	United States of America	United States of America
25	LENTO	China Japan Thailand	Japan	China Japan Thailand	Japan	Japan

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
		(3)		(3)		
26	LUCAS	Australia Brazil China Costa Rica Mexico Netherlands Antilles (Netherlands) Philippines Venezuela (8)	Costa Rica, Venezuela, Brazil Netherlands Antilles (the Netherlands)	Australia Brazil China Costa Rica Mexico Netherlands Antilles (Netherlands) (6)	Costa Rica, Brazil Netherlands Antilles (the Netherlands)	Netherlands Antilles (the Netherlands)
27	MAGDA	Australia Bolivia Brazil (3)	Brazil	Australia Bolivia Brazil (3)	Brazil	Brazil
28	MALAY	China Myanmar Philippines United States of America Viet Nam (5)	United States of America	China Myanmar United States of America Viet Nam (4)	United States of America	United States of America
29	MANGA	Colombia New Zealand Philippines Viet Nam (4)	Colombia	Colombia New Zealand Viet Nam (3)	Colombia	Colombia
30	MARIA	Argentina/Bolivia (FIR boundary) Brazil Japan Thailand United States of America	United States of America, Argentina/Bolivia (FIR boundary)	Japan Thailand United States of America	United States of America, Argentina/Bolivia (FIR boundary)	United States of America

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
		(5)		(3)		
31	MAZDA	China Japan United States of America (3)	United States of America	China Japan United States of America (3)	United States of America	United States of America
32	MONKY	Japan Republic of Korea United States of America (3)	United States of America	Japan Republic of Korea United States of America (3)	United States of America	United States of America
33	MONTA	Hong Kong SAR of China Japan Philippines (3)	NO	Hong Kong SAR of China Japan (2)	NO	To be determined by the 5LNC Duplicate Resolution Rules
34	NORAN	Jamaica Japan Republic of Korea (3)	Reserved in block for Jamaica	Jamaica Japan Republic of Korea (3)	Reserved in block for Jamaica	To be determined by the 5LNC Duplicate Resolution Rules
35	ORION	China Italy Japan Peru Philippines Spain Tonga United States of America (8)	United States of America Peru Spain	China Italy Japan Peru Spain Tonga United States of America (7)	United States of America Peru Spain	United States of America
36	OLIVE	China Japan Thailand United Kingdom United States of America (American Samoa) (5)	American Samoa, United Kingdom	China Japan Thailand United Kingdom United States of America (American Samoa) (5)	American Samoa, United Kingdom	United Kingdom

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
37	PANDA	Brazil China Indonesia Japan Philippines United States of America (6)	United States of America	Brazil China Indonesia Japan United States of America (5)	United States of America	United States of America
38	PANDI	Brazil, Indonesia, Indonesia/Viet Nam (FIR boundary) (4)	Brazil	Brazil, Indonesia, Philippines/Viet Nam (FIR boundary) (4)	Brazil	Brazil
39	PAROT	India (2) Indonesia Iran (Islamic Republic of) Republic of Korea (4)	Iran (Islamic Republic of), Republic of Korea	Indonesia Iran (Islamic Republic of) (2)	Iran (Islamic Republic of), Republic of Korea	Iran (Islamic Republic of)
40	PEARL	China Japan United States of America (3)	United States of America	China Japan United States of America (3)	United States of America	United States of America
41	PRADA	Canada Japan Republic of Korea Spain (4)	Canada	Canada Japan Republic of Korea Spain (4)	Canada	Canada
42	RASKI	India/Oman (FIR boundary) Iraq Saudi Arabia (3)	India/Oman	India/Oman (FIR boundary) Iraq Saudi Arabia (3)	India/Oman	India/Oman
43	ROBIN	Australia China	Japan	China Hong Kong SAR of China	Japan	Japan

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
		Hong Kong SAR of China Japan Mexico (5)		Japan Mexico (4)		
44	ROCKY	China Hong Kong SAR of China Japan New Zealand United States of America Venezuela (6)	United States of America	China Hong Kong SAR of China Japan New Zealand United States of America Venezuela (6)	United States of America	United States of America
45	SAMBO	Cambodia Japan Viet Nam (3)	Viet Nam	Cambodia Japan Viet Nam (3)	Viet Nam	Viet Nam
46	SANDY	Australia China New Zealand Philippines Republic of Korea United Kingdom (6)	New Zealand	Australia China Republic of Korea United Kingdom (4)	United Kingdom	United Kingdom
47	SCOTT	Australia Japan Republic of Korea United States of America (4)	Australia	Australia Japan Republic of Korea United States of America (4)	Australia	Australia
48	SEPIA	China Japan Republic of Korea (3)	Japan	China Japan Republic of Korea (3)	Japan	Japan

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
49	SERVE	Australia China Japan United States of America (4)	United States of America	China United States of America (2)	United States of America	United States of America
50	SHELY	Hong Kong SAR of China Japan Philippines United States (4)	United States of America	Hong Kong SAR of China Japan United States (3)	United States of America	United States of America
51	SHINE	Japan Republic of Korea United states of America (3)	United States of America	Japan Republic of Korea United states of America (3)	United States of America	United States of America
52	SIMEL	Brazil Indonesia Peru (3)	Brazil	Brazil Indonesia Peru (3)	Brazil	Brazil
53	SKATE	Hong Kong SAR of China Libya Philippines United States of America (4)	Philippines, United States of America	Hong Kong SAR of China Libya United States of America (3)	United States of America	United States of America
54	SNAKE	Japan Republic of Korea United states of America (3)	United States of America	Japan Republic of Korea United states of America (3)	United States of America	United States of America
55	SPICA	Canada China Japan	Canada	China Japan	China	China

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
		(3)		(2)		
56	STELA	Hong Kong SAR of China Japan Russian Federation United States of America (4)	United States of America, Russian Federation	Hong Kong SAR of China Japan Russian Federation United States of America (4)	United States of America, Russian Federation	Russian Federation
57	SUNNY	Australia Japan Republic of Korea United States of America (4)	United States of America	Australia Japan Republic of Korea United States of America (4)	United States of America	United States of America
58	TAMBA	Indonesia (2) Japan Liberia Mexico (5)	Mexico	Indonesia (2) Japan Liberia (4)	No	To be determined by the 5LNC Duplicate Resolution Rules
59	TANGO	India Lao People's Democratic Republic Pakistan Spain Syrian Arab Republic Thailand Viet Nam (7)	Spain, Canada	Lao People's Democratic Republic Spain Syrian Arab Republic Thailand Viet Nam (5)	Spain, Canada	Spain
60	TANON	Cameroon Nigeria Thailand (3)	Cameroon	Cameroon Thailand (2)	Cameroon	Cameroon
61	THARA	Cambodia Nepal	NO	Cambodia Nepal	NO	To be determined by the 5LNC

5LNC		2018		2019		Priority Administrations
		Published in AIP	Registered in ICARD	Published in AIP	Registered in ICARD	
		Thailand (3)		Thailand (3)		Duplicate Resolution Rules
62	TIGER	Japan Lao People's Democratic Republic Pakistan/India (FIR boundary) Thailand United Kingdom United States of America (6)	Thailand, Pakistan/ India (FIR boundary), United Kingdom, United States of America	Japan Lao People's Democratic Republic Thailand United Kingdom United States of America (5)	Thailand, United Kingdom, United States of America	United Kingdom
63	VARIN	Cambodia Thailand United States of America (3)	NO	Cambodia Thailand United States of America (3)	NO	To be determined by the 5LNC Duplicate Resolution Rules
64	WHITE	Canada Japan United States of America (3)	Canada, United States of America	Canada Japan United States of America (3)	Canada, United States of America	United States of America
65	WOODY	Australia Belgium/Netherlands (FIR boundary) China Japan (4)	Belgium/Netherlands	Australia Belgium/Netherlands (FIR boundary) China Japan (4)	Belgium/Netherlands	Belgium/Netherlands

Regional Implementation Status of AIM Performance Expectations

Date Last Amended: July 11, 2019

	1				Phase 1									Phase 2						Phase 3			
	1a	1b	1c	1d	2	3	4	5	6	7	8	9	10	11	12	13	14			15	16	17	18
																	14a	14b	14c				
Afghanistan	0%	0%	0%	0%	0%	0%	40%	0%	30%	0%	0%	0%	0%	0%	30%	0%	0%	0%	50%	0%	0%	0%	
Australia	100%	100%	100%	100%	100%	100%	80%	50%	70%	80%	100%	70%	0%	0%	100%	80%	50%	60%	0%	50%	0%	0%	30%
Bangladesh	0%	100%	0%	0%	0%	0%	0%	0%	80%	50%	0%	60%	0%	0%	0%	60%	0%	60%	0%	50%	0%	0%	0%
Bhutan	0%	50%	0%	0%	0%	0%	40%	0%	60%	70%	0%	100%	0%	0%	10%	10%	0%	90%	100%	30%	0%	0%	40%
Brunei Darussalam	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cambodia	0%	0%	0%	0%	0%	50%	40%	0%	30%	10%	0%	70%	0%	0%	10%	0%	0%	0%	30%	0%	0%	0%	
China	100%	100%	100%	100%	0%	100%	100%	100%	30%	100%	100%	70%	0%	0%	100%	10%	0%	0%	100%	0%	0%	20%	
Hong Kong, China	100%	100%	100%	50%	0%	100%	100%	50%	80%	50%	100%	70%	0%	100%	100%	100%	100%	30%	100%	0%	0%	40%	
Macao, China	100%	100%	100%	100%	0%	100%	100%	100%	50%	0%	100%	70%	0%	50%	50%	50%	0%	0%	80%	0%	0%	0%	
Cook Islands	0%	100%	0%	0%	0%	0%	100%	0%	30%	0%	0%	70%	0%	0%	100%	0%	0%	0%	50%	0%	0%	0%	
DPR Korea	100%	100%	50%	100%	0%	0%	100%	100%	80%	100%	100%	70%	0%	100%	100%	100%	30%	50%	100%	90%	0%	0%	60%
Fiji	0%	100%	0%	0%	0%	0%	100%	0%	30%	0%	0%	70%	0%	0%	100%	100%	0%	100%	0%	50%	0%	20%	
India	100%	100%	100%	100%	0%	100%	100%	100%	80%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%	0%	0%	20%	
Indonesia	100%	100%	100%	100%	0%	50%	100%	100%	50%	100%	100%	70%	0%	100%	0%	60%	50%	50%	30%	50%	0%	30%	
Japan	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%	70%	0%	100%	100%	100%	60%	0%	100%	0%	0%	40%	
Kiribati	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Lao PDR	100%	100%	100%	100%	0%	100%	0%	0%	0%	30%	0%	30%	0%	0%	20%	0%	0%	30%	0%	0%	0%	0%	
Malaysia	100%	100%	100%	50%	0%	100%	50%	50%	100%	100%	100%	70%	0%	50%	100%	100%	60%	60%	50%	100%	0%	0%	50%
Maldives	100%	80%	50%	100%	0%	100%	50%	50%	60%	50%	100%	70%	0%	50%	60%	0%	0%	0%	50%	0%	0%	0%	
Marshall Islands	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Micronesia	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Mongolia	100%	100%	100%	100%	0%	100%	100%	50%	100%	100%	100%	100%	0%	50%	100%	100%	100%	100%	100%	0%	0%	60%	
Myanmar	100%	100%	100%	100%	0%	100%	0%	100%	30%	100%	100%	70%	0%	50%	50%	100%	100%	100%	100%	0%	0%	100%	
Nauru	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Nepal	100%	100%	50%	50%	0%	100%	0%	100%	30%	50%	100%	80%	0%	0%	0%	0%	50%	50%	40%	0%	0%	10%	
New Zealand	100%	100%	100%	100%	0%	100%	50%	100%	80%	100%	100%	70%	0%	50%	100%	90%	100%	80%	20%	50%	0%	0%	
Pakistan	100%	100%	100%	100%	0%	100%	100%	100%	80%	100%	100%	70%	0%	50%	100%	100%	80%	100%	80%	80%	0%	60%	
Palau	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	
Papua New Guinea	50%	100%	50%	50%	0%	100%	50%	50%	30%	50%	0%	30%	0%	50%	50%	30%	0%	0%	0%	0%	0%	0%	
Philippines	0%	100%	0%	0%	0%	50%	100%	50%	60%	50%	50%	30%	0%	50%	50%	100%	0%	0%	0%	30%	0%	0%	
Republic of Korea	100%	100%	50%	100%	0%	50%	50%	100%	80%	100%	100%	80%	0%	100%	100%	80%	100%	60%	50%	100%	0%	80%	
Samoa	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%	0%	70%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	
Singapore	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%	70%	0%	100%	100%	100%	100%	100%	100%	0%	0%	60%	
Solomon Islands	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%	0%	70%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Sri Lanka	100%	100%	100%	100%	0%	100%	40%	50%	50%	40%	100%	70%	0%	50%	50%	50%	40%	40%	30%	80%	0%	30%	
Thailand	100%	80%	50%	100%	0%	50%	100%	100%	40%	20%	100%	50%	0%	100%	100%	20%	20%	20%	60%	0%	0%	20%	
Timor Leste	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Tonga	0%	100%	0%	0%	0%	0%	0%	0%	30%	0%	0%	70%	0%	0%	100%	0%	0%	0%	50%	0%	0%	0%	
Vanuatu	0%	0%	0%	0%	0%	0%	0%	0%	30%	0%	0%	70%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	
Viet Nam	100%	100%	100%	100%	0%	100%	100%	50%	60%	100%	50%	70%	0%	50%	100%	80%	70%	50%	30%	90%	0%	20%	
USA	100%	100%	100%	100%	0%	100%	50%	50%	80%	100%	100%	40%	0%	50%	50%	60%	100%	100%	100%	0%	0%	90%	
France	0%	100%	0%	0%	0%	0%	0%	0%	80%	0%	0%	100%	0%	0%	100%	100%	0%	0%	80%	0%	0%	10%	

54% 69% 48% 50% 0% 51% 49% 43% 48% 46% 50% 57% 0% 33% 53% 45% 31% 37% 24% 54% 0% 0% 21%

Phase 1

1 Developed policy and enacted primary legislation and supporting regulations for Annex 4 and Annex 15 SARPS, and PANS-AIM Procedures including:

1a establishment of an organizational structure for the safety oversight of aeronautical information service providers;

1b requirements for monitoring of differences from Annex 4 and Annex 15 SARPS;

1c Requirements for aeronautical information/data originators;

1d Requirement for AIS quality management systems and processes to be established by all entities in the end-to-end AIS data chain.

2 Ensured National ATM Plans include implementation planning for each of the performance expectations of the Regional Plan for Collaborative AIM.

3 Established AIS either as a separate entity within, or separated from the civil aviation administration.

4 Developed competency requirements for AIS personnel, including English language proficiency requirements, supported by a program of regular performance assessment.

5 Established regular programs of engagement with all stakeholders.

6 Established quality management processes for aeronautical information.

7 Established formal agreements between AIS providers and aeronautical data originators.

8 Provided full access to relevant ICAO Annexes and Documents to all personnel having responsibility for the reception, management, publication and/or distribution of aeronautical information and aeronautical data.

9 Ensured compliance of all aeronautical products with common reference systems WGS-84, MSL/EGM-96 and UTC

Phase 2

10 Adapted policy, primary legislation and supporting regulations to support digital data sets of aeronautical information and associated products

11 Adapted training, competency and performance assessment of AIS personnel for digital data sets and eAIP

12 Implemented and maintained quality management systems encompassing all functions of the AIS

13 Established and maintained digital databases of aeronautical information (PANS-AIM Appendix 1)

14 Managed terrain, obstacle and aerodrome mapping data through the establishment of:

14a a terrain database, from which terrain data sets conforming with Annex 15 Section 5.3.3.3 may be generated

14b an obstacle database, from which obstacle data sets conforming with Annex 15 Section 5.3.3.4 may be generated

14c an aerodrome mapping database, from which aerodrome mapping data sets conforming with Annex 15 Section 5.3.4 may be generated

15 Implemented internet-accessible electronic AIP generated from digital database of aeronautical information

Phase 3

16 Adapted policy, primary legislation and supporting regulations to support automated exchange of aeronautical data

17 Adapted competency development and performance assessment of AIS personnel to support the automated exchange of aeronautical data and production of electronic charts and digital NOTAM.

18 Commenced aeronautical information exchange through digital data sets, digital NOTAM, integrated briefing and electronic charts