International Civil Aviation Organization

The Third Meeting of the South Asia, Indian Ocean and Southeast Asia ATM Coordination Group (SAIOSEACG/3)

Bangkok, Thailand, 16 – 19 April 2024

Agenda Item 6: ATM Contingency Plans and Search and Rescue

ASIA/PACIFIC SEARCH AND RESCUE UPDATE

(Presented by the Secretariat)

SUMMARY

This paper presents an update on Search and Rescue matters related to the Asia/Pacific Region, as discussed by the Asia/Pacific Search and Rescue Working Group.

1. INTRODUCTION

1.1 The Eighth Meeting of the Asia/Pacific Regional Search and Rescue Work Group (APSAR/WG/8) was held from 22 to 25 May 2023 at the Kotiate Wing of the ICAO Asia and Pacific Regional Office, Bangkok, Thailand.

1.2 There were 60 participants registered for the meeting from 20 Administrations and one international organization including Australia, Brunei Darussalam, Cambodia, China, Hong Kong China, Fiji, France (New Caledonia), India, Indonesia, Japan, Malaysia, Maldives, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States of America, Viet Nam, Cospas-Sarsat Programme, and ICAO.

1.3 All meeting documentation for APSAR/WG/8, including the final report of the meeting, may be found on the dedicated meeting web-page at:

https://www.icao.int/APAC/Meetings/Pages/2023-APSAR-WG8.aspx

2. DISCUSSION

Global SAR Update

Outcomes of the ICAO/IMO Joint Working Group Meeting

2.1 USA provided an overview of the outcomes of the Twenty-Ninth Meeting of the ICAO/International Maritime Organization (IMO) Joint Working Group on Harmonization of Aeronautical and Maritime Search and Rescue (ICAO/IMO JWG-SAR), which was held in London, United Kingdom, from 17 to 21 October 2022.

2.2 It was noted that the APSAR/WG had a long history of providing submissions to the ICAO/IMO JWG-SAR, as supported by the regional performance expectation in element 7.13 of the Asia/Pacific Regional SAR Plan. The Asia/Pacific Region was represented at JWG-SAR by two aeronautical SAR experts (Australia and Singapore) and three maritime experts (China, New Zealand and USA). Participation in the JWG-SAR by aeronautical and maritime experts from a broad

geographical spread was strongly encouraged.

ICAO Update on the LADR

2.3 ICAO provided an update on the Location of an Aircraft in Distress Repository (LADR), which would support the Autonomous Distress Tracking (ADT) Standards in Annex 6 Part I. The LADR was intended to meet the requirements for information sharing as part of the Global Aeronautical Distress and Safety System (GADSS). The GADSS concept of operations and the functional specifications for the LADR were available at https://www.icao.int/safety/globaltracking.

2.4 Noting that it was important that stakeholders were able to receive data on aircraft potentially in distress, the meeting was informed that the new ICAO Doc 10165 – GADSS Manual should be published later in 2023, and would provide greater detail on how stakeholders would work together using the LADR. Testing later in 2023 and early in 2024 in the North Atlantic (NAT) Region would serve to develop a model for other ICAO Regions.

2.5 It was also stressed in discussion that there were no fundamental changes to existing SAR alerting and coordination procedures between Air Traffic Service Units (ATSUs) and RCCs complying with the provisions of Annex 11 and Annex 12. ATSUs would receive ADT notifications distributed by the LADR and then take steps to assess the information and notify the RCC, in the same way that other incidental information or reports of in-flight emergencies were handled. Normally an Alert Phase (ALERFA) would be declared pending communication checks and confirmation with the flight crew. ATSU and RCC staff needed to be aware of the new ADT system, its capabilities and limitations.

Status of the COSPAS-SARSAT Programme

2.6 The meeting was provided with a status report on the Cospas-Sarsat system, including system operations, significant developments, space and ground segments, beacons, false alerts, reporting by RCCs on use of the distress alert data provided, and results of Cospas-Sarsat Mission Control Centres (MCCs) – SAR Point of Contact (SPOC) communication tests.

2.7 Since September 1982, the Cospas-Sarsat System has provided assistance in rescuing at least 57,413 persons in 17,663 SAR events (**Figure 1**). The distribution of all SAR events for 2021, the latest year for which statistics had been compiled and reviewed, was 18% for aviation, 45% for land and 37% for maritime (**Figure 2**).

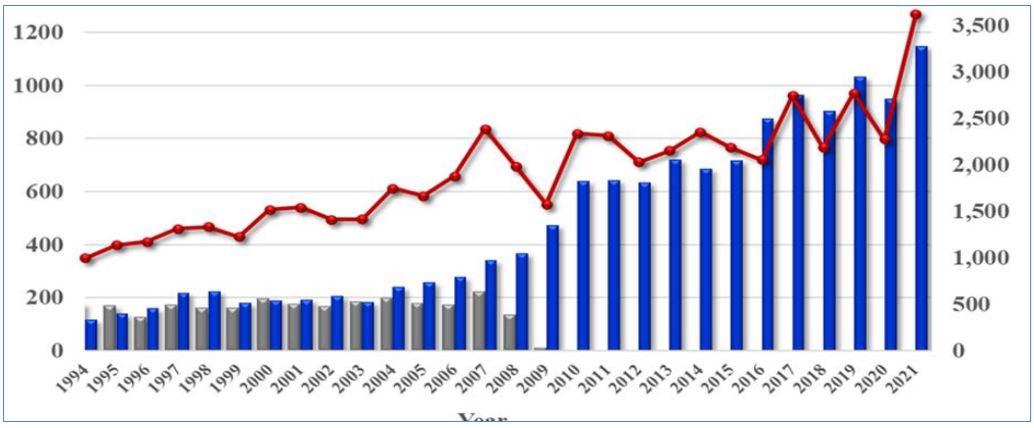

Figure 1: SAR Events with the Assistance of Cospas-Sarsat Data (Jan. 1994 - Dec. 2021)

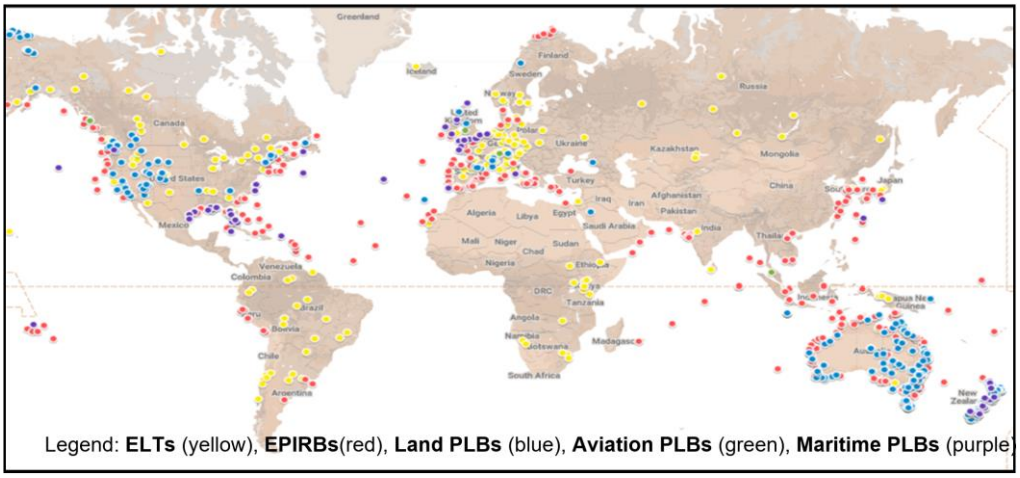

Figure 2: 2021 Geographic Distribution of SAR Events

GADSS, the ELT(DT), and a Model Template/Letter for Communication with SAR Authorities

2.8 Cospas-Sarsat presented information on deployment of Emergency Locator Trannsmitter s – Distress Tracking (ELT(DT)s), developed to support GADSS. Noting the postponement of the ICAO requirement for ADT equipage to 1 January 2025, the meeting was informed that several major aircraft manufacturers had indicated they anticipated delivering aircraft equipped with ELT(DT)s as early as March 2023. Cospas-Sarsat had declared full operational capability (FOC) for ELT(DT)s designed using first generation beacon technology, and work was in progress towards declaring FOC for ELT(DT)s with design based on second-generation beacon technology.

2.9 The meeting was informed that ELT(DT)s would activate according to a number of criteria, in most cases requiring a SAR response if not corrected. However, their design had been engineered to have a very low false alarm rate, especially when compared to ELTs. If an ELT(DT) was triggered in flight it was likely to be an authentic alert. The four primary activation triggers were:

- Unusual attitude;
- Unusual speed;
- Collision with terrain or water; or
- Total loss of thrust/propulsion on all engines.

2.10 The minimum specification for criteria used to detect an in-flight aircraft distress event and trigger the transmission of information were available in EUROCAE Doc ED-237.

2.11 Similar to 406 MHz distress beacons, ELT(DT)s were configured to include the ICAO Aircraft Address and the aircraft operator's three-letter designator (3LD) in notifications/alerts and, consequently, in the SIT 185 message. The State of registry of the aircraft was decoded by the Cospas-Sarsat system from the Aircraft Address. ICAO noted that there were cases where aircraft imported to some States did not have their ATC transponder equipment correctly configured with the new Aircraft Address that must be assigned by the State of registry, and that the same issue could therefore potentially apply to 406 MHz distress beacons and ELT(DT)s. This matter was raised at the Workshop on ICAO Aircraft Address and Target Identification in Surveillance Data and Flight Plan, held in Bangkok on 6 June 2023.

Asia/Pacific Regional Readiness for Autonomous Distress Tracking

2.12 The Secretariat presented the results of a survey of Asia/Pacific regional readiness for ADT, noting that with the expectation that increased numbers of aircraft equipped with ADT devices would potentially become operational from late 2022, and that ADT alerts would be distributed through the Cospas-Sarsat system and the ICAO LADR (when commissioned), there was an urgent need:

- for effort to be made to improve knowledge of GADSS among regulatory, airline, SAR and Air Navigation Service Provider (ANSP) stakeholders; and
- to promote development of procedures among them in preparation for the likely appearance of ADT, including ELT(DT) before the end of 2022 and increasingly after the applicability date.

2.13 The meeting considered that the survey questions/checklist of considerations was in need of update, particularly in the context of the delayed availability of the LADR. The meeting agreed that a modified survey that did not include an expectation of development of procedures for use of the LADR should be circulated to remind States of the need to act now to prepare for the receipt of ELT(DT) alerts and notifications, and to gauge any improvement in State readiness.

Procedures for Reception and Handling of ADT Notifications Received

2.14 The USA provided guidance and recommended procedures for RCC reception and handling of ADT notifications received from aircraft in flight that may be in distress. It was noted that ICAO considered the ADT device as providing a notification, not a distress alert, initially handled as an Alert Phase unless other information indicated otherwise. The LADR would inform the three key stakeholders, initially by email, about the availability of that information. Stakeholders were expected to access that information in the LADR.

2.15 The ADT device selected by major aircraft manufacturers (Airbus and Boeing) was the ELT(DT), which would send a 406 MHz Cospas-Sarsat-formatted message to the RCC at the same time as it sent an ADT notification to the LADR. The message to the RCC would be clearly titled ELT DISTRESS TRACKING, and would contain required ADT information plus other optional information.

2.16 A number of RCC procedures currently being considered for response to distress messages from an aircraft in flight were provided.

2.17 The USA and ICAO Europe/North Atlantic (EUR/NAT) Regional Office, in coordination with ICAO Headquarters, were developing the NAT Autonomous Distress Tracking Exercise with LADR (NAT DISTREX). The goal was testing of new procedures to be in place for ADT and LADR. The procedures were intended to serve as a model for other ICAO Regional Offices to encourage conducting a similar test.

2.18 In response to a query it was confirmed that the Annex 6 requirement for fitment of ADT devices from 1 January 2025 only applied to aircraft of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness was first issued on or after 1 January 2024.

iPhone Emergency Satellite Communications and Automatic Crash Detection Function – Impact on SAR and ANS Units

2.19 The meeting was provided with an overview of new capabilities on certain smartphones that could impact SAR and ATSUs. In 2022 Apple had released a software update to enable its iPhone 14 users to text emergency services when out of cellular and Wi-Fi coverage. Android smartphones

would have a similar capability in late 2023.

2.20 The iPhone 14 offered ‘emergency SOS’ via satellite to send text messages to emergency services, and automatic ‘crash detection’ using local cellular connection or Wi-Fi calling with an internet connection via the Apple Watch or iPhone.

2.21 The new capabilities in these smartphones and the growing number of commercial satellite systems and devices which could provide the communications network were examples of disruptive communications alerting systems that SAR services would face from new devices that were not properly regulated or interfaced with reliable and standardized message distribution systems. However, SAR services must be adaptable and make use of credible technology used by persons in distress. A good example was that the mobile telephone was often used in coastal waters rather than the internationally established radio-telephone channel 16 VHF-FM.

2.22 The meeting was informed that SAR services must adapt and evolve as new technology offered the potential to improve their performance. However, such technology and devices were often not properly regulated or interfaced with reliable message distribution systems. These new capabilities fell under the responsibility of national authorities to regulate and guide the functional design of the equipment and its operation to provide consistent and common capability for users and to ensure SAR services were not negatively impacted.

Regional Air Navigation Plan Update

2.23 The Secretariat provided APSAR/WG/8 with an update on progress on the definition of Search and Rescue Regions (SRRs), as presented in a separate working paper to this meeting.

Regional SAR Status

Regional SAR Status

2.24 The meeting was provided with an update of SAR implementation status in the APAC Region. The ICAO APAC Regional Office maintained records of the information provided from its accredited Administrations regarding SAR status, in order to report to APANPIRG.

2.25 The 2020 revision of the USOAP CMA Protocol Questions (PQs) had resulted in the total number relating to SAR being reduced from 26 to 16.

2.26 An analysis of the revised 16 Universal Safety Oversight Audit Programme (USOAP) SAR-related Protocol Questions in May 2022 indicated that the overall Effective Implementation (EI) for SAR had decreased when compared to the previous assessment. ICAO was still processing the transition of the revised USOAP Protocol questions on the USOAP website to reflect the changes, and the states would have been made aware of any corresponding changes to the PQ results. Regional average EI scores for SAR related PQs for the last four years (2020 and 2021 – 26 PQs, 2022 and 2023 – 16 merged PQs) were:

- May 2020 – 60%
- April 2021 – 59%
- May 2022 – 55%
- May 2023 – 55%

2.27 From the PQ analysis there was still weakness in the major areas of SAR indicated by USOAP:

- CE-3: 7.517 (26%) – [SAR service provider] SAR coordination agreements;
- CE-4: 7.499 (29%) – [SAR regulatory oversight] Implementation of training plan;
- CE-7: 7.505, 7.543 and 7.545 (38%, 47% and 49%) – [SAR regulatory oversight] effective regulatory surveillance oversight of SAR, Detailed Plans of SAR operations and checks that SAR operational personnel have regular training, including the conduct of SAREX; and
- CE-8: 7.507 (38%) – [SAR regulatory oversight and service provider] mechanism to eliminate SAR regulatory deficiencies.

Regional SAR Plan Implementation Status

2.28 The following 25 APAC Administrations submitted SAR Plan implementation status reports in 2023:

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

2.29 **Figure 3** illustrates the implementation status of the performance expectations of the SAR Plan as at 23 August 2023.

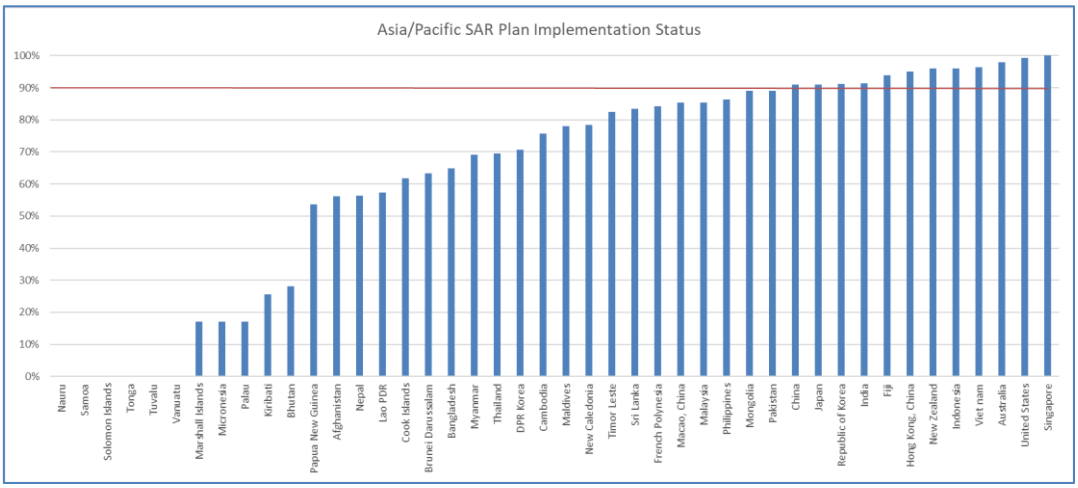

Figure 3: Asia/Pacific SAR Plan Implementation Status as at 23 August 2023

2.30 Regional policy established that States below 90% implementation would be considered to have an APANPIRG ANS Deficiency recorded for SAR implementation. Since APSAR/WG/7 (2022), there were no changes. 12 Administrations that had reported implementation of 90% or more:

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

2.31 **Attachment A** provides an overview of the SAR implementation status of each APAC Administration at the time of the APSAR/WG/8 meeting.

2.32 A revised SAR implementation reporting form presented by the Secretariat (**Flimsy 2**), drew the attention of the meeting to element 7.2 i) of the Regional SAR Plan, which had been included in its latest update to version 4.0 in 2022:

7.2 All States should:

i) establish arrangements for situations where RCCs need to conduct SAR operations (in accordance with Annex 12) at the same time as the accident investigation authority needs to conduct search and recovery operations (in accordance with Annex 13).

2.33 An associated reporting item was included in the revised SAR implementation reporting form. It was proposed that, while the implementation of this element would be tracked in reports submitted to ICAO, it would not be included in the implementation status scores until 2025, in order to mitigate against the potential reduction of scores in the nearer term.

2.34 Responding to a request for information on how to determine the timing of termination of a SAR operation, the meeting was informed that each case required individual assessment by the RCC and other participating State authorities. The IAMSAR Manual contained some guidance on considerations including, for example, review of the adequacy of the search and search area coverage, and medical advice on survivability.

ICAO EUR/APAC SAR Workshop 2024

2.35 The ICAO EUR and APAC Search and Rescue (SAR) Workshop is scheduled from 2 to 4 October 2024 in Baku, Azerbaijan.

2.36 The primary objectives of this workshop are to enhance collaboration between the European and Asia/Pacific Regions on SAR implementation matters and to address States' preparedness in the implementation of the Global Aeronautical Distress and Safety System (GADSS) Autonomous Distress Tracking (ADT), with a planned tabletop exercise on ADT and Location of an Aircraft in Distress Repository (LADR).

2.37 The provisional agenda for the workshop is as follows:

Day 1: Joint meeting between the EUR SAR Task Force and APAC SAR Working Group (implementation of regional/global SAR documents, SAR oversight, regional challenges, significant SAR-related events (e.g. SAR operations, exercises), SAR regional cooperation, etc.).

Day 2: SAR Workshop – GADSS ADT/LADR preparedness (regional preparedness in the implementation of GADSS ADT, review of ICAO provisions related to LADR and GADSS, discussions related to GADSS, ELT (DT), etc.).

Day 3: SAR Workshop – APAC/EUR GADSS ADT/LADR tabletop exercise, ICAO NAT DISTREX PT exercise outcomes, de-brief of the APAC/EUR exercise, and the closing of the workshop.

2.38 The relevant information is provided on the meeting web page at icao.int/APAC/Meetings/Pages/2024-ICAO-EUR-APAC-SAR-Workshop.aspx.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) note the update on the LADR, and respond to the recirculated survey on readiness for ADT;

c) note the emergence of new capabilities in personal devices that may impact SAR and ATSUs;

d) note the implementation status of the performance expectations of the Regional SAR Plan, and urge States to provide *Asia/Pacific SAR Plan* status reports on their compliance with the *Asia/Pacific SAR Plan* reporting elements;

e) note the likelihood of increasing numbers of aircraft equipped with ADT devices becoming operational, and the expected distribution of ADT alerts;

f) urge States/Administrations to participate in the ICAO EUR/APAC SAR Workshop 2024; and

g) discuss any relevant matters as appropriate.

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REGIONAL SAR PLAN MONITORING AND REPORTING FORM
SAR PERFORMANCE INDICATORS

Following is a bank of indicators based on the Asia/Pacific Plan's performance improvement section (which should be read in conjunction with these questions), that can be used to assess whether an administration is either compliant or not and to internally evaluate their implementation status of the Asia/Pacific SAR Plan. Using the drop down menu for each of the 41 elements, please indicate implementation status with either 0 (not implemented), or 0.5 (50% implemented - note - other partial implementation may be indicated such as 0.1 = 10%) or 1 (fully implemented).

	Indicate whether your Admininistration has:	Afghanistan	Australia	Bangladesh	Bhutan	Brunei Darussalam	Cambodia	China	Hong Kong, China	Macao, China	Cook Islands	DPR Korea	Fiji	French Polynesia
1	Enacted legislation that incorporates or is aligned to applicable international Conventions	1	1	1	1	1	1	1	1	0.5	0.1	1	0.5	1
2	Unless delegated, established an entity that provides H24, SAR services within its area of responsibility/SRR	1	1	1	0.5	1	0.5	1	1	1	1	1	1	1
3	Established a national SAR committee	1	1	0	0.5	1	1	1	1	1	0.1	1	1	1
4	Empowered SAR Mission Coordinators with the authority to adequately carry out their responsibilities	1	1	1	0.5	1	0.5	1	1	1	1	1	1	1
5	Established an Administrative Single Point of Contact for SAR (ASPOCS) for non-urgent, administrative matters	1	1	1	1	1	1	1	1	0.5	1	1	1	1
6	Conducted studies to integrate aviation and maritime SAR, and as far as practicable, civil and military activities	1	1	1	0	0.5	1	1	1	0.5	1	0.5	1	1
7	Conducted studies to align, as far as practicable, aeronautical and maritime SRRs, and SRRs and FIRs	1	1	1	0	0.5	0.5	1	1	0.5	1	0.5	1	1
8	Established a single State SAR Plan	1	1	1	0.5	1	1	1	1	1	0.5	1	1	1
9	Established aerodrome emergency plans that provide for co-operation and co-ordination with RCCs	0.5	1	1	1	1	1	1	1	1	1	1	1	1
10	Established SAR agreements with States having adjoining SRRS or FIRs	0.5	0.95	0	0.5	1	1	0.5	0.5	1	0.9	0.5	0.5	0
11	Provided up to date cross-border information on SAR capability to adjoining States	0	0.9	1	0	1	1	0.8	1	1	0.1	0.5	0.5	1
12	Pre-arranged procedures for cross-border SAR responses	1	0.95	0	0.5	1	1	0.6	1	1	1	0.5	0.5	0
13	Established RCC plans for response to Mass Rescue Operations (MROs) integrated with national disaster plans	0.5	0.9	0.5	0	1	1	1	1	1	1	1	1	0.5
14	Established operational plans and procedures for SRUs, provision of support, communication and reporting	0.5	1	1	0.5	1	1	1	1	1	0.5	1	1	1
15	Established SAR Alerting procedures which are tested, integrated and include civil/military protocols	0.5	1	0.5	0	1	1	1	1	1	1	1	1	1
16	Provided a fully equipped RCC of sufficient size with adequate provision for operational positions and human factors	0.5	1	1	0.5	0.5	0.5	1	1	1	1	0.5	1	1
17	Provided adequate supervisory ATC resources to allow timely SAR alerts and information to RCCs	0	1	1	0.5	1	1	1	1	1	0.5	1	1	1
18	Provided sufficient RCC staffing	0	1	1	0.5	0.5	0.5	1	1	1	1	1	1	1
19	Provided a sufficient number of trained specialist RCC officers including SMCs and A/SMCs	0	1	0.1	0.5	0.5	0.5	0.8	1	1	1	1	1	1
20	Availability of a pool of RCC support staff who are familiar with RCC operations, but not trained as coordinators	0	1	0.5	0.5	1	1	1	1	1	1	0.5	1	1
21	Developed SAR personnel position descriptions detailing responsibilities and eligibility criteria	1	1	1	0.5	1	0.5	1	1	1	1	1	1	1
22	Developed a comprehensive training programme that includes SAR training for SAR Coordinators and SRU staff	0.5	1	1	0.5	0.5	0.5	1	1	1	0.1	1	1	1
23	Facilitated RCC staff to be proficient in the English language	1	1	1	0.5	1	0.5	1	1	1	1	0.5	1	1
24	Facilitated a programme of regular liaison visits between relevant RCCs, ATC units and airline operating centres	0	0.8	0.5	0.5	0.5	0.5	0.7	1	1	0	1	1	1
25	Established additional oceanic SAR capability as far as practicable to ensure a timely and adequate SAR response	1	1	1	0	0	0.5	1	1	1	1	0	1	1
26	Established sufficient SRU capabilities (crews, availability, military assets, communications, authority, etc.)	0.5	1	1	0	0.5	1	0.8	1	1	0.5	0.5	1	1
27	Established procedures and necessary infrastructure to coordinate distress beacon alert responses	0	1	0.5	0	0.5	1	1	1	1	1	0.5	1	1
28	Established a reliable distress beacon registration system	0	1	1	0	0	0.5	1	1	1	0	0.5	1	1
29	Planned and prepared for the implemention of next generation beacons	0	1	1	0	0	0.5	1	0.5	0.5	1	0.5	1	0.5
30	Established an appropriate nationwide means of disposal for old distress beacons	0	1	1	0	0	1	1	1	0	0	0.5	1	0
31	Established contingency facilities, or procedures for the temporary delegation of SAR to another body or State	1	1	0	0	0	1	1	1	1	0	0	1	0.5
32	Established a centralised information source publishing all AIP information required on SAR	1	0.9	1	0	1	0.5	1	1	0.5	1	1	1	1
33	Established an Internet-based SAR information sharing system	1	1	0	0	0	1	0.5	1	0.5	0	0.5	1	0.5
34	Established systems for the maximum practicable cooperation between State entities for information when required	1	1	0	0	0.5	1	1	1	1	1	1	1	1
35	Developed and maintained a current, comprehensive electronic list of State SAR Facilities, SAR Equipment, and SRUs	0.5	1	0	0	1	0.5	0.8	0	1	0	0.5	1	1
36	Established an Internet-based SAR Library, or cooperate by contributing to an Internet-based Asia/Pacific resource	0.5	1	0	0	0	0.5	0.6	1	0	1	0	0.5	0.5
37	Provided each RCC and SAR Authority with ready access to a current copy of SAR reference documents	1	1	1	0	0.5	0.5	0.8	1	1	1	1	1	1
38	Conducted regular SAREX to test and evaluate coordination procedures, data and information sharing and SAR responses	0.5	0.9	0.5	0	0.5	0.5	1	1	1	0	0.5	1	1
39	Implemented SAR System Improvement and Assessment measures, including Safety Management and QA systems	0	0.9	0	0	0.5	1	0.6	1	1	0	0.5	1	1
40	Conducted an annual or more frequent analysis of their current State SAR system to identify specific gaps in capability	0.5	1	0.5	0.5	0.5	0.5	1	1	1	0	0.5	1	1
41	Conducted SAR promotional programs	0	1	0	0	0	0.5	0.8	1	0.5	0	1	1	0
	Total (of 41)	**23.0**	**40.2**	**26.6**	**11.5**	**26**	**31.0**	**37.3**	**39.0**	**35.0**	**25.3**	**29**	**38.5**	**34.5**
	%	**56%**	**98%**	**65%**	**28%**	**63%**	**76%**	**91%**	**95%**	**85%**	**62%**	**71%**	**94%**	**84%**

***2023 Update - Higher than previous year**
***2023 Update - Less than previous year**
***2023 Update - No Change**
* Carried over from pre-2019 reporting process. No reports against Regional SAR Plan Monitoring and Reporting Form Received

REGIONAL SAR PLAN MONITORING AND REPORTING FORM
SAR PERFORMANCE INDICATORS

Following is a bank of indicators based on the Asia/Pacific Plan's performance improvement section (which should be read in conjunction with these questions), that can be used to assess whether an administration is either compliant or not and to internally evaluate their implementation status of the Asia/Pacific SAR Plan. Using the drop down menu for each of the 41 elements, please indicate implementation status with either 0 (not implemented), or 0.5 (50% implemented - note - other partial implementation may be indicated such as 0.1 = 10%) or 1 (fully implemented).

	Indicate whether your Admininistration has:	India	Indonesia	Japan	Kiribati	Lao PDR	Malaysia	Maldives	Marshall Islands	Micronesia	Mongolia	Myanmar	Nauru	Nepal
1	Enacted legislation that incorporates or is aligned to applicable international Conventions	1	1	1	0	1	1	1	0	0	1	1		0.7
2	Unless delegated, established an entity that provides H24, SAR services within its area of responsibility/SRR	1	1	1	0.5	1	1	1	1	1	1	1		0.5
3	Established a national SAR committee	1	1	1	1	1	1	1	0	0	1	1		1
4	Empowered SAR Mission Coordinators with the authority to adequately carry out their responsibilities	1	1	1	0.5	1	1	0.5	0	0	1	1		0.5
5	Established an Administrative Single Point of Contact for SAR (ASPOCS) for non-urgent, administrative matters	1	1	1	1	1	1	1	0	0	1	1		1
6	Conducted studies to integrate aviation and maritime SAR, and as far as practicable, civil and military activities	1	1	1	0	0.5	1	1	0	0	1	1		1
7	Conducted studies to align, as far as practicable, aeronautical and maritime SRRs, and SRRs and FIRs	1	1	1	0	0.5	0	0.5	0	0	0	1		0.5
8	Established a single State SAR Plan	1	1	0.8	0.5	1	1	1	0	0	1	0.5		0.2
9	Established aerodrome emergency plans that provide for co-operation and co-ordination with RCCs	1	1	1	1	0.5	1	0	0	0	1	0.5		0.5
10	Established SAR agreements with States having adjoining SRRS or FIRs	0.5	0.9	0.5	0.5	0.5	0.5	0.5	1	1	1	0.5		0
11	Provided up to date cross-border information on SAR capability to adjoining States	0.5	1	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0		0.5
12	Pre-arranged procedures for cross-border SAR responses	0.5	1	0.5	0.5	0.5	0.5	0.5	1	1	1	1		0
13	Established RCC plans for response to Mass Rescue Operations (MROs) integrated with national disaster plans	1	1	1	0	0	1	1	0	0	0.5	0.5		0.5
14	Established operational plans and procedures for SRUs, provision of support, communication and reporting	1	1	0.5	1	1	1	1	0	0	1	1		0.5
15	Established SAR Alerting procedures which are tested, integrated and include civil/military protocols	1	1	1	0	0.5	1	1	0	0	1	0.5		0.8
16	Provided a fully equipped RCC of sufficient size with adequate provision for operational positions and human factors	1	1	1	0	1	1	1	0	0	1	1		0.7
17	Provided adequate supervisory ATC resources to allow timely SAR alerts and information to RCCs	1	1	1	0.5	1	1	1	0	0	1	1		1
18	Provided sufficient RCC staffing	1	1	1	0.5	1	1	1	0	0	1	1		0.5
19	Provided a sufficient number of trained specialist RCC officers including SMCs and A/SMCs	1	1	1	0	0.5	1	1	0	0	1	1		0.3
20	Availability of a pool of RCC support staff who are familiar with RCC operations, but not trained as coordinators	1	1	1	0	0.5	1	1	0	0	0.5	1		0.5
21	Developed SAR personnel position descriptions detailing responsibilities and eligibility criteria	1	1	1	0.5	0.5	1	1	0	0	1	0.5		0.4
22	Developed a comprehensive training programme that includes SAR training for SAR Coordinators and SRU staff	1	1	0.8	0.5	0.5	1	0.5	0	0	1	1		0.7
23	Facilitated RCC staff to be proficient in the English language	1	1	1	0.5	1	1	1	1	1	0.5	1		0
24	Facilitated a programme of regular liaison visits between relevant RCCs, ATC units and airline operating centres	1	1	1	0	0.5	0.5	0	0	0	0.5	1		0.5
25	Established additional oceanic SAR capability as far as practicable to ensure a timely and adequate SAR response	1	1	1	0	1	1	1	1	1	0	1		1
26	Established sufficient SRU capabilities (crews, availability, military assets, communications, authority, etc.)	1	1	1	0	0.5	1	1	0	0	1	1		0.5
27	Established procedures and necessary infrastructure to coordinate distress beacon alert responses	1	1	1	0	1	1	1	1	1	1	1		0.7
28	Established a reliable distress beacon registration system	1	1	1	0	1	0.5	0.5	0	0	1	0.5		1
29	Planned and prepared for the implemention of next generation beacons	0.5	1	1	0	0.5	0.5	0	0	0	0.5	0		0.4
30	Established an appropriate nationwide means of disposal for old distress beacons	1	0.4	1	0	1	0	0	0	0	0	0		1
31	Established contingency facilities, or procedures for the temporary delegation of SAR to another body or State	0	1	1	0.5	0	1	1	0	0	0	0		0
32	Established a centralised information source publishing all AIP information required on SAR	1	1	1	0	1	1	1	0	0	1	1		1
33	Established an Internet-based SAR information sharing system	0.5	1	0.5	0	0	1	1	0	0	1	0		0.6
34	Established systems for the maximum practicable cooperation between State entities for information when required	1	1	1	0	0	1	0.5	0	0	1	0.5		0.5
35	Developed and maintained a current, comprehensive electronic list of State SAR Facilities, SAR Equipment, and SRUs	1	1	1	0	0	0.5	1	0	0	0	0.5		0.8
36	Established an Internet-based SAR Library, or cooperate by contributing to an Internet-based Asia/Pacific resource	1	0.6	0.5	0	0	1	1	0	0	0	0		0.3
37	Provided each RCC and SAR Authority with ready access to a current copy of SAR reference documents	1	1	1	0	0.5	1	1	0	0	0.5	0		0.5
38	Conducted regular SAREX to test and evaluate coordination procedures, data and information sharing and SAR responses	1	1	0.7	0	0	1	1	0	0	1	1		0.7
39	Implemented SAR System Improvement and Assessment measures, including Safety Management and QA systems	1	0.5	1	0	0	1	0	0	0	0.5	0		0.5
40	Conducted an annual or more frequent analysis of their current State SAR system to identify specific gaps in capability	1	1	1	0	0	1	1	0	0	1	0.5		0.3
41	Conducted SAR promotional programs	1	1	1	0.5	0	0.5	1	0	0	0	0.5		0.5
	Total (of 41)	**37.5**	**39.4**	**37.3**	**10.5**	**23.5**	**35.0**	**32**	**7.0**	**7.0**	**30.0**	**27.5**	**0**	**23.1**
	%	**91%**	**96%**	**91%**	**26%**	**57%**	**85%**	**78%**	**17%**	**17%**	**73%**	**67%**	**0%**	**56%**

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REGIONAL SAR PLAN MONITORING AND REPORTING FORM
SAR PERFORMANCE INDICATORS

Following is a bank of indicators based on the Asia/Pacific Plan's performance improvement section (which should be read in conjunction with these questions), that can be used to assess whether an administration is either compliant or not and to internally evaluate their implementation status of the Asia/Pacific SAR Plan. Using the drop down menu for each of the 41 elements, please indicate implementation status with either 0 (not implemented), or 0.5 (50% implemented - note - other partial implementation may be indicated such as 0.1 = 10%) or 1 (fully implemented).

	Indicate whether your Admininistration has:	New Caledonia	New Zealand	Pakistan	Palau	Papua New Guinea	Philippines	Republic of Korea	Samoa	Singapore	Solomon Islands	Sri Lanka	Timor Leste	Tonga
1	Enacted legislation that incorporates or is aligned to applicable international Conventions	1	1	1	0	1	1	1		1		1		1
2	Unless delegated, established an entity that provides H24, SAR services within its area of responsibility/SRR	1	1	1	1	1	1	1		1		1		1
3	Established a national SAR committee	1	1	1	0	0.5	1	1		1		1		1
4	Empowered SAR Mission Coordinators with the authority to adequately carry out their responsibilities	1	1	1	0	0.5	1	1		1		1		1
5	Established an Administrative Single Point of Contact for SAR (ASPOCS) for non-urgent, administrative matters	1	1	1	0	1	1	1		1		1		1
6	Conducted studies to integrate aviation and maritime SAR, and as far as practicable, civil and military activities	1	1	1	0	1	1	1		1		1		0.5
7	Conducted studies to align, as far as practicable, aeronautical and maritime SRRs, and SRRs and FIRs	0.5	1	1	0	1	0.5	0.5		1		1		0.5
8	Established a single State SAR Plan	1	1	1	0	0	1	0.8		1		1		1
9	Established aerodrome emergency plans that provide for co-operation and co-ordination with RCCs	1	1	1	0	1	1	1		1		1		0.5
10	Established SAR agreements with States having adjoining SRRS or FIRs	0.66	0.9	0	1	0.5	0.8	0.7		1		0.8		1
11	Provided up to date cross-border information on SAR capability to adjoining States	0	1	0	1	0	1	1		1		1		1
12	Pre-arranged procedures for cross-border SAR responses	0	1	0.5	1	0.5	1	1		1		0.8		0.5
13	Established RCC plans for response to Mass Rescue Operations (MROs) integrated with national disaster plans	0	1	0.5	0	0.5	0.8	1		1		1		0.5
14	Established operational plans and procedures for SRUs, provision of support, communication and reporting	1	0.8	1	0	0.5	0.7	0.8		1		0.6		0.5
15	Established SAR Alerting procedures which are tested, integrated and include civil/military protocols	1	1	1	0	0.5	1	1		1		1		1
16	Provided a fully equipped RCC of sufficient size with adequate provision for operational positions and human factors	1	1	1	0	0.5	0.3	1		1		0.5		0.5
17	Provided adequate supervisory ATC resources to allow timely SAR alerts and information to RCCs	1	1	1	0	1	1	1		1		1		0.5
18	Provided sufficient RCC staffing	1	1	1	0	1	0.6	1		1		0.9		0.5
19	Provided a sufficient number of trained specialist RCC officers including SMCs and A/SMCs	1	1	1	0	0.5	0.7	1		1		0.9		0.5
20	Availability of a pool of RCC support staff who are familiar with RCC operations, but not trained as coordinators	1	1	1	0	0.5	1	1		1		1		1
21	Developed SAR personnel position descriptions detailing responsibilities and eligibility criteria	1	1	1	0	0.5	1	1		1		1		0.5
22	Developed a comprehensive training programme that includes SAR training for SAR Coordinators and SRU staff	1	1	1	0	0.5	1	1		1		0.9		1
23	Facilitated RCC staff to be proficient in the English language	1	1	1	1	0.5	1	1		1		1		0.5
24	Facilitated a programme of regular liaison visits between relevant RCCs, ATC units and airline operating centres	0.5	1	1	0	0.5	0.7	1		1		0.7		1
25	Established additional oceanic SAR capability as far as practicable to ensure a timely and adequate SAR response	1	1	1	1	1.0	0.5	1		1		0.8		1
26	Established sufficient SRU capabilities (crews, availability, military assets, communications, authority, etc.)	1	1	1	0	0.5	1	1		1		0.6		1
27	Established procedures and necessary infrastructure to coordinate distress beacon alert responses	1	1	1	1	0.5	1	1		1		1		0.5
28	Established a reliable distress beacon registration system	1	1	1	0	0.5	1	1		1		1		0.5
29	Planned and prepared for the implemention of next generation beacons	0.5	1	1	0	0	0.5	1		1		0.6		0.5
30	Established an appropriate nationwide means of disposal for old distress beacons	0	1	1	0	0	1	0		1		0.5		0
31	Established contingency facilities, or procedures for the temporary delegation of SAR to another body or State	0	0.75	1	0	0.5	0.3	0.8		1		0.4		0.5
32	Established a centralised information source publishing all AIP information required on SAR	1	1	1	0	0.5	1	1		1		1		0.5
33	Established an Internet-based SAR information sharing system	1	0.9	1	0	0.5	1	0.8		1		0		0.5
34	Established systems for the maximum practicable cooperation between State entities for information when required	1	1	1	0	0.5	1	1		1		0.8		1
35	Developed and maintained a current, comprehensive electronic list of State SAR Facilities, SAR Equipment, and SRUs	0.5	0.75	0.5	0	0.5	1	1		1		0.5		0.5
36	Established an Internet-based SAR Library, or cooperate by contributing to an Internet-based Asia/Pacific resource	0	1	1	0	0	0.5	1		1		1		0
37	Provided each RCC and SAR Authority with ready access to a current copy of SAR reference documents	1	1	1	0	1	1	1		1		1		1
38	Conducted regular SAREX to test and evaluate coordination procedures, data and information sharing and SAR responses	1	0.75	1	0	0	0.5	1		1		0.9		1
39	Implemented SAR System Improvement and Assessment measures, including Safety Management and QA systems	1	0.75	0.5	0	0.5	1	0.5		1		0.5		0.5
40	Conducted an annual or more frequent analysis of their current State SAR system to identify specific gaps in capability	1	1	0.5	0	0.5	1	0.5		1		0.8		0.5
41	Conducted SAR promotional programs	0.5	0.75	1	0	0	1	1		1		0.7		1
	Total (of 41)	**32.2**	**39.4**	**36.5**	**7.0**	**22.0**	**35.4**	**37.4**	**0**	**41.0**	**0**	**34.2**	**0**	**28.5**
	%	**78%**	**96%**	**89%**	**17%**	**54%**	**86%**	**91%**	**0%**	**100%**	**0%**	**83%**	**0%**	**70%**

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REGIONAL SAR PLAN MONITORING AND REPORTING FORM
SAR PERFORMANCE INDICATORS

Following is a bank of indicators based on the Asia/Pacific Plan's performance improvement section (which should be read in conjunction with these questions), that can be used to assess whether an administration is either compliant or not and to internally evaluate their implementation status of the Asia/Pacific SAR Plan. Using the drop down menu for each of the 41 elements, please indicate implementation status with either 0 (not implemented), or 0.5 (50% implemented - note - other partial implementation may be indicated such as 0.1 = 10%) or 1 (fully implemented).

	Indicate whether your Admininistration has:	Thailand	Tuvalu	United States	Vanuatu	Viet nam
1	Enacted legislation that incorporates or is aligned to applicable international Conventions	1		1		1
2	Unless delegated, established an entity that provides H24, SAR services within its area of responsibility/SRR	0.8		1		1
3	Established a national SAR committee	1		1		1
4	Empowered SAR Mission Coordinators with the authority to adequately carry out their responsibilities	0.8		1		1
5	Established an Administrative Single Point of Contact for SAR (ASPOCS) for non-urgent, administrative matters	1		1		1
6	Conducted studies to integrate aviation and maritime SAR, and as far as practicable, civil and military activities	1		1		1
7	Conducted studies to align, as far as practicable, aeronautical and maritime SRRs, and SRRs and FIRs	0.8		1		1
8	Established a single State SAR Plan	0.6		1		1
9	Established aerodrome emergency plans that provide for co-operation and co-ordination with RCCs	1		1		1
10	Established SAR agreements with States having adjoining SRRS or FIRs	0.8		0.7		0.5
11	Provided up to date cross-border information on SAR capability to adjoining States	0.7		1		1
12	Pre-arranged procedures for cross-border SAR responses	0.8		1		1
13	Established RCC plans for response to Mass Rescue Operations (MROs) integrated with national disaster plans	0.9		1		1
14	Established operational plans and procedures for SRUs, provision of support, communication and reporting	0.5		1		1
15	Established SAR Alerting procedures which are tested, integrated and include civil/military protocols	0.8		1		1
16	Provided a fully equipped RCC of sufficient size with adequate provision for operational positions and human factors	0.8		1		1
17	Provided adequate supervisory ATC resources to allow timely SAR alerts and information to RCCs	1		1		1
18	Provided sufficient RCC staffing	0.6		1		1
19	Provided a sufficient number of trained specialist RCC officers including SMCs and A/SMCs	0.6		1		1
20	Availability of a pool of RCC support staff who are familiar with RCC operations, but not trained as coordinators	0.9		1		1
21	Developed SAR personnel position descriptions detailing responsibilities and eligibility criteria	0.8		1		1
22	Developed a comprehensive training programme that includes SAR training for SAR Coordinators and SRU staff	0.8		1		1
23	Facilitated RCC staff to be proficient in the English language	1		1		0.5
24	Facilitated a programme of regular liaison visits between relevant RCCs, ATC units and airline operating centres	1		1		1
25	Established additional oceanic SAR capability as far as practicable to ensure a timely and adequate SAR response	0.8		1		1
26	Established sufficient SRU capabilities (crews, availability, military assets, communications, authority, etc.)	0.7		1		1
27	Established procedures and necessary infrastructure to coordinate distress beacon alert responses	1		1		1
28	Established a reliable distress beacon registration system	1		1		1
29	Planned and prepared for the implemention of next generation beacons	1		1		1
30	Established an appropriate nationwide means of disposal for old distress beacons	0.6		1		1
31	Established contingency facilities, or procedures for the temporary delegation of SAR to another body or State	0.5		1		1
32	Established a centralised information source publishing all AIP information required on SAR	0.8		1		1
33	Established an Internet-based SAR information sharing system	0.8		1		1
34	Established systems for the maximum practicable cooperation between State entities for information when required	0.6		1		1
35	Developed and maintained a current, comprehensive electronic list of State SAR Facilities, SAR Equipment, and SRUs	0.8		1		1
36	Established an Internet-based SAR Library, or cooperate by contributing to an Internet-based Asia/Pacific resource	1		1		0.5
37	Provided each RCC and SAR Authority with ready access to a current copy of SAR reference documents	0.8		1		1
38	Conducted regular SAREX to test and evaluate coordination procedures, data and information sharing and SAR responses	0.9		1		1
39	Implemented SAR System Improvement and Assessment measures, including Safety Management and QA systems	0.6		1		1
40	Conducted an annual or more frequent analysis of their current State SAR system to identify specific gaps in capability	0.9		1		1
41	Conducted SAR promotional programs	1		1		1
	Total (of 41)	**33.8**	**0**	**40.7**	**0**	**39.5**
	%	**82%**	**0%**	**99%**	**0%**	**96%**

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