



**Agenda Item 7: AOP, AIM, MET, SAR**

**ASIA/PACIFIC SEARCH AND RESCUE UPDATE**

(Presented by the Secretariat)

**SUMMARY**

This paper discusses Search and Rescue (SAR) matters related to the Asia/Pacific.

**1. INTRODUCTION**

1.1 The Fifth Meeting of the Asia/Pacific Regional Search and Rescue Work Group (APSAR/WG/5) was held from 09 to 11 June 2020 by Video Teleconference (VTC) from the ICAO Asia and Pacific Regional Office, Bangkok, Thailand.

1.2 A total of 110 participants were registered for the meeting from 27 States and Administrations, and three International Organizations, including Afghanistan, Australia, Bangladesh, Bhutan, Cambodia, China, Hong Kong China, Fiji, French Polynesia (France), India, Indonesia, Japan, Lao People's Democratic Republic (PDR), Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand (NZ), Pakistan, Philippines, Republic of Korea (ROK), Singapore, Sri Lanka, Thailand, United States of America (USA), Viet Nam, Cospas-Sarsat, IATA, and ICAO.

1.3 Post-election, Mr. Tai Kit, Head Air Traffic Control Specialist (Search and Rescue/Contingency Planning), Civil Aviation Authority of Singapore presided over the APSAR/WG/5 meeting throughout its duration as Chairperson.

**2. DISCUSSION**

High Level Meeting Outcomes

2.1 The APSAR/WG/5 meeting had also recalled the goals relevant to SAR from the *Beijing Declaration* from the Asia Pacific Ministerial Conference on Civil Aviation (31 January – 01 February 2018), and the need for SAR personnel to take an interest in the development of National Air Navigation Plans (NANPs) so that SAR was adequately resourced and prioritised.

2.2 States had provided updates on their SAR-related APANPIRG Deficiencies to the meeting. The USA commented on Indonesia's positive progress, and congratulated India for its improvement. India stated that SAR Letters of Agreement (LOA) had been progressed with several neighbouring States, and there was also an opportunity for a LOA with South Africa on matters of mutual cooperation, notwithstanding the fact that South Africa and India did not share a common Search and Rescue Region (SRR) boundary.

2.3 Indonesia had expressed its desire to conclude a SAR LOA with India. India also expressed their desire to have LoA executed with Indonesia at the earliest and informed the meeting that they have already started preparing an initial draft which will be forwarded to Indonesia soon for comments.

2.4 The APSAR/WG/5 agreed that India and Indonesia's status reports were sufficient to recommend the deletion of the current SAR-related Deficiency to the ATM/SG/8 and APANPIRG/31.

#### Global SAR Update

2.5 ICAO HQ had presented a summary of the activities undertaken by ICAO at the global level to support the implementation of the Global Aeronautical Distress and Safety System (GADSS), including developments relating to the location of an aircraft in distress repository (LADR).

2.6 The meeting had noted that GADSS involved three parts (aircraft tracking, Autonomous Distress Tracking (ADT) of aircraft in flight and Post-flight localisation and Recovery (PFLR)). The ICAO Regional Office asked whether the future provisions for GADSS in Annex 12 — *Search and Rescue* and Annex 13 — *Aircraft Accident and Incident Investigation* would take into account the need to ensure that SAR took priority over Annex 13 activity while safety-of-life operations were still ongoing. ICAO HQ confirmed that Annex 12 and Annex 13 provisions would clarify the operational interface between these two areas. ICAO welcomed any input the APSAR/WG may wish to contribute to the GADSS rollout process.

2.7 ICAO HQ had informed the meeting that the PANS-OPS Volume III GADSS ADT and LADR procedures were now envisaged for applicability on 4 November 2021, while the Annex 6 ADT aircraft equipment requirements were expected to be delayed from 01 January 2021 until 01 January 2023. The 2021 provisions included procedures for aircraft operators to track aircraft, responding to such tracking systems in an appropriate manner and forwarding information received from an ADT to the LADR.

2.8 The meeting had requested further information about LADR's data storage and retention parameters, especially with regard to RCCs. ICAO HQ later advised that the expected policy would be based on the Annex 10 — *Aeronautical Telecommunications* ATS data retention requirements, whereas the system must store all data (including ADT event and audit logs) for a period of at least thirty days from its submission. After 30 days from submission, the system should archive all data to an offline file storage facility.

#### Status of the Cospas-Sarsat Programme

2.9 The meeting was provided with an update on Cospas-Sarsat operations, significant developments, space and ground segment status, beacons, false alerts, reporting by Rescue Coordination Centres (RCCs) on the use of the distress alert data provided and results of Mission Control Centre-SAR Point of Contact (MCC-SPOC) communication tests.

2.10 The meeting had noted that in 2018, the SAR false alert rate was 96.85%, or about one real alert confirmed in 32 alerts received. The rate of false reports had not changed substantially since 2014.

2.11 Cospas-Sarsat had reported an increase in the number of location protocol beacons that report the location in an alert message (87.4% in 2018), and the number of 406 MHz beacons worldwide (2,249,273) beacons by about 7%. Moreover, the growing registration rate of International 406 MHz Beacon Registration Database (IBRD, <https://406registration.com/>) users and number of Medium-altitude Earth Orbiting SAR satellites and systems (MEOSAR) supported a more responsive capability. Cospas-Sarsat requested States to provide feedback for possible improvements after receipt of a distress alert from Global Maritime Distress Safety System (GMDSS) mobile satellite service providers, including Cospas-Sarsat.

2.12 Cospas-Sarsat had reported that there were no unresponsive SPOCs in the Asia/Pacific Region during 2018. Cospas-Sarsat was invited to provide updated data for 2019 when it became available later in 2020.

2.13 Cospas-Sarsat had discussed its future enhancements with a focus primarily on refinement and enhancement of technical specifications for MEOSAR, Emergency Locator Transmitters (ELTs) for in-flight distress tracking (ELT(DT)s), the Return Link Service (RLS) and second-generation beacons (SGBs) that transmit more distress information and have greater location accuracy.

2.14 In 2019 the highest priority had been noted to be the commissioning of space and ground segment assets for MEOSAR, to continue the fastest possible advancement towards continuous global coverage.

#### ELT Alert Reporting and False Alert Verification In China

2.15 China provided data and analysis related to 406 MHz ELT beacon alerts within China during 2019. China described its process for ELT signal verification and follow up action to reduce the number of false beacon alerts.

2.16 The meeting had commended China for developing guidance material (*Enhancing and Improving the Verification of ELT Beacon False Alerts*) in September 2019, which had led to a reduction in the proportion of unknown cause alerts from 68.75% to 48.28%. This meant improved ELT beacon alert investigations and to better understand the causes.

#### New Zealand's GADSS Preparation

2.17 NZ presented information outlining its work preparing for the implementation of GADSS ADT. RCCNZ had initiated contact with State agencies and other key stakeholders to establish a GADSS Implementation Group. The CAANZ was reviewing the need for regulations related to Annex 6 on aircraft tracking. The RCCNZ had urged the CAA to adopt the Cir. 347 notification form as part of any regulation amendment, and to continue the use of the ALR message between Air Traffic Services Units (ATSUs) and RCCNZ.

2.18 The RCCNZ had registered with Aireon's Aircraft Locating and Emergency Response Tracking (ALERT), although this is not an ADT service. RCCNZ had also attempted to register with OPS CTRL Directory at <https://www4.icao.int/opsctrl>, which has been established by ICAO to assist the implementation of the Annex 6 Aircraft Tracking standard. NZ urged ICAO HQ to allow RCCs to access to this valuable resource. ICAO HQ informed the meeting that this was being considered.

#### Autonomous Distress Tracking Implementation

2.19 WP06 noted that ICAO's intent was for the aircraft operator to receive ADT notifications and in a non-prescriptive manner, did not specify the technology to achieve this. The USA further noted that aircraft operators, ATSUs and RCCs need to ensure that their staff understand each other's roles, responsibilities and processes to ensure clear communication and coordination, and avoid, conflicting effort and unnecessary increased workload.

2.20 The USA provided a background on LADR and ELT(DT), noting that ICAO Montreal planned to hold a LADR workshop in late July 2020 to test the prototype. The paper also urged States to use **APSAR/WG/5/WP06/Attachment A** (the International Maritime Organisation's IMO *Interim Guidance for SAR Services Regarding Implementation of Autonomous Distress Tracking of Aircraft in Flight*) as a means to have their aeronautical and maritime SAR services coordinate to develop national and regional response procedures for ADT.

### Regional Air Navigation Plan Update

2.21 ICAO had recalled the development of the Asia/Pacific Regional electronic Air Navigation Plan (eANP), which replaced ICAO Doc. 9673 – *Asia and Pacific Regions Regional Air Navigation Plan*, and the Proposal for Amendment (PfA) process for Flight Information Regions (FIRs) and SRRs.

2.22 The meeting noted that the ability for States to establish their SRRs under Annex 12 had been amended to be a two-stage process now, as SRRs would require the same process of approval as FIRs within the eANP Volume I (by approval of the ICAO Council). ICAO HQ informed the meeting that Annex 12 would be amended to reflect this change in due course.

2.23 To facilitate the PfA process, ICAO had urged States to urgently review FIR/SRR data related to their administration to be included in the eANP Table SAR I-1. ICAO anticipated that the SRR Table would be completed by 2021, as FIRs were being processed first. The APASAR/WG Chairperson urged States to review their SRR data if they had not already done so. NZ commented that SRR definitions would be even more important to support ADT, as accurate definitions of service volume were required.

2.24 APSAR/WG/5 had noted that Section 3 of the eANP Volume II contained provisions for the establishment and maintenance of a National Air Navigation Plan (NANP) that included Basic Planning Elements (BPEs), and failure to address the BPEs could result in an APANPIRG Deficiency. These NANP requirements would include SAR planning as part of a whole-of-government approach, to ensure an integrated and harmonized approach, in accordance with the national priorities of State governments. ICAO stated that this was a good opportunity for the SAR community to ensure SAR planning and capability were embedded in NANPs as a priority, integrated as appropriate with other areas, and encouraged SAR experts to ask questions about NANP development progress.

2.25 Australia had noted that SAR is now included in the new [6<sup>th</sup>] Edition of the Global Air Navigation Plan (GANP). States were encouraged to continually highlight SAR matters, so that SAR initiatives receive an appropriate priority and SAR is retained in the next edition of the GANP.

### Regional SAR Status

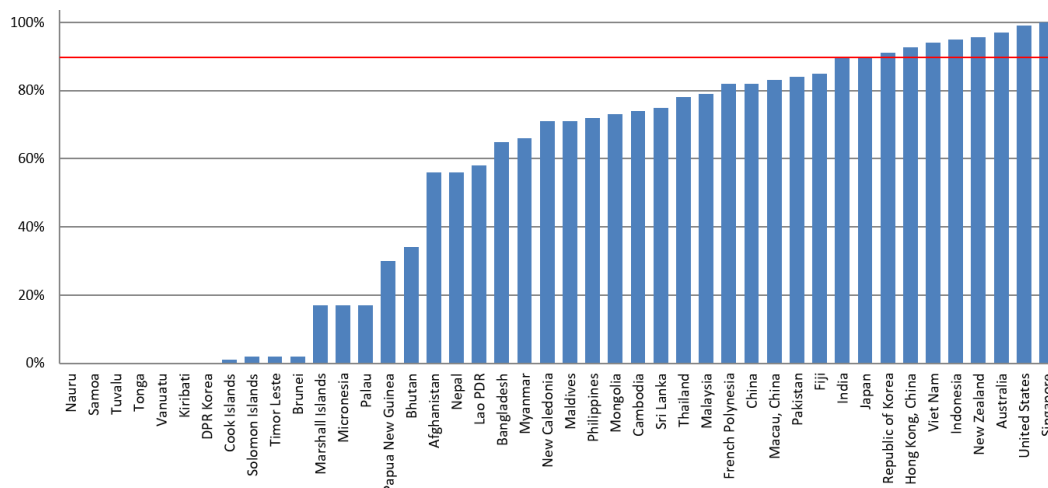
2.26 ICAO had presented data on the regional SAR capability status, recalling the requirement to provide updates on their compliance status with the *Asia/Pacific SAR Plan* by April each year.

2.27 An analysis of the 26 Universal Safety Oversight Audit Programme (USOAP) SAR-related Protocol Questions (PQs, not including 7.483) indicated that the overall SAR Effective Implementation (EI) had risen as follows for the Asia/Pacific Region since 2015 from 50.7% to 60% in May 2020. The APSAR/WG/5 noted that this represented positive progress, although the average achieved fell well short of what would be a satisfactory level to SAR experts. From the PQ analysis, there had been little improvement in the major areas of weakness in SAR indicated by USOAP, which were in the areas of:

- **CE-3:** 7.517 (28%) – [SAR service provider] SAR coordination agreements;
- **CE-4:** 7.497 and 7.499 (42% and 37%) – [SAR regulatory oversight] SAR inspector's training plan and training programme effectively implemented for SAR inspectors;
- **CE-7:** 7.505 and 7.545 (31% and 43%) – [SAR regulatory oversight] effective regulatory surveillance oversight of SAR, and checks that SAR operational personnel have regular training, including the conduct of SAREX; and

- **CE-8:** 7.507 (43%) – [SAR regulatory oversight and service provider] mechanism to eliminate SAR regulatory deficiencies.

2.28 The SAR Plan-based 41 element assessment provided a metric of the *Asia/Pacific SAR Plan* implementation as at June 2020 (**Figure 1**).

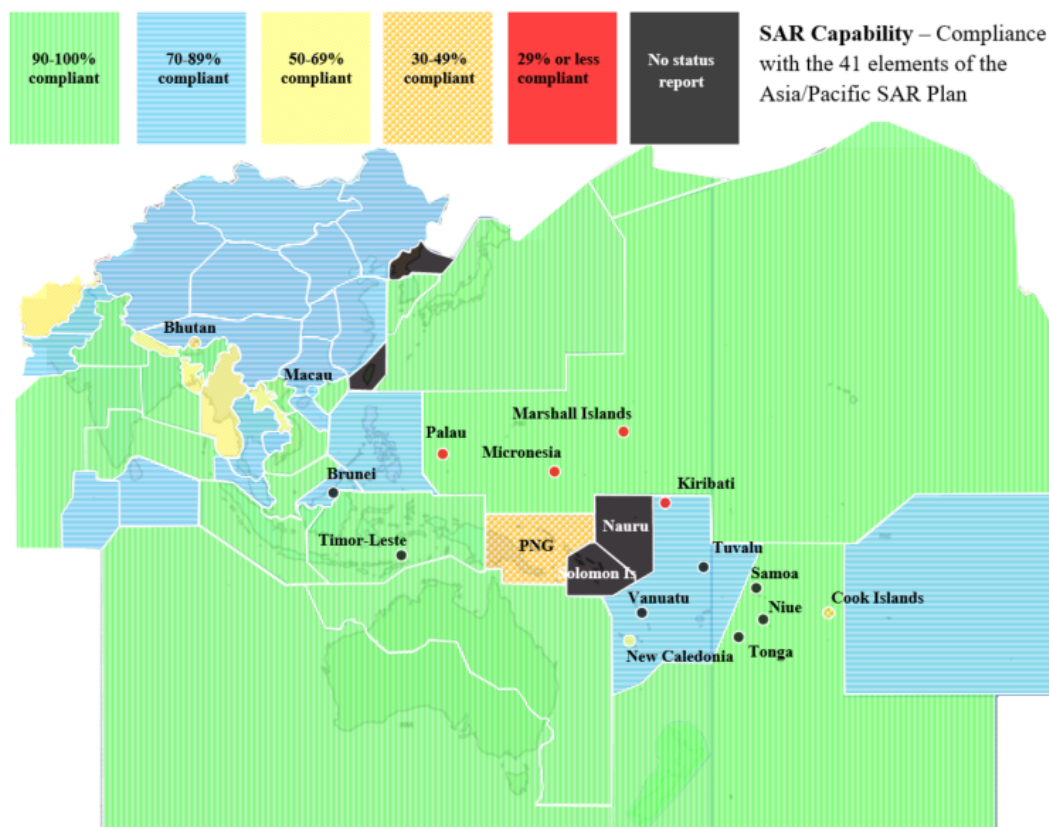


**Figure 1:** Asia/Pacific SAR Plan Implementation Status (as at June 2020, average 54%)

2.29 The meeting had recalled that eANP regional policy stated that below 90% implementation status would be considered for an APANPIRG SAR deficiency. Only ten States/Administrations had reported implementation of 90% or above at APSAR/WG/5, if the status reports from India and Indonesia are accepted by the ATM/SG/8 and APANPIRG/31:

Australia, Hong Kong China, India, Indonesia, Japan, NZ, ROK, Singapore, USA and Viet Nam.

2.30 Based on the State SAR Report data provided to the APSAR/WG/5 by 23 States and Administrations, **Figure 2** provides an overview of reported *Asia/Pacific SAR Plan* compliance, as at June 2020.



**Figure 2:** Reported Compliance with the Asia/Pacific SAR Plan, June 2020

2.31 The SAR Agreements List (**Attachment A**) and SAR Agreement Matrix (**Attachment B**) were reviewed and updated accordingly. **Attachment C** provides details of the Asia/Pacific SAR Plan’s reported compliance levels (SAR Plan Compliance Tracking Sheet).

RCCNZ, Nadi ARSC and JRCC Australia SAREX

2.32 NZ recalled that the *Asia/ Pacific SAR Plan* expected all States to conduct SAREX with the SAR authorities of adjacent SRRs in order to test SAR operational systems and procedures and improve through the post SAREX review, including the update of bilateral agreements. In response to this NZ, Fiji and Australia conducted a joint SAREX on 19 November 2019.

2.33 As this had been the first large scale aviation SAREX between the participating nations, it was decided to involve only the RCCs by testing the early stages of Awareness, Initial Action, and Planning and Coordination. Later SAREXs would be expanded to include SAR Units (SRUs), ATSU, other RCCs and aircraft operators.

2.34 The SAREX had been initiated within the Fiji FIR/SRR, where the aircraft reported an engine problem but elected to continue the flight into the Australian FIR. During the SAREX, Joint RCC (JRCC) Australia had identified appropriate SRUs from Australia and provided them with detailed tasks. It was suggested by JRCC Australia that if New Zealand was also tasking assets into the same area then JRCC Australia should take over the tasks, so as to coordinate all the air assets. From a safety point of view and an efficient use of resources, this was a good lesson to learn. NZ noted that JRCC Australia’s NEXUS Incident Management System was set up to manage these tasks.

2.35 Although it was agreed between all parties that the SAREX had been realistic and worked with all participants remaining in their respective countries, it was agreed that there should be more liaison visits to respective RCCs to cement relationships and understanding. This would also

comply with the *Asia/Pacific SAR Plan* (paragraph 7.4h). French Polynesia invited NZ to conduct a SAREX together, which NZ agreed to consider.

Asia/Pacific SAR Plan Update

2.36 ICAO presented a marked-up version of the *Asia/Pacific SAR Plan* (Version 3.1). The current version approved by APANPIRG/30 would be updated in 2022 in accordance with the normal cycle of review, but in the meantime the marked-up version would capture any proposals for change. APSARWG/5 participants were invited to review Version 3.1 and submit any comments accordingly.

DAGMAR

2.37 The mMigration of Agreements and Arrangements from ICAO's Database of Aeronautical Agreements and Arrangements (DAGMAR) is partially complete. The intention is to include all aeronautical agreements and arrangements, including SAR LOA in this portal. Some Agreements and Arrangements may not be accessible on WAGMAR at this time. While the situation is being resolved, please note that States may access pre-existing registrations on DAGMAR at the following address: <https://cfapp.icao.int/dagmar/main.cfm?UserLang=e>.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) endorse the deletion of India and Indonesia's APANPIRG Deficiency in SAR;
- c) urge States to provide *Asia/Pacific SAR Plan* status reports at least once annually, by not later than 31 May each year, on their compliance with the *Asia/Pacific SAR Plan* reporting elements; and
- d) discuss any relevant matters as appropriate.

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## SAR AGREEMENTS LIST

Updated: 21 June 2020

DATE	STATES	REMARKS
14 April 1972	ASEAN States – Indonesia, Malaysia, Philippines, Singapore and Thailand	Multilateral agreement
March 1997	ASEAN – Viet Nam	Viet Nam accession to 1972 ASEAN Agreement (as above)
August/Sept. 2004	Australia/Fiji	
November 1990	Australia / Indonesia	Updated 5 April 2004
April 2006	Australia / Maldives	Letter of Arrangement
2 April 2009	Australia / New Zealand	Notified 2013
February 2001	Australia / Papua New Guinea	
29 July 1999	Australia / New Caledonia	Maritime Arrangement for SAR Cooperation
8 October 1998	Australia / Solomon Islands	SAR Arrangement
29 April 2014	Australia/Sri Lanka	SAR Arrangement
16 December 1998	Brunei Darussalam / Malaysia	
22 December 2009	Bhutan / India	SAR Arrangement
February 1999	Cambodia / Viet Nam	Updated in 2009
04 May 2016	China/Hong Kong (Macao) China	SAR and Salvage Agreement
11 September 2019	China/Kazakhstan	
1 June 2009	Chile / New Zealand	SAR services coordination
16 May 2007	China / Republic of Korea	
notified 2003	China / United States	
Signed 25 Oct 2013	China/Mongolia	
20 July 2017	Cook Islands / New Zealand	Notified 3 August 2017
notified July 2007	French Polynesia (Tahiti) / New Zealand	
notified January 2013	French Polynesia (Tahiti) / United States	Draft agreement being considered by FP authorities
Notified September 2016	French Polynesia (Tahiti)/Cook Islands	Cook Islands covered by agreement with New Zealand.
June 1982	Indonesia / Singapore	
1990	Indonesia / Papua New Guinea	JBC MOU signed
25 August 1986	Indonesia / Philippines	
24 January 2018	Indonesia/Sri Lanka	MOU
1988, July 2006	Indonesia / United States	SAR Services Agreement
17 March 2010	Japan/Philippines	SAR Agreement
30 April 2008	Japan / Republic of Korea	
1986	Japan / United States	
1998	Lao PDR / Vietnam	Updated in 2009
05 March 2013	Lao PDR/Myanmar	
13 July 2019	Lao PDR/Thailand	
29 August 1985	Malaysia / Indonesia	
9 December 1985	Malaysia / Philippines	
11 August 1984	Malaysia / Singapore	
9 September 1985	Malaysia / Thailand	
25 June 2014	Maldives/Sri Lanka	

<b>DATE</b>	<b>STATES</b>	<b>REMARKS</b>
notified 2003	Marshall Islands / United States	
notified 2003	Micronesia / United States	
11 April 2008	Mongolia/Russian Federation	
22 May 2002	New Caledonia / New Zealand	
notified July 2007	New Zealand/Niue	Government aid agreement
20 August 2003	New Zealand / Samoa	Notified 2005
Notified July 2007	New Zealand/Tokelau	Government aid agreement
17 June 2005	New Zealand / Tonga	
16 April 2003	New Zealand / United States	
26 November 2002	Palau / United States	
July 1996	Philippines / Singapore	
20 September 1996	Philippines / Viet Nam	Updated 2015
September 1985	Singapore / Thailand	Updated July 1996
July 1996	Singapore / Viet Nam	

SAR LOA Matrix Date Last Amended: 11 June 2020 (√ = SAR Agreement notified, blank cell = SAR Agreement not notified)

Administration	Afghanistan	Australia	Bangladesh	Bhutan	Brunei	Cambodia	China	Hong Kong	Macao	Cook Islands	DPR Korea	Fiji	French Polynesia	India	Indonesia	Japan	Kiribati	Lao PDR	Malaysia	Maldives	Marshall Is	Micronesia	Mongolia	Myanmar	Nauru	Nepal	New Caledonia	New Zealand	Niue (NZ)	Pakistan	Palau	PNG	Philippines	ROK	Samoa	Singapore	Solomon Is	Sri Lanka	Thailand	Timor Leste	Tonga	Tuvalu	Vanuatu	Viet Nam	USA												
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USA <sup>3</sup> 50%							√								√	√													√																												
Viet Nam 75%						√										√			√																																						

<sup>1</sup> Also has an agreement with Kazakhstan

<sup>2</sup> Also has an agreement with the Tokelau Islands and a SAR agreement with SAM State Chile

<sup>3</sup> Includes American Samoa, Guam, Johnston, Kingman, Midway, Mariana, Palmyra, Wake

**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).

		Afghanistan	Australia	Bangladesh	Bhutan	Brunei	Cambodia	China	Hong Kong, China	Macao, China	Cook Islands	DPRK	Fiji	French Polynesia	India	Indonesia	Japan	Kiribati	Lao PDR	Malaysia	Maldives	Marshall Islands	Micronesia
<b>Indicate whether your Administration has:</b>																							
1	Enacted legislation that incorporates or is aligned to applicable international Conventions	1	1.0	1.0	0.5		1.0	1.0	1.0	0.5			0.5	1.0	1.0	1.0	1.0		1.0	1	1	0	0
2	Unless delegated, established an entity that provides H24, SAR services within its area of responsibility/SRR	1	1.0	1.0	0.5		0.5	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1	1	1	1
3	Established a national SAR committee	1	1.0	0.0	0.0		1.0	1.0	1.0	1.0			1.0	1.0	1.0	1.0	1.0		1.0	1	1	0	0
4	Empowered SAR Mission Coordinators with the authority to adequately carry out their responsibilities	1	1.0	1.0	0.0		0.5	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1	0.5	0	0
5	Established an Administrative Single Point of Contact for SAR (ASPOCS) for non-urgent, administrative matters	1	1.0	1.0	1.0		1.0	1.0	1.0	0.5			1.0	1.0	1.0	1.0	1.0		1.0	1	0	0	0
6	Conducted studies to integrate aviation and maritime SAR, and as far as practicable, civil and military activities	1	1.0	1.0	1.0		1.0	0.8	1.0	0.5	1.0		1.0	1.0	1.0	1.0	1.0		0.5	1	1	0	0
7	Conducted studies to align, as far as practicable, aeronautical and maritime SRRs, and SRRs and FIRs	1	1.0	1.0	1.0		0.5	1.0	1.0	0.5	1.0		1.0	1.0	1.0	1.0	1.0		0.5	0	0.5	0	0
8	Established a single State SAR Plan	1	1.0	1.0	0.5		1.0	1.0	1.0	1.0			1.0	1.0	1.0	1.0	0.5		1.0	1	1	0	0
9	Established aerodrome emergency plans that provide for co-operation and co-ordination with RCCs	0.5	1.0	1.0	0.0		1.0	1.0	1.0	1.0			1.0	1.0	1.0	1.0	1.0		0.5	1	0	0	0
10	Established SAR agreements with States having adjoining SRRs or FIRs	0.5	1.0	0.0	0.5		1.0	0.5	0.5	1.0	0.9		0.1	0.0	0.5	0.9	0.5		0.5	0.5	0.5	1	1
11	Provided up to date cross-border information on SAR capability to adjoining States	0	0.7	1.0	0.0		1.0	0.5	1.0	1.0			0.1	1.0	0.5	1.0	0.5		0.5	0.5	0.5	1	1
12	Pre-arranged procedures for cross-border SAR responses	1	1.0	0.0	0.0		1.0	0.6	0.0	1.0	1.0		0.1	0.0	0.5	1.0	0.5		0.5	0.5	0.5	1	1
13	Established RCC plans for response to Mass Rescue Operations (MROs) integrated with national disaster plans	0.5	0.7	0.5	0.0		1.0	1.0	1.0	1.0	1.0		1.0	0.0	0.5	1.0	1.0		0.0	1	1	0	0
14	Established operational plans and procedures for SRUs, provision of support, communication and reporting	0.5	1.0	1.0	0.5		1.0	1.0	1.0	1.0			1.0	1.0	1.0	1.0	1.0		1.0	1	1	0	0
15	Established SAR Alerting procedures which are tested, integrated and include civil/military protocols	0.5	1.0	0.5	0.5		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.5	1	1	0	0
16	Provided a fully equipped RCC of sufficient size with adequate provision for operational positions and human factors	0.5	1.0	1.0	0.5		0.5	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1	1	0	0
17	Provided adequate supervisory ATC resources to allow timely SAR alerts and information to RCCs	0	1.0	1.0	1.0		1.0	1.0	1.0	1.0			1.0	1.0	1.0	1.0	1.0		1.0	1	1	0	0
18	Provided sufficient RCC staffing	0	1.0	1.0	0.5		0.5	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1	1	0	0
19	Provided a sufficient number of trained specialist RCC officers including SMCs and A/SMCs	0	1.0	0.1	0.0		0.5	0.8	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.5	1	1	0	0
20	Availability of a pool of RCC support staff who are familiar with RCC operations, but not trained as coordinators	0	1.0	0.5	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.5	1	1	0	0
21	Developed SAR personnel position descriptions detailing responsibilities and eligibility criteria	1	1.0	1.0	0.5		0.5	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		0.5	1	1	0	0
22	Developed a comprehensive training programme that includes SAR training for SAR Coordinators and SRU staff	0.5	1.0	1.0	0.0		0.5	0.8	1.0	1.0			1.0	1.0	1.0	1.0	0.5		0.5	1	0.5	0	0
23	Facilitated RCC staff to be proficient in the English language	1	1.0	1.0	1.0		0.5	0.8	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1	1	1	1
24	Facilitated a programme of regular liaison visits between relevant RCCs, ATC units and airline operating centres	0	0.9	0.5	0.5		0.5	0.5	1.0	1.0			1.0	1.0	1.0	1.0	1.0		0.5	0.5	0	0	0
25	Established additional oceanic SAR capability as far as practicable to ensure a timely and adequate SAR response	1	1.0	1.0	1.0		0.5	0.6	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	0.5	1	1	1
26	Established sufficient SRU capabilities (crews, availability, military assets, communications, authority, etc.)	0.5	1.0	1.0	0.0		1.0	0.8	1.0	1.0			1.0	1.0	1.0	1.0	1.0		0.5	1	1	0	0
27	Established procedures and necessary infrastructure to coordinate distress beacon alert responses	0	1.0	0.5	0.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1	1	1	1
28	Established a reliable distress beacon registration system	0	1.0	1.0	0.0		0.5	0.6	1.0	1.0			1.0	1.0	1.0	1.0	1.0		1.0	1	0.5	0	0
29	Planned and prepared for the implementation of next generation beacons	0	1.0	1.0	0.0		0.5	1.0	0.5	0.5	1.0		0.0	0.5	0.5	1.0	1.0		0.5	0	0	0	0
30	Established an appropriate nationwide means of disposal for old distress beacons	0	0.8	1.0	0.0		1.0	0.5	1.0	0.0			0.0	0.0	1.0	0.2	1.0		1.0	0	0	0	0
31	Established contingency facilities, or procedures for the temporary delegation of SAR to another body or State	1	1.0	0.0	0.0		1.0	1.0	1.0	1.0			1.0	0.5	0.0	1.0	1.0		0.0	1	1	0	0
32	Established a centralised information source publishing all AIP information required on SAR	1	0.9	1.0	1.0		0.5	1.0	1.0	0.5			1.0	1.0	1.0	1.0	1.0		1.0	1	1	0	0
33	Established an Internet-based SAR information sharing system	1	1.0	0.0	0.0		1.0	0.2	1.0	0.5			1.0	0.0	0.5	1.0	0.5		0.0	0	0	0	0
34	Established systems for the maximum practicable cooperation between State entities for information when required	1	1.0	0.0	0.0		1.0	1.0	1.0	1.0			1.0	1.0	1.0	1.0	1.0		0.0	0.5	0.5	0	0
35	Developed and maintained a current, comprehensive electronic list of State SAR Facilities, SAR Equipment, and SRUs	0.5	1.0	0.0	0.0		0.5	0.6	0.0	1.0			1.0	1.0	1.0	1.0	1.0		0.0	0.5	1	0	0
36	Established an Internet-based SAR Library, or cooperate by contributing to an Internet-based Asia/Pacific resource	0.5	1.0	0.0	0.0		0.5	0.6	1.0	0.0	1.0		0.1	0.5	1.0	0.5	0.5		0.0	0	0	0	0
37	Provided each RCC and SAR Authority with ready access to a current copy of SAR reference documents	1	1.0	1.0	0.3		0.5	0.6	1.0	1.0			1.0	1.0	1.0	1.0	1.0		0.5	1	1	0	0
38	Conducted regular SAREX to test and evaluate coordination procedures, data and information sharing and SAR responses	0.5	1.0	0.5	0.0		0.5	0.6	1.0	1.0			1.0	1.0	1.0	1.0	0.5		0.0	1	1	0	0
39	Implemented SAR System Improvement and Assessment measures, including Safety Management and QA systems	0	0.9	0.0	0.0		1.0	0.6	1.0	1.0			1.0	1.0	1.0	0.5	1.0		0.0	1	0	0	0
40	Conducted an annual or more frequent analysis of their current State SAR system to identify specific gaps in capability	0.5	1.0	0.5	0.5		0.5	0.8	1.0	1.0			1.0	1.0	1.0	1.0	1.0		0.0	0.5	1	0	0
41	Conducted SAR promotional programs	0	1.0	0.0	0.0		0.5	0.8	1.0	0.5			1.0	0.0	1.0	1.0	1.0		0.0	1	1	0	0
Total (of 41)		23.0	39.9	26.6	13.8	0.0	31.0	33.6	38.0	35.0	17.9	0.0	34.9	33.5	37.0	39.1	37.0	0.0	23.5	32.0	29	7.0	7.0
%		56%	97%	65%	34%	0%	76%	82%	93%	85%	44%	0%	85%	82%	90%	95%	90%	0%	57%	78%	71%	17%	17%

\*2020 Update - Higher than previous year

\*2020 Update - Less than previous year

\*2020 Update - No Change

**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).

		Mongolia	Myanmar	Nauru	Nepal	New Caledonia	New Zealand	Pakistan	Palau	Papua New Guinea	Philippines	Republic of Korea	Samoa	Singapore	Solomon Islands	Sri Lanka	Timor Leste	Tonga	Thailand	Tuvalu	United States	Vanuatu	Viet nam	
<b>Indicate whether your Administration has:</b>																								
1	Enacted legislation that incorporates or is aligned to applicable international Conventions	1.0	1.0		0.7	1.0	1.0	1.0	0	0.0	1.0	1.0		1.0		1.0		1.0	1.0		1.0		1.0	
2	Unless delegated, established an entity that provides H24, SAR services within its area of responsibility/SRR	1.0	1.0		0.5	1.0	1.0	1.0	1	1.0	1.0	1.0		1.0		1.0		1.0	1.0		1.0		1.0	
3	Established a national SAR committee	1.0	1.0		1.0	1.0	1.0	1.0	0	0.0	0.8	1.0		1.0		1.0		1.0	1.0		1.0		1.0	
4	Empowered SAR Mission Coordinators with the authority to adequately carry out their responsibilities	1.0	1.0		0.5	1.0	1.0	1.0	0	1.0	0.5	1.0		1.0		1.0		1.0	0.5		1.0		1.0	
5	Established an Administrative Single Point of Contact for SAR (ASPOCS) for non-urgent, administrative matters	1.0	1.0		1.0	1.0	1.0	1.0	0	1.0	1.0	1.0		1.0		1.0		1.0	1.0		1.0		1.0	
6	Conducted studies to integrate aviation and maritime SAR, and as far as practicable, civil and military activities	1.0	1.0		1.0	1.0	1.0	1.0	0	0.0	0.8	1.0		1.0		1.0		0.5	1.0		1.0		1.0	
7	Conducted studies to align, as far as practicable, aeronautical and maritime SRRs, and SRRs and FIRs	0.0	1.0		0.5	0.5	1.0	1.0	0	0.0	0.0	0.5		1.0		0.8		0.5	1.0		1.0		1.0	
8	Established a single State SAR Plan	1.0	0.5		0.2	1.0	1.0	1.0	0	0.0	1.0	0.8		1.0		0.5		1.0	1.0		1.0		1.0	
9	Established aerodrome emergency plans that provide for co-operation and co-ordination with RCCs	1.0	0.5		0.5	1.0	1.0	1.0	0	0.5	0.0	1.0		1.0		0.8		0.5	1.0		1.0		1.0	
10	Established SAR agreements with States having adjoining SRRs or FIRs	1.0	0.5		0.0	0.5	0.9	0.0	1	0.0	0.8	0.7		1.0		0.8		1.0	0.5		0.7		0.5	
11	Provided up to date cross-border information on SAR capability to adjoining States	0.5	0.0		0.5	0.0	1.0	0.0	1	0.0	1.0	1.0		1.0		1.0		1.0	1.0		1.0		1.0	
12	Pre-arranged procedures for cross-border SAR responses	1.0	1.0		0.0	0.0	1.0	0.5	1	0.0	0.8	1.0		1.0		0.8		0.5	0.5		1.0		1.0	
13	Established RCC plans for response to Mass Rescue Operations (MROs) integrated with national disaster plans	0.5	0.5		0.5	0.0	1.0	0.5	0	0.5	1.0	1.0		1.0		0.5		0.5	0.5		1.0		0.5	
14	Established operational plans and procedures for SRUs, provision of support, communication and reporting	1.0	1.0		0.5	1.0	0.9	1.0	0	0.0	1.0	0.8		1.0		0.5		0.5	0.5		1.0		1.0	
15	Established SAR Alerting procedures which are tested, integrated and include civil/military protocols	1.0	0.5		0.8	1.0	1.0	1.0	0	0.5	0.5	1.0		1.0		0.5		1.0	0.5		1.0		1.0	
16	Provided a fully equipped RCC of sufficient size with adequate provision for operational positions and human factors	1.0	1.0		0.7	1.0	1.0	1.0	0	1.0	0.7	1.0		1.0		0.7		0.5	0.5		1.0		1.0	
17	Provided adequate supervisory ATC resources to allow timely SAR alerts and information to RCCs	1.0	1.0		1.0	1.0	1.0	1.0	0	1.0	0.7	1.0		1.0		1.0		0.5	1.0		1.0		1.0	
18	Provided sufficient RCC staffing	1.0	1.0		0.5	1.0	1.0	1.0	0	1.0	0.7	1.0		1.0		0.9		0.5	0.5		1.0		1.0	
19	Provided a sufficient number of trained specialist RCC officers including SMCs and A/SMCs	1.0	1.0		0.3	1.0	1.0	1.0	0	1.0	1.0	1.0		1.0		0.9		0.5	0.5		1.0		0.5	
20	Availability of a pool of RCC support staff who are familiar with RCC operations, but not trained as coordinators	0.5	1.0		0.5	1.0	1.0	1.0	0	0.5	1.0	1.0		1.0		1.0		1.0	1.0		1.0		1.0	
21	Developed SAR personnel position descriptions detailing responsibilities and eligibility criteria	1.0	0.5		0.4	1.0	1.0	1.0	0	0.5	1.0	1.0		1.0		1.0		0.5	1.0		1.0		1.0	
22	Developed a comprehensive training programme that includes SAR training for SAR Coordinators and SRU staff	1.0	1.0		0.7	1.0	1.0	1.0	0	0.0	0.5	1.0		1.0		0.9		1.0	1.0		1.0		1.0	
23	Facilitated RCC staff to be proficient in the English language	0.5	1.0		0.0	0.5	1.0	1.0	1	0.5	1.0	1.0		1.0		1.0		0.5	1.0		1.0		0.5	
24	Facilitated a programme of regular liaison visits between relevant RCCs, ATC units and airline operating centres	0.5	1.0		0.5	0.5	0.8	1.0	0	0.0	0.5	1.0		1.0		0.7		1.0	1.0		1.0		1.0	
25	Established additional oceanic SAR capability as far as practicable to ensure a timely and adequate SAR response	0.0	1.0		1.0	1.0	1.0	1.0	1	0.0	0.3	1.0		1.0		0.6		1.0	0.5		1.0		1.0	
26	Established sufficient SRU capabilities (crews, availability, military assets, communications, authority, etc.)	1.0	1.0		0.5	1.0	1.0	1.0	0	0.0	1.0	1.0		1.0		0.6		1.0	1.0		1.0		1.0	
27	Established procedures and necessary infrastructure to coordinate distress beacon alert responses	1.0	1.0		0.7	1.0	1.0	1.0	1	0.5	1.0	1.0		1.0		1.0		0.5	1.0		1.0		1.0	
28	Established a reliable distress beacon registration system	1.0	0.5		1.0	1.0	1.0	1.0	0	1.0	1.0	1.0		1.0		1.0		0.5	1.0		1.0		1.0	
29	Planned and prepared for the implementation of next generation beacons	0.5	0.0		0.4	0.5	1.0	0.5	0	0.0	0.3	1.0		1.0		0.5		0.5	1.0		1.0		1.0	
30	Established an appropriate nationwide means of disposal for old distress beacons	0.0	0.0		1.0	0.0	1.0	0.5	0	0.0	0.3	0.0		1.0		0.5		0.0	0.5		1.0		1.0	
31	Established contingency facilities, or procedures for the temporary delegation of SAR to another body or State	0.0	0.0		0.0	0.0	0.50	1.0	0	0.0	0.3	0.8		1.0		0.0		0.5	0.5		1.0		1.0	
32	Established a centralised information source publishing all AIP information required on SAR	1.0	1.0		1.0	1.0	1.0	1.0	0	0.0	1.0	1.0		1.0		0.8		0.5	0.5		1.0		1.0	
33	Established an Internet-based SAR information sharing system	1.0	0.0		0.6	0.0	0.9	1.0	0	0.0	1.0	0.8		1.0		0.0		0.5	0.5		1.0		1.0	
34	Established systems for the maximum practicable cooperation between State entities for information when required	1.0	0.5		0.5	0.0	1.0	1.0	0	0.0	1.0	1.0		1.0		0.5		1.0	0.5		1.0		1.0	
35	Developed and maintained a current, comprehensive electronic list of State SAR Facilities, SAR Equipment, and SRUs	0.0	0.5		0.8	0.5	0.9	0.5	0	0.0	1.0	1.0		1.0		1.0		0.5	0.5		1.0		1.0	
36	Established an Internet-based SAR Library, or cooperate by contributing to an Internet-based Asia/Pacific resource	0.0	0.0		0.3	0.0	1.0	1.0	0	0.0	0.5	1.0		1.0		0.8		0.0	0.5		1.0		0.5	
37	Provided each RCC and SAR Authority with ready access to a current copy of SAR reference documents	0.5	0.0		0.5	1.0	1.0	1.0	0	1.0	1.0	1.0		1.0		1.0		1.0	1.0		1.0		1.0	
38	Conducted regular SAREX to test and evaluate coordination procedures, data and information sharing and SAR responses	1.0	1.0		0.7	1.0	0.8	0.5	0	0.0	0.3	1.0		1.0		0.8		1.0	1.0		1.0		1.0	
39	Implemented SAR System Improvement and Assessment measures, including Safety Management and QA systems	0.5	0.0		0.5	0.5	0.75	0.5	0	0.0	0.5	0.5		1.0		0.4		0.5	0.5		1.0		1.0	
40	Conducted an annual or more frequent analysis of their current State SAR system to identify specific gaps in capability	1.0	0.5		0.3	0.5	1.0	0.5	0	0.0	0.0	0.5		1.0		0.5		0.5	1.0		1.0		1.0	
41	Conducted SAR promotional programs	0.0	0.5		0.5	0.0	0.75	1.0	0	0.0	1.0	1.0		1.0		0.5		1.0	1.0		1.0		1.0	
Total (of 41)		30.0	27.5		23.1	28.0	39.2	35.0	7.0	12.5	29.8	37.4	0.0	41.0	0.0	30.8	0.0	28.5	32.0	0.0	40.7	0.0	38.5	
%		73%	67%	0%	56%	68%	96%	85%	17%	30%	73%	91%	0%	100%	0%	75%	0%	70%	78%	0%	99%	0%	94%	

\*2020 Update - Higher than previous year  
\*2020 Update - Less than previous year  
\*2020 Update - No Change