AFI/APAC/MID Inter-regional Search and Rescue (SAR) Workshop

(Salalah, Oman, 26 – 29 August 2019)

APAC Region SAR Plan

Presented by **-** Keziah Ogutu
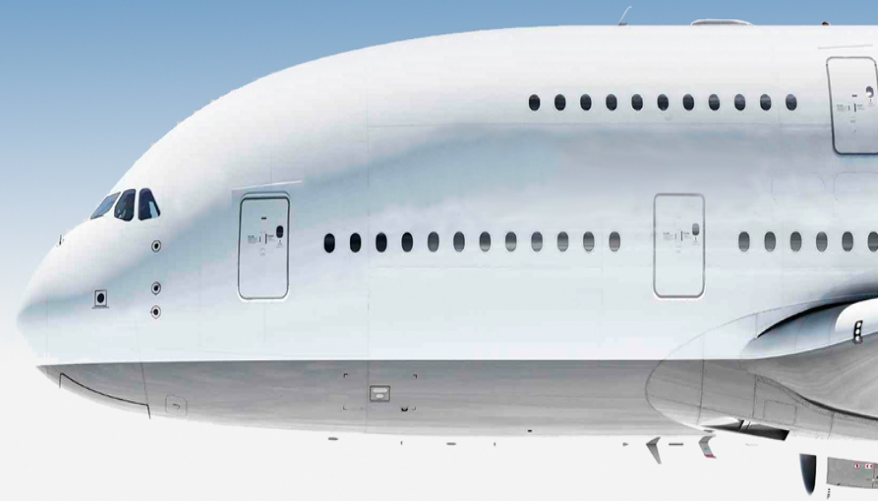
RO ATM & SAR – ICAO ESAF

✓ **The Objective**

✓ **EI and Tracking**

✓ **Objective**

- ✓ The scope of the Plan is the identification of: ☐ the current status of SAR preparedness of Asia/Pacific Region States and State SAR arrangements; and ☐ recommendations for SAR planning and preparedness enhancements, in terms of compliance with Annex 12 of the ICAO Convention, IAMSAR Manual guidance, and accepted best international practice.

- ✓ The Plan is designed to address both civil and military SAR authorities and has been developed in consultation with Asia/Pacific States, SAR administrations and relevant International Organisations.

✓ EI and Tracking

- ✓ **ICAO Regional Office** maintains a record, as reported to ICAO by the States themselves, of the status of individual State SAR compliance against Annex 12 requirements.

- ✓ There are significant variations in the level of State SAR capability across the region

    - ✓ A number of States have not reported their status at all to ICAO. The ICAO Universal Safety Oversight Audit Programme – Continuous Monitoring Approach (USOAP-CMA) also provides a useful tool to States to self-assess their individual SAR system status.

- ✓ The Plan was developed as part of a suite of Asia/Pacific air navigation plans, including the Seamless ATM Plan, the Air Traffic Flow Management (ATFM) Framework, and the Regional ATM Contingency Plan (the Plan should not be considered in isolation).

- ✓ The Plan is expected to provide guidelines and recommendations for Asia/Pacific States to consider for the enhancement and improvement of national, sub-regional and regional SAR capability.

✓ **EI and Tracking**

✓ **SAR PERFORMANCE INDICATORS**

✓ **SAR Capability Matrix (Last Update: 15 May 2018)**

✓ **SAR LOA Matrix** **Date Last Amended**: 29 August 2018

SAR PERFORMANCE INDICATORS

Following is a bank of indicators based on the Asia/Pacific Plan's performance improvement section (wh
used to assess whether an administration is either compliant or not and to internally evaluate their impl
menu for each of the 41 elements, please indicate implementation status with either 0 (not implement
may be indicated such as 0.1 = 10%) or 1 (fully in

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

nich should be read in conjunction with these questions), that can be
lementation status of the Asia/Pacific SAR Plan. Using the drop down
:ed), or 0.5 (50% implemented - note - other partial implementation
nplemented).

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/SRR	0
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matters	0
activities	0
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ster plans	0
oorting	0
	0
d human factors	0
	0
	0
	0
ordinators	0
	0
d SRU staff	0
	0
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AR response	0
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y or State	0
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	0
n when required	0
ment, and SRUs	0
icific resource	0
its	0
g and SAR responses	0
d QA systems	0
: gaps in capability	0
	0
Total (of 41)	0

SAR Capability Matrix (Last Update: 15 May 2018)

	Training	Alerting	Legislative	SAR Committee	SAR Agreements	Relationships	Communications	Quality Control	Civil Military	Resources	SAREX	Library	Computerisation	SAR Programme	Supply Dropping	Special Equipment	SAR aircraft	Navigation	ELTs	COSPAS-SARSAT Alerts	Capability (A=5, B=4) %
Afghanistan																					0
Australia	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	A	99
Bangladesh	D	B	B	E	C	B	B	A	A	B	B	B	C	B	B	B	A	B	A	A	69
Bhutan																					0
Brunei	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	A	A	A	E	93
Cambodia	A	A	A	A	B	B	B	A	B	B	C	B	D	C	A	E	A	A	E	B	68
China	A	A	A	A	A	A	B	B	A	B	B	C	D	E	A	A	A	A	A	E	76
Cook Islands	E	D	D	E	E	C	C	C	D	E	D	E	E	E	E	D	D	E	A	E	5
DPR Korea	D	B	D	B	E	D	B	B	B	C	D	E	E	E	D	E	C	C	E	E	20
Fiji	C	A	C	A	C	A	A	A	A	C	A	B	C	A	A	C	C	A	A	A	64
French Polynesia	A	A	A	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	98
Hong Kong, China	A	A	A	A	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	99
India	B	A	A	B	C	B	A	D	A	A	A	A	B	B	A	B	A	A	A	A	84
Indonesia	A	A	A	A	A	A	B	B	A	A	A	B	B	B	A	B	B	B	B	B	90
Japan	A	A	A	A	B	A	A	A	A	A	A	A	B	A	A	A	A	A	A	A	98
Kiribati															A	A	A	A			20
Lao PDR	C	B	C	B	B	B	B	D	B	B	C	C	C	C	B	D	D	B	D	A	41
Macau, China	A	A	A	B	A	-	A	-	-	-	A	-	-	-	-	-	A	-	A	A	49
Malaysia	A	A	A	A	B	A	A	A	A	A	A	B	A	A	A	A	A	A	B	B	96
Maldives	B	A	C	A	B	A	B	C	A	C	B	B	A	C	C	C	A	C	A		59
Marshall Islands	C	C	C	C	C	C	C	E	C	E	E	E	E	E	E	E	E	C	B	E	4
Micronesia	C	D		E	E	D	C					E			D	D					0

	Training	Alerting	Legislative	SAR Committee	SAR Agreements	Relationships	Communications	Quality Control	Civil Military	Resources	SAREX	Library	Computerisation	SAR Programme	Supply Dropping	Special Equipment	SAR aircraft	Navigation	ELTs	COSPAS-SARSAT Alerts	
Mongolia	A	A	A	A	A	A	A	A	A	A	A	A	A	B	D	B	A	B	A	A	92
Myanmar	D	E	D	C	E	B	C	C	B	E	E	E	E	E	C	E	B	C	E	E	12
Nauru																					0
Nepal	C	C	C	C	C	C	B	C	B	C	C	D	C	D	C	C	E	C	C	C	8
New Caledonia	A	B	B	B	C	B	A	A	A	B	A	A	B	B	A	B	A	A	A	A	87
New Zealand	A	A	A	A	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	99
Pakistan	A	B	B	A	C	A	B	A	A	A	A	A	D	B	B	A	A	A	A	A	85
Palau																					0
Papua New Guinea	B	A	B	A	B	B	C	C	B	A	C	B	C	C	C	E	A	E	A	A	44
Philippines	C	B	A	C	B	C	B	C	C	C	C	A	C	C	D	C	B	A	A	A	41
Republic of Korea	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	100
Samoa																					0
Solomon Islands																					0
Singapore	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	100
Sri Lanka	C	B	B	C	B	B	A	B	A	B	B	A	D	D	B	B	C	A	A	A	66
Thailand	B	A	A	A	B	A	A	A	A	A	A	B	B	B	A	A	A	A	A	A	95
Timor Leste																					0
Tonga	C	D	E	E	D	C	C	E	B	E	A	E	E	E	E	E	B	E	A	A	23
Tuvalu																					
United States	A	A	A	A	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	99
Vanuatu																					0
Viet Nam	A	A	A	A	B	A	A	B	A	A	A	A	B	A	A	A	A	A	A	A	97

A = Fully meets Annex 12 requirements, B = Meets Annex 12 requirements in most areas,
C = Meets Annex 12 requirements in some areas, D = Initial implementation, E = Not implemented, Blank = No response

SAR Matrix Element Descriptions

Training: The appropriate level and type of training for SAR coordinator, SAR mission coordinator, on-scene coordinator, and operational facilities. (IAMSAR Manual Vol. 1, Chapter 3)

Alerting: Fast and reliable means for the rescue coordination center to receive distress alerts. (IAMSAR Manual Vol. 1, Chapter 2)

Legislative: Statutes and related provisions that establish a legal foundation for establishing a SAR organization and its resources, policies, and procedures. (IAMSAR Manual Vol. I, Chapter 1)

SAR committee: Typically established under a national SAR plan, the SAR coordinating committee is comprised of SAR system stakeholders. (IAMSAR Manual Vol. 1, Chapter 6 and Appendix J)

Agreements : States should enter into agreements with neighboring States to strengthen SAR cooperation and coordination. (Chapter 3 – *Cooperation*, in both Annex 12 – Search and Rescue, and the International Convention on Maritime SAR)

Relationships: Close cooperation between services and organizations which may contribute to improving SAR service in areas such as operations, planning, training, exercises and research and development.

Communications: Communication capability for receipt of distress alerts and operational coordination among the SAR mission coordinator, the on-scene coordinator and SAR facilities. (IAMSAR Manual Vol. 1, Chapter 3)

Quality Control: Procedures to focus on improving the quality of SAR services so as to improve results and reduce costs. (IAMSAR Manual Vol. 1, Chapter 6)

Civil/Military: Close cooperation between the various civilian and military organizations.

Resources: The primary operational facilities made available to the national SAR system by various authorities and arrangements with others. (IAMSAR Manual Vol. 1, Chapter 5 and Appendix C)

SAR Exercise: Exercise to test and improve operational plans, provide learning experience and improve liaison and coordination skills. (IAMSAR Manual Vol. 1, Chapter 3; Annex 12, and Annex 14 regarding Airport Emergency Plan)

Library: Quick access to the applicable international, national, and agency SAR publications that provide standards, policy, procedures and guidance.

Computerization: Use of or access to output of various computer resources including databases, computer aids for SAR system management, search planning software, etc. (IAMSAR Manual Vol. 1, Chapter 2)

SAR programme: National structure to establish, manage and support the provision and coordination of SAR services. (IAMSAR Manual Vol. 1, Chapter 1)

Supply dropping: Supplies and survival equipment carried by air and maritime SAR facilities to aid survivors and facilitate their rescue, as appropriate. (IAMSAR Manual Vol. 1, Chapter 2 and Appendix B)

Special equipment: Equipment created for specific rescue scenarios (such as mountain or desert rescue) and equipment typically carried on designated SAR units to support coordination and locating functions as well as special supplies and survival equipment to aid survivors and facilitate their rescue. (IAMSAR Manual Vol. 1, Chapter 2 and 4)

SAR aircraft: An aircraft provided with specialized equipment suitable for the efficient conduct of SAR missions (Annex 12, Chapter 2 - *Organization*)

Navigation: Suitable means provided within the SAR region to determine position, and the responding SAR facilities have the appropriate equipment on board to determine their position in the SAR region they are likely to operate. (IAMSAR Manual Vol. 1, Chapter 2)

ELT: National regulations for carriage of ELTs, and arrangements for registration of the 406 MHz beacon and rapid access to the beacon registration database. (Annex 6 – Operation of Aircraft and Annex 10 - Aeronautical Telecommunications; and IAMSAR Manual Vol. 1, Chapter 4)

Cospas-Sarsat Distress Alerts: A SAR Point of Contact (SPOC) designated for receipt of Cospas-Sarsat distress data, and arrangements for efficient routing of the distress data to the appropriate SAR authority (the aeronautical emergency locator transmitter ELT), maritime emergency position-indicating beacon (EPIRB), and personal locator beacon (PLB)). (Annex 12, paragraph 3.2.5 and Section 2.4; and, IAMSAR Manual Vol. 1, Chapter 4)

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
1. Afghanistan																																													
2. Australia												√			√					√								√				√					√	√							
3. Bangladesh														√																															
4. Bhutan														√																															
5. Brunei																			√																										
6. Cambodia																																												√	
7. China																																		√											√
8. Hong Kong, Ch.																																													
9. Macao, China																																													
10. Cook Islands																												√																	
11. DPR Korea																																													
12. Fiji		√																																											
13. Fr. Polynesia										√																		√																	
14. India			√																																										
15. Indonesia		√																	√													√	√			√		√	√					√	√
16. Japan																																	√	√											√
17. Kiribati																																													
18. Lao PDR																			√																									√	
19. Malaysia					√										√																		√			√			√					-	
20. Maldives		√																																				√							
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28. New Zealand[1]		√								√			√														√		√						√						√				√
29. Niue (NZ)																												√																	
30. Pakistan																																													
31. Palau																																													√
32. PNG		√													√																														
33. Philippines															√	√			√																	√			√					√	
34. ROK							√									√																													
35. Samoa																												√																	
36. Singapore															√				√														√						√					√	
37. Solomon Is.		√																																											
38. Sri Lanka		√													√					√																									
39. Thailand															√				√														√			√								√	
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42. Tuvalu																																													
43. Vanuatu																																													
44. Viet Nam						√									√			√	-														√			√			√						
45. USA[2]							√								√	√					√	√						√			√														

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[1] Also has an agreement with the Tokelau Islands and a SAR agreement with SAM State Chile
[2] Includes American Samoa, Guam, Johnston, Kingman, Midway, Mariana, Palmyra, Wake