



ICAO

International Civil Aviation Organization

**Tenth Meeting of the ICAO Asia/Pacific Search and Rescue
Workgroup (APSAR/WG/10)**

Siem Reap, Cambodia, 27 – 30 May 2025

Agenda Item 5: Asia/Pacific Regional SAR Plan

REGIONAL SEARCH AND RESCUE UNIT (SRU) CAPABILITY

(Presented by Australia)

SUMMARY

This paper proposes that the current *Asia/Pacific Search and Rescue (SAR) Plan Preferred SAR Capability Specifications (PSCS)* on provision of up to date cross-border information on SAR capability be amended to focus on SAR unit (SRU) capability, together with a proposal that States provide this information through regular updates to this Workgroup.

1. INTRODUCTION

1.1 One of the Preferred SAR Capability Specifications (i.e. PSCS 7.2 c) of the Asia/Pacific SAR Plan is the expectation on all States to provide up to date cross-border information on SAR capability to adjoining States, which should be included in bilateral SAR agreements.

1.2 Australia proposes that the term “SAR capability” within this PSCS be reviewed and amended to “SAR unit (SRU) capability” to provide a clearer definition of what is understood to be the intent of this PSCS and to simplify the administrative process for regional States. If this proposal is agreed, Australia also proposes that States report their SRU capability for the amended PSCS to this Workgroup as an alternative to States needing to exchange their SRU information annually with each of their neighbouring States.

1.3 This proposal also aligns with the distinctive difference between the definitions provided in Annex 12 Chapter 1:

- ***Search and rescue facility.*** Any mobile resource, including designated search and rescue units, used to conduct search operations; and
- ***Search and rescue unit.*** A mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

1.4 Search and rescue facilities may include mobile resources that do not qualify as SRUs as defined by Annex 12, such as aircraft or vessels that might be requested to assist during SAR operations until the arrival on scene of dedicated SRUs. Such SAR facilities include, for example, transiting aircraft, merchant ships, fishing vessels, etc. This proposal is focused on the reporting of SRU capability and not the wider set of SAR facilities.

2. DISCUSSION

Asia/Pacific SAR Plan and Cross-Border Information on SAR Capability

2.1 The Asia/Pacific SAR Plan includes in its Performance Improvement Plan the following PSCS:

7.1 SAR Standards and Procedures: All States should:

...

- c) *provide up to date cross-border information on SAR capability (this should be included in bilateral SAR agreements).*

2.2 The annual self-assessment by States for PSCS 7.2 c) is reported in the Regional SAR Plan Monitoring and Reporting Form, under the following SAR Performance Indicator (SPI):

...

11. Provided up to date cross-border information on SAR capability to adjoining States.

2.3 The meaning of “SAR capability” is not defined in the Asia/Pacific SAR Plan and is therefore open to interpretation by States. SAR capability is a holistic term which can include a range of capabilities within the SAR system, such as the capabilities of Rescue Coordination Centres (RCCs), RCC staff, RCC incident management and planning systems, SAR communications, SRUs, SAR equipment, suitable aerodromes, refuelling facilities, budget, SAR service governance and oversight, and so on. Therefore, for SPI 11 the self-assessment of the range of elements that could be included under SAR capability can be challenging for States to measure, evaluate, administer and report in a standard manner.

2.4 PSCS 7.2 c) also asks States to coordinate the same information repeatedly with each of their neighbours and some States have many neighbours to coordinate with. For States to achieve an annual implementation status of 100% for SPI 11, this relies on all neighbours reciprocating with their information regularly and this can also be challenging to achieve.

2.5 While the sharing of the wide range of SAR capability elements between RCCs can be useful for RCCs, Australia suggests that the most valuable and critical SAR capability information that should be shared is each State’s up to date SRU capability (air and maritime) and location. The Asia/Pacific Regional Air Navigation Plan (ANP) Volume II already provides State SRU information however that only requires States to contribute basic SRU information.

2.6 SRUs from neighbouring States may provide:

- a) a faster SAR response, for example where an SRU within the SAR Region (SRR) of another State is based closer or has a faster transit speed to a distress location;
- b) a specific SAR capability, for example where an SRU within the SRR of another State is equipped with a 406 MHz homer, search radar, night vision imaging system (NVIS), SAR survival equipment or drift measuring devices that can be dropped from an aircraft, etc; or
- c) supplementation of a State’s own SRUs, particularly during a large-scale SAR operation where multiple SRUs are needed, for example a Mass Rescue Operation to a large passenger aircraft ditching or passenger ship.

2.7 RCCs should coordinate with their neighbours, as appropriate to different SAR incident circumstances, to enquire about SRUs in those neighbouring SRRs that might be available to assist for the reasons outlined in paragraph 2.6 above. However, it is beneficial for RCCs to have this SRU

capability information available before such a need arises because that information can provide efficiencies during a SAR incident, including:

- a) enabling RCCs to make more informed requests for the assistance of SRUs from their neighbours; and
- b) saving valuable time during a SAR incident by reducing the amount of information about SRUs that needs to be communicated between RCCs. Only dynamic information or changes to SRU capability not already provided previously will need to be communicated.

2.8 Without this information, the opportunity for RCCs to achieve the best possible SAR response could be missed resulting in loss of lives that may otherwise have been saved.

2.9 It is also relevant to consider that a good indication of each State's overall SAR capability is already provided by many of the other 41 SPIs without needing to consider the existing PSCS 7.2 c) and its corresponding SPI 11.

Asia/Pacific SAR Plan – Sharing Regional SRU Capability Information

2.10 For the reasons outlined in earlier paragraphs, Australia proposes that PSCS 7.2 c) and its corresponding SPI 11 be amended to focus on the sharing of SRU capability rather than the larger set of elements that could describe the total SAR capability of a State.

2.11 It is proposed that instead of each State coordinating individually with its neighboring States to exchange SRU capability information, all States should report this information centrally to the ICAO Asia/Pacific Regional Office annually, no later than 28 February. The ICAO Secretariat will compile the data and present it as a working paper at the APSAR/WG meeting, include it as an appendix to the meeting report, and subsequently publish it on the ICAO APAC eDocuments webpage.

2.12 An additional advantage would be that information about the SRU capabilities of other regional States beyond only the adjacent neighbouring States of a coordinating RCC would be available that might also be requested to assist for the reasons outlined in paragraph 2.6.

2.13 States with updated SRU capability may consider presenting detailed information papers or presentations to this Workgroup. Sharing this information with the Workgroup may also prompt ideas that other States might consider for improvements to their own State SRU capability.

Proposed New Asia/Pacific SRU Capability Document

2.14 The proposed new SRU Capability document could include SRU capability information aligned with Annex 12 Standards and Recommended Practices (SARPs), the ICAO/IMO Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, and the Asia/Pacific ANP Volume II.

2.15 The Asia/Pacific ANP, Volume II, Part VI Search and Rescue (SAR), TABLE SAR II-1 includes State SRU information, but is limited by only including basic information on SRU capability as follows:

- a) aircraft radius of operation with 2½ hours search time remaining;
- b) helicopter radius of operation and capacity for evacuating a set number of persons; and
- c) rescue boats and vessels classified by generic characteristics.

2.16 The Asia/Pacific ANP SRU information does not include any information regarding SAR equipment or specific capabilities (per Annex 12) that can be useful for RCCs to know about when assessing SAR response plans. It also does not require reporting of SRU base locations, although States do voluntarily provide locations in the Remarks column of the Asia/Pacific ANP table.

2.17 The proposed new SRU capability document could be added as a new appendix to the APSAR/WG Final Report to dynamically supplement the Asia/Pacific ANP information, include more detailed capability information per Annex 12, and provide enhanced awareness of SRU capability for the whole region. Annex 12 Chapter 2 paragraph 2.6 includes several SARPs relevant to SRU capability which in summary includes that SRUs shall, or should be, equipped to:

- a) promptly locate the scene of an accident and provide assistance;
- b) conduct reliable two-way communications with other SAR facilities;
- c) communicate on aeronautical distress and on-scene frequencies, and other prescribed frequencies;
- d) home on distress frequencies;
- e) communicate with vessels over maritime areas;
- f) communicate using the International Code of Signals;
- g) drop survival equipment, and
- h) from 26 November 2026, over maritime areas drop a device for measuring actual surface drift.

2.18 IAMSAR Manual Volume II Chapter 6 paragraph 6.16.4, states that it is important that RCCs should be aware of the SAR resources available in regional and neighbouring RCCs and arrange regular exchange and update of such information including details about SRUs (aircraft, vessels, land and specialized units), airstrips, refuelling and other facilities.

2.19 IAMSAR Manual Volume II Appendix G Facilities and Equipment Selection, contains guidance on air, maritime and land units, and the SAR supplies and survival equipment that could be carried by those units.

2.20 The guidance in IAMSAR Manual Volume II Appendix G, advises that land facilities, unlike air and marine facilities, are difficult to classify. Land SRUs can include a variety of capabilities such as specialized mountain, jungle, urban, remote, polar, cave, desert, parachute, flood and medical units that may be based at many different locations within a State.

2.21 IAMSAR Manual Volume II Appendix G Paragraph G.6.3, includes guidance on SAR supplies and survival equipment packs categorised by climatic areas. It is proposed that the new SRU capability document includes similar descriptive terms as an indication of survival pack types that could be dropped by SRUs to survivors, but based on the similar descriptive terms used in the ICAO International Flight Plan, Item 19, which indicate carriage of survival equipment, i.e. polar (P), desert (D), maritime (M) and jungle (J) [ICAO Doc 4444 (PANS-ATM) Appendix 2].

2.22 It may not be necessary to include information on all SRUs of a State in the proposed SRU Capability document because there are SRUs which are not capable of operating into neighbouring SRRs, for example SRUs that have insufficient range capability or do not have the necessary regulatory or international operating approvals to operate into neighbouring SRRs. The Workgroup is invited to consider whether only information on States' SRUs that can operate into another SRR should be included in the proposed SRU Capability document.

2.23 Following the practice of the Asia/Pacific ANP, the proposed document does not include information on land SRUs. Also, it may not be practicable to individually list all land units in the proposed document given their wide variety of capability and that there are potentially many locations they could be based within States. The Workgroup is invited to consider whether land SRUs should be included in the proposed SRU capability document, and if so, a simple option may be to record general comments only regarding States' land SRU capability.

2.24 As noted in paragraphs 2.6 to 2.8 above, the proposed new document can enhance RCC situational awareness of SRUs outside their own SRR to better identify potential SRUs in another State that they could request to assist during SAR response. This information could also be displayed on RCC charts (wall or electronic) to assist with ready identification of suitable assets outside their SRR including SRUs beyond neighbouring SRRs, which supports PSCS 7.3 c) and SPI 17 (RCC facilities).

2.25 It is important to note that the proposed SRU capability document will only include information for the Asia/Pacific region so those APAC States with SAR neighbours in adjoining ICAO regions will need to continue to coordinate individually with those neighbours to share SRU capability information. This could be improved, if it is agreed to establish the proposed Asia/Pacific SRU Capability document, by recommending that other ICAO regions consider implementing the same document and sharing those documents between the ICAO regions.

2.26 A suggested sample Asia/Pacific SRU Capability document format is available for consideration by the Workgroup in **Attachment A** to this paper.

Proposed Amendments to PSCS 7.2 c) and Corresponding SPI 11

2.27 The following amendments to the Asia/Pacific SAR Plan Performance Improvement Plan PSCS and SAR Performance Indicator are proposed by Australia for consideration by this Workgroup. Proposed amendments are highlighted grey with deletions struck out.

2.28 Proposed PSCS amendment:

7.2 SAR Standards and Procedures: All States should:

- c) provide up to date ~~cross-border~~ information on State SAR unit (SRU) location and capability on those SRUs that may operate into other State SRRs. This should be provided to the ICAO Asia/Pacific Regional Office per the guidance in Appendix [to be advised] of this Plan. ~~(this should be included in bilateral SAR agreements).~~

2.29 Proposed SPI amendment (Element 11 of the Regional SAR Plan Monitoring and Reporting Form):

- 11. Provided up to date ~~cross-border~~ information on SAR unit (SRU) location and capability to ~~adjoining States~~ the ICAO Asia/Pacific Regional Office per the guidance in Appendix [to be advised] of the Asia/Pacific SAR Plan.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper and discuss any relevant matters as appropriate;
- b) consider and agree to the proposals to:
 - i) change the reporting of SAR capability to reporting of SAR Unit (SRU) capability;

- ii) amend the Preferred SAR Capability Specifications (PSCS 7.2 c) of the Asia/Pacific SAR Plan and the corresponding SAR Performance Indicator (SPI 11) per the suggested amendments in paragraphs 2.28 and 2.29; and
- iii) introduce the new method for States to report their SRU capability;
- c) consider the proposal for the new Asia/Pacific SRU Capability document, and if agreed, consider:
 - i) whether it is necessary to include information on land SRUs, and if so, whether it is sufficient to include general comments on the availability of land SRUs only;
 - ii) whether information should only be included about SRUs that can operate into, or beyond, a neighbouring SRR;
 - iii) the suggested draft guidance and document format in Attachment A;
 - iv) adding the draft guidance in Attachment A as a new Appendix to the Asia/Pacific SAR Plan;
 - v) the proposal for States to submit updates of their SRU capability information to the ICAO Asia/Pacific Regional Office annually, no later than 28 February. The ICAO Secretariat will compile the data and present it as a working paper at the APSAR/WG meeting, include it as an appendix to the meeting report, and subsequently publish it on the ICAO APAC eDocuments webpage;
- d) if all proposals are agreed, consider the Draft Conclusion below for submission to the ATM Sub-Group to enable the proposed changes and amendments; and
- e) encourage States to submit information papers or presentations to future APSAR/WG meetings on their SRU capabilities, especially any new capability.

Draft Conclusion APSAR/WG/10-X: Proposal Annual Submission of Asia/Pacific Search and Rescue Unit (SRU) Capability		
What:	That,	Expected impact:
1. States and Administrations to submit update of their SRU capability information to the ICAO Asia/Pacific Regional Office annually, no later than 28 February. The ICAO Secretariat will compile the data and present it as a working paper at the APSAR/WG meeting, include it as an appendix to the meeting report, and subsequently publish it on the ICAO APAC eDocuments webpage; and		<input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
2. the Asia/Pacific SAR Plan and the corresponding SAR Performance Indicator in the Regional SAR Plan Monitoring and Reporting Form be amended to support the States/Administrations' submission of Asia/Pacific SRU Capability information and be uploaded to the ICAO Asia/Pacific Regional Office website to replace the existing version.		
Why:	To enhance RCC situational awareness of SRUs outside their own SRR to better identify potential SRUs in another State that they could request to assist during SAR response.	Follow-up: <input checked="" type="checkbox"/> Required from States
When:	30-May-25	Status: Draft to be adopted by Subgroup

Who:	<input checked="" type="checkbox"/> Sub groups	<input checked="" type="checkbox"/> APAC States	<input checked="" type="checkbox"/> ICAO APAC RO	<input type="checkbox"/> ICAO HQ	<input type="checkbox"/> Other:
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ANNUAL ASIA/PACIFIC SRU CAPABILITY SURVEY

In accordance with the *Asia/Pacific SAR Plan*, this document provides information on regional State SRUs.

Note: this document does not contain information on all State SRUs, only those SRUs which are capable of operating into another State's SRR.

EXPLANATION OF THE TABLE

Column

1. State.
2. SRU category (*Note: refer IAMSAR Manual Volume II Appendix G for SRU category criteria*).
 - Air units – SRG, MRG, LRG, VLR, ELR, HEL-L, HEL-M or HEL-H.
 - Maritime units – RB or RV [*Note: the boat or vessel speed in knots may be inserted, e.g. RB(14) or RV(10)*].
3. SRU location – full name of the location.
4. SRU capability
 - Air units – indicate specialised capability which may include, but not be limited to, visual search, electronic search (e.g. 121.5/ 243.0/ 406 MHz homer), rescue hoist/winch (day, night), aviation VHF/UHF/HF radio, marine VHF/HF radio, ADS-B, AIS, satellite telephone, droppable SAR equipment [e.g. life raft, survival kit, datum marker buoy (DMB), etc], medical crew, etc.
 - i. life raft capacity should be inserted, e.g. LR (12).
 - ii. survival kits may be indicated by type P (polar), D (desert), M (maritime) or J (jungle) if appropriate.
 - Maritime units – as for air units, indicate specialised capability, for example, electronic search, DMB, deployable fast rescue boat, etc.
5. Remarks – supplementary information such as aircraft type (ICAO designator) or vessel type, etc.
6. Contact – RCC name.

Example

State	SRU Category	SRU Location	SRU Capability	Remarks	Contact
1	2	3	4	5	6
Australia	ELR	Cairns, Essendon, Perth	Visual search, EO/IR, NVIS, search radar, multi-frequency homer, aviation VHF/HF, marine VHF, ADS-B in/out, AIS, satphone Droppable kits D, M, J, LR(6), LR(36), DMB	CL60	JRCC Australia
	HEL-M	Thursday Island	Visual search, 406 MHz homer, NVIS, aviation VHF, marine VHF, ADS-B out, satphone, winch	AW139	
	RV(27)	Sydney	Range 1,400 NM, carries deployable 6.4 m rescue craft	Offshore patrol vessel	

– END –