



International Civil Aviation Organization

**Third Meeting of the Asia/Pacific Regional Search and Rescue Task Force
(APSAR/TF/3)**

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Agenda Item 5: Asia/Pacific Regional SAR Plan

GUIDANCE ON ORGANIZATION OF SAREX BETWEEN STATES

(Presented by Singapore)

SUMMARY

This paper presents a guide to assist States in organizing a Joint Search and Rescue Exercise (SAREX) with their neighbouring State or States.

Strategic Objectives:

A: Safety – Enhance global civil aviation safety

Global Plan Initiatives:

Not Applicable

1. INTRODUCTION

1.1 During the last session of the Task Force Meeting in 2014 (APSARTF/2), some States have expressed interest in conducting joint exercises with one or more of their neighbouring States. States have recognized the values, importance and benefits of conducting joint SAR exercises with neighbouring State or States that share common boundaries. Some States may have very few SAR operations each year so exercises like this will be critical to maintain proficiency.

1.2 Joint exercises among neighbouring States or parties to SAR agreements will also be of value as procedures relating to coordination and communication can be practiced and improved. This will not only ensure cooperation among States when responding to an incident but also enhances the SAR capability within a region. Another advantage for the conduct of exercises is that it will reveal deficiencies that may exist in SAR plans and enable them to be improved. It is safer to have shortcomings revealed by exercises rather than during actual operations.

2. DISCUSSION

2.1 The IAMSAR Manual Volume 1 has a chapter on Exercises (Chapter 3 – Training, qualification, certification and exercises) giving a brief outline on the planning stage of an SAREX to the evaluation stage of the exercise. This document provides further information and the required elements that go into the planning of a SAREX. This document will serve as a guide to assist States to develop a work plan for the organization of a SAREX with one's neighbouring State or States. States may wish to amend, delete or add any other requirements or elements into their work plan that they may deem appropriate or necessary.

Planning

2.2 Before any SAREXes, proper planning would be required at least two months (or more if required) before the actual date for the exercise. The organizing State should plan and hold a Coordination Meeting for all participants involved in the coming SAREX. This will ensure that all participants have a common understanding and all participants have an prior arrangement in place for the safe conduct of the SAREX. States can agree to conduct a Table Top Exercise (where all participants involved will have a table top discussion for the SAREX) or a Full Scale or Physical Exercise (field exercise where there is actual deployment of assets). If States or some of the participants involved are participating in the SAREX for the first time, it is recommended that a Table Top Exercise would be more appropriate as it will enable all participants to have a clear understanding of the exercise plans, coordination procedures and the required communication procedures before embarking on an exercise with actual deployment of assets.

Exercise elements in the work plan

2.3 A typical exercise sequence involves the development of the concept of what is to be exercised, selection of participants (staff and facilities), exercise scenarios and others. An attachment to this document listed some of the elements required in the planning of a SAREX and this it can be used as a work plan for any organization of a Joint SAREX. Please see **Attachment 1**.

Execution

2.4 Those who plan exercises should not be the same ones who would respond to the created scenarios. This will help to avoid cover ups or known weaknesses to ensure ideal results. Scenarios should be as realistic as possible and simulated events relating to the scenario can serve as exercise injects during the exercises to add to the realism of the exercises.

Evaluation

2.5 The evaluation process is an important part of the SAREX as it identifies the weakness in the SAR system and the final step is to develop recommendations for improvement. Subsequent exercises would emphasize these recommended changes as well as other concerns.

ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) note the information contained in this paper and consider the attachment's inclusion in the Asia/Pacific SAR Plan as an appendix if appropriate;
 - b) discuss any relevant matters as appropriate; and
 - c) use this document as a guidance material in the organization of a Joint SAREX with one's neighbouring State or States.

ATTACHMENT 1

WORK PLAN FOR THE COORDINATION MEETING OF A JOINT SEARCH AND RESCUE EXERCISE

1. OBJECTIVES

State the objectives of the joint SAREX and what are to be achieved out of the SAREX by all participants.

For example:

1.1 The objectives of the Joint SAREX are:

- a) To provide continuation of SAR exercise and improve cooperation between (participating State RCC) and (participating State RCC).
- b) To provide continuation training for personnel of SAR organisations from both (participating State RCC) and (participating State RCC)
- c) To test the communication facilities and procedures between (participating State RCC) and (participating State RCC); and
- d) To test and determine the effectiveness of the Search and Rescue Units of (participating State RCC) and (participating State RCC).

2 DATE AND TIMING OF SAREX

State the agreed date, time and year for the Joint SAREX. Have alternate or contingency plan in the event that the full scale SAREX cannot be conducted due to weather or any unforeseen circumstances. It is recommended that a pre-SAREX brief be conducted to ensure all participants understand their roles and the required actions to be taken. State the agreed time for a pre-SAREX brief to be carried out for all participants and States may conduct simultaneous pre-SAREX brief at their own location for their local participants. For standardization and to avoid confusion, it is recommended that all timing and dates used should be in UTC as there may be difference in time and day for different States. After the SAREX, it is also recommended to conduct a de-brief for all participants.

For example:

2.1 Table Top SAREX or A Full Scale Exercise will be held between (participating States) and (participating State) on(date/month/year according to UTC)(day of the week according to UTC) from (time in UTC) to (time in UTC).

2.2 In the event of bad weather, the Full Scale SAREX will be converted into a Table Top SAREX. The cut off time will be at (time in UTC).

2.3 A Pre-SAREX brief will be held on (day/month/year according to UTC) (day of the week according to UTC) in (location of the pre-SAREX brief) at (time in UTC).

2.4 De-Brief will be held on (day/month/year according to UTC) (day of the week according to UTC) in (location of the de-brief) at (time in UTC).

3 SCENARIO

Discussion and development of exercise scenario with participating State or States and agencies involved. Scenario created should be as realistic as possible to simulate close to a real incident. A fictitious flight plan can be included to provide additional information pertaining to the distressed aircraft as required by the RCCs.

For example:

3.1 At (time in UTC), a chartered(type of aircraft) (callsign of distressed aircraft) departed from (point of departure) to (destination) with (POB). At (time in UTC), aircraft declared “**MAY DAY**” due to (nature of emergency) at (location in Lat and Long or with reference to a prominent location known to all).

3.2 Other information like Pilot-in-command equipment carried on board, colour of aircraft fuselage or tail.

4 PARTICIPATING ORGANISATIONS OR UNITS

Identify and list all participating agencies from both States.

For example:

4.1 From (participating States)

- 1) Civil Aviation Authority of
- 2) Local Airforce
- 3) Local Navy
- 4)
- 5)

From (the other participating States):

- 1) Civil Aviation Authority of
- 2) Local Air Force
- 3) Local Navy
- 5)
- 6)

5 DEPLOYMENT OF EXERCISE SEARCH AND RESCUE UNITS (SRUs) AND CALLSIGNS

State all the SAR assets that will take part in the SAREX. It is recommended that the callsigns of the SRUs should be pre-fixed with the word “SAREX” to indicate that it is an exercise aircraft or surface vessel. This will not create any confusion between a SAREX and a real incident. Callsign assigned to a particular SAR asset should not be changed and to be used throughout the exercise. Different SAR asset should be assigned with an individual flight number.

For example:

5.1 SRUs from (participating State) and their callsigns are as follows:

<u>Type of SRUs</u>	<u>Callsign</u>	<u>Remarks</u>
Fokker 50	SAREX 01	Search
C130	SAREX 02	Search
Dolphin Helicopter	SAREX 03	Search and Rescue
.....	SAREX.....	.....
.....	SAREX.....	.....
.....	SAREX.....	.....

5.2 SRUs from (the other participating State) and their callsigns are as follows:

<u>Type of SRUs</u>	<u>Callsign</u>	<u>Remarks</u>
Helicopter	SAREX 04	Search and Rescue
Ship	SAREX 05	Search and rescue
.....	SAREX....	.....

6 COMMUNICATIONS

State the agreed radio frequencies to be used in the SAREX. Make communication arrangements between the two RCCs as well as between the RCCs and the SRUs. It is recommended that a communication check be conducted between all parties before the SAREX to ensure serviceability of communication equipment. A standby day may be necessary if the communication check is found not satisfactory or unsuccessful.

For example:

6.1 The communications arrangement will be as follows:

a) Between (participating State RCC) and (the other participating State RCC)

Primary communication	-	.....KHz or .....Mhz or landlines
Secondary communication	-	.....KHz or .....Mhz or landlines
Standby communication	-	.....KHz or .....Mhz or landlines

b) Between(participating State RCC) and SRUs

Primary communication	-	..... KHz or .....MHz
Secondary communication	-	..... KHz or .....MHz

Standby communication -KHz orMHz

- 6.2 A communication test between (participating State RCC) and (the other participating State RCC) will be conducted prior to the SAREX. The date for the test is on (date/month/year according to UTC) between (time in UTC) to (time in UTC).
- 6.3 In the case of unsatisfactory communication test, another test will be conducted on (date/month/year according to UTC) between (time in UTC) to (time in UTC).
- 6.4 All messages pertaining to the exercise shall be prefixed with the words “SAREX SAREX SAREX”

7 SEARCH OBJECT

In a Full Scale SAREX, States can consider the deployment of a search object to add realism to the exercise. This will enable participating SRUs to practice visual search from air as well as on from the surface of the sea. If the homing capability of the SRUs is desired, a beacon can be placed on the search object for electronic search. Arrangement can be made for the search object to be deployed at the proposed distress location at the activation time of the SAREX. A search object with some significant marking or markings on it will enable easier visual sighting of search target on land or on water.

For example:

- 7.1 The search object will be provided by (one of the participating State RCC) and will be deployed at (time in UTC) on(date of the SAREX according to UTC) at the position in which the distressed aircraft is assumed to have crashed.
- 7.2 Search target is marked with..... (bright colour or with the words “SAREX” or some significant marking).

8 ALERTING AND ACTIVATION

State clearly on the alert and activation processes for the SAREX. Decide on which State would initiate the distress phase and notify the other participating State or States so that joint SAR effort can be carried out. If the distressed location is within the area of responsibility of a particular State, the State concern should carry out the alerting and activation phase. The other participating State or States should be notified and joint SAR operations can be carried out.

For example:

- 8.1 Since the crash will occur in (name the State) FIR or area of responsibility, (State concern) RCC will notify (participating State) . Both RCCs will coordinate the SAR Operations.

9 SEARCH AREA

Discuss on how to determine the search area or which State should determine the search area. In a joint SAR effort, the two RCCs can determine their own search areas and agree on a common search area.

For example:

- 9.1 The respective Search Mission Coordinators (SMCs) will work out a search area upon receipt of the distress location or crash report.
- 9.2 The two SMCs shall discuss with each other and agree on a common search area.
- 9.3 If there is a great difference between the two search areas, the controlling RCC shall decide on the most probable area and take the necessary action to promulgate the area as a restricted area for SAR operations accordingly.

10 DIPLOMATIC CLEARANCE

Make necessary arrangement for the application of Diplomatic Clearance required if State assets may or are required to enter into another State's territorial airspace or waters. The process for application should be made known or if there is an agreement in place between the two States, then the agreed procedure should be followed. Provide information regarding the SRUs and particulars of the personnel on board. It is recommended that particulars of the SRUs be provided to the State concern prior to the SAREX. This will assist in the Diplomatic Clearance process.

For example:

- 10.1 (State) SMC will request to (State) for diplomatic clearance to allow (State's) SRUs to enter (State's) territorial airspace and waters.
- 10.2 To obtain diplomatic clearance for (State's) SRU, (State) SMC shall provide the following particulars:
 - a) Registration of SRU
 - b) Type of aircraft or vessel
 - c) Name of Captain/Pilot In Command
 - d) Names of crew on board (not required for sea asset)
 - e) Area of operation
 - f) Date and time of operation
- 10.3 The details of the (State's) SRU shall be provided to (State) one or two weeks before the exercise. Application for diplomatic clearances through the normal channel via the (agency for the process of the Diplomatic Clearance) is advised in order to accelerate the diplomatic clearance process.

11 SEARCH OPERATIONS

Note: Ensure the safe conduct of the SAREX especially with the air assets. It is recommended that there should be one controlling RCC providing instructions to search aircraft prior to entering the search area. It is also recommended that an Air Coordinator be deployed to provide instructions to search aircraft during transit to and fro from the

search area as well as within the search area if the RCC personnel have no knowledge of Air Traffic Control.

For example:

- 11.1 All SRUs shall report to the controlling RCC or On Scene Coordinator (OSC) prior to entering the Search Area and while conducting search in the Search Area to ensure safety and efficiency in the joint SAR effort. All air search assets must observe and adhere to ATC instructions.
- 11.2 Non exercise aircraft shall keep clear of the search area unless clearance has been obtained for these aircraft to transit through.

12 RESCUE OPERATIONS

Note: Discuss on how the rescue operation is to be executed. States can decide on a simulated rescue operation by taking photographs of the search object once sighted or if actual personnel are deployed at the distressed location as survivors, actual rescue operations can be conducted. Actual rescue operation will provide training for the rescue of survivors from sea or land to hospitals or landing sites. If possible, recover the search object from the land or sea after the exercise, this will help to avoid the search object becoming an obstacle to others on land or sea. If recovering is not possible, make a general broadcast to warn others of the objects.

For example:

- 12.1 When the search object is sighted, the SRU shall inform the (State) RCC. The (State) RCC will disseminate the information to all other SRUs.
- 12.2 The SRUs to take photographs of the search object to simulate the rescue of the survivors.
- 12.3 Recovery of the search object will be by (agency that is recovering the search object).
- 12.4 If the search object is unable to be recovered due to sea state or weather, an Urgent Marine Information Broadcast is provided by (maritime agency responsible for the area).

13 EMERGENCY LANDING OF SEARCH AIRCRAFT

Note: Make arrangement for search aircraft to land in airport or airfield of another State in the event of an emergency encountered by the search aircraft where immediate landing is required.

For example:

- 13.1 (State's) search aircraft will be given permission to land in (name of airport or airfield) if an emergency landing is required.

14 TERMINATION OF SAREX

Note: State the requirements or under what circumstances that will terminate the SAREX. Make arrangement in the event of a real incident that might occur during the SAREX.

Consideration can be given to have a code word or words which are understood by all participating agencies and SRUs in the event of a real incident. Once the code word is broadcast to all concern, it will be understood by all participants and the SAREX will be converted into real SAR operations.

For example:

- 14.1 The SAREX will be terminated under any one of the following circumstances:
 - a) When the all the SRUs have returned to base.
 - b) When the time for the SAREX has expired and no search object is sighted.
 - c) When there is an actual emergency.
- 14.2 In the case of a real emergency, the exercise will be converted into a real SAR Operations. The code word “**NO DUFF NO DUFF**” will be broadcast and all agencies to terminate the exercise immediately and prepare and convert it into a real SAR Operations.

15 SAREX De-brief

Note: Conduct of a SAREX de-brief is important as this is where the evaluation process of the exercise is presented by evaluation experts who observed the exercise and observations by people who actually participated in the exercise scenarios. This is the final step to identify weaknesses and development of recommendations for improvement. Agree on a date and venue to conduct a SAREX de-brief to all participants from both States.

For example:

- 15.1 SAREX Debrief will be held in on (date/month/year according to UTC) at (time in UTC).
- 15.2 The venue for the SAREX De-brief will be at (name the venue).

16 SAREX CONTROLLERS/EVALUTORS/OBSERVERS

Note: Name the personnel who will be involved in the SAREX as observers, evaluators and controllers. As for evaluators and controllers, they must have expertise in the areas of SAR as they will understand what is to be evaluated and how to control the exercise to maximize the training value.

For example:

- 16.1 Personnel involved in the SAREX will be as follows:

From	SAREX Controllers/Evaluators/Observers
a) .....	..... (name of personnel and their role)
..... (State)	..... (name of personnel and their role)
..... (State)	..... (name of personnel and their role)

17 INVITATION TO FOREIGN OBSERVERS

Note: States may consider inviting observers from foreign countries or international organizations to attend and observe the SAREX. These personnel can provide valuable feedbacks for improvement to the system. Arrangement to be made as to which State will do the invitation and who should be invited to attend.

For example:

- 17.1 Invitation to foreign observers to observe the SAREX at (state the venue for the observation of the SAREX) will be provided (State that is providing the invitation) on behalf of (the other State).
- 17.2 The following countries and organizations will be invited to attend:
- a) (name of country or organization)
 - b) (name of country or organization)
 - c) (name of country or organization)
 - d) (name of country or organization)

18 PRESS COVERAGE

Note: If there provision for any press coverage for the SAREX, made the arrangement for drafting of press release.

For example:

- 18.1 If there is a requirement for a joint press release on the SAREX to be issued,(State that will produce the draft) will draft the press release and forward to (the other State) for concurrence.

19 SAREX REPORT

Note: SAREX Report is important as it serve as a permanent record of the exercise. Each element of the exercise is recorded and lesson learnt during the exercise is captured. Make arrangement on who should produce the SAREX Report for dissemination to all participating agencies as well as others who may be interested.

For example:

- 19.1 (State) will produce the SAREX Report with assistance from (the other State). Photographs will be made available for the SAREX Report.
- 19.2 A copy of the report will be sent to each of the following countries and International Organizations.
- a) (country or International Organization)
 - b) (country or International Organization)
 - c) (country or International Organization)

20 VENUE FOR THE NEXT SAREX

Note: It will be good to plan for an annual joint SAREX with neighbouring State or States. State the tentative date and venue if possible for the next SAREX coordination meeting and SAREX.

For example:

- 20.1 The next SAREX Coordination Meeting will be held at (venue) on (date/month/year).
- 20.2 The next Full Scale SAREX will be held on (date/month/year).