Rescue Coordination Centres (RCCs) and SAR Points of Contact (SPOCs)

UN/South Africa Cospas-Sarsat Training Course
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What we'll cover...

- Overview of RCCs and SPOCs
- RCC Functional Requirements
- Integrating Cospas-Sarsat in SAR operations
- SAR Intel and Resource Utilization
- SAR Response to a C-S Alert
- Feedback to a MCC
- Some Final Thoughts...
**First, some truths...**

*SAR happens when everything else fails!*

**What does Search and Rescue mean?**

**Search:** An operation, normally co-ordinated by a RCC or RSC, using available personnel and facilities to locate persons in distress. *(IAMSAR, Volume 1)*

**Rescue:** An operation to retrieve persons in distress, provide for their initial medical or other needs and deliver them to a place of safety. *(IAMSAR, Volume 1)*
Rescue Coordination Centre (RCC)

A unit responsible for promoting efficient organization of search and rescue operations within a search and rescue region (IAMSAR, Volume 1)
RCC Functional Requirements

- 24 hour availability
- Staffed by trained watch standers
  - Working knowledge of English language
  - Formal and On the Job Training
- Charts and Plotting Equipment which apply to the SRR (nautical, aeronautical, & topographic)
- Plans, procedures, organizational & administrative
- Systems for receiving distress alerts (GMDSS)
- Communications commensurate with responsibilities
  - Rapid and reliable
  - Telephone and facsimile – essential
  - SRUs, Adjacent RCCs, RSCs, ATS, etc
  - Aeronautical Fixed Telecom Network (AFTN), MF/HF/VHF/UHF, GMDSS, Inmarsat, etc.
- Use of Information Systems and computer resources (internet!)
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RCC Functional Requirements
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RCCs in North America
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RCCs in Southern Africa
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**Rescue Sub-Centres (RSCs)**

A unit subordinate to an RCC, established to complement the latter according to particular provisions of the responsible authorities:

- Where communications facilities in a portion of an SRR are not adequate to enable close-coordination between RCC and SAR facilities
- Where the SRR encompasses a number of states or territorial divisions where local facilities can only be directed through local authorities
- Requirements for personnel, equipment and accommodations are similar to an RCC
Search and Rescue Point of Contact (SPOC):

“Rescue coordination centres and other established and recognised points of contact which can accept responsibility to receive Cospas-Sarsat alert data to enable the rescue of persons in distress.”

(IAMSAR Volume 1)
USMCC Search and Rescue Points of Contact (SPOC)

RCC Bermuda

JRCC Curacao

Mexico

Guyana

Colombia
Integrating Cospas-Sarsat in SAR Operations

All that’s really needed is one of these!
Integrating Cospas-Sarsat in SAR Operations

Minimum requirements to receive alerts: phone line and facsimile machine to receive Cospas-Sarsat SIT alerts
Integrating Cospas-Sarsat in SAR Operations

Or, RCCs can use advanced, computerized systems available which allow automated receipt and tracking of alerts.
Integrating Cospas-Sarsat in SAR Operations

- SAR COMPUTER AUTOMATION TOOL
  - Real-time automated receipt of SARSAT emergency beacon detections
  - Automated SAR incident & mission prosecution tool
    - Mission Log
    - Search Planning
    - Contacts
    - SAR Resource Tracking
    - Survival Models

AFRCC uses SARMaster (EMS Technologies)
USCG uses C2PC/CASP and is transitioning to SAROPs (CG developed systems)
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C2PC / CASP
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**SAROPS**

- ArcGIS based
- Extensive Incident set up
  - Pre-distress motion with hazards
    - LKP, LKP&DR, Voyage Info
- Multiple weighted scenarios
- Multiple leeway and POD targets lists
- Multiple enviro data sources
- Account for relative motion of SRU vs. drift object
- Optimal Search & POD area(s) generated
SAR Intelligence

In SAR, the information on the target and the people affected is “intelligence”. Intelligence gathering also includes information on assets and resources that may assist.

**Prior to operations** – building up & identifying sources of information & data

**During operations** – tapping into the information and data

Once the alert has been raised the SMC requires:

- Name of vessel or aircraft, type, callsign, registration.
- Full description (size, type, colour, markings, unusual features).
- Persons on board.
- Communications equipment.
- Emergency, safety and survival equipment.
- Owner and agent for the aircraft/vessel and contact information.
- Other possible sources of information – family.
SAR Intelligence & Resource Utilization

U.S. Rescue Coordination Centers

RCC Norfolk / LANTAREA:
+1 – 757 – 398 – 6231

RCC Alameda / PACAREA:
+1 – 510 – 437 – 3700

RCC Langley / Air Force RCC:
+1 – 800 – 851 – 3051 or
+1 – 757 – 764 – 8112

AdditionalResources:
RCC-NET: www.rcc-net.org
SARContacts.com
SAR Intelligence & Resource Utilization

Automated Mutual assistance VEssel Reporting (AMVER) System

- Over 3,000 vessels voluntarily report their position to the USCG daily ready to lend assistance in an emergency

- Any Rescue Coordination Center can request a Surface Picture (SURPIC) from a USCG RCC for vessels in any geographic region
SAR Response to a C-S Alert

121.5/243 MHz Beacon Alert
- 1st Composite Merge
- Begin utilization of SAR Intel
  - Check with ATS/VTS
  - Request Airborne reports
  - Field/marina check
- Dispatch SRU when unable to determine that alert is non-distress or if indications of distress exist
- Continue to provide position updates to SRU until resolved
- Upon completion of case – provide incident feedback to MCC

406 MHz beacon Alert
- Unlocated on first alert
- Begin utilization of SAR Intel
  - Check databases
  - Call POCs
  - Check for ATS/VTS/GMDSS info
- A&B Solution on first LEO pass
- Dispatch SRU when unable to determine that alert is non-distress or if indications of distress exist
- Continue to provide position updates to SRU until resolved
- Upon completion of case – provide incident feedback to MCC
Feedback to MCC

- The primary purpose of the feedback is to help evaluate the effectiveness of the overall SARSAT system.
- Additional benefits are found in the simple existence of historical records both for general use as well as specific assistance in resolving incidents involving newly activated distress beacons.
- Information and statistics are presented to multiple International forums
  - IMO/ICAO
  - C-S Councils
  - National SAR Committees
- US is going to Online database gathering tool
  - Allows for ease of data submission and information queries
Some Final Thoughts

Global RCC concept is ideal...however, limitations do exist:

- SRR boundaries are not meant to be barriers to providing assistance or cooperation.

- The concept of “first RCC” has been developed to show how an MRCC that receives a distress alert has responsibility to do what it can to acknowledge the alert, and arrange assistance, until it can identify another RCC willing and better able to respond.

  (IAMSAR Volume 2, Sections 2.25.1 & 3.6 provides additional discussion)

- RCCs have not uniformly met conditions of IAMSAR = inconsistency with SAR facilities and capabilities throughout their whole SRR.
What is IAMSAR?

Volume I: Organization and Management
Discusses the global SAR system concept, establishment and improvement of national and regional SAR systems and co-operation with neighbouring States to provide effective and economical SAR services.

Volume II: Mission Co-ordination
Assists personnel who plan and co-ordinate SAR operations and exercises.

Volume III: Mobile Facilities
Is intended to be carried aboard rescue units, aircraft and vessels to help with performance of a search, rescue or on-scene co-ordinator function, and with aspects of SAR that pertain to their own emergencies.
What about national SAR policies & manuals?

*Effective response depends on strong SAR policies & procedures...*

- National SAR Plan & National SAR Committee
- National SAR Supplement (to IAMSAR)
- U.S. Coast Guard SAR Addendum (CG SAR Manual)
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Partnerhips!
Essential to effective SAR coordination and response

- Joint SAR Agreements, Training, & Exercises
- USCG Training Opportunities: Many available. USCG travels around the globe providing technical training and consulting services in maritime law enforcement, marine safety and environmental protection, small boat operation and maintenance, port security, infrastructure development and search and rescue!

Opportunities also available to attend the U.S. SAR School in Yorktown, Virginia.
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U.S. National SAR School
www.uscg.mil/tcyorktown/Ops/SAR/index.shtm

SAR School classroom environment.

Student calculating Uncorrelated Distress scenario.