edition 2011

Maritime and Aeronautical Search and Rescue Plan for the SAR-Region of the Dutch Caribbean Islands

SAR-PLAN

DUTCH CARIBBEAN COAST GUARD

Preface

This SAR-Plan is a publication of the Dutch Caribbean Coast Guard (DCCG).
This publication is effective on June 1st 2011. Former publications shall be destroyed in accordance with the local procedure for the destruction of the document.

Users wishing to comment on the contents of this publication should forward their comments to the Head of Rescue Coordination Centre (HRCC).

Curacao, october 1st 2011
Director of the Dutch Caribbean Coast Guard

D.A. Swijgman
BRIGGEN

RNLMC

1. Distribution

This is an open source dynamic document and will not be distributed.

Organizations that are interested in this SAR PLAN may read and/or print this version for own purposes.

It is not allowed to distribute this documents or parts thereof for any commercial purpose without the permission of the Director of the Dutch Caribbean Coast Guard.

2. Table of Contents

3. General

This plan consists of a Maritime and Aeronautical Search and Rescue (SAR) Plan for the Curaçao SAR-region (short title: Curaçao SAR-plan). The plan supports recommendations and agreements made by the government of Curaçao and the government of Aruba with the representatives of the International Civil Aeronautical Organisation (ICAO) and the International Maritime Organisation (IMO).

a. Purpose: The SAR plan sets procedures and internal guidance, intended to maximise performance of units involved in SAR-missions. The plan provides an overall maritime and aeronautical SAR-plan for both military and civilian units in the SAR-Region. The plan is promulgated for guidance for RCC Curaçao, participants and for other agencies. It is the basic operating plan for SAR-missions. It does not define minimum performance standards, create obligations, nor create rights for other parties.
   In the event of a comprehensive SAR-action or major emergency the director of the Dutch Caribbean Coast Guard will inform the local authorities who may decide to activate the local emergency plan. The Dutch Caribbean Coast Guard (DCCG) forms part of this emergency plan.

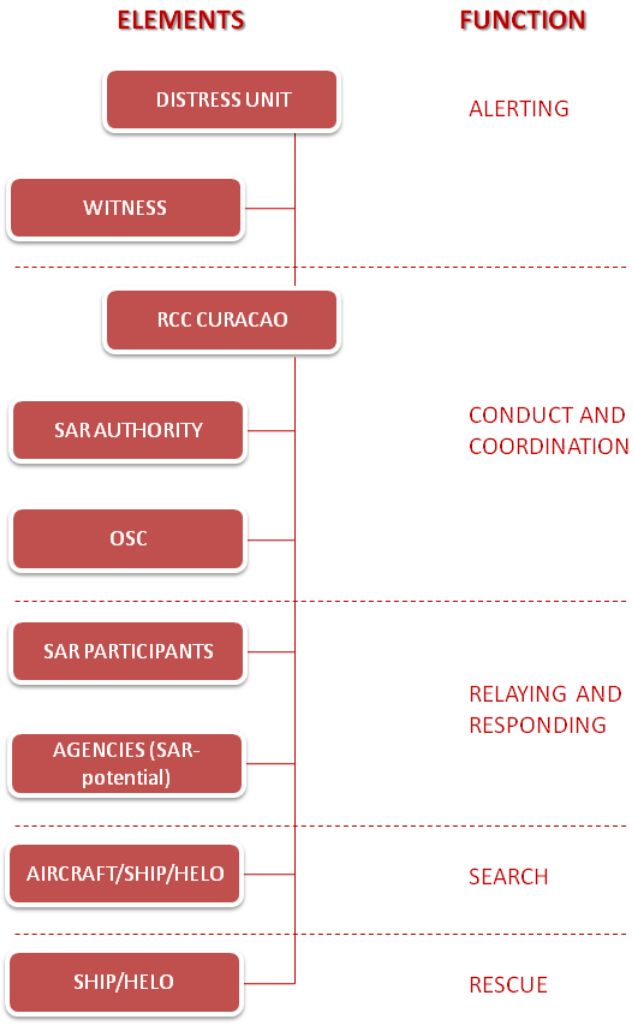
b. Responsibilities: The DCCG has co-ordinating responsibility for the promulgation of the SAR-plan. Recommendations for changes should be sent to:
   Dutch Caribbean Coast Guard
   Naval base Parera, Nightingaleweg z/n
   Willemstad, Curaçao
   email: rcc.curacao@mindef.nl (p) or rcc.curacao@gmail.com (s).

c. SAR around the Windward Islands (St. Maarten, Saba and St. Eustatius) is coordinated by MRCC Fort de France, Martinique.

4. SAR-organisation

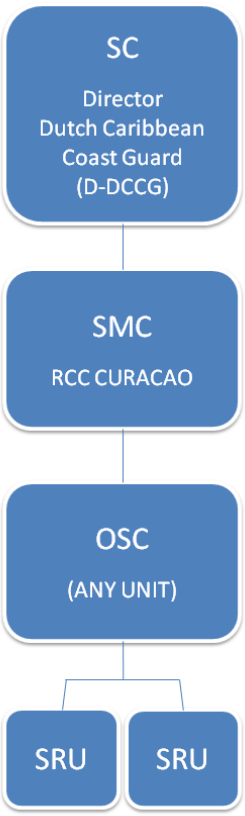
4.1 General

The SAR-organisation will use all available assets/resources to assist persons and property in potential or actual distress. The different elements during a SAR-operation are shown below:



4.2 Organisation Curaçao

The SAR-organization consists of a SAR-coordinator (SC), a SAR-Mission Coordinator (SMC) and several Search and Rescue Units (SRU). The figure below shows the SAR-mission organisation.



4.2.1 **SAR Co-coordinator (SC)**

The SC is Director Dutch Caribbean Coast Guard. His tasks are:

Prepare and distribute a comprehensive SAR-plan including frequencies;
Maintain listings of available SAR-facilities and establish close liaison with other agencies and organisations;
Schedule SAR exercises;
Keep organisations and agencies informed of any developments;
Maintain records and statistics of incidents.

4.2.2 SAR-Mission Coordinator (SMC)

RCC Curaçao is SMC. Adjacent Rescue Coordination Centres and other agencies designated by SC can act as SMC. Tasks of SMC are:

Operate a RCC;
Encourage and promote standardisation of SAR-procedures and techniques;
Receive, evaluate and disseminate distress information, when indicated initiate immediate action to provide assistance.
The Department of Civil Aviation of Aruba is responsible to take and initiate action in case of an aeronautical incident or emergency on the island of Aruba.
The Department of Civil Aviation at Curacao is responsible to take and initiate action in case of an aeronautical incident or emergency on the islands of Curaçao and Bonaire;
Utilise appropriate SAR-participants and inform them about the assistance required. All SAR-participants will be responsible for their own equipment and personnel and must operate in accordance with their own regulations and safety standards;
Designate **On-Scene-Coordinator (OSC)** (any unit on the scene which can coordinate local activities) and provide all available information relative to the incident;
Brief SAR-units (regarding target data, OSC, search area, call signs and communications);
Debrief SAR-participants and provide SAR-Coordinator with:

1. Areas searched;
2. Hours flown;
3. Hours searched;
4. Results.

Keep SAR-Coordinator and other agencies informed;
Inform local Police and Harbour Master;
Maintain own SAR-readiness and establish procedures for initiating SAR- incidents;
Establish, maintain and firmly control communications with all designated SAR-units on-scene;
Establish SAR-action plan.

4.2.3 On Scene Coordinator (OSC)

Tasks of the OSC are:

a. Execute SMC SAR-action plan;
b. Modify plan due to on-scene conditions (consider variables as: available units, weather conditions, visibility, turbulence, flying conditions, endurance, new target information);
c. Assume operational control and provide coordination of all assigned units;
d. Maintain communications with RCC (designated control channels);
e. Submit SITREP ONE immediately upon arrival on-scene;

- Arrival time on-scene and estimated time of departure.;
- On-scene weather (to be included in every Sitrep);
- Any significant modification made to the SMC's search plan;
- Summary of all search areas completed;
- Relief of OSC by another unit;
- Recommendations for future SAR action plans;
- Follow up SITREPS when needed and there should always be a final SITREP when the case is closed.

f. Maintain communications with all search units. Require "operations normal" reports every 60 minutes for fixed wing aircraft and every 30 minutes for rotary aircraft;
g. Brief arriving SRU's;
h. Assign a common altimeter setting to all aircraft;
i. Obtain search results (include information in Sitrep).

4.2.4 Search and Rescue Unit (SRU)

Participants mentioned below can be SRU.

a. Coastguard units;
b. Citizens Rescue Organisation, Curaçao and Aruba;
c. Netherlands Military Forces in the Caribbean;
d. Flight Information Centre/ Air Traffic Control Centre;
e. Air Traffic Services;
f. Police forces of Aruba, Bonaire and Curaçao;
g. Port Authorities of Aruba, Bonaire and Curaçao;
h. Commercial Tugboat Companies;
i. SARSAT LUT Miami/San Juan;
j. Commercial Aircraft Operators;
k. Dedicated military and government forces of adjacent countries;
l. Meteorological Department Curaçao;
m. Automated Mutual-Assistance Vessel Rescue System (AMVER);
n. Local boat and aircraft owners or operators;
o. General shipping.

Their tasks are:

a. Conduct SAR operations as assigned;
b. Report search results to SMC or OSC;
c. Act as OSC when designated.

5. Curaçao SAR region

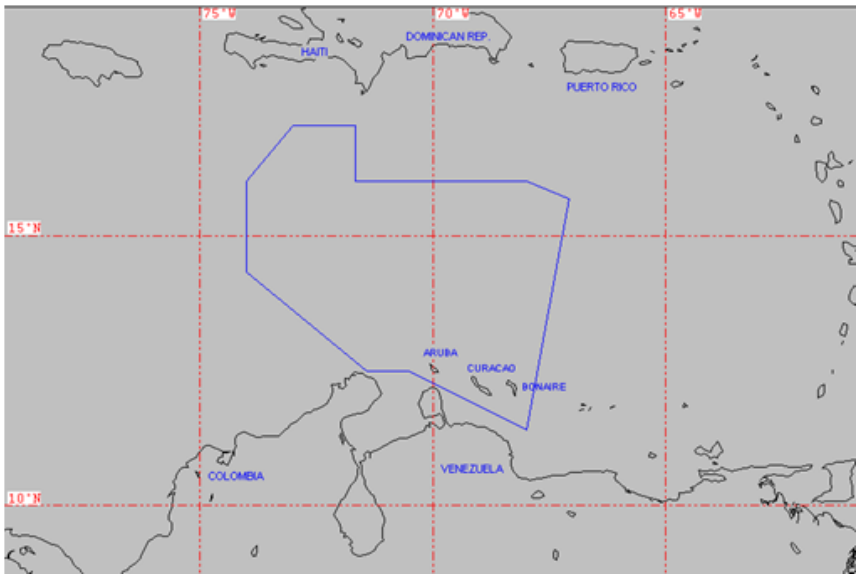
5.1 Maritime and Aeronautical SAR responsibility

The geographic boundaries of the Curaçao SAR-Region for maritime SAR responsibility are i.a.w. Annex 2 of "The provisional maritime search plan for the greater Caribbean area" as agreed during the final meeting on Caribbean Maritime Search and Rescue of the IMO April 30th-may 4th 1984, Caracas, Venezuela. The geographic boundaries of the Curaçao SAR-Region for Aeronautical SAR responsibility are i.a.w. ICAO agreements. According to the IMO and ICAO SAR Conventions, the Curaçao SAR Region is defined as the SAR-Region for Maritime and Aeronautical SAR. The Curaçao SAR Plan is in force for all (Maritime and Aeronautical) incidents within this area.

5.2 Geographic boundaries

The geographic boundaries of the Maritime and Aeronautical SAR-Region are as follows:

12 -30.0 N/070 -30.0 W
12 -30.0 N/071 -25.0 W
14 -20.0 N/074 -00.0 W
16 -00.0 N/074 -00.0 W
17 -00.0 N/073 -00.0 W
17 -00.0 N/071 -40.0 W
16 -00.0 N/071 -40.0 W
16 -00.0 N/068 -00.0 W
15 -41.0 N/067 -04.0 W
11 -24.0 N/067 -58.0 W
12 -30.0 N/070 -30.0 W



The SAR-region of the Dutch Caribbean

6. Operations

6.1 Mission

Mission is to conduct maritime and aeronautical SAR-operations within the Dutch Caribbean SAR-Region in order to render aid to persons and property in distress.

6.2 Command and Control

1. The SC is responsible for efficient use of available SAR resources;
2. The SMC is responsible for efficient execution of a SAR-mission and is responsible for all SAR-stages (see para 6.4). Its responsibilities include prompt dispatch of appropriate and adequate SAR-facilities. All coordination and contacts with foreign governments and RCC's are also conducted by SMC;
3. Following countries adjacent to the DCCG SAR-Region have Rescue Coordination Facilities:
   - RCC Kingston (Jamaica);
   - RCC Maiquetia (Venezuela), (Memorandum Of Understanding on SAR since 1997);
   - MRCC La Guaira (Venezuela);
   - RCC San Juan (Puerto Rico);
   - RCC Cartagena (Colombia);
   - RCC Semanah (Haiti);
   - RCC Santo Domingo (Dominican Republic), (Memorandum Of Understanding on SAR since 2007).

6.3 SAR stages

The designated SAR stages define the nature of assistance provided at any time. The major stages are:

6.3.1 **Awareness**

Knowledge by any person that an emergency situation is imminent (Initial report).

6.3.2 **Initial action**

Preliminary action taken to alert SAR-units and obtain amplifying information. This stage includes evaluation and classification of the information, preliminary communication checks (Precom), extended communication checks (Excoms) and immediate action in urgent cases.

6.3.3 **Planning**

The development of operational plans (search, rescue and final delivery).

6.3.4 Emergency phases

Every SAR-incident starts in an appropriate emergency phase. The emergency phase will be assigned by RCC Curaçao after evaluation of the situation. The emergency phase consists of the Uncertainty, Alert and Distress phase.

Uncertainty Phase (UNCERFA)

In case of any doubt about the safety of a craft or person overdue. The situation should be investigated, information should be gathered. Precom may start in this phase.
Actions taken:
RCC Curaçao must be informed;
Conduct Precom, verify information and seek additional information;
Full cooperation with other agencies.

Alert Phase (ALERFA)

In case of any difficulty or need for assistance; but no immediate danger. SRU's can be launched. Units must first investigate high-probability locations or routes.
Actions taken:
Mobilise SAR-personnel and units;
Continue search for additional information;
Alert communications facilities;
Initiate an Urgent Marine Information Broadcast (UMIB) message.

Distress Phase (DISTRESFA)

In case of any threatening or imminent danger requiring immediate response. For overdue, distress phase exists when communication checks failed and other forms of investigation were unsuccessful.
Actions taken:
Dispatch SAR-units;
Initiate action including the following:
Determine most probable location;
Determine on-scene weather;
Determine the extent of the search (in case of prolonged search);
Designate OSC;
Request additional SAR-facilities;
Initiate All Ships broadcast (from AMVER);
Notify source of initial distress information of action taken;
Send Sitreps i.a.w. procedures.

6.3.5 Coordinating instructions

- SAR-case will officially be opened by RCC Curaçao;
- Each incident should at least include Sitrep one and a final Sitrep;
- All requests for military aircraft assistance in case of a SAR-incident outside the Curaçao SAR-Region will be directed to SMC;
- In case of SMC is unable to operate properly at the Coastguard Ops centre, RCC Curaçao will be relocated in Navy Headquarters at Parera naval base or at Coastguard Air station HATO airport;
- All Communication Stations mentioned in para 8.2, will relay all traffic to RCC;
- The Meteorological Department Curaçao will provide the SMC with all available weather information;
- SAR-mission is terminated by RCC.

6.3.6 Air operations

- All SAR-flights will operate i.a.w. the Air Traffic Rules and procedures as mentioned in the AIP of Aruba, the AIP of the former Netherlands Antilles[1] and this SAR plan;
- Flights engaged in Search and Rescue may depart from Curaçao, Bonaire and Aruba without a flight plan;
- All SAR-flights within the Curaçao FIR will be executed at an altitude coordinated with ATC;
- All aircraft traffic under control of ATC and outside the arrival and departure area of an aerodrome shall be diverted in case of interference with any SAR-aircraft operating in designated search area. If the search area or a part of the search area is inside the arrival and departure area of an aerodrome, Tower Control will direct aircraft for vertical and lateral separation.

6.3.7 Administration and documentation

To control and reconstruct SAR-incidents adequately, all information should be documented. All information will be organised in case folders. Following information should be included in these folders:

- All messages (fax, Email, letters etc.);
- All telephone sheets;
- All search planning material;
- All units mission logs and plotting charts;
- All additional reports (police);
- All other relevant information.

These folders should be saved for at least five years.

[1] The AIP is under construction since 10-10-2010 and will become an AIM for the entire Dutch Caribbean islands. The implementation of this AIM is expected June 2013.

7. Communications

7.1 General

Good SAR-Coordination depends on communication. SAR communication occurs between the distressed unit, RCC, OSC, communication stations or participants.

7.2 Emergency communications

7.2.1 Emergency frequencies [2]

The unit in distress controls the radio-traffic. If communications are established with a unit in distress, remain on the same frequency. Following frequencies are assigned as distress or emergency frequencies and will be monitored by RCC Curaçao:

Medium	Monitored frequencies
DSC VHF/FM	Channel 70 (156.525 MHz)
DSC MF	2187.5 KHz
Voice VHF	Channel 16 (156.800 MHz)
Voice UHF/VHF	243.000 MHz / 121.500 MHz
Voice MF	2182 KHz

7.2.2 Stations guarding emergency frequencies

Following stations are listening/guarding the emergency frequencies:

- Plesman Tower, Curaçao : 121.500 MHz
- Curaçao FIC/ACC : 121.500 MHz
- Beatrix Tower (Aruba) : 121.500 MHz (DF-station)
- Flamingo Tower (Bonaire): 121.500 MHz
- Curaçao Ports Authority : Ch. 16
- Aruba Ports Authority : Ch. 16

7.2.3 SAR mission communication

During execution of a SAR-mission communication is the key to a successful coordination between the different SRU's, OSC, SMC and the RCC.

Control channels [1]

Control Channels are used between the OSC and the SMC (RCC).

BAND	PRIMARY	SECONDARY	TERTIARY
HF	8199.7 KHz	6209.2 KHz	4377.6 KHz
VHF/FM	06	67	

[2] All MF/HF frequencies are 'window' frequencies.

On Scene channels [3] On Scene Channels are used between the SRU's and the OSC.

BAND	PRIMARY	SECONDARY
HF	3023 KHz (night) 5680 KHz (day)	6210.7 KHz
VHF/AM	123.100 MHz	121.500 MHz
VHF/FM	Ch. 06	Ch. 16
UHF	282.800 MHz	243.000 MHz

Monitor channels The Monitor Channels are guarded by SRU's throughout the mission for possible transmission from distressed craft.

7.3 Global Maritime Distress and Safety System (GMDSS)

GMDSS is an internationally established distress and safety system. It relies upon the establishment of specific sea areas of communications. This improvement in ship-to-shore distress alerting does require particular equipment on board vessels and RCC's. Inmarsat C is also operational at the RCC.

7.3.1 GMDSS Elements

The Region of RCC Curaçao is classified as an A2 area. RCC Curaçao is under coverage of an Inmarsat satellite for communication, distress calls and safety net messages like Enhance Group Call (EGC).
The Region is covered by 2 INMARSAT satellites:
AOR-W : Atlantic Ocean Region West (874)
AOR-E : Atlantic Ocean Region East (871)

Inmarsat C
- 24 hour monitoring on INMARSAT C
- INMARSAT C - 430600099
Digital Selective Calling (DSC)
- 24 hour DSC listening watch for VHF and MF
- MMSI - 003061000
Navigational Telex (NAVTEX)
-Navigational, meteorologicaland urgent information broadcasts in NAVTEX area Hotel (H).

TIME GMT)	0110	0510	0910	1310	1710	2110

COSPAS/SARSAT
24 hour monitoring via Local User Terminals (LUT) which processes signals to determine the beacons position and identity. An alert is related via an Mission Control Centre (MCC) to RCC Curaçao.

[3] All MF/HF frequencies are 'window' frequencies.

7.4 Call signs and IFF-settings

7.4.1 **Aircraft**

Call signs for assigned SAR-aircraft are “RESCUE PLUTO" 1 to 9 odd numbers.
For helicopters is "RESCUE PEDRO" 2 to 10 even numbers.

Example:	RESCUE PLUTO ONE	
	RESCUE PEDRO TWO	

7.4.2 **Ships**

Call signs for assigned ships consists the ships name.

Example:	JAGUAR	“JAGUAR”
	SR-12	“SIERRA ONE TWO”
	ANTJE	“ANTJE”

7.4.3 **RCC Curacao**

Call sign for RCC Curaçao is “RCC CURAÇAO”.
SAR Call sign is “CURAÇAO RESCUE”

7.4.4 **IFF-settings**

All aircraft under control of RCC Curaçao squawk mode 2 and/or 3 during SAR-operations:

- Mode 2= 1234
- Mode 3= 336 + pluto nr. 1,3 (so 3361 or 3363)

8. RCC and communication stations

8.1 RCC

Operator : Dutch Caribbean Coast Guard
Location : Naval Base Parera, Curaçao.
Call sign : RCC CURAÇAO or PJC (PAPA JULIETT CHARLIE)
Watch hours : Continuously
Frequencies : 8199.7 KHz (P), 6209.2 (S), 4377.6 KHz (T)
Services : SMC
INMARSAT C : 430600099
FAX : 599-9-463 7950
Telephone : 599-9-463 7700
913 (distress only)(Dutch Caribbean islands only)
E-mail : rcc.curacao@mindef.nl
rcc.curacao@gmail.com
P-Mission : Coordination

8.2 Communication stations

8.2.1 **Curacao**

a. Communication Centre FIC/ACC Curaçao
Operator : Department of Aviation Netherlands Antilles
Location : Mahuma/ Airport Plesman
Call sign : "CURAÇAO CONTROL"
Watch hours : Continuously
Frequencies : 127.100 MHz, 124.100 MHz, 121.500 MHz
Services : Aeronautical and Distress
Telephone : 599-9-839 3504 (supervisor) / 839 3518, 839 3528 (control)
Mission : Communication, Relaying, Responding

b. Curaçao Ports Authority
Operator : Curaçao Ports Authority
Location : Fort Nassau signal station
Callsign : "FORT NASSAU"
Watch hours : Continuously
Frequencies : CH 16, 12
Telephone : 599-9-434 5900, 434 5999 / 461-3907 (fax)
Services : Maritime
Mission : Communication

c. Coastguard Air station HATO
Operator : Coastguard NA&A
Location : Coastguard Air station HATO
Call sign : "PJX"
Watch hours : 07.00Q – 15.00Q Monday-Friday
Frequencies : on request only
FAX : 599-9-463 7915
Telephone : 599-9-463 7900/463 7901
Mission : Communication

8.2.2 **Aruba**

a. Aruba Ports Authority

Operator : Aruba Port Authorities
Location : Oranjestad
Call sign : "ARUBA PORT CONTROL"
Watch hours : Continues
Frequencies : CH 16,11
Services : Maritime
Telephone : 297-582 1740
FAX : 297-583 2896
Mission : Communication

b. Aruba Ports Authority

Operator : Valero Marine
Location : St.Nicolaas Haven, Aruba
Call sign : "COASTAL MARINE"
Watch hours : Continues
Frequencies : CH 16,8
Services : Maritime
Telephone : 297-589 8450
Mission : Communication

c. ATC Communication Centre Aruba

Operator : Head of Air Traffic Services Aruba
Location : Beatrix airport
Call sign : "BEATRIX"
Watch hours : Continues
Frequencies : 120.900 MHz, 121.500 MHz
DF station : 120,900 MHz, 121.500 MHz
Aerial loc. : Beatrix Tower
Services : Aeronautical, Distress and DF
FAX : 297-588 5234
Telephone : 297-582 1291 / 524 2136
Mission : Communication, Relaying, Responding

8.2.3 **Bonaire**

a. Bonaire Ports Authority

Operator : Bonaire Port Authorities
Location : Kralendijk, Bonaire
Call sign : "BONAIRE PILOTS"
Watch hours : 0730-1200 Q, 1330-1700 Q (Mon-Fri, except public holiday)
Frequencies : CH 16, 11
Services : Maritime
Telephone : 599-7-178151/566 0037(cell)/565 4752(cell)
Mission : Communication

b. Bonaire Tower

Operator : Department of Aviation at Curacao
Location : BONAIRE/Flamingo Airport
Call sign : "FLAMINGO TOWER"
Watch hours : Continuous
Frequencies : 118.700 MHz, 121.500 MHz
Service : Air and distress
Telephone : 599-7-178 359 / 175 600 ext.222
Mission : Communication

9. Search and Rescue Units (SRU's)

9.1 Aircraft

9.1.1 **Dash 8**

CLASS	Havilland Dash 8
DESCRIPTION	Turboprop short take-off and landing patrol aircraft
NUMBER OF AIRCRAFT	2
SAR-MISSION	Search
NUMBER OF ENGINES	2
CREW	7
TRANSIT SPEED	180 – 290 KTS
SEARCH SPEED	160 – 220 KTS
ENDURANCE	8 hours
SEARCH RADAR	ELTA EL/M 2022A(V)3 Surveillance radar (lightweight phased array up to 200 nm, ISAR and weather capacity)
FLIR	FLIR Systems Star Safire III (Electro optical + IR 4.5 – 5.0 micrometer, recording facilities)
COMMUNICATIONS	2 VHF/UHF, HF, UHF-Satcom
AIS	AI 3000 Automatic Identification System for shipping
HOMING	Rockwell Collins DF-430 SAR-DF system (121.5 – 243.0 – 406 MHz)
IFF	1/2/3
IFF MODE 3	C-GPAB / CG-81 / mode 3: 1771 C-GRNN / CG-82 / mode 3 : 1772
CALL SIGN	RESCUE PLUTO 1 (thru 9)
OPERATOR	PAL (Provincial Air Lines, Canada)
STATIONED	Coast Guard Air Station Hato, Curaçao
TELEPHONE	+5999 – 4637900
REMARKS	Contact Dash via RCC Curaçao +5999 4637700 Dash carries smoke markers, (drift)buoys (drop tube), life raft (2x8 pax via drop hatch)

9.2 Helicopters

9.2.1 **Aero Spatial AS-355 / Twinstar**

CLASS	Twinstart
DESCRIPTION	AS-355
REGISTRATION	PH-HVH
NUMBER OF AIRCRAFT	1
SAR-MISSION	Search and Rescue
NUMBER OF ENGINES	2
CREW	2
TRANSIT SPEED	120 KTS
ENDURANCE	3 hours
COMMUNICATION	VHF-FM/UHF
IFF	Mode 3: 0355
CALL SIGN	RESCUE PEDRO 2 (thru 10)
OPERATOR	Heli Holland
STATIONED	Coast Guard Air Station Hato, Curaçao
AREA	Curaçao, Aruba and Bonaire TTW's
TELEPHONE	+5999 4637900 / 4637913
REMARKS	Contact AS-355 via RCC Curaçao +5999 4637700 Hoist capable (if tasked) Max. hoist 135 kilograms Night capable

9.2.2 **AW-139 (from medio 2012)**

9.2.3 **SH-14D Lynx**

CLASS	SH-14D
DESCRIPTION	Lynx
NUMBER OF AIRCRAFT	1
SAR-MISSION	Rescue
NUMBER OF ENGINES	2
CREW	3
TRANSIT SPEED	120 KTS
RANGE	320 NM
SEARCH RADAR	Seaspray
COMMUNICATION	VHF/FM, UHF, MF/HF
IFF	1/2/3
CALL SIGN	RESCUE PEDRO 2 (thru 10)
OPERATOR	Royal Netherlands Navy
STATIONED	On board NL Navy vessel
AREA	Contact via RCC Curaçao +5999 4637700
	Hoist capable (if tasked)
TELEPHONE	Max. hoist 272 kilograms
REMARKS	FLIR (Forward Looking Infra Red)

9.2.4 **NH90 (from 2013)**

9.3 Ships

9.3.1 **Cutters**

CLASS	137 FT Coast Guard cutter
DESCRIPTION	Patrol, Search and Rescue vessel
NUMBER OF SHIPS	3
SAR-MISSION	Search and Rescue
NUMBER OF ENGINES	2
CREW	11
SPEED	27 KTS
RANGE	Max. 2000 NM
SEARCH RADAR	Kelvin Hughes
COMMUNICATION	VHF (FM and AM), UHF, MF/HF
SAR EQUIPMENT	DF FOR VHF/AM, VHF/FM, Inmarsat C
OPERATOR	Dutch Caribbean Coast Guard
TELEPHONE	Contact via RCC Curaçao +5999 4637700
STATIONED	Jaguar – Willemstad, Curaçao Panter – Oranjestad, Aruba Poema – Phillipsburg, Saint Martin
TASKING OPERATOR	RCC Curaçao
AREA	SAR region
REMARKS	Fitted with 1 Rhib – max speed 34 kts, max 6 persons. Fitted with 1 external fire fighting pump Fitted with 2 search lights May be fitted with an Inshore

Name	JAGUAR	PANTER	POEMA
Bow number	P 810	P 811	P 812
Int. Call sign	PACJ	PACK	PACL

9.3.2 **Super Rhib Patrol Boat**

CLASS	11.70M 'Superrhib'
DESCRIPTION	Patrol en Search vessel
NUMBER OF SHIPS	12 (4 per sub-station: Aruba, Curaçao, St. Martin)
SAR-MISSION	Search and Rescue
NUMBER OF ENGINES	2
CREW	4-5
SPEED	40+ KTS Max.
RANGE	-
SEARCH RADAR	Furuno 1722C
COMMUNICATION	VHF/FM
SAR EQUIPMENT	-
CALL SIGN	SUPERRHIB ZERO ONE (thru 12)
OPERATOR	Dutch Caribbean Coast Guard
TELEPHONE	Contact via RCC Curaçao +5999 4637700
STATIONED	Curaçao, Willemstad – 4 Aruba, Oranjestad – 4 Saint Martin, Phillipsburg – 4
TASKING OPERATOR	RCC Curaçao
AREA	Operating within 30 nm (max) from the coast
REMARKS	-

9.3.3 **Netherlands Navy Frigate** [4]

CLASS	Multi Purpose Frigate (if tasked for Coast Guard operations)
DESCRIPTION	Patrol, Search and Rescue vessel
NUMBER OF SHIPS	1
SAR-MISSION	Search and Rescue, OSC
NUMBER OF ENGINES	4
CREW	Approximately 160
MAXIMUM SPEED	29 KTS
RANGE	4700 NM
SEARCH RADAR	SMART/DECCA/Air Early Warning radar
COMMUNICATION	VHF/FM, UHF, MF/HF
IFF	1/2/4
CALL SIGN	Name Navy Frigate
OPERATOR	Royal Netherlands Navy
TELEPHONE	Contact via RCC Curaçao +5999 4637700
STATIONED	Willemstad, Curaçao
REMARKS	1 Helicopter SH-14D Lynx on board

[4] Stationed in the Caribbean on rotation base

9.3.4 **Landing Platform Dock (LPD) (US: Amphibious Transport Dock)** [5]

CLASS	Multi Purpose Support ship (if tasked for Coast Guard operations)
DESCRIPTION	Patrol, Search and Rescue vessel
NUMBER OF SHIPS	1
SAR-MISSION	Search and Rescue, OSC
NUMBER OF ENGINES	4
CREW	153 (+ 611 marines when applicable)
MAXIMUM SPEED	20 KTS
RANGE	> 6000 NM at 12 KTS
SEARCH RADAR	Thales DA 08 (Rotterdam), Thales Variant 2D mk2 (Johan de Witt), Kelvin Hughes
COMMUNICATION	VHF/FM, UHF, MF/HF
IFF	1/2/4
CALL SIGN	Name Navy Ship
OPERATOR	Netherlands Royal Navy
TELEPHONE	Contact via RCC Curaçao +5999 4637700
STATIONED	Willemstad, Curaçao
REMARKS	Can carry up to 6 medium size helicopters e.g. (NH-90) Facilities for max 6 landing craft (LCVP/LCU/LCM)

LCVP

LCU

[5] Stationed in the Caribbean on rotation base

9.3.5 **Replenishment ship** [6]

CLASS	Multi Purpose Support ship (if tasked for Coast Guard operations)
DESCRIPTION	Patrol, Search and Rescue ship
NUMBER OF SHIPS	1
SAR-MISSION	Search and Rescue, OSC
NUMBER OF ENGINES	2
CREW	
MAXIMUM SPEED	21 KTS
RANGE	
SEARCH RADAR	
COMMUNICATION	VHF/FM, UHF, MF/HF
IFF	1/2/4
CALL SIGN	Name Navy Ship
OPERATOR	Royal Netherlands Navy
TELEPHONE	Contact RCC Curaçao +5999 463 7700
STATIONED	Willemstad, Curaçao
REMARKS	May carry 3 to 4 helicopters

[6] Stationed in the Caribbean on rotation base

9.3.6 **Navy Auxiliary vessel**

CLASS	HNLMS Pelikaan
DESCRIPTION	Auxiliary ship
NUMBER OF SHIPS	1
SAR-MISSION	Rescue
CREW	13
TOTAL BEDS	77
SPEED	15 KTS
ENDURANCE	21 days
SEARCH RADAR	Furuno (3 and 10 cm)
COMMUNICATION	GMDSS (HF/2VHF/Inmarsat)
CALL SIGN	PELIKAAN
OPERATOR	Royal Netherlands Navy
TELEPHONE	+5999 4637432/4637430
STATIONED	Willemstad, Curaçao
AREA	Curaçao SAR-region
REMARKS	Storing capacity for 5 20ft containers, 4 trucks or jeeps. Contact via RCC Curaçao +5999 4637700 (Operated by Netherlands Navy but can be tasked for SAR)

9.4 Civil Rescue Organizations

9.4.1 **Rescue boat (Curacao, Saba, Statia)**

CLASS	Griend II – 7.40 mtr (Atlantic 21) – polyester / fiberglass (sandwich around wood)
DESCRIPTION	Rescue boat
NUMBER OF SHIPS	3 (Curaçao, Saba, Statia)
SAR-MISSION	Rescue
NUMBER OF ENGINES	2 x 115 HP Yamaha outboards (2-stroke)
CREW	3 (8 pax max)
SPEED	30 – 35 KTS KTS (transit), 10 – 20 KTS (search)
RANGE	25 NM (from the coast)
ENDURANCE	4 hours at 75% power (tanks 2 x 110 ltr) + 100 ltr spare
ALERT TIME	< 30 minutes – has trailer – can be transported by road
COMMUNICATION	2 X VHF/FM – cell phone
SAR EQUIPMENT	Search lights – towing capability – mobile pump – first aid kit – stretcher – GPS – plotter - AIS
OPERATOR	CITRO Curaçao, SRF Saba and SRF Statia
CALL SIGN	GRIEND (Curaçao) STUT (Saba) MAKREEL (Statia)
TELEPHONE	Curaçao +5999 4637700 (RCC Curaçao) +5999 7471600 (CITRO base) Saba +5994 163295 (SRF Saba) Statia +5993 1802715 (SRF Statia, Andre Bennet) +5993 184482 (SRF Statia, Andre Bennet)
AREA	Curaçao coastal area Saba coastal area Statia coastal area

9.4.2 **Rescue / Tug boat (Aruba, Curacao)**

CLASS	9 mtr. Waddenvlet – type Zeeleeuw – aluminum
DESCRIPTION	Rescue/Tug boat
NUMBER OF SHIPS	2
SAR-MISSION	Search and Rescue – towing capable
NUMBER OF ENGINES	1 Volvo diesel 100 HP
CREW	3-5
SPEED	8 KTS (max)
RANGE	40 NM (from the coast)
ENDURANCE	12 hours
COMMUNICATION	2x VHF/FM
OPERATOR	CITRO Curaçao, CITRO Bonaire, SARFA Aruba
CALL SIGN	Aruba SIGFRIED EDMUNDIS Curaçao CORNELIUS ZWAAN (NC 700)
SAR EQUIPMENT	Savage pump - tow line - search light - First aid kit - oxygen set – RDF – radar - GPS - AIS
TELEPHONE	Aruba : 00-297-5944204 (Adolph Croes) : 00-297-7337000 (Patrick) : 00-297-7310227 (Ruben Croes) Bonaire : 599-7-174 534 (Dhr Pierre Chirino) Curaçao : 599-9-463 7700 (RCC Curaçao) : 599-9-747 1600 (CITRO-base)
AREA	Aruba coastal area Bonaire coastal area Curaçao coastal area

9.4.3 **Mobile Communication Relay Station (Curaçao)**

DESCRIPTION	Toyota land cruiser 4WD
SAR-MISSION	Communication relay – trailer transport – plotting - supplier
CREW	2 - 3
COMMUNICATION	2 x VHF/FM
TELEPHONE	+599-9-560-2413
SAR EQUIPMENT	RDF – search lights – GPS
CALL SIGN	CITRO MOBILE BASE
OPERATOR	CITRO Curaçao
STATIONED	Boat house Caracas Bay Curaçao
TASKING OPERATOR	CITRO Curaçao

9.4.4 Rescue boat auxiliary (Curacao)

CLASS	Commercial yacht – polyester/fiberglass
DESCRIPTION	14.5 mtr, fully equipped (beds/kitchen/toilet)
NUMBER OF SHIPS	1
SAR-MISSION	Search and Rescue – towing capability
NUMBER OF ENGINES	2 x 435 HP Detroit diesel
CREW	4 – 8
SPEED	15 KTS
RANGE	80 NM (from the coast)
ENDURANCE	18 hours
ALERT TIME	< 30 minutes
COMMUNICATION	2 x VHF/FM – cell phone
SAR-EQUIPMENT	Towing line – salvage pump – search lights – first aid kit – O2 set – RDF – GPS – radar – echo sounder – plotter – plot table etc.
OPERATOR	CITRO auxiliary Curaçao
CALL SIGN	AURORA
TELEPHONE	Curaçao +5999 4637700 (RCC Curaçao) +5999 7471600 (CITRO base)
AREA	Curaçao coastal area

9.4.5 CITRO Communication & Co-ordination center

(no picture)

CLASS	Joop Kooijman Sea Rescue Station
DESCRIPTION	Crew center – boat shelter – operations – supplies – maintenance
SAR-MISSION	Communication (relay / mobile base) – planning – monitoring
COMMUNICATION	2 x VHF/FM – phone +5999 7471600 – email citrooperations@yahoo.com
SAR-EQUIPMENT	Documentation/planning – computer – printer – plotting table
OPERATOR	CITRO Curacao
CALL SIGN	CITRO BOAT HOUSE (CITRO BOOTHUIS)

9.4.6 Rescue boat (Aruba)

a.

CLASS	Eduardo M
DESCRIPTION	Rigid Hull Inflatable Rescue Boat
NUMBER OF SHIPS	1
SAR-MISSION	Rescue
NUMBER OF ENGINES	2 outboards 70 HP each
CREW	3
SPEED	30 KTS
RANGE	25 NM
ENDURANCE	3 hours
ALERT TIME	Within 30 minutes
COMMUNICATION	2 x VHF
SAR-EQUIPMENT	Search light, First aid kit, GPS, plotter
OPERATOR	SARFA Aruba
CALL SIGN	RESCUE EDUARDO
TELEPHONE	Aruba +297 5944204 (Adolph Croes) +297 7337000 (Patrick) +297 7310227 (Ruben Croes) +297 5821740 (Aruba Port Authorities)
AREA	Aruba coastal area

b.

CLASS	Proline 27
DESCRIPTION	Rescue Boat with capability to transport patients and/or rescue equipment
NUMBER OF SHIPS	1
SAR-MISSION	Rescue, transport, support
NUMBER OF ENGINES	1 x 350 HP
OPERATOR	SARFA Aruba
CALL SIGN	ARUBA WAY RESCUE
TELEPHONE	Aruba +297 5944204 (Adolph Croes) +297 7337000 (Patrick) +297 7310227 (Ruben Croes) +297 5821740 (Aruba Port Authorities)
AREA	Aruba coastal area

9.5 Other Civil Participants

9.5.1 **Curacao**

(no picture)

a.

CLASS	Lafayette Crew Boat
DESCRIPTION	42 FT crew tender
NUMBER OF SHIPS	1
SAR-MISSION	Rescue
NUMBER OF ENGINES	2
CREW	2-3
SPEED	22 KTS
RANGE	280 NM
LAUNCH TIME	Mon – Fri 07:30 – 17:00Q
	Sat – Sun On request
COMMUNICATION	VHF/FM
SAR-EQUIPMENT	Can carry 25 POB
CALL SIGN	HVI-ONE
OPERATOR	Curaçao Port Authority
TELEPHONE	+5999 4345972 / 5105907 (outside office hours)
STATIONED	Willemstad, Curaçao
REMARKS	No navigation equipment

b.

TYPE	Tug boat
NUMBER OF SHIPS	4
SAR-MISSION	Rescue
AREA	Curaçao SAR-region
OPERATOR	Curaçao Towing Company
TELEPHONE	+5999 4612849
REMARK	Operates on commercial base

9.5.2 **Aruba**

(no picture)

TYPE	Tug boat
NUMBER OF SHIPS	4
SAR-MISSION	Rescue
AREA	Aruba coastal waters
OPERATOR	Coastal Oil Tug
TELEPHONE	+297 5898450
REMARKS	Operates on commercial base

9.5.3 **Bonaire**

(no picture)

a.

TYPE	Pilot boat
NUMBER OF SHIPS	1
SAR-MISSION	Rescue
AREA	Bonaire inner coastal waters
OPERATOR	Bonaire Ports Authority
TELEPHONE	+5997 178151

b. *(no picture)*

TYPE	Curibo (Zeeleeuw)
NUMBER OF SHIPS	1
SAR-MISSION	Rescue
AREA	Bonaire inner coastal waters
OPERATOR	CITRO Bonaire
TELEPHONE	+5997 174534 (Mr. Pierre Chirino)

10. SAR – Messages

The SAR messages should be sent to RCC's and/or Units by the best possible means. This includes email (preferably), telephone, fax or by voice.

SAR- messages include:

1. Urgent Marine Information Broadcast;
2. Search Action Plans;
3. Situation Report.

10.1 Urgent Marine Information Broadcast (UMIB)

Ships are alerted by an UMIB. RCC broadcasts the UMIB i.a.w. international regulations.

a. An UMIB should be used during the Alert phase;
b. An UMIB, distress broadcast should be used during the Distress phase;
c. In waters traversed by ocean-going merchant ships 500 KHz should be used for UMIB. The 2182 KHz should be used within 300 miles of shore and the 156.8 MHz (channel 16) in the coastal area (within 30 miles of shore). Incidents within 300 miles of shore require broadcasts on all three frequencies.

10.2 Search Action Plan

The SAP should be issued by the RCC as soon as possible. It is used to pass required actions of participating SRU's and agencies. The SAP should include:

a. Situation
   Brief description of incident, position, and time. Number of persons on board (POB). Primary and secondary search targets, including amount and type of survival equipment. Weather forecast and period for forecast. SRU's on scene;
b. Search Area
   A description of the Search area by name, size, corner points and other relevant information;
c. Execution
   Description of the actions planned for designated SRUs with name of SRU, agency, type of search pattern, creep direction, commence search corner, and search altitudes;
d. Coordination
   All instructions relevant for co-ordination between SRUs and SMC. Information about names of SMC, OSC, on scene time for SRUs, track spacing and coverage factor, OSC instructions, airspace reservations, aircraft safety comments, parent agency relief instructions and authorization for non SAR aircraft in area;
e. Communication
   Instructions for communication between SRUs, OSC and RCC with primary and secondary control/on scene/monitor channels and IFF settings.

Example SAP

1. SITUATION:
   A. EMERGENCY PHASE, BRIEF DESCRIPTION OF INCIDENT, POSITION
   B. PERSONS ON BOARD:
   C. SEARCH TARGETS PRIMARY: / SECONDARY:
      (INCLUDING AMOUNT AND TYPE OF SURVIVAL EQUIPMENT)
   D. WEATHER FORECAST PERIOD TO :
      (CLOUD CEILING AND COVERAGE, VISIBILITY, WIND, SEASTATE, OTHER INFORMATION)
   E. SRU's ON SCENE:
2. SEARCH AREA (READ IN FOUR COLUMNS):
   AREA/SIZE/CORNER POINTS/OTHER
3. EXECUTION (READ IN SEVEN COLUMNS):
   AREA/SRU UNIT/ PARENT ACT/PATT/CREEP/CSP/ALT
3. COORDINATION:
   A. SAR-MISSION CORDINATOR : (NORMALLY RCC CURAÇAO)
   B. ON SCENE COORDINATOR: (DESIGNATED)
   C. ON SCENE TIME SRU
   D. TRACK SPACING/COVERAGE FACTOR DESIRED
   E. OSC INSTRUCTIONS
   F. AIRSPACE RESERVATION
   G. AIRCRAFT SAFETY COMMENTS
   H. OSC CHOP INSTRUCTIONS
   I. PARENT AGENCY RELIEF INSTRUCTIONS
   J. AUTHORIZATION FOR NON-SAR AIRCRAFT IN AREA.
5. COMMUNICATION
   A. CONTROL CHANNEL: PRIMARY / SECONDARY
   B. ON SCENE CHANNEL: PRIMARY / SECONDARY
   C. MONITOR CHANNEL:
6. REPORTS
   A. OSC COLLECTS ON SCENE WEATHER REPORTS FROM SRU AND RESOLVES DISCREPANCIES
   B. OSC REPORTS TO SMC
   C. PARENT ACTIVITIES REPORT TO SMC AT END OF DAILY OPERATIONS: SORTIES, HOURS FLOWN, AREA(S) SEARCHED, AND COVERAGE FACTOR(S)

10.3 Situation Report (SITREP)

The sitrep is sent by the OSC to keep the SMC informed. The sitrep is sent by the SMC to keep all participants informed. Initial sitreps should be transmitted as soon as possible. Sitreps provide the following information:

a. Identification
   In subject line: the Sitrep number, identification of the unit, a one- or two word description of the emergency and the phase of the emergency;
b. Situation
   A description of the case, conditions that affect the case and any amplifying information. After first Sitrep only changes to the original reported situation need to be included;
c. Action taken
   A report of all actions taken. When unsuccessful, the report includes areas searched, coverage factor or Probability of Detection (POD);
d. Future plans
   Description of any actions planned for future execution;
e. Status of Case
   Only for final Sitrep (case closed or suspended).

Example SITREP

TRANSMISSION:	(Distress/urgency etc.)
FROM:	(Originating RCC)
TO:	(All concerned)
SAR SITREP (NUMBER):	(Indicate nature of message)
A. IDENTITY OF CASUALTY:	(Name, call sign, flag state)
B. POSITION :	(Latitude/longitude)
C. SITUATION :	(Type of massage - e.g. distress/urgency; date/time; nature of distress/urgency - e.g. fire, collision, medico)
D. NUMBER OF PERSONS:	
E. ASSISTANCE REQUIRED:	
F. COORDINATING RCC:	
G. DESCRIPTION OF CASUALTY:	(Physical description, owner/charterer, cargo carried, passage from/to, life saving equipment carried, etc.)
H. WEATHER ON SCENE:	(Wind, sea/swell state, air/sea temperature visibility, cloud cover/ceiling, barometric pressure)
J. INITIAL ACTION TAKEN:	(RCC)
K. SEARCH AREA:	(As planned by RCC)
L. COORDINATING INSTRUCTIONS:	(OSC designated, units participating, communications, etc.)
M. FUTURE PLANS:	
N. ADDITIONAL INFORMATION:	(Include time SAR operation terminated)

Notes:

1. Each Sitrep should sequentially be numbered;
2. If time permits, full form may be used;
3. If incident is concluded, a final Sitrep should be issued.