



**Department of Marine & Ports Services  
Ministry of Transport  
Government of Bermuda**

# **Bermuda Search and Rescue Operations Plan**

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Bermuda Maritime Operations Centre  
RCC Bermuda / Bermuda Radio

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# **BERMUDA SEARCH AND RESCUE OPLAN**

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## **BERMUDA SEARCH AND RESCUE ORGANISATION**

### **1.0 INTERNATIONAL SAR CONVENTION OBLIGATIONS & DOMESTIC LAW**

#### **International Convention on Maritime Search and Rescue**

The 1979 SAR Convention introduced an international search and rescue framework to the maritime community with the intention that, no matter where an accident occurs, the rescue of persons in distress at sea would be coordinated by a SAR organisation and, when necessary, by co-operation between neighbouring SAR organisations.

The technical requirements of the SAR Convention are contained in its Annex, which is divided into five Chapters. Parties to the Convention are required to ensure that arrangements are made for the provision of adequate SAR services in their coastal waters. Parties are encouraged to enter into SAR agreements with neighbouring States involving the establishment of SAR regions, the pooling of facilities, establishment of common procedures, training and liaison visits. The Convention further states that Parties should take measures to expedite the entry of rescue units from other Parties into their territorial waters.

The Convention establishes the preparatory measures which should be taken, including the establishment of rescue co-ordination centres. It outlines operating procedures to be followed in the event of emergencies or alerts and during SAR operations, including the designation of an on-scene commander and their duties.

#### **Article 155 Air Navigation (Overseas Territories) Order 2007**

In compliance with the requirements of the Convention on International Civil Aviation signed at Chicago on 7 December 1944 (the Chicago Convention) - in particular Annex 12 thereto - and of the requirements of the International Civil Aviation Organisation (ICAO), Article 155 of the Air Navigation (Overseas Territories) Order 2007 (as amended) requires His Excellency the Governor, on behalf of the United Kingdom as a Contracting State to the Chicago Convention, to make appropriate arrangements for the establishment and provision of search and rescue (SAR) services to civil aviation within an Overseas Territory.

In accordance with the provisions of Article 155(1) to the Air Navigation (Overseas Territories) Order 2007 (as amended) (the Order) the Governor of the Overseas Territory of Bermuda hereby Directs the Bermuda Maritime Operations Centre:

- a) within the Territory and Territorial Waters to provide, or secure the provision of, a Search and Rescue (SAR) service for the benefit of civil aviation; and
- b) to ensure the availability of human resources, facilities and assets appropriate to the delivery of an effective SAR service in the Territory; and
- c) to ensure that assistance is rendered to persons in distress; and
- d) to coordinate such service with the rescue co-ordination centre (RCC) from which SAR services are provided; and
- e) for these purposes to ensure the regular meeting of the SAR Committee; and
- f) for the above purposes to review and re-publish the SAR Plan; and

- g) for the fulfilment of the above purposes to review and update the training programme (including refresher training) for all personnel involved in the delivery of SAR provision.

The said service shall be provided in accordance with:

- The applicable provisions of Annex 12 to the Chicago Convention (as amended from time to time);
- The relevant and applicable provisions of the Hamburg Convention;
- The relevant and applicable provisions of the Regional Search and Rescue Plans and any related Memoranda of Agreement made under such plans;
- The relevant and applicable provisions of Volumes I and II to the Aeronautical and Maritime Search and Rescue (IAMSAR) Manual (as revised from time to time);
- The provisions of an Overseas Territories Aviation Circular (OTAC SAR-1) as published from time to time by Air Safety Support International (ASSI);

### **Domestic Law**

The SAR Convention was extended to Bermuda on 22 June 1985 and expands upon the obligations contained in Chapter V/Regulation 7 of the Safety of Life at Sea (SOLAS) Convention. Given that it contains mostly state duties its provisions are not expressly recorded in local legislation – a legal position similarly adopted in the UK. By virtue of the 1985 extension the Bermuda Government is subject to these duties.

Oversight of SOLAS implementation and execution of coastal state maritime search and rescue operations in coordination with other relevant Government Departments and local bodies is the responsibility of the Bermuda Shipping & Maritime Authority (BSMA) per the Bermuda Shipping & Maritime Authority Act 2016. SAR planning effectiveness is assessed by the practical implementation of this plan and verification by the BSMA that the prescribed arrangements are in fact made and exercised unless this oversight is otherwise delegated.

### **1.1 GENERAL**

The aim of the Bermuda Search and Rescue Operations Plan is to provide for the effective use of all locally available resources in the prosecution of search and rescue missions using the framework prescribed by the International Maritime Organization (IMO) and International Civil Aviation Organisation's (ICAO) International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual.

The procedures for implementing the Bermuda SAR Operation Plan (SAR OPLAN) have been agreed to by the local authorities concerned and approved by the Search and Rescue Standing Committee.

The nature of any Search and Rescue incident can be described as extremely dynamic and there is no such thing as a typical incident such that a manual can be written to cover all eventualities. Evaluation by the Rescue Coordination Centre (RCC) of all the information available, combined with support from the stated agencies and the general boating and land-based public, is essential to a successful SAR case outcome. With access to only limited surface SAR resources and with no permanent aircraft resources in Bermuda, a highly co-operative, multi-agency approach is required if a positive incident outcome is to occur.

## 1.2 **SCOPE**

The Bermuda Search and Rescue Region (SRR) is established in co-operation with neighbouring nations and described in relevant documents of IMO (IMO SAR plan) and ICAO (Regional Air Navigation plans).

As Bermuda SRR is bounded on all sides by the US region (RCC Norfolk), mutual co-operation and assistance will be provided. The existence of SRR Limits should not be viewed as a basis to restrict, delay or limit in any way, prompt and efficient action to relieve distress situations in either nation's SRR.

Within the boundaries of the Bermuda SRR, Bermuda accepts responsibility for co-ordinating incidents to encompass our defined area within the USMCC SPOC agreement and as per our MOU with the USCG, this defines for maritime SRR geographically, for a continuous line following a line circular in shape on an approximate 200 mile radius from Bermuda, where the line also depicts the perimeter of the Bermuda Economic Exclusion Zone (EEZ) on international charts.

The Bermuda SAR OPLAN considers incident types by their marine area of occurrence:

INSHORE WATERS (harbours, bays);  
OFFSHORE WATERS (waters within the reef line) and;  
OCEANIC WATERS (those waters beyond the reefline).

While all Government agencies supporting SAR under this plan assist with inshore and offshore incident response, the Bermuda Coast Guard commits to provide SAR response up to 12 Nautical Mile. The Department of Marine & Ports commits to provide a SAR response up to 30 Nautical Miles from Bermuda using their sea-going vessels and personnel expertise. Longer range missions using pilot boats or tugs are undertaken on a case by case basis following a risk assessment.

On occasion the prosecution of SAR in the Bermuda area may also be undertaken by RCC Bermuda without the assistance of any local vessels, but rather through the tasking of transiting vessels on a 'Good Samaritan' basis or through the use of USCG aircraft resources requested by RCC Bermuda as Search Mission Coordinator (SMC). Such vessels are detected using GMDSS "all ships" broadcasts, VTS radar detection, as well as AIS, LRIT and AMVER systems.

As Bermuda is situated within a maritime SAR region for which the United States has accepted overall responsibility, oceanic SAR incidents may or may not require that the Bermuda SAR Plan be utilized in the prosecution of SAR missions. The scale of any incident and consideration as to which RCC (Bermuda or Norfolk) is best positioned to act as SMC is a key decision at the early stages of a case. Communications demands and aircraft/vessel tasking responsibilities should be considered, combined with any other incidents (workload) that the RCC is handling and as such manpower requirements over a 24-48 hour period should be evaluated given the duration of SAR events. Should SMC be assumed by RCC Bermuda, any SAR response would be undertaken in accordance with established international procedures, with local on-water resources being put on standby ready to respond.

The Rescue Co-ordination Centre (RCC) in Bermuda is authorised to request from other rescue co-ordination centre worldwide, such assistance as may be needed (including vessels, aircraft and other equipment) to assist persons in distress and will similarly provide assistance to other rescue co-ordination centres as and when requested. RCC Bermuda is also the responsible authority for Aviation SAR as delegated by the Governor under Annex 12.

### **1.3 S.A.R. STANDING COMMITTEE**

The Search and Rescue Standing Committee will be responsible for advising the Bermuda Government on all SAR related matters, and for approving the SAR OPLAN. Committee members include:

Director of Marine & Ports – Chairman  
Rescue Coordination Centre Officer in Charge  
Commissioner of Police  
Chief Fire Officer, Bermuda Fire & Rescue Service  
Director of Emergency Services, King Edward VII Memorial Hospital  
Commanding Officer of the Bermuda Regiment  
Director of Airport Operations  
Director of Environmental Protection

Other members may be co-opted to advise the Standing Committee as required, in addition to the above committee representatives.

The SAR Standing Committee (SSC) has oversight of the SAR Coordination Committee (SCC) and meet biannually.

#### **1.3.1. SAR Coordination Committee (SCC)**

A popular and effective process for SAR co-ordination is the establishment and use of SAR coordination Committees (SCCs). These can be established within a SAR agency, on a national or regional level, or ideally, at all of these levels. SAR committees can work to improve and support the SAR system by efforts such as the following:

- provide a standing forum for coordination of administrative and operational SAR matters;
- develop plans, policies, positions, manuals, etc., to:
  - resolve cross-agency jurisdictional issues;
  - develop joint solutions for SAR matters of common concern;
  - assign and coordinate SAR responsibilities; and
  - develop and implement SAR requirements and standards.
- effectively use all available resources for SAR, including global, regional, national, private, commercial, and volunteer resources (such resources may include advice, communications facilities and databases, ship reporting systems, training, SAR facilities, search planning expertise, technical assistance, foreign language assistance, medical or fuelling facilities, regulatory support and others);
- develop common equipment, facilities and procedures as appropriate;
- interface with other national and international organizations involved with emergency services;
- promote close co-operation and coordination between civilian and military authorities and organizations for the provision of effective SAR services;
- serve as a cooperative forum to exchange information and develop positions and policies of interest to more than one member agency;

- improve co-operation among aeronautical, maritime and land SAR communities;
- determine ways to enhance overall effectiveness and efficiency of SAR services;
- promote safety programmes to help citizens avoid or cope with distress situations; and
- develop contingency plans for use of SAR resources during disasters.

**SAR Coordination Committee consists of the following parties and meets on a monthly basis:**

Triple I Code / Safety & Security Coordinator	Bermuda Shipping & Maritime Agency (BSMA)
Coordinator Maritime Safety & Security	Dept. Marine & Ports Services / RCC Bermuda
Chief Maritime Operations Controller	Dept. Marine & Ports Services / RCC Bermuda
Pilot Warden	Dept. Marine & Ports Services / Bermuda Pilot Service
Harbour Master	Dept. Marine & Ports Services
Chief Fisheries Warden	Dept. Environment & Natural Resources (DENR)
Divisional Officer Operations	Bermuda Fire & Rescue Service (BFRS)
Royal Bermuda Regiment	Staff Officer
Officer-in-Charge	Bermuda Marine Police / Bermuda Coastguard
Aerodrome Inspector	Bermuda Civil Aviation Authority
Airport Duty Officer	Bermuda Skyport Corporation Limited
Air Traffic Control (ATC)	L.F. Wade International airport
Dispatcher	911 / EMD

#### **1.4 CONTROL AND CO-ORDINATION**

##### **Rescue Co-ordination Centre**

The Bermuda Maritime Operations Centre (Bermuda Radio) is the designated RCC for SAR operations in Bermuda and is responsible for assessing requests for assistance and then tasking appropriate response units. Effective control/co-ordination is not possible without access to a broad range of communication systems. Bermuda Radio is well equipped in this regard and complies with the International Conventions relating to the Global Maritime Distress and Safety System (GMDSS) introduced in February 1999. In addition they operate a VHF radio direction finding system and coastal radar surveillance (VTS) system to assist with vessel tracking and the determination of the last known position of a vessel such that tasking of search and rescue units to an incident position can effectively occur.

RCC Bermuda is responsible for maintaining the details of SAR resources, their equipment and their capabilities to ensure an effective response to SAR incidents. Details are contained in the SAR OPLAN SRU Annex C.

The RCC may delegate responsibility for co-ordination of on-scene units to an on-scene commander (OSC) who will ensure the effective direction of SAR operations. The OSC will ensure that the RCC is kept informed of developments and search progress / results through the use of Situation Reports (SITREPS).

In the case of a large scale incident RCC Bermuda is responsible for alerting other Bermuda Government Departments and Agencies that may have resources and manpower useful to life saving efforts particularly during a Mass Casualty Incident. If the magnitude of any given incident appears potentially overwhelming to existing resources, personnel and the national infrastructure, the Disaster Risk Reduction and Mitigation Team along with the Emergency Measures Organisation may also need to be

convened. This would be initiated by the Director of Marine & Ports through the Ministry of Tourism and Transport.

### **Rescue Sub-Centre ( RSC )**

The Bermuda Coast Guard Headquarters at Watford House is designated as the Rescue Sub-Centre (RSC). The Bermuda Coast Guard will assist with inshore and offshore SAR incidents when called upon by the RCC and as RSC can take the lead in a mutually agreed manner and prosecute a SAR incident at any time that the RCC is busy.

Given the nature of Bermuda Coast Guard operations, they may act upon inshore incident reports independently during routine patrols but will always provide follow up information at incident conclusion to the RCC to ensure that consistent incident management and statistical data is maintained at a national level by the RCC. In the event of one or more fatalities, the Bermuda Police will have overall responsibility for the preparation of a file for submission to the Coroner as required.

## **1.5 PERSONNEL**

Personnel required for SAR operations will be nominated by the authorities concerned indicating the duties for which they are responsible and how they may be contacted in an emergency. Alternates will be nominated where necessary.

RCC Bermuda will be responsible for maintaining the call-out list and will draw upon the personnel on this list according to the nature and circumstance of any emergency. Certain agencies may make use of additional internal call-out procedures when requested.

## **1.6 EQUIPMENT**

The type of SAR craft, the extent to which it is used, ancillary equipment and supplies carried onboard will vary with the type of incident. A list of available local craft and details of the equipment fitted onboard has been compiled for SAR purposes. This is outlined in the SAR OPLAN SRU Annex.

Specialist equipment may be required in the case of fire. The presence of biological, chemical or nuclear agents should be considered, and the threats posed to rescue personnel always assessed. IMDG cargo information for all vessels entering territorial waters is held by the RCC and the port of call. This should be reviewed and communicated to Bermuda Fire and Rescue Service (BFRS).

Should the scale of a shipboard fire incident be assessed to be beyond the scope of local operational and technical abilities, RCC Bermuda can obtain support via USCG resources along with commercial salvors being arranged via the Department of Marine & Ports in conjunction with the ship operator concerned. Other detailed emergency response plans covering such issues may need to be considered prior to any marine response being initiated.

## **1.7 MEDICAL ASSISTANCE**

Medical requirements for persons being landed at Bermuda from vessels is overseen by the Director of Emergency Services at King Edward VII Memorial Hospital and coordinated through RCC. KEMH Hospital

will initiate a response according to the medical situation and the scale of the emergency. Details of medical equipment, personnel and their use in SAR operations, including procedures for handling survivors, on-scene triage and casualty transport will be the responsibility of the KEMH Director of Emergency Services.

Oceanic medical cases requiring immediate medical advice will normally result in RCC Bermuda liaising with RCC Norfolk and U.S. Coast Guard Flight Surgeons, as well as other international telemedical services who are able to provide remote assessment of passengers and crew, while then also recommending treatment options using the normally limited medical supplies and expertise aboard ship. Certain private hospitals / clinics in the United States and Europe also offer expertise in this area.

Where immediate medical treatment is required, U.S. Air Force / Air National Guard Para-Jumpers may be tasked through RCC Norfolk to assist. Such personnel are able to be dropped by parachute to render high level medical treatment to injured or sick personnel onboard a vessel at sea. Alternatively, a helicopter MEDEVAC may also be performed using U.S. Coast Guard or other military assets.

Any subsequent disembarkation of sick or injured crewman from a ship for further treatment in Bermuda is undertaken in the presence of a local Doctor in consultation with the Hospital Emergency Department via the RCC. Such transport operations are normally performed by the Pilot / Rescue vessels of the Department of Marine & Ports Services who rendezvous with ships off of the East End of the island either at Five Fathom Hole or other nearby deep water locations.

Diversions by ships sailing trans-Atlantic between ports where highly infectious diseases exist is not uncommon. As a result personal protection equipment and related patient handling procedures exist for pilot boat crews engaged in the patient transfer overseen by a local physician or EMT personnel. Increased (air and sea) border health surveillance and screening activities by the Department of Health also exist following the introduction of Quarantine (Maritime and Air) Regulations 2017.

## **1.8 PUBLIC RELATIONS**

In view of the importance of keeping the public informed of all SAR incidents, information will be forwarded to the news media by the RCC as a matter of routine. In the event of a large scale incident, assistance from the Department of Communications (DoC) would be requested. Those involved at the scene of an incident or engaged in a search should be careful not to comment on the facts surrounding the incident but rather, should refer all inquiries from the public or media to the RCC where a DoC representative will be able to assist.

Large scale incidents will require the establishment of an information centre and use of the Police Casualty Bureau under the control of the Commissioner of Police. Inquiries by relatives and next of kin can then be directed to the Bureau once it has been established.

In the event of a civil air disaster a special information centre for inquiries will be set up by the airline(s) concerned in accordance with the Department of Airport Operations Airport Emergency Plan (AEP).

Release of survivor and casualty names should never be undertaken without coordination between the RCC, Police and DCI representatives – and this may also require coordination between RCC Bermuda and foreign Rescue Coordination Centres out of respect for the families involved.

Logistical support via the recently formed Disaster Risk Reduction and Mitigation Team (DRRMT) and the Emergency Measures Organisation (EMO) is also provided and related MOUs and Mass Rescue Operational (MRO) plan inclusion as an Annex to the SAR Plan is being drafted.

#### **1.9 TRAINING AND EXERCISES**

At least one major SAR exercise will be held annually to test the efficiency of the overall SAR organisation. Particular attention will be paid to areas of inter-agency alerting, crew alerting and unit response time. Underway communications, the general ability of crews to take direction and follow search pattern instructions from the RCC or OSC should also be scrutinized and any lessons learned analyzed at a Post Exercise Discussions (PXD) arranged by the SAR Standing Committee.

#### **1.10 COSTS**

An account of all expenses resulting from SAR operations will be kept by each Department for submission to the RCC (post incident) as needed. The Accountant General will be responsible, where possible, for recovering any costs incurred by Government resources.

#### **1.11 SALVAGE**

Salvage will be the responsibility of the Department of Marine and Ports Services for vessels and the Department of Civil Aviation for aircraft, supported by the Department of Marine & Ports and commercial contractors as needed where the recovery of an aircraft offshore is required post incident.

#### **1.12 INTERNATIONAL MARITIME SEARCH AND RESCUE AGREEMENTS**

Bermuda has obligations relating to Maritime Search and Rescue under the following International Conventions:

- International Convention for the Safety of Life at Sea 1974 (SOLAS 74) including amendments relating to the Global Maritime Distress and Safety System (SOLAS 88)
- International Convention on Maritime Search and Rescue 1979 (SAR 79)
- International Convention on Salvage 1989
- Convention on International Civil Aviation 1944 (ICAO Convention Annex 12)
- The Law of the Sea 1982

Bermuda falls within RCC Norfolk's search and rescue region as overseen by the U.S. Coast Guard Atlantic Area Command Centre. A MOU with RCC Norfolk is currently being drafted by the Policy Office at USCG HQ Washington and should be completed in Q1/2020.

COSPAS SARSAT (C/S) satellite distress beacon alerts for Bermuda beacons aboard Bermuda registered ships and aircraft operating globally are routed to RCC Bermuda as the nominated C/S 24 hour point of contact. In addition, Bermuda assumes responsibility for all 406 MHz satellite beacon alerts within a 200 nautical mile radius of Bermuda with these alerts being automatically forwarded from the US Mission Control Centre in Suitland, Maryland to the Duty Controller at RCC Bermuda. A MOU is in place with the USMCC relating to this function (see ANNEX F).

### **1.13 INQUIRIES / INVESTIGATIONS**

An inquiry or investigation into a SAR incident involving a domestic recreational or passenger carrying vessel (an “island boat”) operating under the Marine Board Act may be convened by the Minister of Transport should it be considered necessary, while the Merchant Shipping Act similarly places responsibility on the BSMA for accident investigation involving Bermuda and foreign flagged ships operating in territorial waters.

In complex, high profile and more demanding cases, assistance from the UK Marine Accident Investigation Branch (MAIB) may be requested and the US Coast Guard may also become involved as an interested party to any investigation due to the involvement of US passengers (see COMDTPUB P16732 NVIC 05-17 01 DEC 2017: “Reporting and Investigation of Marine Casualties where the United States is a Substantially Interested State (SIS)” )

Any safety investigation recommendations will be referred to the SAR Standing Committee and other Bermuda marine regulatory bodies for review and implementation action.

Where serious injury or loss of life is involved, the Bermuda Police Service would be expected to have an investigation role probing matters of human negligence and criminality under Bermuda Law. Typically BSMA ship surveyors and accident investigators will probe the incident or accident cause from a safety standpoint with a view to creating a ‘no blame’ factual report for submission to local authorities, the vessel’s Flag State and IMO.

Aviation incident investigation is the responsibility of the Bermuda Civil Aviation Authority (BCAA) potentially assisted by the UK Air Accident Investigation Branch (AAIB) in the event of a major incident. The U.S. National Transportation Safety Board (NTSB) may become involved as a party with a potentially substantive interest as well as other international flag states and aviation technical interests.

## **OPERATIONS PLAN**

### **2.1 INITIAL REPORTS**

Reports of vessels or aircraft missing, overdue or in distress are forwarded by the fastest means to the Rescue Co-ordination Centre (RCC) who will evaluate the information and initiate the necessary action. Initial reports received directly by the Rescue Sub-Centre (RSC) are evaluated by the RSC in conjunction with the RCC to ensure that a duplication of efforts does not occur and an effective use of resources is made. Similarly, reports of flares or sightings of distress craft made on the 911 emergency telephone system are to be relayed directly from COMOPS to the RCC on established 911 telephone circuits. This ensures a timely response and an accurate assessment of the situation. This is extremely critical when a distress position can only be determined using sighting reports from members of the public.

Some incidents can also be easily resolved by the RCC requesting assistance from vessels already operating in the general area of the distress. Such vessels may be detected using established surveillance technologies or by use of a VHF radio broadcast to draw their attention to an unfolding incident. Failing that, a suitable Bermuda Coastguard, Fisheries, Marine & Ports or vessel of opportunity may be tasked to respond to the scene. This is to be undertaken by the RCC and not solely by Police Operations (COMOPS) in the interests of deploying resources effectively and without any duplication of effort. Procedures between the RCC (Bermuda Radio) and Bermuda Coast Guard are well established in this regard.

Should the incident position, nature of distress or weather on scene exceed the capability of highly reliable "front-line" Bermuda Coastguard Resources, the RCC will request assistance from other better suited (larger) SAR vessels. (See ANNEX A - Bermuda Search & Rescue Organisational Structure and Incident Reporting).

### **2.2 INCIDENT EVALUATION**

Search and Rescue operations offshore and especially those undertaken in the shallow reef areas of Bermuda's northern reef platform provide a challenging and potentially dangerous environment for surface search units. Every SAR incident is dynamic in nature and the circumstances under which a search and / or rescue operation is undertaken may change dramatically due to factors beyond anyone's control, most notably the weather.

The successful execution of the mission will only occur through the constant evaluation and re-assessment of all the information available, possibly over a period of several days. Further investigation surrounding the disappearance of a vessel may also be needed, requiring close co-operation between a variety of agencies, as well as members of the public through the electronic media.

It is essential that all information be forwarded to the RCC so that well informed and consistent decision making can be allowed to occur, particularly in cases where merchant ships and/or military ships and aircraft have been tasked to assist.

### **2.3 INITIAL ACTION BY RCC**

Upon receipt of information indicating that a vessel or aircraft is in a state of emergency the RCC will evaluate the information and determine the emergency phase and the type and the extent of the

response required. The RCC will then alert the appropriate agencies and possibly request certain forms of assistance. (See ANNEX B – Callout List)

## **2.4 PROCEDURE DURING EMERGENCY PHASES**

### ***UNCERTAINTY PHASE*** (Vessel or aircraft reported overdue)

The information received by the RCC / RSC will be verified if necessary and attempts made to obtain further information.

A communication search will be commenced by the RCC who will attempt to contact the missing vessel or aircraft by the most direct means or obtain information from a source knowledgeable about the vessel or aircraft's operations.

Sightings of vessels suspected of being in difficulty will, where necessary, be verified by the dispatch of land and / or sea units to the scene to verify the report.

### ***ALERT PHASE*** (Vessel or aircraft confirmed overdue; possibly in distress)

Upon the declaration of the Alert Phase the appropriate agencies within the SAR mechanism will be alerted by the RCC and the following information provided:

- (a) Emergency phase ( ALERT or DISTRESS )
- (b) Type of craft, description and number of persons on board
- (c) Nature of emergency
- (d) Position, if known
- (e) Present and forecast weather
- (f) Nature of assistance required

In the case of incidents in Bermuda Waters, RCC Bermuda will assume the role of SAR Mission Co-ordinator (SMC). SMC may also be assumed by RCC Bermuda for SAR incidents out to 200 nautical miles from Bermuda in consultation with RCC Norfolk. Should multiple simultaneous incidents occur in territorial waters, the RCC may appoint the RSC to assume the SMC role for specific cases. Similarly, in the case of a large oceanic incident some distance from Bermuda, RCC Bermuda may hand off the function of SMC to another RCC elsewhere in the world.

If a vessel's position is unknown, the SMC will determine the most probable position of the casualty and the initial search area will be based upon the information obtained from reporting sources during the communications search.

The SMC will issue an Urgent Marine Information Broadcast (UMIB) or Pan Pan broadcast if this has not already been undertaken during the Uncertainty Phase and promulgate relevant information by the most effective means which may include broadcasts using VHF and HF radio or satellite systems.

SMC will dispatch SAR response units in a measured and appropriate manner. For instance, a disabled small craft in sheltered inland waters would not be considered to be in distress but may require heightened communications monitoring while a commercial (tow) resolution to the situation can be found.

On the other hand, Bermuda's off-lying reef platform and proximity to deep water oceanic sea conditions may make the timely dispatch of SAR assets to a disabled vessel scenario further offshore (such as on Challenger or Argus Banks) of heightened importance in order to ensure that a major search incident does not result given Bermuda's limited SAR resources and absence of aviation (fixed wing and helicopter) SAR assets.

Forecast weather conditions, onset of nightfall and vessel type/seaworthiness all need to be considered and constantly reviewed by the SMC to avoid an incident deteriorating with heightened risk resulting for the POB onboard. A MOU with the Bermuda Weather Service is in place providing for collaboration on weather data collection (from ships to RCC to BWS) as well as SAR incident support whereby RCC can access all current and historic BWS wind and sea current data in order to help further improve the accuracy of drift predictions in the USCGs SAROPS planning software (see ANNEX G).

The SMC will keep the vessel's owner, next of kin of persons onboard and the reporting source all informed of any action being taken.

***DISTRESS PHASE*** (Vessel or aircraft confirmed as being in grave and imminent danger after a distress signal received or signs of distress reported)

SMC will brief the crew of Search and Rescue Units (SRUs) before dispatching them to the distress position or to the Commence Search Point (CSP) of a calculated search area in a timely fashion. Use of maritime distress frequencies and other methods of communication will be made in order to divert any vessels possibly in the area to the scene.

The SMC will :

- (a) Designate an On Scene Commander (OSC) if necessary
- (b) Alert additional SAR facilities if necessary
- (c) Co-ordinate and direct the SAR operation through to its conclusion.

Maritime SAR Planning training is required by RCC staff along with recurrent training every 5 years.

Use of the USCG SAROPS SAR Planning software is found the best method of calculating object drift and defining a search area in oceanic areas beyond the reef edge (>3miles) and a search area with appropriate SRU search pattern for a given search scenario can be requested by RCC Bermuda to RCC Norfolk.

By far the best way of improving drift predictions in a SAR case is the deployment of a Datum Marking buoy (DMB) and RCC should undertake to have a trackable DMB deployed on scene at the Last Known Position at the earliest opportunity so that USCG SAROPS program calculations are using the best data available.

## **2.5 ACTION BY SAR UNITS**

Units engaged in searching will advise the OSC (or SMC directly if no OSC has been appointed) of their progress, observations and results at regular intervals in the form of a Situation Report (SITREP). When the distressed craft has been located, a SITREP stating the following will be passed to the SMC:

- (a) Time of sighting and position of the casualty
- (b) Apparent condition of casualty / persons on board
- (c) Additional SRUs required on-scene, if any
- (d) Intended action
- (e) On-scene weather condition

When the casualty has been assisted and / or the survivors rescued, the SRU concerned will inform the OSC (or SMC directly) and advise what facilities are required ashore upon their return.

## **2.6 TERMINATION OF OPERATIONS**

When the distress craft has been located and / or the survivors rescued and delivered safely ashore, the SMC will terminate the SAR operation and advise all concerned.

If the distressed craft and personnel onboard have not been located and it has been determined that further searching would be to no avail, the RCC shall suspend SAR operations pending further developments and will advise all personnel involved.

## **2.7 RECORDS**

The RCC will maintain a detailed record of all communications and actions taken through the various SAR alert phases. A narrative of events will be compiled at incident conclusion in order to assist with subsequent investigations and SAR case analysis.

## **2.8 MASS RESCUE OPERATIONS**

A Mass Rescue Operation (MRO) is a low probability, high consequence event that will require a response to provide immediate assistance to a large number of people who are in distress.

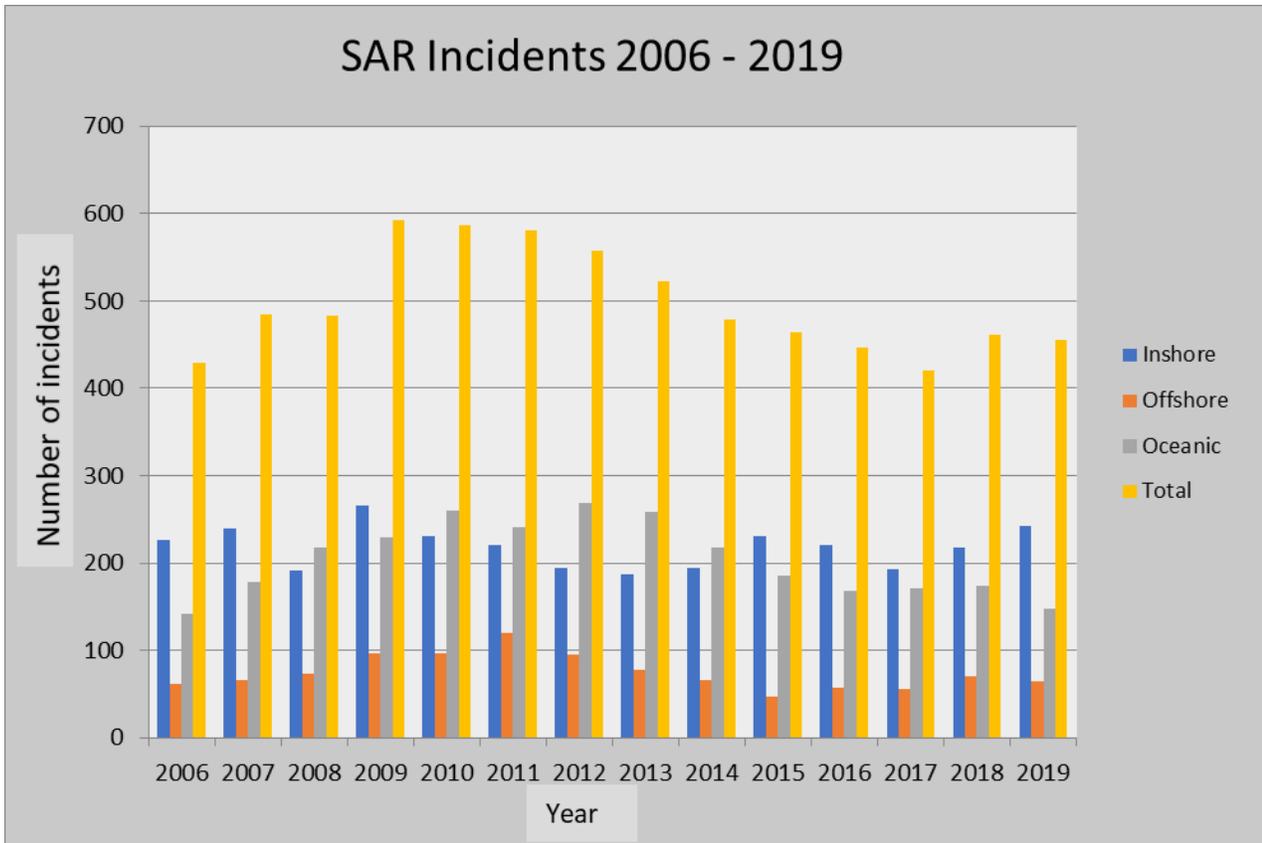
The definition of an MRO is:

*A SAR incident that involves the need for immediate assistance to large numbers of persons in distress, such that capabilities normally available to search and rescue authorities are inadequate.*

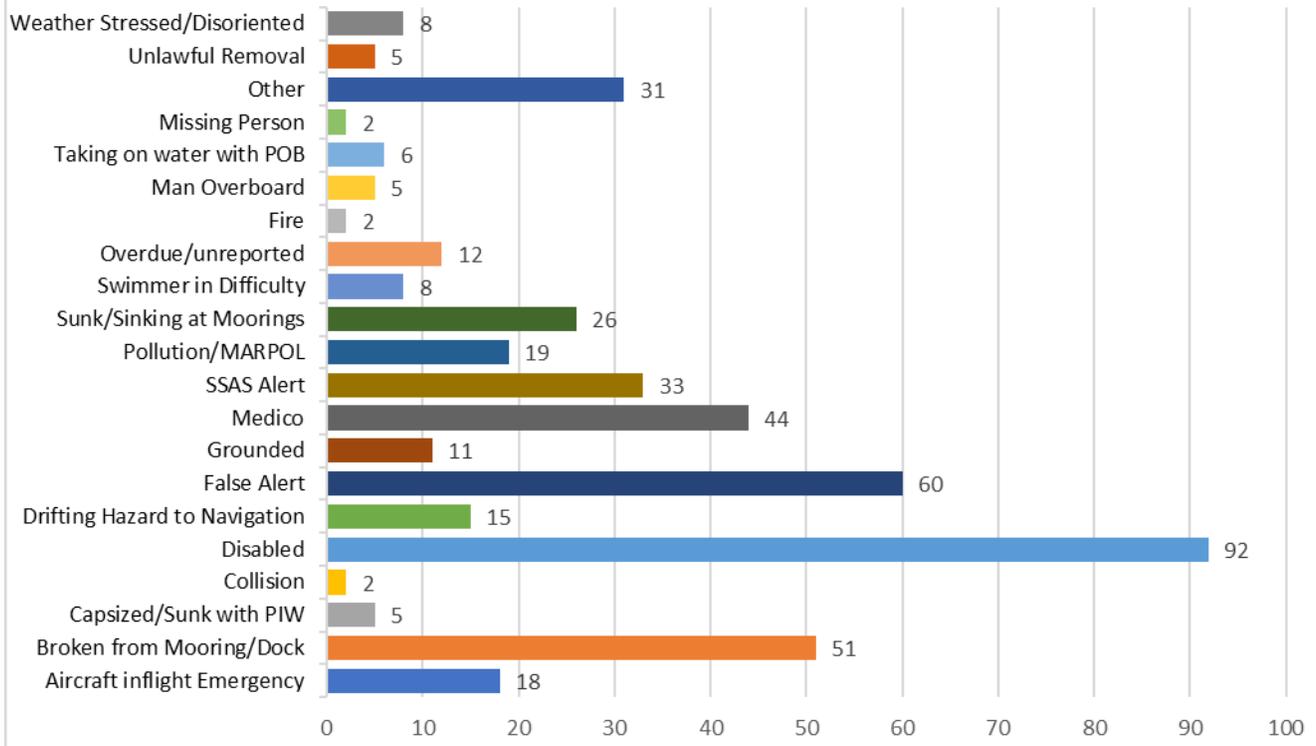
While an incident offshore would be coordinated using SOLAS and IAMSAR protocols, potentially utilizing SAR assets referenced in Annex C such as the Fast Ferries, as well as the vessels own lifesaving equipment, the shoreside operational response for a large number of persons being landed would fall into the remit of MRO plan Annex H.

A MRO incident is a nationally significant SAR operation, which would require the activation of the Emergency Management Organization System & Disaster Risk Mitigation Team DRMT. Further information about MROs can be found in the SAR MRO Plan Annex H (Draft).

2.9 RCC Bermuda National SAR Statistics 2006 – 2019



### RCC Bermuda Incident Types 2019



### Assets deployed to SAR Incidents 2019

