

# 1 NZ SAR SYSTEM

Overview.....	6
What is SAR? .....	7
New Zealand’s SAR Responsibilities .....	7
New Zealand Search and Rescue Region.....	7
NZ SAR Structure.....	7
The Role of Coastguard in Marine SAR.....	9
Categories of SAR Incidents .....	10
Category 1.....	10
Category 2.....	10
Kayaker on route from Haast to Bluff reported overdue. ....	11
Passenger vessel (100 POB) sinking in Bay of Islands.....	11
Precautionary Operations.....	11
Coordinated Incident Management System (CIMS) .....	12
Incident Controller .....	13
Incident Management Team (IMT).....	14
Operational Management.....	14
Planning / Intelligence.....	14
Logistics & Admin.....	14
IMT - Titles Roles & Responsibilities.....	15
Operations Manager .....	15
Marine SAR Controller (MSC).....	15
Duty Officer (DO) .....	16
Radio Operator (RO).....	16
Marine SAR Advisor.....	16
On Scene Resources - Titles Roles & Responsibilities .....	17
Coastguard Rescue Vessels.....	17
Coastguard Rescue Vessel (CRV) Skipper .....	17
On Scene Command (OSC) .....	17
Coastguard Air Patrol (CAP).....	18
Aircraft Pilot.....	18
In Flight Coordinator (IFC) .....	18
In Flight Observer (IFO) .....	18
CIMS – Example Scenarios .....	19

## Overview

The aim of this training module is to provide Coastguard personnel with a general overview of marine Search and Rescue (SAR) in New Zealand. This includes the key organisations involved and the role that Coastguard has to play.

The module also covers the various titles, roles, and responsibilities of different Coastguard personnel involved in SAR incidents.

## What is SAR?

From a national perspective, SAR incorporates operations involving missing or injured persons on both land and at sea. Marine SAR involves people in distress on the water, either at sea, in harbours, rivers or lakes.

Coastguard's involvement in SAR includes activities on all these waterways. To do this Coastguard utilises a variety of assets ranging from Coastguard Rescue Vessels (CRV's), Coastguard Air Patrol (CAP) aircraft, and land-based Coastguard assets such as radio networks and operation rooms.

## New Zealand's SAR Responsibilities

The International Convention for the Safety of Life at Sea (SOLAS) requires that signatory governments provide for the rescue of persons in distress at sea within their Search and Rescue Region (SRR). The government of New Zealand is a signatory to this convention.

### New Zealand Search and Rescue Region

New Zealand's SRR is a huge area stretching from just south of the equator to the South Pole, and from about halfway between New Zealand and Australia to about halfway between New Zealand and South America.



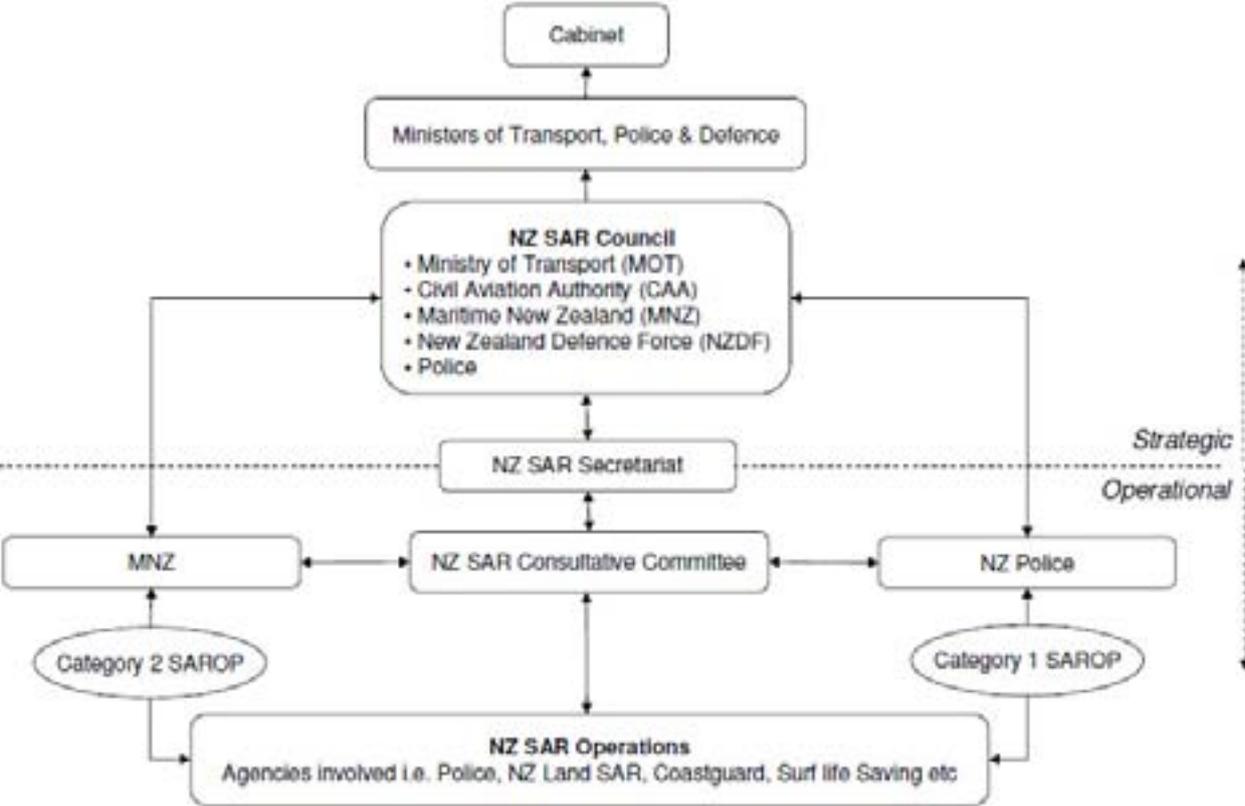
## NZ SAR Structure

In New Zealand, there are over 11,000 people directly involved in Search and Rescue (land & marine) nationwide, and another 1,500 working in support of them. People from all over the country and from all walks of life are involved in NZ SAR.

Unpaid professional volunteers make up approx 90% of the personnel in the NZ SAR sector, which is one of the highest rates of volunteer involvement in the world.

The different organisations / agencies involved all sit within a recognised national structure. The diagram below shows the various agencies involved in that structure.

The term SAROP stands for Search and Rescue Operation, and there are different categories of SAROPs depending on whether MNZ or NZ Police is coordinating the operation.



# The Role of Coastguard in Marine SAR

In New Zealand, there are two Coordinating Authorities that have been directed by the government to hold accountability, and responsibility for marine Search and Rescue Operations (SAROPs). These Coordinating Authorities are;

- New Zealand Police.
- MNZ (Maritime New Zealand).

***Note: MNZ administers SAR through the Rescue Coordination Centre New Zealand (RCCNZ).***

In general, the Police are only involved in 'close to shore' SAR incidents (including rivers & lakes), whilst the RCCNZ is involved in both 'close to shore' and 'off shore' SAR incidents.

Apart from the Police launches presently situated in Auckland and Wellington, there are no other dedicated Coordinating Authority vessels available for permanent marine SAR duties. Consequently, both the NZ Police and the RCCNZ deploy other physical resources to meet the requirements of the SOLAS convention.

The NZ Defence Force (Air force and Navy) often provide the key physical resources for 'off shore' SAR incidents, with Coastguard units across the country fulfilling the role of providing the physical resources for 'close to shore' marine SAR incidents.

Depending on specific local and / or regional operating procedures, Coastguard units can be tasked by;

- Their Regional Office.
- The Police.
- RCCNZ.
- 

Coastguard Units can also 'self-task' in a SAROP from within their Unit, ensuring that the appropriate authority is informed. In other words if a Coastguard Unit / Skipper are the first to be informed of a distress situation, they don't have to wait to be tasked by a Coordinating Authority.

# Categories of SAR Incidents

## Category 1

Operations carried out under the authority of the **NZ Police**. Support and advice for these incidents can be provided by the RCCNZ or any other organisation, including Coastguard.

## Category 2

Operations carried out under the authority of the **RCCNZ**. Support and advice for these incidents can be provided by the NZ Police or any other organisation, including Coastguard.

RCCNZ is staffed 24 / 7 and is located in the same building as 'Maritime Radio' — the Maritime Operations Centre at Avalon, Wellington.

'Category 2' includes specific incidents such as;

- All searches associated with missing or distressed aircraft.
- All searches where there has been distress beacon activation. Either EPIRB (Emergency Position Indicating Radio Beacon), ELB (Emergency Locator Beacon), ELT (Emergency Locator Transmitter) or PLB (Personal Locator Beacon).
- SAR operations which require the use of national civil and / or military resources, or resources from another country (such as foreign shipping).
- Any operation where responsibility is transferred by mutual agreement from the Police to the Rescue Coordination Centre.

***Note any flare sightings must be reported to RCCNZ, even if they are efficiently dealt with using local resources as a Category 1. This is because a flare may be sighted and reported to RCCNZ as well – this procedure is to eliminate the chance of two separate SAROPs being initiated for the same incident.***

***Note the category of an operation can be changed depending on the circumstances and by the mutual consent of both controlling authorities.***

The use of different categories in SAROPs is to clarify responsibility, and financial provision (i.e. who pays the bill!). Size, scale, type, or complexity does **not** necessarily determine classification. Incidents in each category can be very large or quite small. The ultimate decision on the category of incident is determined by which controlling authority is best able to deal with the incident.

Example

**Kayaker on route from Haast to Bluff reported overdue.**

This incident may initially first come to the attention of the police, and hence be a Category 1 SAROP. The areas remoteness and lack of local resources would mean that the police would alert RCCNZ. RCCNZ would be in a better position to request commercial, naval or other similar vessels and aircraft to assist in the search. Hence by mutual agreement this incident may become a Category 2 SAROP.

**Passenger vessel (100 POB) sinking in Bay of Islands**

This area has a large number of private, tourist, and game fishing vessels that could respond to the incident. If RCCNZ cannot bring any particular required resources to assist, then the incident would be run as a Category 1 SAROP.

***During any SAR incident RCCNZ & Police will discuss who the best authority to coordinate the operation is.***

## **Precautionary Operations**

Many Coastguard operations are precautionary, and as such they are not categorised, and so do not fit into the system described above.

These operations provide 'Good Samaritan Assistance'. An example would be going to the assistance of a vessel that is not in any distress (imminent danger), such as a vessel broken down and anchored in fair weather.

***Precautionary operations are not distress situations, and the Coordinating Authorities, do not need to be involved.***

***These situations however can and do sometimes deteriorate and turn into SAR operation, and the coordinating authorities should be informed immediately if there is cause for concern.***

# Coordinated Incident Management System (CIMS)

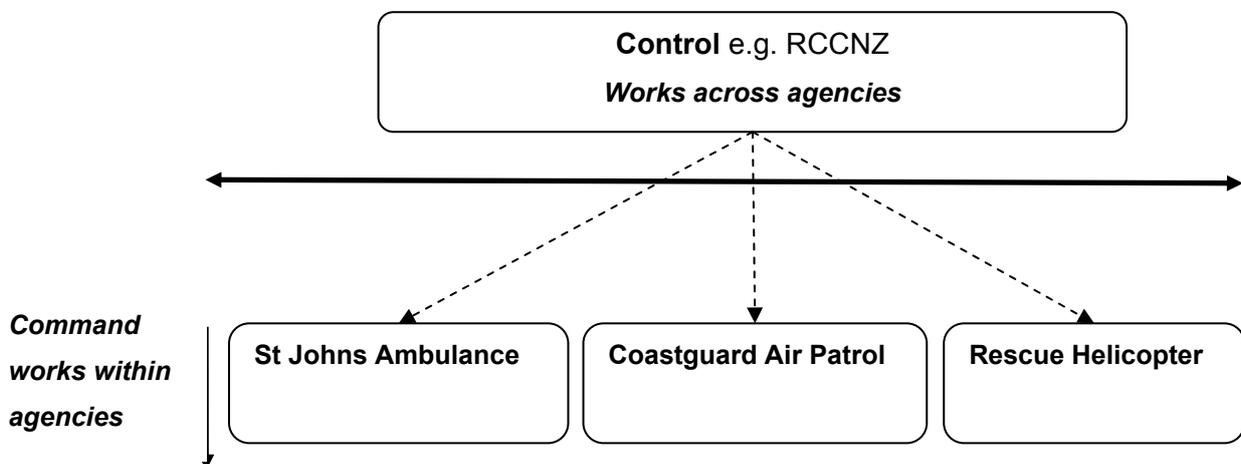
In New Zealand, all agencies involved in SAR (including Coastguard) have agreed to work under an operational model known as CIMS (Coordinated Incident Management System). The purpose of CIMS is to ensure a coordinated response using a common framework, and common terminology when a number of different agencies are involved.

The Coordinating Authority in an incident (In Marine SAR this will be either the Police or RCCNZ) will provide the overall coordination, and control of other agencies involved.

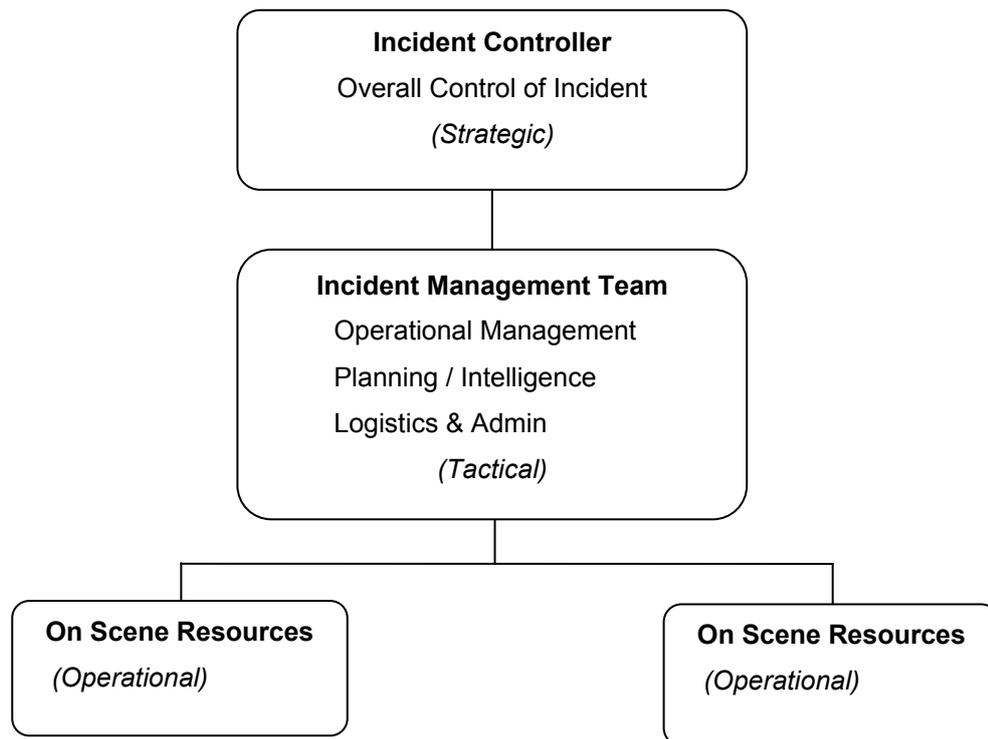
***Each agency remains in command of its own assets, and determines what assets are available and what tasks they can undertake in response to the incident.***

In CIMS the terms 'Control' and 'Command' to describe a persons role has particular meaning.

***'Control' works horizontally across different agencies, while 'Command' works vertically and is within an individual agency.***



The flow chart below illustrates the general structure of a SAROP using the CIMS system.



## Incident Controller

In the CIMS model the overall control of the incident is managed by a member of the Coordinating Authority (either NZ Police or RCCNZ). This Incident Controller is responsible for the overall direction of the operation, and could be classed as the strategic management.

Their responsibilities include;

- Establishing command & control.
- Controlling personnel & equipment.
- Maintaining accountability & public safety.
- Establishing & maintaining communications with outside organisations.

To assist the Incident Controller there is a group referred to as the Incident Management Team.

## **Incident Management Team (IMT)**

The Incident Management Team forms the tactical management of the operation. As Coastguard crew it is the IMT that you are most likely to be in direct contact with. They are responsible for;

### **Operational Management**

- Directing and coordinating all operations assigned to them.
- Assisting Incident Controller in developing a plan of action.
- Requesting if required additional resources through the Incident Controller.
- Keeping the Incident Controller informed of the situation.

### **Planning / Intelligence**

Gathering, evaluating, and disseminating information about the incident and status of resources, and contributing to the development of the plan of action.

### **Logistics & Admin**

Providing the facilities, materials, services, and resources (including personnel) to support the operation.

***The number of people involved, and the distribution of individual responsibilities within the Incident Management Team will vary depending on the size and complexity of the incident, and the personnel available.***

***In large and complex operations there may be more than one Incident Management Team working under the Incident Controller.***

# IMT - Titles Roles & Responsibilities

## Operations Manager

Whatever the make up of the IMT there must be one person clearly identified as taking the role of Operations Manager. It is the Operations Manager who has the responsibility for the management of the IMT and reporting to the Incident Controller.

## Marine SAR Controller (MSC)

One title that should be understood is that of the Marine SAR Controller (MSC). A MSC is a person specifically trained in Marine SAROP incident management and in particular the search planning aspect of incident management. MSCs are normally either Coastguard or NZ Police personnel (RCCNZ have their own version of a MSC who would fulfil an identical role). Duties of a MSC may include (but are not limited to):

- Being available for rapid response on a 24-hour basis, rostered as appropriate, to respond to the requirements of the controlling authority or duty personnel at the Coastguard unit.
- Determining and coordinating all SAR personnel and resources pertinent to the requirements of the incident, and ensuring that all personnel operate within recognised safety limits.
- Providing relevant details to the on scene resources, including defined target, area of probability, search methodology, weather and conditions, communication networks and other logistics.
- Coordination and communication with the relevant controlling authority.
- Ensuring that comprehensive record-keeping, post-incident reporting and debriefing is carried out.

Dependent on the size of the incident and personnel available, the MSC may take on all or parts of the responsibilities of the IMT. One area of responsibility that would always be taken by a trained MSC is that of Planning / Intelligence because of their specific training in developing search plans. Thus the IMT may be made up of several people each with varying roles and responsibilities.

## **Duty Officer (DO)**

Some Coastguard Units / Regions have permanently manned operations centres, with a designated Duty Officer. The Duty Officer is often the first person to be made aware of a developing incident. Their duties may include (but not limited to):

- Being available, on a roster basis, to take charge of routine operations of the Coastguard communications facility, and to initiate an appropriate response to any incident.
- Informing the duty Marine SAR Controller, other members of the IMT, and relevant agencies of an incident that may require a SAR response.
- Logging all incident-related communications and actions.
- Ensuring all communication procedures are correctly followed.

The burden of interpreting the severity of the incident, and hence what response is required, often lies with the Duty Officer. They must consider all factors and must decide by referring to established procedures / protocols if the incident is sufficiently serious to warrant a SAR response. ***Basic rule – When in doubt, treat it as a SAR Incident***

## **Radio Operator (RO)**

In some areas of the country (with a permanently manned operations centre) there may be Radio Operators on duty in addition to a Duty Officer. If not, an incident requiring the establishment of an IMT will often involve designated Radio Operators to facilitate communications with the on scene resources.

## **Marine SAR Advisor**

The role of the Marine SAR Advisor is to provide expert advice to assist any party involved in a SAR incident. ***The Marine SAR Advisor may not have any training in SAR but will be able to assist due to their particular knowledge and experience.***

Their advice could include details of local conditions, and specific local resources that may be available. It may be for example, that the Marine SAR Advisor has specific personal or technical knowledge regarding the target of a search - a local fisherman in the case of a missing fishing vessel. The Marine SAR advisor may be on site with the rest of the IMT, in contact by phone, or at / near the scene of the incident.

# On Scene Resources - Titles Roles & Responsibilities



## Coastguard Rescue Vessels

### Coastguard Rescue Vessel (CRV) Skipper

The CRV Skipper's role is to perform the tasks assigned to them by the IMT, and keep the IMT fully informed of any developments on scene. Every Skipper is ultimately responsible for their vessel, their own actions, and that of the crew. Therefore CRV Skippers should assess their vessel, their own abilities and their crew's strengths and weaknesses before accepting any assigned task. They must ensure that the IMT or On-Scene Command is fully informed of any deficiencies or limitations.

***The CRV Skipper has the absolute right, responsibility, and authority to decline any assigned task if it is considered that it involves an unacceptable level of risk.***

### On Scene Command (OSC)

Where more than one SAR response is involved, the appointment of On-Scene Command may be made by IMT. The On-Scene Command is normally the **Skipper** of the vessel on the scene with the most experience in SAR operations. The choice of On Scene Command may also be influenced by which vessel is most suitable for the role. This may change as more experienced personnel or other vessels become involved. OSC duties include but are not limited to: (See Module On Scene Command)

- Assuming delegated command and control of their allocated resources.
  - Establishing effective communications between SAR resources and IMT.
  - Implementing required tasks as directed and coordinating resources as required (i
- Logging all incident-related communications and actions and participating in any debriefing.

## Coastguard Air Patrol (CAP)

### Aircraft Pilot

Just as a CRV Skipper is responsible for their vessel, a pilot has similar overall responsibility for their aircraft and its crew. Safety on board an aircraft is subject to stringent regulations, and a pilot must operate within these at all times.



### In Flight Coordinator (IFC)

The responsibility for the on-board planning and execution of SAR operations and communications with the IMT, OSC and other SAR agencies remains with the IFC. They are also responsible for the welfare of the observers on board.

### In Flight Observer (IFO)

The In Flight Observer carries out an observation and search role. An observer's responsibility also involves advising the pilot of any relevant hazards in the air.

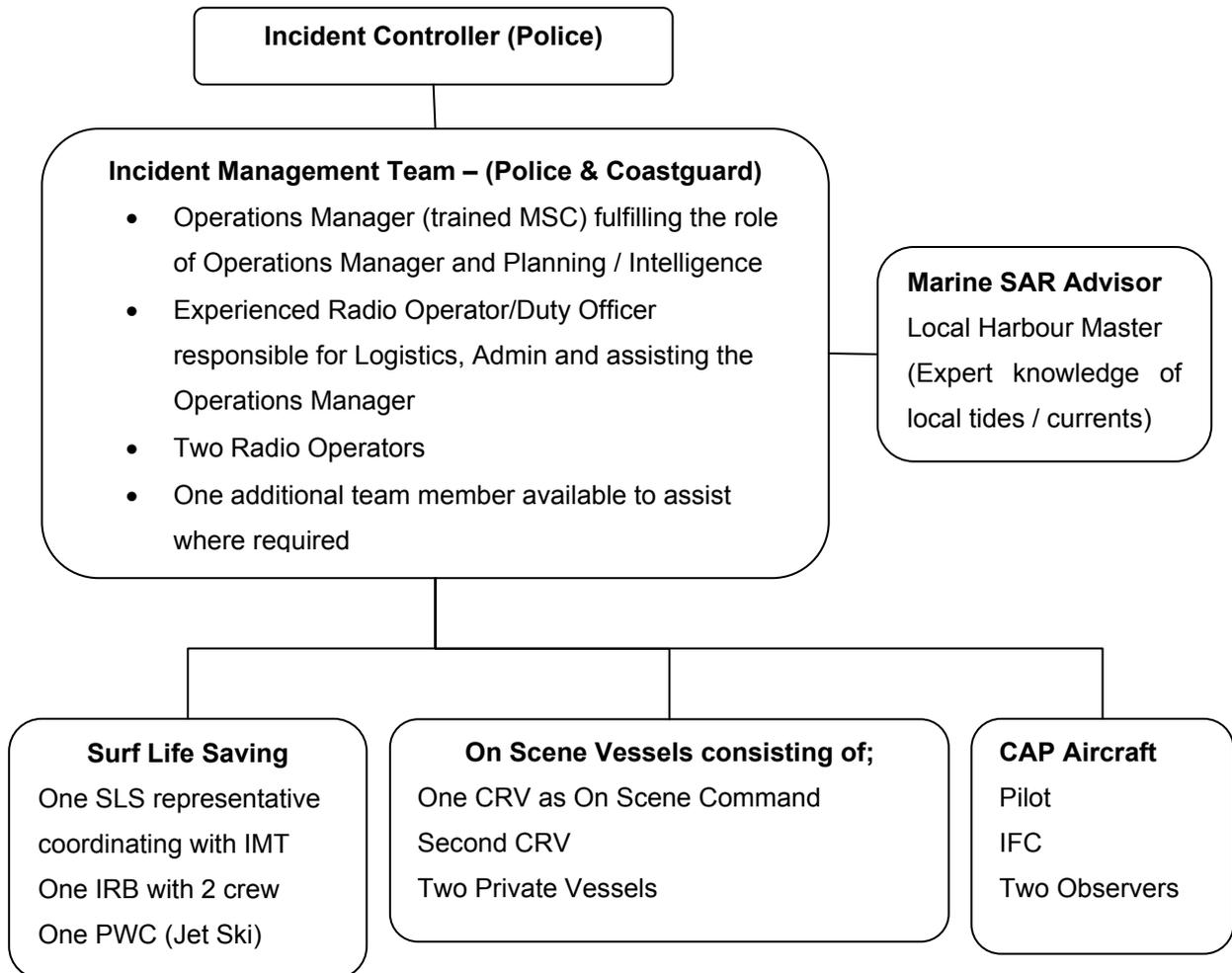
# CIMS – Example Scenarios

To illustrate CIMS in action the following flowchart represents an example SAROP.

The scenario represented is of a Category 1 SAROP - a search for an overdue vessel with Coastguard Rescue Vessels, Coastguard Air Patrol, local Surf Lifesaving, and private vessels involved in the operation.

The IMT have at their disposal;

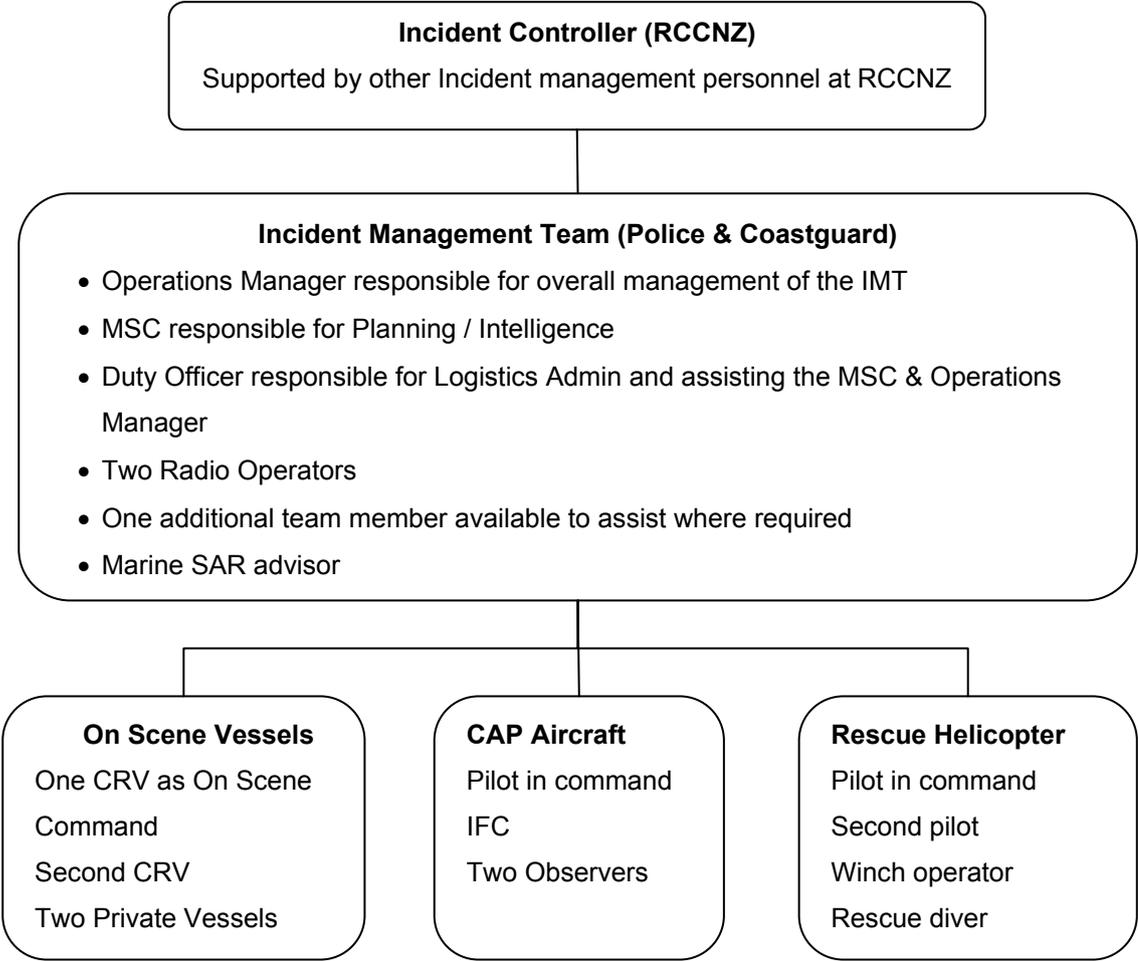
- Members of the local Surf Lifesaving who are conducting a shore line search.
- Two CRV's and two private vessels who are conducting an area search further offshore.
- One CAP aircraft that is being coordinated by the IMT to fly a search pattern in conjunction with the CRV's and private vessels.



Taking the SAROP illustrated on the previous page as an example; - An EPIRB is activated, and is identified as belonging to the overdue vessel. The overall responsibility for the operation changes, and it now becomes a Category 2 SAROP under RCCNZ. To avoid disruption the original IMT is retained.

The IMT is joined by the Marine SAR Advisor and another member, who although not a trained MSC, is trained and experienced in CIMS Management. They take over the role of Operations Manager allowing the MSC to concentrate on search planning.

The shoreline search conducted by Surf Life Saving is concluded, and with the operation moving further offshore they are stood down. A rescue helicopter is tasked to assist in the aerial search.



***With the CIMS system the response to an incident can be increased or decreased in scale without any change to the basic structure.***

It is important that all Coastguard Unit members have a general overview of marine Search and Rescue (SAR) in New Zealand, and be aware of the various titles, roles and responsibilities of different personnel involved in SAR incidents.

What is even more important is that Coastguard Units have a good working relationship with the other agencies and other Coastguard Units that they are likely to work alongside.

Units should take every opportunity to foster inter agency communication, and where possible integrated training.