

Safety Management Plan

Saumlaki Rally

Darwin Sailing Club

1. Risk matrix

See Appendix A.

2. Summary of measures recommended by the Darwin Sailing Club

1. Entries

- a. The Darwin Sailing Club put in place a registration system in 2 phases:
 - Expression Of Interest – pre registration: Before validating each entry, the DSC Sailing Officer checked the following:
 - o Type of vessel appropriate for the passage. We highlighted the vessel shall be in a seaworthy condition for the passage.
 - o The applicant declared having AIS and EPIRB onboard.
 - o We strongly recommended liferaft.
 - o We requested and checked the experience of the Skipper is adequate for similar passages.
 - o We rejected single handed applications.

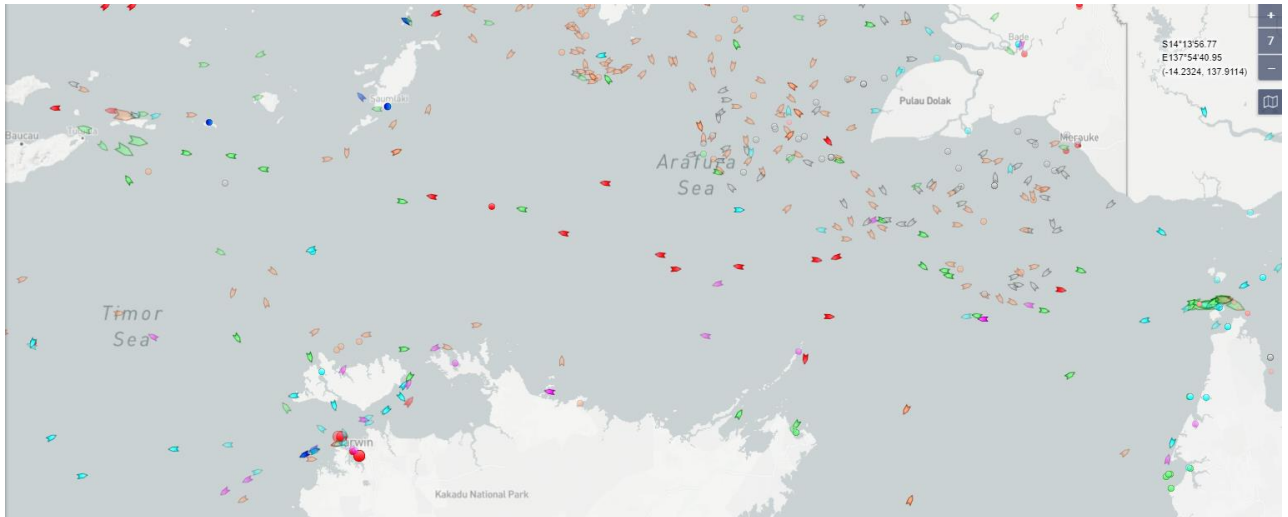
2. During the voyage

Measures for the competitors:

- a. Jack lines are strongly recommended and every crew member on deck must wear a harness tethered on the jack line, at all times when the crew leaves the cockpit.
- b. Boat track SHALL be recorded at all times to help with Man Over Board situations
- c. Additional measures for crew on deck are recommended: lifejacket, Personal Locator Beacon, AIS Beacon,
- d. Watchkeeping: Lookout shall be continuous during the voyage.

Particular attention must be observed at night for squalls, and when crossing the shipping lanes:

- Around the Vernon Islands, and along the coast of Melville (coastal landing barges and fishing boats): Commercial vessels regularly sail out of the main channel at the Vernons, and sail in the straightest line between Vernons and Cape Don.
- Between Torres Straight and eastern tip of Timor
- Fishing activities on the Australian Continental Shelf
- Fishing activities in the vicinity of Saumlaki (within 50nm as per shown on the below map, as an example)



Marine Traffic snapshot taken 12/08/2022

To help watchkeeping, a watchkeeper task sheet and watch handover checklist are strongly recommended.

e. Emergency procedures and drills are strongly recommended for the following situations:

- Man Overboard
- Steering Failure
- Abandon Ship
- Fire
- Collision/Grounding
- Medevac

Measures for the Organiser (DSC):

- Preparation of Safety Management Plan, shared with AMSA.
- Supply of trackers for each boat.
- Satellite Phone scheds system twice a day.
- VHF scheds twice a day with Rally boats in VHF range.
- Emergency procedures supplied **as an example** for the following situations (they need to be adapted for the Rally and for each boat):
 - Man Overboard
 - Steering Failure
 - Abandon Ship
 - Fire
 - Collision/Grounding
 - Medevac
- List Of Contacts with all safety beacons shared with AMSA.

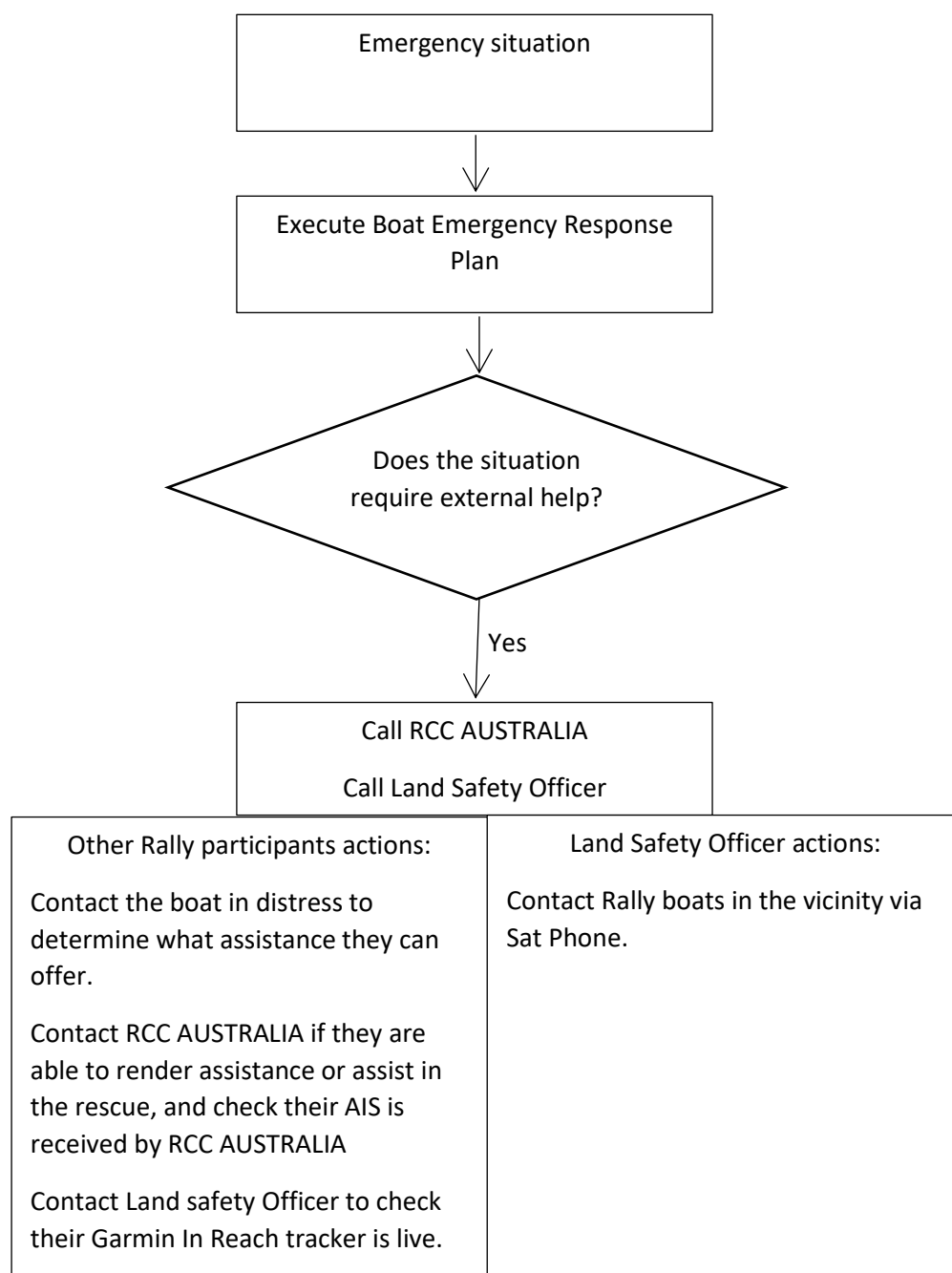
3. DSC Response Plan in case of an emergency:

While each skipper is individually responsible for the safety of their crew and their boat, the Rally gives an opportunity to each crew to reduce the consequences of an emergency, by rendering assistance to the boat in distress.

Any emergency occurring during the Rally must be notified to all skippers as well as RCC AUSTRALIA.

The help provided by one of us may be adequate enough and come quicker to help our mates.

The general response plan in an emergency is as follow:



a. Man Over Board

1. The Skipper shall execute their emergency procedure.
2. The Skipper transmit MAY DAY VHF16 with estimated position of Man Over Board (Datum) and time where the MOB occurred.
3. Contact RCC AUSTRALIA by satellite phone
4. The Skipper SHALL execute their MOB Search And Rescue (SAR) plan.
5. Until RCC Australia takes over the SAR operations, broadcast (every 30 minutes) on VH16:
 - a. The boat current position
 - b. The wind direction and force
 - c. Sea State
 - d. The SAR pattern adopted

Third party boats hearing the MAY DAY SHALL assist in the Search And Rescue and take the following actions:

1. Plot the MOB position and time on a Chart.
2. Contact RCC AUSTRALIA by satellite phone.
3. Strengthen the visual and sound lookout with additional crew on deck
4. Adopt a SAR Pattern – Use Annex A - IAMSAR Vol3 extracts for guidance.
5. If possible, display/record the AIS track of the May Day boat, so you understand what the May Day boat is doing.
6. Radar lookout by experienced crew, set on short range (3 nm) if appropriate.
Following settings may enhance the target detection on a Man Over Board:
 - a. Short Pulse, or Harbour Mode in modern radars
 - b. Rain filter OFF
 - c. Sea filter at a minimum, or OFF.
 - d. Gain slightly higher than automatic gain
 - e. Echo trail ON (weak echos looks like a track

b. Collision / Vessel not able to sail.

6. The Skipper shall execute their emergency procedure.
7. Each Skipper SHALL render assistance to the other vessel if required.
8. If assistance required, the Skipper SHALL transmit PANPAN or MAYDAY on VHF16.
9. Contact RCC AUSTRALIA and the Land Safety Officer by satellite phone and report the incident.
10. Vessels in the Rally must render assistance within their ability, and report to RCC AUSTRALIA.

c. Medevac

1. Contact RCC AUSTRALIA and the Land Safety Officer by satellite phone and report.
2. the Skipper SHALL transmit PANPAN or MAYDAY on VHF16.

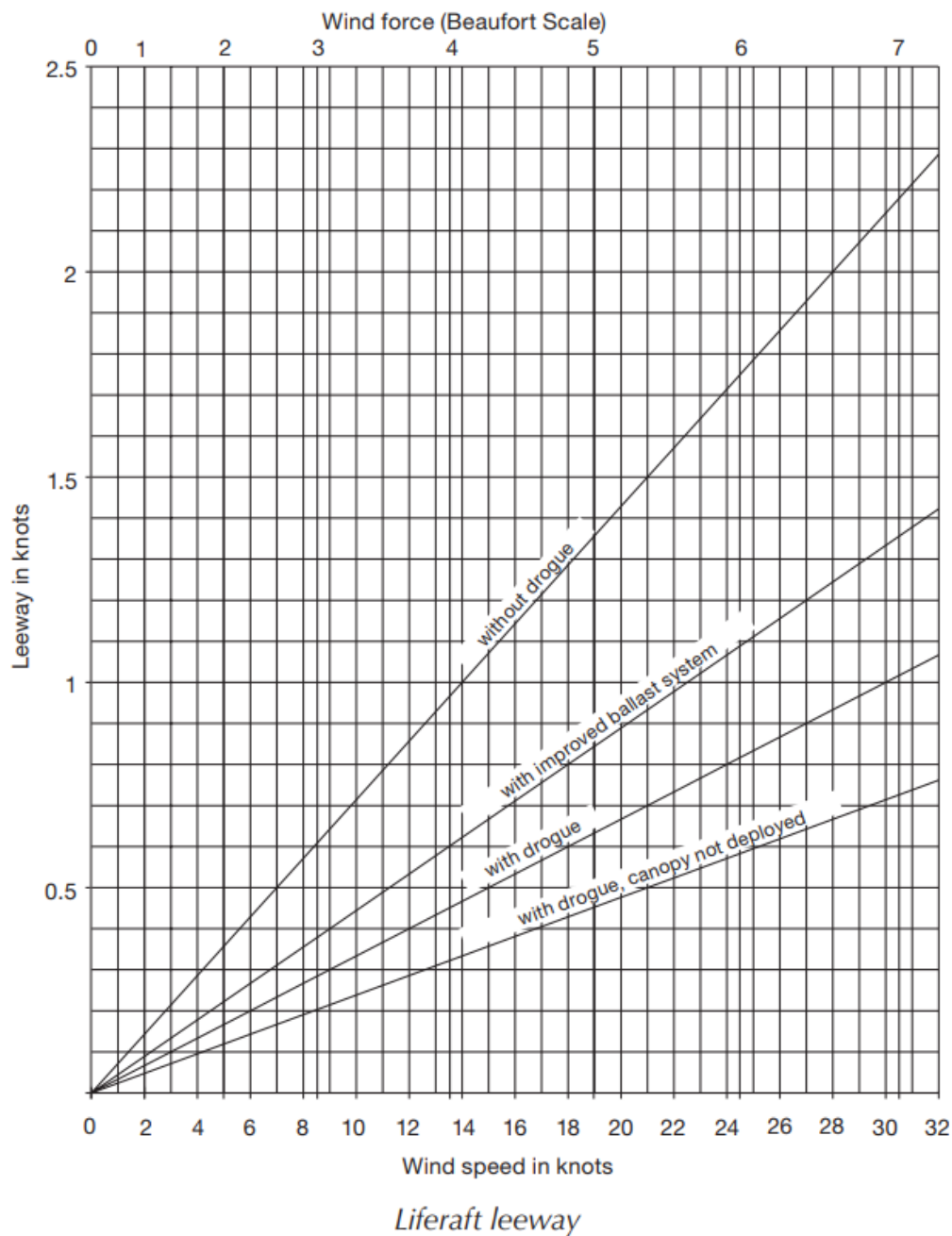
If medical evacuation is required, RCC AUSTRALIA will coordinate the operation, and may ask to alter course to reach rescue party as quickly as possible.

Evacuation of casualty from sailboats to helicopters may require launching the tender or deploying the liferaft depending on conditions.

3. Vessels in the vicinity must keep watch on VHF16 and contact RCC AUSTRALIA.

Appendix A: IAMSAR Vol3 extracts

These extracts show data used by Search And Rescue Teams. Knowledge of these may assist skippers in rescue operations for emergencies on their own boat or as being part of a rescue operation.



**Uncorrected sweep widths (W_U) for
merchant vessels (km (NM))**

Search object	Meteorological visibility (km (NM))				
	6 (3)	9 (5)	19 (10)	28 (15)	37 (20)
Person in water	0.7 (0.4)	0.9 (0.5)	1.1 (0.6)	1.3 (0.7)	1.3 (0.7)
4-person liferaft	4.2 (2.3)	5.9 (3.2)	7.8 (4.2)	9.1 (4.9)	10.2 (5.5)
6-person liferaft	4.6 (2.5)	6.7 (3.6)	9.3 (5.0)	11.5 (6.2)	12.8 (6.9)
15-person liferaft	4.8 (2.6)	7.4 (4.0)	9.4 (5.1)	11.9 (6.4)	13.5 (7.3)
25-person liferaft	5.0 (2.7)	7.8 (4.2)	9.6 (5.2)	12.0 (6.5)	13.9 (7.5)
Boat < 5 m (17 ft)	2.0 (1.1)	2.6 (1.4)	3.5 (1.9)	3.9 (2.1)	4.3 (2.3)
Boat 7 m (23 ft)	3.7 (2.0)	5.4 (2.9)	8.0 (4.3)	9.6 (5.2)	10.7 (5.8)
Boat 12 m (40 ft)	5.2 (2.8)	8.3 (4.5)	14.1 (7.6)	17.4 (9.4)	21.5 (11.6)
Boat 24 m (79 ft)	5.9 (3.2)	10.4 (5.6)	19.8 (10.7)	27.2 (14.7)	33.5 (18.1)

Weather correction factors (f_w) for all types of search units

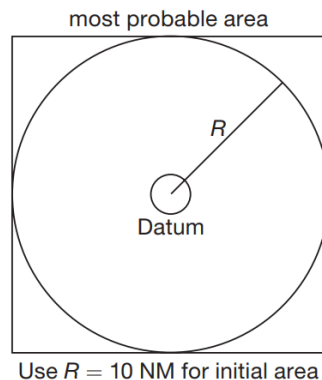
Weather Winds km/h (kts) or seas m (ft)	Search object	
	Person in water	Liferaft
Winds 0–28 km/h (0–15 kt) or seas 0–1 m (0–3 ft)	1.0	1.0
Winds 28–46 km/h (15–25 kt) or seas 1–1.5 m (3–5 ft)	0.5	0.9
Winds > 46 km/h (> 25 kt) or seas > 1.5 m (> 5 ft)	0.25	0.6

Searching speed (V)

- To perform a parallel track search with several vessels moving together in a coordinated manner, all vessels should proceed at the same speed, as directed by the OSC.
- When performing a coordinated search with several vessels moving together, the search speed should normally be the maximum speed of the slowest vessel present under the prevailing conditions.
- In restricted visibility, the OSC will normally order a reduction in searching speed.

Search Area:

- Plot the search area:
 - draw a circle centred on datum with radius R .
 - using tangents to the circle, form a square as shown below
 - if several facilities will be searching at the same time, divide the square into sub-areas of the appropriate size and assign search facilities accordingly.



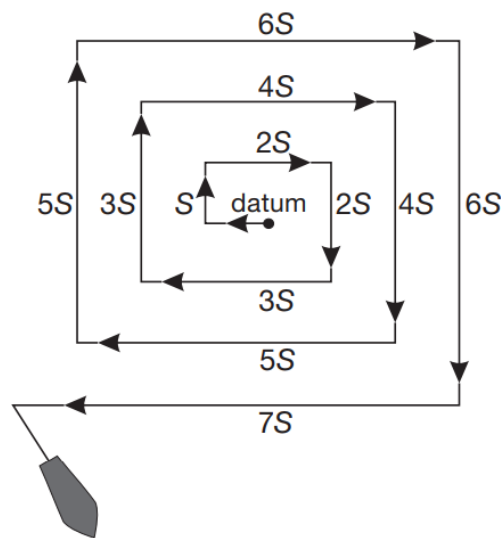
Search Patterns:

Search patterns

- It may be advisable for vessels, especially when searching for a person in the water with either an expanding square search (SS) or a sector search (VS), to use dead reckoning (DR) navigation rather than more accurate navigational methods. DR navigation will minimize pattern distortion relative to the search object since it will automatically account for the currents affecting the search object's drift during the search. For both vessels and aircraft, if a smoke float or other highly visible, expendable object is available, it should be deployed at datum and the pattern should be performed relative to it. Precise search pattern navigation using high-precision methods such as global satellite navigation systems will produce good patterns relative to the ocean bottom, but not relative to the drifting search object. This could allow the search object to drift out of the search area before the search facility arrives in that vicinity.

Expanding square search (SS)

- Most effective when the location of the search object is known within relatively close limits.
- The commence search point is always the datum position.
- Often appropriate for vessels or small boats to use when searching for persons in the water or other search objects with little or no leeway.
- Due to the small area involved, this procedure must not be used simultaneously by multiple aircraft at similar altitudes or by multiple vessels.
- Accurate navigation is required; the first leg is usually oriented directly into the wind to minimize navigational errors.

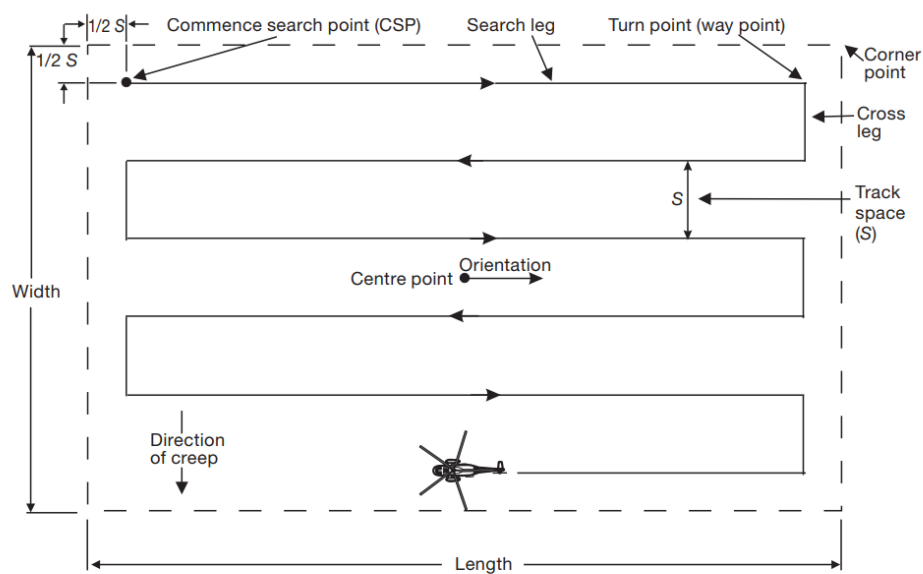


Expanding square search (SS)

- A suitable marker (for example, a smoke float or a radio beacon) may be dropped at the datum position and used as a reference or navigational aid marking the centre of the pattern.
- For aircraft, the search pattern radius is usually between 5 NM and 20 NM.

Parallel track search (PS)

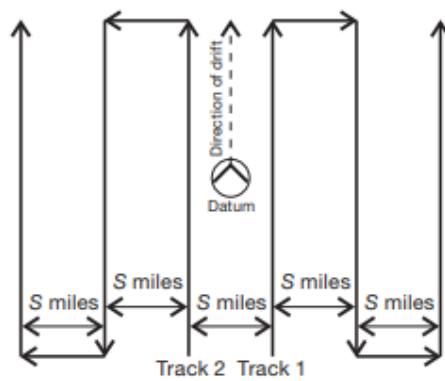
- Used to search a large area when survivor location is uncertain.
- Most effective over water or flat terrain.
- Usually used when a large search area must be divided into sub-areas for assignment to individual search facilities on-scene at the same time.
- The commence search point is in one corner of the sub-area, one-half track space inside the rectangle from each of the two sides forming the corner.
- Search legs are parallel to each other and to the long sides of the sub-area.



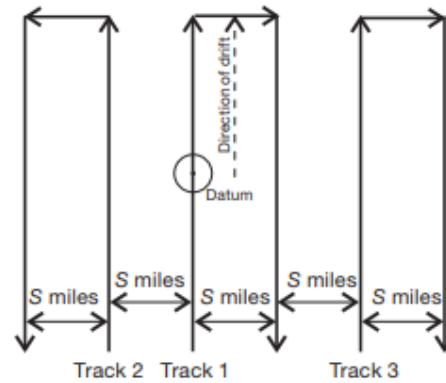
Parallel track search (PS)

Multiple vessels may be used as shown on page 3-30 IAMSAR Vol3:

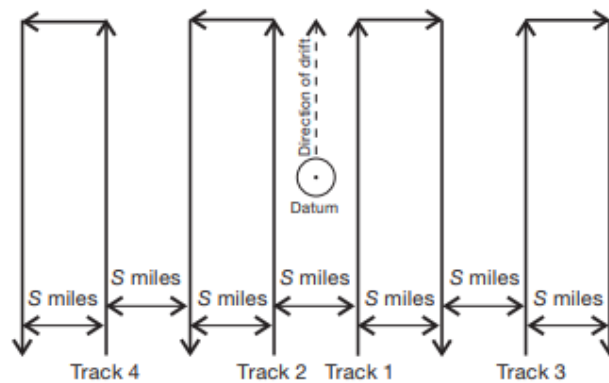
- Parallel track search: for use by two ships.
- Parallel track search: for use by three ships.
- Parallel track search: for use by four ships.
- Parallel track search: for use by five or more ships.



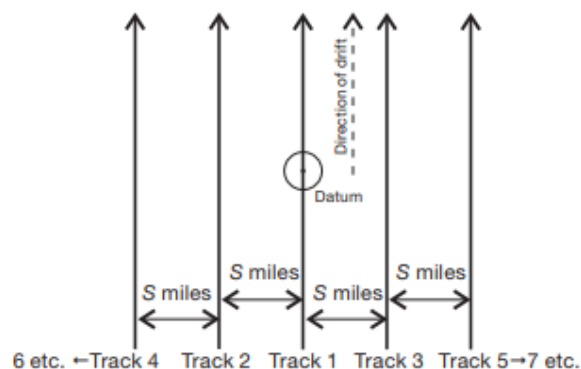
PATTERN 2
Parallel track search – 2 ships



PATTERN 3
Parallel track search – 3 ships



PATTERN 4
Parallel track search – 4 ships



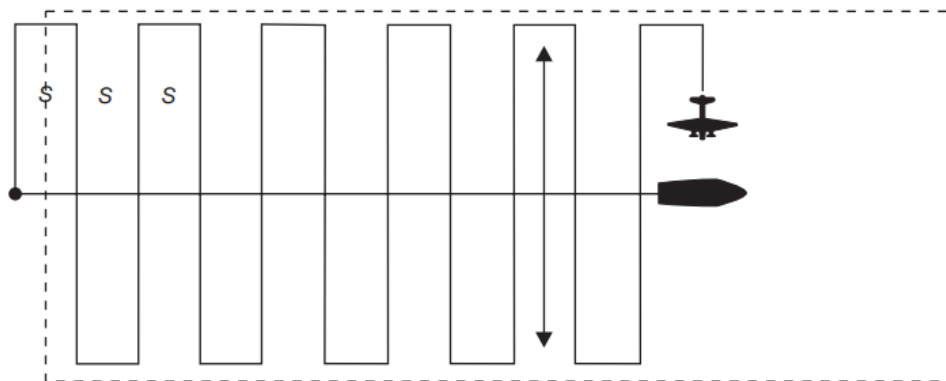
PATTERN 5
Parallel track search – 5 or more ships

Coordinated vessel–aircraft search pattern

- Normally used only if there is an OSC present to give direction to and provide communications with the participating craft.
- Creeping line search, coordinated (CSC) is often used.
- The aircraft does most of the searching, while the ship steams along a course at a speed as directed by the OSC so that the aircraft can use it as a navigational checkpoint.
- The aircraft, as it passes over the ship, can easily make corrections to stay on the track of its search pattern.
- Gives a higher probability of detection than can normally be attained by an aircraft searching alone.
- Ship speed varies according to the speed of the aircraft and the size of the pattern. The relationship among the speed of the surface facility, the aircraft's speed, the track spacing and the length of the search legs is defined by the following equation:

$$V_s = (S \times V_a)/(L + S)$$

where V_s is the speed of the surface facility in knots, S is the track spacing in nautical miles, V_a is the aircraft's true air speed (TAS) in knots, and L is the length of the aircraft's search leg in nautical miles.



Creeping line search, coordinated (CSC)

Initiation of search

- When a search facility arrives on-scene in advance of the others, it should proceed directly to datum and commence an expanding square search.
- If possible, datum may be marked by putting over a liferaft or other floating marker with a leeway similar to that of the search object, as a check on the drift.
- This can then be used as a datum marker throughout the search.
- As other facilities arrive, the OSC should select one of the search patterns, as appropriate, and allocate search sub-areas to individual facilities.
- In good visibility and with sufficient search facilities, the OSC may let the first facility continue its expanding square search while the others conduct a parallel track search through the same area.

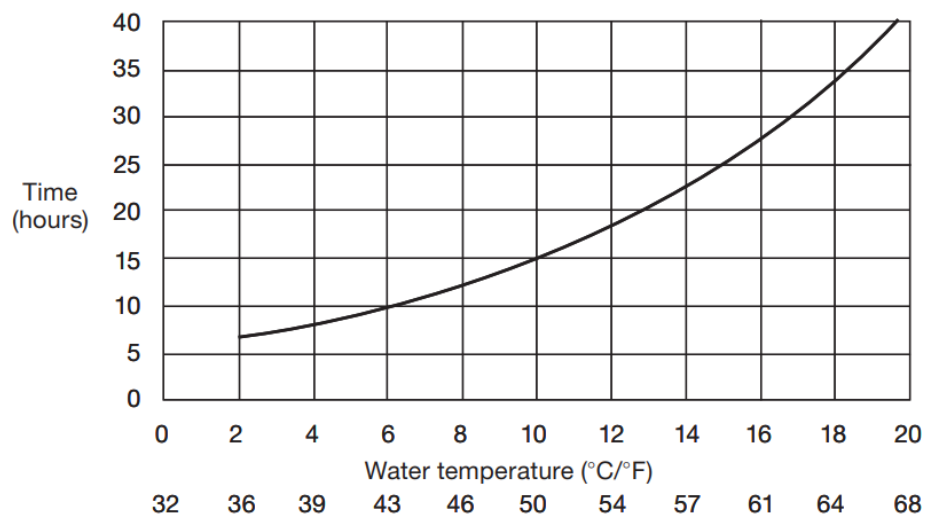
Radar search

- When several assisting ships are available, a radar search may be effective, especially when the position of the incident is not known reliably and SAR aircraft may not be available.
- No prescribed pattern has been provided for this contingency.
- The OSC should normally direct ships to proceed in “loose line abreast”, maintaining a track spacing between ships of the expected detection range multiplied by 1.5.
- The table below serves as a guide for detection ranges for ship radar.

Search object	Radar scanner height	
	15 m	30 m
10,000 gt ship	13.0 NM	18.0 NM
1,000 gt ship	6.0 NM	8.4 NM
200 gt ship	5.5 NM	7.7 NM
9 m boat	1.9 NM	2.7 NM

Survival time for Man Over Board:

- The following diagram shows realistic survival times for people believed to be in water at various temperatures. If there is a possibility that survivors may have survival equipment or have been able to get out of the water, search times should be extended.
- Remember that the graph can only be indicative. Predicting survival times in immersion victims is not a precise science; there is no formula to determine exactly how long someone will survive or how long a search should continue. In water temperatures above 20°C (68°F) search times exceeding 24 h should be considered.



Medical evacuation (MEDEVAC)

- If medical evacuations are being considered, the benefits must be weighed against the inherent dangers of such operations to both the person needing assistance and to the rescue personnel.
- When medical assistance is required, information as indicated below should be sent to the RCC. Other information may be necessary in certain cases.
 - ☐ name of the vessel, flag, IMO number, radio call sign and telephone number
 - ☐ master's name and nationality
 - ☐ shipowner/operator, nationality and contact details
 - ☐ patient's name, age, gender, nationality, and language
 - ☐ patient's respiration, pulse rate, temperature, and blood pressure
 - ☐ location of pain
 - ☐ nature of illness or injury, including apparent cause and related history
 - ☐ symptoms
 - ☐ type, time, form, and amounts of all medications given
 - ☐ time of last food consumption
 - ☐ ability of patient to eat, drink, walk, or be moved
 - ☐ with accident cases, how the accident occurred
 - ☐ whether the vessel has a medicine chest, and whether a physician or other medically trained person is on board

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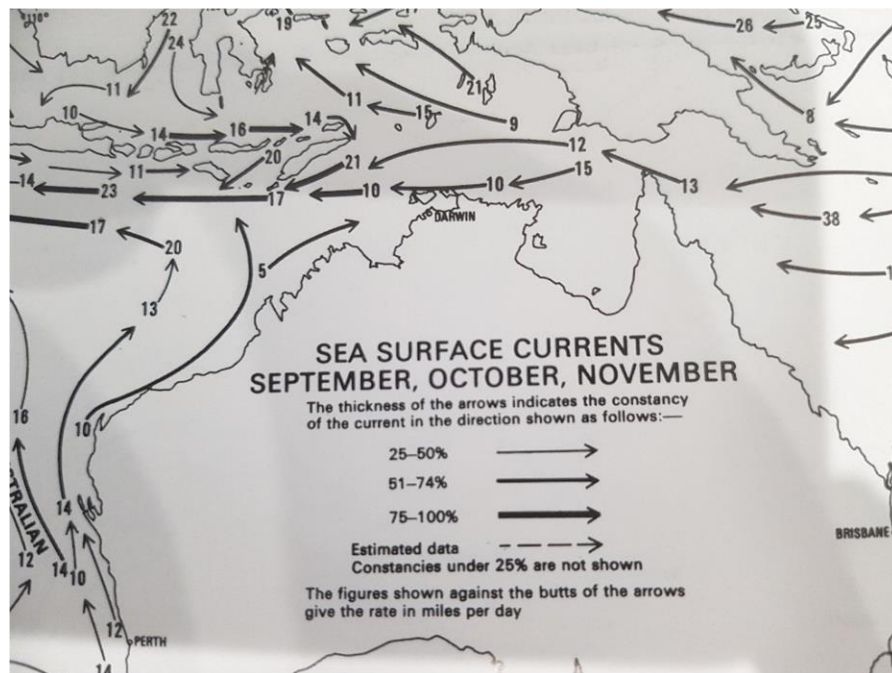
- ☐ whether a suitable clear area is available for helicopter winch operations or landings
 - ☐ name, address and phone number of vessel's agent
 - ☐ last port of call, next port of call, and ETA to next port of call
 - ☐ communications and homing signal available
 - ☐ additional pertinent remarks.
- The final decision about whether it is safe to conduct an evacuation remains ultimately with the person in command of the rescue facility tasked with conducting the evacuation. The vessel's master is responsible for the safety of his vessel and personnel and may decide against the evacuation.

Evacuation by helicopter

- When arranging for the evacuation of a patient by helicopter, the following points should be considered.
 - requesting helicopter assistance
 - arrange a rendezvous position as soon as possible if the vessel is beyond helicopter range and must divert
 - give as much medical information as possible, particularly about the patient's mobility
 - advise immediately of any changes in the condition of the patient
 - preparation of patient before the helicopter arrives
 - move the patient to the helicopter pick-up, if so required
 - ensure the patient is tagged to show details of any medication which has been administered
 - prepare the patient's seaman's papers, passport, medical record, and other necessary documents in a package ready for transfer with the patient
 - ensure that personnel are prepared as necessary to move the patient to the special stretcher (lowered by the helicopter) as quickly as possible
 - the patient should be strapped in the stretcher face-up, in a lifejacket if condition permits.

Distress vessel

- In addition to other guidance given to vessels, in multiple aircraft SAR operations or mass evacuation situations, the Master of the vessel in distress should agree on cooperation with airborne units with ACO/OSC/SMC including:
 - ☐ determine landing/hoist positions
 - ☐ determine working channels
 - ☐ inform when ready to receive helicopters
 - ☐ be prepared to provide ship manifest to RCC or SRU
 - ☐ be prepared to guide rescue personnel arriving on ship
 - ☐ be prepared to gather passengers to landing/hoist positions and to guide them
 - ☐ determine medical triage status and number of casualties
 - ☐ plan order of evacuation and relay to RCC/OSC/ACO
 - ☐ update vessel position, speed and course at regular intervals; 1NM can be considered a significant difference in position for aircraft especially in poor weather conditions.



Extract from AMSA – Survival At Sea

APPENDIX B: EXAMPLES OF EMERGENCY PROCEDURES

(Extract from Sailing Adventures NT – Seawind 1000, for sunset charter conditions in Darwin Harbour)

DO NOT APPLY THESE PROCEDURES WITHOUT ADAPTING THEM TO YOUR BOAT, CREW, AND CONDITIONS.

MAN OVERBOARD

			Tick box
1	Alarm "Man OVERBOARD"	Anyone	
2	Drop the Life Buoy	Master	
3	Point the Man Over Board	Crew	
4	Mark GPS MOB Waypoint	Master	
5	Order all passengers to sit down.	Master	
6	Manoeuvre.	Master	
7	Motors down, start. If practicable Furl headsail. Drop mainsail.	Master	
8	When approaching the man, on Master's order , prepare the recovery gear (Ladder, life sling, boat hook)	Crew	
9	MOB condition assessment – First Aid – Call 000 if required	Master	

APPENDIX C: List Of Contacts

Saumlaki Start

PRO: Peter Bracken

Contact: +61 408 324 450

Shorebased Schedules Officers:

8am schedules: Ed Vincent

Contact: +61 417 520 591

6pm schedules: Peter Bracken

Contact: +61 408 324 450

Before the start - Rally Management:

Sailing Co-Ordinator: Dominic Coburn

Contact: +61 478 254 691