AUSTRALIAN MUSEUM
LIZARD ISLAND
RESEARCH STATION

INDEPENDENT SNORKELLER INDUCTION PACKAGE

ALL INDEPENDENT SNORKELLERS MUST:	Page
Read and understand the *LIRS Independent Snorkelling Regulations*	1
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FORMS TO BE SUBMITTED AT OR PRIOR TO INDUCTION	
Research project leaders	a separate **Project Form** for each project
Each snorkeler	an **Independent Snorkeller Form**

LIRS INDEPENDENT SNORKELLING REGULATIONS

DEFINITION

- Independent snorkellers are experienced snorkellers, or they are good swimmers with little or no snorkelling experience, or they entrust their safety while snorkelling to a particular person.
- They are either doing work while snorkelling or they are snorkelling in a private capacity.
- Independent snorkellers do not expect to be supervised while they are in the water and they accept responsibility for their own safety while snorkelling.
- Persons qualified to undertake occupational diving at LIRS are considered competent independent snorkellers due to their diver training and experience.

REQUIREMENTS FOR SNORKELLING

- An *Independent Snorkeller Form* must be completed before any snorkelling takes place. This requires a statement as to swimming ability, snorkelling ability, disclosure of certain medical conditions that may increase the risks of snorkelling, and it includes a risk analysis.
- A parent or guardian must sign the form of a snorkeller under the age of 18.
- Snorkellers under the age of 12 must be accompanied by an adult while snorkelling.

SNORKELLER RESPONSIBILITIES

An independent snorkeller:

- accepts responsibility for him/herself while snorkelling
- discloses to the Dive Officer any medical or competency issues that may affect snorkelling safety
- participates in a risk assessment process
- agrees to follow LIRS snorkelling and boating procedures

EQUIPMENT

- Snorkellers bring their own equipment, borrow it from others, or they hire it from LIRS. Masks, snorkels, fins, wetsuits and lycra suits are available.
- Weight belts are provided free of charge to independent snorkellers who have been approved to use them by the Dive Officer.

SNORKEL TEAMS

- There are normally two or more people in a snorkelling team. A two-person team may comprise two snorkellers, or one snorkeller and another person in a boat or on shore nearby.
- Solo snorkelling may be allowed in certain circumstances (see Independent snorkelling from a boat, Independent snorkelling from shore, below)
- Independent snorkelling teams that include one or more child snorkellers must be of at least two people, the child and a suitable adult.

LOW RISK AREA

Southeasterly conditions prevail for at least eight months per year and a stable Low Risk Area (shown **shaded**) generally applies during those conditions. Note that:

- The Dive Officer may cancel this general dispensation at any time
- The Dive Officer may post a map showing a different Low Risk Area according to prevailing and forecast weather conditions

Low Risk Conditions are defined as:

- Depth of bottom does not exceed 20 metres
- Swell and/or wave height does not exceed 0.5 metres
- Current is nil to slight (snorkellers can swim against it with minimum exertion)
- Underwater visibility is greater than 4 metres
- Activity starts and ends in full daylight

INDEPENDENT SNORKELLING PROCEDURES

Independent snorkelling from a boat

- Boat usage must be in accordance with the induction conducted on arrival.
- The boat log is used to ensure that snorkellers who use a boat have returned to LIRS.
- Snorkelling and boating conditions are monitored by staff and restrictions applied if necessary due to weather conditions or other factors.
- Snorkellers are advised to fly the dive flag and deploy a float line from the boat while snorkelling.
- Solo snorkelling from boats may only take place following risk assessment and approval from the Dive Officer.

Independent snorkelling from shore

- Independent snorkelling (including by solo snorkellers) may take place from shore at Casuarina Beach and Loomis Beach under the following conditions:
    - The Beach Snorkel Log has been filled in before departure and must be signed in on return, which must not be more than two hours after departure (see exemption for limited non-work snorkelling below). The snorkeller must notify a responsible person and enter that person's name in the Beach Snorkel Log prior to snorkelling. The responsible person must check that the snorkeller has returned by the appointed time and notify LIRS staff immediately if not. The responsible person is usually a member of the snorkellers' own research team but could be a LIRS staff member who has specifically agreed to take on that responsibility on each occasion.
    - Low Risk Area conditions apply (note that Low Risk conditions include daylight hours only).
- Independent snorkelling (including by solo snorkellers) with entry from other shore locations or in areas where Low Risk Conditions do not exist (including at night) is subject to risk assessment and approval from the Dive Officer.
- A dive flag on a float is available on request by snorkellers who are snorkelling from shore.

- Snorkelling from shore for **non-work purposes** within 50 metres of Casuarina Beach or Loomis Beach is not covered by this manual and the Beach Snorkel Log does not need to be completed. Such activities are personal in nature and people are expected to take normal precautions such as telling someone what they are doing. However, swimming or snorkelling from the beach (unless a boat has been signed out) for **any reason (work or non-work)** more than 50 metres from those beaches does require the Beach Snorkel Log to be completed.

Independent snorkelling at night

- Night is defined as the period from sunset to sunrise.
- Night snorkelling must be approved by the Dive Officer at least a day in advance. Consideration must be given to locations, weather, tides, personnel, navigation, equipment and task-related procedures.
- The snorkellers must submit a special risk assessment.
- Each snorkeller should have:
  - a chemical light stick or other constant light source firmly attached to the snorkel, and
  - an underwater torch.
- A competent lookout must be posted. The lookout must have a torch and a VHF radio for communicating with LIRS staff during an emergency.
- Snorkelling at twilight (15 min before sunrise and 15 min after sunset) from shore within 50 metres of Casuarina Beach is not subject to night snorkelling regulations provided low risk conditions exist and the Beach Snorkel Log has been completed.

Independent snorkelling with children

- Child snorkellers who are under 13 years may only snorkel when accompanied by an Independent snorkeller who is their parent/guardian or an adult supervisor approved in writing by the parent/guardian.
- Child snorkellers aged between 13 and 18 may snorkel when accompanied by adults other than their parent/guardian at the parent/guardian's discretion, without documentation.

END OF INDEPENDENT SNORKELLING REGULATIONS

EMERGENCY PROCEDURES FOR INDEPENDENT SNORKELLERS

Missing snorkeller

- Buddy snorkeller or other accompanying person to contact LIRS immediately by VHF radio, if available, or by the most expedient means which could include asking the Resort or another person to contact LIRS.
- Recall any snorkellers still in the water using signals such as a whistle, revving the motor three times and/or repeated banging on the side of the boat.
- If snorkelling from a boat, failure of boat to return by intended return time according to boat log will be taken to indicate a missing snorkeller.
- If snorkelling from shore, a responsible person should have been nominated in the Beach Snorkel Log and intended return time listed. Failure to return by that time must be reported by that person to LIRS staff immediately.
- Accompanying people to scan area continuously for missing snorkeller.
- LIRS staff to start search and rescue procedures immediately upon notification of a missing snorkeller. At least two people should go together to begin the search, unless finding a second person would result in a delay of more than a few minutes.
- Boat should remain anchored/ moored as it was when the snorkeller was last seen. If the boat must be moved, an emergency marker buoy should be left at that position. In all LIRS vessels, the anchor line is attached to the boat with a snap hook and it has a float near the end. Consider detaching the anchor line from the boat and leaving it as the emergency marker buoy.
- Team conducting search must give due consideration to existing risk factors including personal ability, current, visibility, sea and weather conditions.

Injured snorkeller

- Independent snorkellers take full responsibility for their own safety while snorkelling. They have been advised that the risks can be reduced by snorkelling with others but they are not required to do so.
- Buddy snorkeller or other accompanying person, if any, to contact LIRS as soon as possible for assistance.

END OF EMERGENCY PROCEDURES FOR INDEPENDENT SNORKELLERS

RISK ASSESSMENT FOR INDEPENDENT SNORKELLING

This risk assessment covers hazards that are or may be encountered by independent snorkellers conducting standard underwater tasks and/ or by people using boats (drivers and passengers) from LIRS and it provides appropriate minimum control measures. The following definitions apply:

Independent snorkellers are experienced snorkellers, or they are good swimmers with little or no snorkelling experience, or they entrust their safety while snorkelling to a particular person. They are either doing work while snorkelling or they are snorkelling in a private capacity. They do not expect to be supervised while they are in the water and they accept responsibility for their own safety while snorkelling. Persons qualified to undertake occupational diving at LIRS are considered competent independent snorkellers due to their diver training and experience.

Standard underwater tasks comprise observation, collection of non-venomous species, and use of hand nets, slates, measuring tapes, cameras, lightweight frames, grids, monitoring devices, hand tools, stakes, small sediment corers and clove oil.

This *Risk Assessment for Independent Snorkelling* covers boating as well as independent snorkelling activities.

- Independent snorkellers are required to accept this risk assessment by completing and submitting to LIRS an *Independent Snorkeller Form*
- Boat drivers who are not snorkellers are also required to accept this risk assessment by completing and submitting to LIRS an *Independent Snorkeller Form*, which will be annotated as "Not a snorkeller".
- Divers and group snorkelling supervisors accept different risk assessments that are appropriate to their activities.

Independent snorkellers and boat drivers who are not snorkellers must consider whether this risk assessment covers all their planned activities. If not, an additional risk assessment must be completed.

Conventions used in the risk assessment

1) The terms and risk matrix used in this assessment are in the tables below (Source: *Work Related Incident/ Illness/ Near Miss Report,* Australian Museum Form OHS 002, February 2007).
2) The abbreviation **LRA** refers to the Low Risk Area as defined in the latest version of the *LIRS Diving Procedures Manual*.
3) Control measures that apply to all locations are unshaded. Additional control measures that apply to areas outside the LRA are shaded in grey.
4) Practices or operations that require additional risk assessment are *in italics*.

Likelihood of meeting a particular hazard	
Almost certain	Is expected to occur in most circumstances
Likely	Will probably occur in most circumstances
Possible	Could occur at some time
Unlikely	Not likely to occur in normal circumstances
Rare	May occur only in exceptional circumstances
Consequence of incident with hazard	
Insignificant	Injuries not requiring first aid
Minor	First aid required
Moderate	Medical treatment required
Major	Hospital admission required
Severe	Death or permanent disability

Risk matrix					
Likelihood vs Consequence	Insignificant	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Very High	Very High
Likely	Medium	Medium	High	High	Very High
Possible	Low	Medium	High	High	Very High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Medium	Medium	

1) ENVIRONMENTAL HAZARDS

Hazard	**Likelihood (L) Consequence (C) Risk (R)**	**Control Measures used to prevent or minimize risk**
Strong currents	L: Location-specific; Rare to Likely C: Insignificant to Severe R: Low to Very High-controlled	❖ Deploy a float line behind the anchored/ moored boat before entering the water. ❖ Each snorkeller to assess current strength at the snorkelling site immediately upon entering the water. ❖ If it is necessary to swim or to hold the float line to maintain position near the boat, then a competent boat driver must remain with the boat (either in it or in the water in the boat's immediate vicinity as appropriate to conditions) during the snorkelling activities or snorkelling must cease. ❖ If a boat attendant is deemed necessary, snorkellers and boat attendant to discuss: current strength and direction, plan for pick-up if snorkellers are unable to swim back to vessel, boarding procedures.
Low underwater visibility	L: Rare C: Minor R: Low	❖ Do not snorkel if horizontal visibility is less than 4 metres (*additional risk assessment is required for snorkelling in lower visibility*) ❖ Snorkel in full daylight (*night snorkelling requires additional risk assessment)* ❖ If snorkelling at twilight (i.e within 15 minutes of sunset or sunrise), tell a responsible person your plans and be in the immediate vicinity of LIRS (i.e. complete the Beach Snorkel Log)

Strong wind, rough sea conditions or unstable weather	L: Likely C: Minor to High R: Moderate to High -controlled	❖ Snorkel within the LRA and check that low risk conditions actually exist at the snorkelling site, i.e. - depth of bottom does not exceed 20 metres, - swell and/or wave height does not exceed 0.5 m, - current is nil to slight, - underwater visibility is greater than 4 metres, and - activity starts and ends in daylight. ***or*** have a competent person with you ❖ Load boat conservatively, drive it at speed appropriate to the conditions and ensure passengers maintain low centre of gravity ❖ Select snorkelling site to minimize the effect of wave action ❖ Assess weather, if stormy or unfavourable weather is looming do not venture out. ❖ If unfavourable weather hits while in water, assess situation, return to boat or shore if safe to do so, consider maintaining position in water over reef if visibility is poor and if you think squally conditions will be short lived. ❖ Within the LI Group but outside the LRA, have a competent person with you, check weather forecast and obtain advice from LIRS staff if forecast is dubious (*solo snorkelling outside the LRA requires additional risk assessment)* ❖ If snorkelling away from the LI Group, boat driver to be highly experienced and have good local knowledge ❖ Do not snorkel away from the LI Group or traverse exposed parts of the LI Group when wind is, or is forecast to be, stronger than 25 knots (*except in emergencies - additional risk assessment is required*)
Exposure to heat and radiation	L: Almost certain C: Insignificant to Severe R: Medium to Very High - controlled	❖ Wear hat, sunglasses, protective clothing and sunscreen for boat trips ❖ Stay well hydrated ❖ Put on wetsuit last during hot weather
Exposure to cold	L: Likely C: Minor R: Low	❖ Wear wetsuit appropriate to conditions
Obstructed ascent	L: Possible C: Severe R: Very High - controlled	❖ Do not enter overhangs or caves by more than half body length

2) PHYSIOLOGICAL/ HYPERBARIC HAZARDS

Hazard	Likelihood (L) Consequence (C) Risk (R)	Control Measures used to prevent or minimize risk
Medical conditions that can be made worse by physical exertion (e.g. heart disease, asthma, some lung complaints)	To be assessed on Independent Snorkeller Form	Depending on assessed risk level, consider: ❖ Not snorkelling ❖ Snorkel with other people ❖ Wear a flotation device ❖ Stay in shallow areas where you can stand ❖ Stay close to shore or boat ❖ Snorkel only in calm conditions
Medical conditions that can result in loss of consciousness (e.g. some forms	To be assessed on Independent Snorkeller Form	Depending on assessed risk level, consider: ❖ Not snorkelling ❖ Snorkel with other people ❖ Wear a flotation device ❖ Stay in shallow areas where you can stand

of epilepsy, some diabetic conditions)		❖ Stay close to shore or boat ❖ Snorkel only in calm conditions ❖ Avoid triggers for condition
Undiagnosed medical conditions in people over the age of 50	L: Possible C: Insignificant to Major R: Low to High - controlled	Depending on level of fitness and swimming experience, consider: ❖ Not snorkelling ❖ Snorkel with other people ❖ Wear a flotation device ❖ Stay in shallow areas where you can stand ❖ Stay close to shore or boat ❖ Snorkel only in calm conditions
Drowning	To be assessed on Independent Snorkeller Form	❖ Do not engage in snorkelling unless you are a confident swimmer or you are snorkelling with a person who you are confident can take care of you ❖ If uncertain of abilities, wear a flotation device, stay close to accompanying person, stay in shallow water where you can stand or close to shore or boat, snorkel only in calm conditions
Snorkelling - related illnesses & injuries	L: Likely C: Major R: High - controlled	❖ Be fit to snorkel ❖ Stay within your abilities ❖ Ensure adequate hydration before and after snorkelling ❖ Do not hyperventilate ❖ Ensure ears are clearing properly while descending and ascending ❖ Do not continue to descend if ear or sinus pain is felt ❖ Do not snorkel if feeling unwell
Fatigue	L: Possible C: Insignificant to Major R: Low to High - controlled	❖ Anchor boat as close to site as is safe ❖ Know your physical limits (and those of your buddy, if any) ❖ Ensure snorkellers are well rested and hydrated ❖ If heavy or strenuous underwater work is planned, allow plenty of time or increase the team size to distribute the load (*frequent heavy work while snorkelling requires additional risk assessment)* ❖ If distressed, become positively buoyant (i.e. drop weight belt and any other heavy gear)
Wearing weight belt	L: Possible C: Insignificant to Major R: Low to High - controlled	❖ Wear a weight belt only if a competent snorkeller and if wearing a buoyant wetsuit (*use of weight belt without a buoyant wetsuit requires additional risk assessment*) ❖ Be trained in the use of a weight belt ❖ Conduct buoyancy check to ensure that you are not over weighted ❖ Use only quick release fittings ❖ Ditch weight belt if feeling distressed

3) BIOLOGICAL HAZARDS

Hazard	Likelihood (L) Consequence (C) Risk (R)	Control Measures used to prevent or minimize risk
Dangerous marine animals – bites	L: Rare C: Minor to Major R: Moderate	❖ Do not engage in activities that may attract sharks (*potentially attractant activities such as spearfishing, underwater line fishing, fish feeding or barrier netting require additional risk assessment)* ❖ Exit water if sharks appear aggressive or if any crocodile is seen

		❖ If collecting from crevices, check for moray eels
Dangerous marine animals – cuts & stings	L: Rare C: Minor to Major R: Moderate	❖ Avoid bumping into corals and other coelenterates ❖ Wear appropriate protective clothing, especially in the stinger season ❖ Consider wearing gloves if handling organisms ❖ *If intending to handle dangerous marine animals, a special risk assessment is required.*

4) ASSOCIATED ACTIVITIES HAZARDS

Hazard	Likelihood (L) Consequence (C) Risk (R)	Control Measures used to prevent or minimize risk
Anchored/moored boat drifts away from snorkelling site	L: Unlikely C: Location-specific; Insignificant to Severe R: Low to Very High-controlled	❖ Anchoring and mooring tackle to be well maintained, checked by boat driver after each use, and its condition entered into the boat log on return ❖ Scope of anchor line should be at least 5:1 (i.e. use 10 m of line if water is 2 m deep) and at least 8:1 in winds >20 knots ❖ Within designated LRA, snorkelling site is located within comfortable swimming distance of shore ❖ Ensure anchor is correctly deployed and that the line will not be abraded by: (i) inspecting anchor and line in water before commencing work, and/or (ii) if anchor cannot be seen from surface or from a comfortable snorkelling depth, then snorkeller or boat driver must have prior knowledge that the anchoring site is free of abrasion hazards and must observe landmarks from boat for at least 10 minutes to ensure anchor is not dragging, **or** have a competent boat driver who is vigilant of the boat's location and who remains within easy swimming distance of the boat ❖ If no boat attendant, snorkellers frequently check to ensure that boat has not drifted away and that current conditions remain nil to slight.
Remoteness from assistance	L: Possible C: Moderate R: High -controlled	❖ Boats to be signed out with a realistic sign-in time, to be monitored by LIRS ❖ Boat to be equipped with safety equipment as required by Queensland Transport, VHF radio, oxygen resuscitation equipment and trauma kit ❖ LIRS to maintain VHF listening watch during all boating operations ❖ LIRS to have staff trained in first aid and medical oxygen administration ❖ If not using a boat, tell a responsible person your plans and advise them to alert LIRS staff if you have not returned by a pre-arranged time ❖ If solo snorkelling, do not snorkel for more than 2 hours before signing back in or before notifying someone of your return unless you've been given special permission by the Diving Officer. *Longer periods of solo snorkelling require additional risk assessment.* ❖ If twilight snorkelling from shore, snorkel only in the immediate vicinity of LIRS and tell a responsible person your plans, i.e. complete the Beach Snorkel Log (*other twilight snorkelling and night snorkelling requires additional risk assessment*)

		❖ Medical assistance from the Royal Flying Doctor Service is available by phone from LIRS ❖ If snorkelling within the LI Group but outside the LRA, have a competent person with you (*solo snorkelling outside the LRA requires additional risk assessment)* ❖ Away from the LI Group, boat driver/ attendant must be highly competent with boats and familiar with safety equipment carried aboard the boat
Lifting, (including raising an anchor, loading & unloading boats)	L: Almost certain C: Moderate R: High -controlled	❖ Use correct lifting techniques (i.e. bent knees, straight back) ❖ Enlist assistance for heavy items, know your limits ❖ Pack equipment into easily-lifted containers ❖ Anchor only on sand ❖ Brace yourself against the boat to prevent falling while lifting anchor ❖ Return to LIRS without anchor if it is stuck fast, inform LIRS staff ❖ Team member to hold vessel in position during loading/unloading, especially important when windy
Loading & unloading boats during on-shore winds	L: Possible C: Moderate R: High - controlled	❖ Anchor vessel off beach or use the "loading zone" mooring before loading/unloading during strong on-shore winds ❖ Heed LIRS notices concerning loading/unloading sites
Grounding of vessel	L: Unlikely C: Minor R: Low	❖ Reduce speed when operating in or near shallow water and maintain vigilant lookout ❖ Avoid driving over corals ❖ Reduce speed if in doubt about navigable waters ❖ Seek advice from LIRS staff about navigable passages ❖ Away from the LI Group, high level of local knowledge and boating experience required of person in charge of boat
Capsizing vessel	L: Rare C: Moderate R: Medium - controlled	❖ Do not exceed vessel loading limits ❖ Do not overload forward area of vessel ❖ Maintain vessel stability by correctly balancing the load ❖ Do not enter areas where waves are breaking
Propeller injury	L: Unlikely C: Severe R: High - controlled	❖ Always have motor turned off when people are near the stern of the vessel ❖ Do not "manta tow" or otherwise drag people behind a boat (*additional risk assessment must be conducted for such activities*)
Being run over by other boats	L: Unlikely C: Severe R: High - controlled	❖ Deploy dive flag at snorkelling site and stay near the flag ❖ If snorkelling away from the boat or if snorkelling from shore, tow a dive flag on a float in areas where boat traffic might be a hazard ❖ Be alert for approaching boats - scan the area periodically and listen for motor noise ❖ If a boat is approaching, signal the driver to make sure you have been seen - do not assume you have been seen until you get some response from the driver
Motor breakdown	L: Possible C: Minor R: Medium - controlled	❖ LIRS to maintain outboard motors and provide VHF radio ❖ Complete boat log before every trip ❖ Stick to plan as entered on register ❖ Deploy anchor if there is a risk of drifting away ❖ If drifting, make boat visible by flying dive flag and displaying V sheet ❖ Be familiar with vessel's emergency equipment including EPIRB

Shallow-drive mechanism on 30 hp Suzuki outboard motors	L: Possible C: Major R: High - controlled	❖ Four-stroke motor has power tilt and trim. Ensure operator's hand or leg will not be pinned against seat or elsewhere when operating tilt/trim mechanism. ❖ LIRS to ensure that boat drivers are competent with protocol for using shallow drive and tilt/trim mechanism.
Standard research equipment (e.g. slates, tapes, string, nets, lightweight grids and traps, cameras, stakes, hand tools, squirt bottles)	L: Likely C: Insignificant to Severe R: Medium to Very High - controlled	❖ Be competent through training or experience to use the equipment safely ❖ Carry a knife if using equipment that may cause entanglement (e.g. tapes, string, barrier nets) ❖ Devise methods of carrying equipment underwater so that it does not hamper movement or cause undue fatigue
Non-standard research equipment (e.g. spearguns, air powered tools, lift bags)	L: Possible C: Insignificant to Severe R: Low to Very High - controlled	❖ Do not use non-standard research equipment unless competent through training or experience to use the equipment safely (*additional risk assessment is required*)

END OF RISK ASSESSMENT FOR INDPENDENT SNORKELLING

OPERATION AND USE OF VHF RADIO

Situations for using radio

- Emergencies that pose grave and imminent danger to life or vessel (Mayday call)
- Vessel is broken down or there has been an incident that requires assistance.

Instructions for using handheld radio

- The VHF radio in dinghies is located under the foredeck in a red or yellow safety container along with other safety equipment such as EPIRB and flares.
  - Turn the radio ON (top right knob) and turn the volume UP (same knob)
  - Channel 16 will automatically be displayed
  - Slowly turn squelch knob (top middle) until noise has just stopped
  - Ensure radio is transmitting on 5 watts. If 1 watt is displayed on the screen, press the 1/5 W button (lower left) until 5 watts is displayed
  - Listen before transmitting to ensure channel is clear
  - To transmit, depress transmit button (on left hand side of radio near the top) and keep it pushed in while speaking using the following format:

    "*Lizard Island Research Station (3 times), this is [your boat's name] (3 times), over*"
- After saying "over", release the transmit button so you can hear a reply
- Within 30 seconds, LIRS will reply as follows:

  "[Boat name], this is Lizard Island Research Station. Please switch to Channel 73"
- Before changing channels, speak once more on Channel 16 to confirm that you have heard the LIRS response by saying:

  "*OK, going to 73"* or words to that effect
- Press the UP arrow to scroll to Channel 73 - you can then talk freely
- Revert back to Channel 16 after about 15 seconds if nothing is heard on Channel 73
- Turn the radio off (top right knob), return it to its Pelican case and stow it in the safety container when radio use has finished

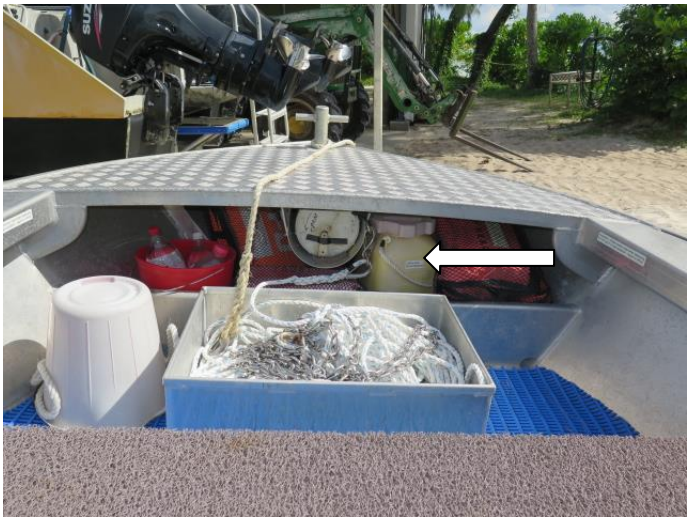
Mayday call

- When there is an emergency that poses grave and imminent danger to life or vessel the initial call should be ***"Mayday Mayday Mayday" this is [your boat's name]***
- When someone answers the Mayday call there is no need to transfer from channel 16.

Please note

- A licence is required to operate a VHF radio because it is important that untrained users do not clog up the airwaves. Instead of requiring LIRS users to have a radio licence, these instructions are provided for correct use of VHF in emergencies only.
- Channel 16 is the international calling and distress frequency. It must be used only to make contact or in emergencies. That is why we need to switch channels after making contact.
- If you cannot reach the Research Station and there is a threat to the safety of a person or vessel, try calling "*Lizard Island Resort*" or "*all vessels at Lizard Island*", using the same format as shown above.
- Reception can be impaired in the vicinity of North Point to Pidgin Point due to the high hills. If trying to raise help from this area, move away from the coast if practical to improve reception and/or make a general call to all vessels in the vicinity or to LI Resort.

- Controls on the boat-mounted radios in *Kirsty K, Macquarie 1* and *Macquarie 2* are slightly different to those on the handheld radios. Instructions will be provided to users of those boats.
- A privately owned radio transmitter for channel 82 was installed below the peak of Cook's Look (eastern side) in 2014 to improve coverage. A dual watch (16 & 82) may be organized for vessels working away from the LI Group. This transmitter periodically stops working due to lack of maintenance. LIRS will confirm whether it is working if radio schedules are planned for channel 82.



Arrow shows yellow safety container in foredeck of dinghy. Note that containers in some boats are orange rather than yellow.

A handheld VHF radio is stored inside a Pelican case inside the safety container, along with other safety equipment.

Handheld VHF radio in opened Pelican case with spare batteries and instructions for use.

At top of radio, flexible antenna is at left, squelch adjustment is at centre, and on/off/volume knob is at right.

The "transmit" button is on the left side near top.

END OF OPERATION AND USE OF VHF RADIO

BOATING EMERGENCY PROCEDURES

MOTOR BREAKDOWN

- Stay with the boat (unless you are immediately adjacent to land).
- Drop anchor and let out adequate line.
- If boat continues to drift, let out all the anchor line except for enough to tie off with.
- Leave all the anchor line out even if boat continues to drift as it will help to slow the rate of drift.
- Use the VHF radio to call for assistance. If you cannot raise anyone then:
    - Signal other boats for assistance.
    - Examine the contents of the safety kit and plan how you can best use the signaling equipment including the EPIRB.
    - Make the boat highly visible (i.e. fly the dive flag, wrap the V-sheet around someone or something).
    - Sit tight and wait for the rescue boat which should arrive in a reasonable amount of time after your sign-in time, especially if you are in the vicinity of where you nominated on the boat logbook.
    - Cover up from the sun (i.e. use towels, wet suit, V-sheet, nally bin over head)

Important

- In case of a breakdown your course of action will depend on a multitude of variables such weather and sea conditions, proximity to land, time of day and condition of the crew.
- Activation of the EPIRB should occur in dire situations only (i.e. severely injured crew, drifting far off Lizard Island, drifting and darkness approaching).

PERSON OVERBOARD

- The first witness should raise the alarm and keep the overboard person in view.
- The boat driver must immediately disengage the propeller or manoeuvre to miss the person overboard.
- Dispatch lifejacket if appropriate.
- Boat driver mentally notes vessel position (e.g. bearing/distance to landmarks) or hits MOB button if GPS is fitted to vessel.
- Boat driver manoeuvres vessel back to person overboard being guided by witness.
- Commence recovery by carefully coming alongside to leeward side of person in water.
- Provide first aid including oxygen therapy as required.
- Radio LIRS and return to Station.

FIRE

- Anyone on board should immediately warn other passengers if they observe fire, smoke or excessive heat.
- The boat driver should:
    - Identify the location of the fire (it will most likely be associated with the outboard motor).
    - If practical, turn off the outboard.
    - Have passengers put on life jackets.
    - Make a VHF radio call as soon as possible giving location and situation.

- Prepare to abandon ship and activate EPIRB, if necessary.

SEVERE WEATHER

- LIRS monitors weather conditions daily. In general, vessels will not be allowed out if severe weather is forecast.
- If caught in severe weather, consider the following actions:
  - If moored or at anchor, stay there until the severe weather passes (squalls usually pass quickly). It may be necessary to drive forward slowly to ease strain on the anchor.
  - If underway, take shelter on the lee side of an island or reef if possible. If not, proceed into the wind slowly to maintain control and position until the severe weather has passed.
  - Radio LIRS, LI Resort or other vessels in area and seek assistance, if required.

MEDICAL

- The first or the most competent person on the scene is to apply first aid.
- Examine contents of first aid kit and use as required.
- If assistance is required, radio LIRS, LI Resort or vessels in area.
- Depending on the situation, the sick or injured person may be brought back to LIRS in the team's boat, or transferred to another vessel, or managed at the site of the incident until help arrives.

GROUNDING OR COLLISION

- Boat driver is to warn passengers to brace for impact and to not fend off another vessel.
- Tend to injured and assess damage to vessel.
- Control ingress of water, if possible.
- Radio for assistance asap, if required.
- If required, boat driver to activate signaling equipment as appropriate and to instruct passengers to wear lifejackets.
- Boat driver should position vessel to reduce flooding and monitor the vessel's stability.

ABANDON SHIP

If possible, stay with the vessel even if totally flooded since all LIRS vessels have positive flotation.
Person in charge should:

- Explain plan to passengers and have them don lifejackets (and wet suits if available).
- Radio Mayday message asap.
- Set off EPIRB and secure safety container.
- With EPIRB and if possible with safety and first aid containers, consider moving people to land if it is very close taking into account condition and abilities of passengers, tide and sea conditions.

Note – Designation of an emergency or assembly station is not necessary due to the small size of LIRS vessels.

Safety notes

- Reduce speed and keep at least 30 m from a dive flag.
- Proceed dead slow when in a mooring basin.
- No bow riding.

END OF BOATING EMERGENCY PROCEDURES

BOAT LOG

Facing pages of the LIRS boat log showing example entries.

*****REMINDER TO DIVE COORDINATORS*****

By listing yourself as Dive Coordinator in the Boat Log, you accept the following summary of responsibilities when diving without a Boat Attendant.

At the dive site, you must determine that:

- The boat and all divers will be within the designated Low Risk Area throughout the dive.
- Defined Low Risk Conditions prevail at the dive site (listed at the sign-out table).
- All divers in the team agree to dive without a boat attendant.
- All divers agree that they are capable of swimming to shore from the dive site if necessary.

And you must ensure that:

- Dive Leaders are briefed to stay within the Low Risk Area and to terminate the dive if low risk conditions appear to have ceased to exist during the dive.
- The anchor line is checked before it is deployed to ensure that it is not damaged.
- A float line and a dive flag are deployed from the boat.
- Divers swim down the anchor line and visually check its integrity, that the anchor is not dragging, and that the line is not being chafed.

***** REMINDER TO BOAT DRIVERS *****

When you sign in after each outing, you must state Yes or No or DNU (did not use) in the column headed "Anchor Ok on return?"

- You and the Dive Coordinator share responsibility for ensuring that the anchor gear is in good condition every time the anchor is deployed.
- If the anchoring gear has been damaged during the outing (i.e. answer is NO) you must immediately report it to LIRS staff and not use the boat again until it has been made good. LIRS staff will repair the anchoring gear asap.

DATE	BOAT	LOCATION If using boat for recreation, must have prior approval & indicate here with "R"	NO. OF PEOPLE	NO. OF DIVERS	DIVE COORDINATOR for this outing (refer above)	TIME OUT	EST. TIME OF RETURN	BOAT DRIVER (refer above)	DRIVER'S INITIALS on return	ANCHOR OK on return? (Y/N/DNU)	LIRS check			
											1200	1400	1600	latest
25/8/20	Sam	Lagoon bommie	2	2	Joe B	0845	1130	JB	JB	Y	JW	JW	JW	JW
25/8/20	Mary Ida	Cobia Hole	3	2	Sally F	0915	1200	Sally	SF	Y	↓	↓	↓	↓
26/8/20	KK	South Island outside	4	3	Jordan K	0900	1230	JK	JK	Y	JW	JW	JW	JW
26/8/20	L+M	Nth Pt → Bommie Bay R*	2	—	Georgina V	1600	1700	GV	GV	DNU	↓	↓	↓	↓

*Ok by Lyle

BEACH SNORKEL LOG

Beach Snorkel Log showing example entry

Beach Snorkel Log

Fill in this log when:

- You are snorkelling from the beach for **work purposes,** even if you're staying very close to the beach.
- You are snorkelling from the beach for **personal purposes** and will be more than 50 metres from shore at any time. You're welcome to fill it in if you're staying close to the beach, but it's not required.

IMPORTANT NOTES

1. **Location**: There are only two locations that do not need specific approval: **Casuarina Beach** or **Loomis Reef**, but only if defined low risk conditions actually exist there at the time (i.e. waves <0.5 m, minimal current, uw visibility >4 m, full daylight). If you plan to walk to other beaches and snorkel from there, you need approval from the Dive Officer.
2. **Time out:** Must be full daylight (i.e. after sunrise and before sunset).
3. **Latest time of return:** Must be before sunset. If snorkelling solo, must also be less than 2 hours after time out.
4. **Notified person:** Before entering data into the log, you must notify someone where you're going and when you will be back. This should be someone in your team and they must be aware that they are responsible for raising the alarm if you don't return by the agreed time.

Date	Snorkeller name(s)	Location NOTE 1	Time out NOTE 2	Latest return time NOTE 3	Work (W) or Personal (P)?	Notified person NOTE 4	Initials on return
27/2/22	Lyle V.	out front	1630	1700	P	ANNE	L.V.