



REEF LIFE SURVEY DIVING PROCEDURES MANUAL FOR SCUBA (OPEN CIRCUIT, COMPRESSED AIR)

OVERVIEW

Reef Life Survey is a program of the Reef Life Survey Foundation Incorporated (RLSF), set up to train volunteer divers in monitoring of coastal reef habitats to a level where data gathered are useful for scientific evaluation, for the ultimate purpose of conserving marine biodiversity. From time to time RLSF organises training sessions and survey expeditions for volunteers at different sites, and after the training the volunteer divers collect data in their own time for later analysis.

In this manual the term 'volunteer' refers only to divers trained under RLSF while they are collecting data specifically for RLSF purposes, and have previously notified RLSF of the planned dive, in accordance with requirements set out in this manual. Any such dive is referred to as a 'notified dive'.

This manual outlines the recommended standard for volunteers trained by RLSF when diving and collecting data specifically for RLSF purposes, and is adapted from Section 2 of the American Association of Underwater Science (AAUS) Diving Code for use by volunteers in Australia and the broader Indo-Pacific region. Obligatory provisions of this manual use the term 'shall', and recommended but not obligatory provisions variously use the terms 'should' or 'is/are recommended'. Recommended provisions are designed to provide guidelines to volunteers to minimise any risks to health and safety associated with diving.

It is emphasized that every volunteer must accept responsibility for his/her own safety, as well as for the health and safety of any volunteer with whom he/she may be collecting data on a notified dive.

1. Introduction

No volunteer shall engage in diving operations under the auspices of RLSF unless

- he/she holds a diving certification at the level of recreational diving issued by a recognised body in Australia, and
- has signed an Indemnity and Waiver of responsibility as set out in Appendix 1.

It is recommended that every volunteer:

- has a current medical certificate issued within the previous 12 months certifying their fitness to dive, and

- becomes a member of the Divers Alert Network (DAN), which provides cover for emergency evacuation and medical assistance when diving away from home, or obtains equivalent cover from another provider, and considers taking out additional diving insurance.

2. Pre -Dive Procedures

Dive Plans

Dives should be planned around the competency of the least experienced diver. Before conducting any diving operations under RLSF, the volunteer shall notify RLSF of a proposed operation, and shall formulate a dive plan that should include the following:

- a) An emergency plan, containing the following information:
 1. Name, telephone number, and relationship of person to be contacted for each diver in the event of an emergency.
 2. Nearest operational decompression chamber.
 3. Nearest accessible hospital.
 4. Available means of transport.
- b) Approximate number of proposed dives.
- c) Location(s) of proposed dives.
- d) Estimated depth(s) and bottom time(s) anticipated.
- e) Decompression status and repetitive dive plans, if required.
- f) Proposed work, equipment, and boats to be employed.
- g) Any hazardous conditions anticipated.

Pre-dive Safety Checks

- a) Volunteer's Responsibility:
 1. Volunteers shall conduct a functional check of their diving equipment, preferably in the presence of any diving buddy. Volunteers should not dive if, in their judgment, conditions are unfavourable, or if they would be violating the precepts of their training, of this document, or of other instructions of RLSF.
 2. No volunteer should dive for the duration of any known condition that is likely to adversely affect his/her safety and health or that of co-divers.
- b) Equipment Evaluations
 1. Volunteers shall ensure that their equipment is in proper working order and that the equipment is suitable for the planned diving operation.
 2. Each volunteer shall have the capability of achieving and maintaining positive buoyancy.
- c) Site Evaluation - Environmental conditions at the site will be evaluated prior to entry to water.

3. Diving Procedures

Buddy diving

All diving activities should assure adherence to the buddy system for SCUBA diving. This buddy system is based upon mutual assistance, especially in the case of an emergency.

Decision to Dive

The decision to dive is that of the volunteer, and he/she should desist from diving whenever he/she feels it is unsafe to make the dive, or if in his/her judgment, conditions are unsafe or unfavourable, or if diving would be violating the precepts of his/her training.

Termination of the Dive

- a) The volunteer should terminate the dive, whenever he/she feels it is unsafe to continue the dive, unless it compromises the safety of another co-diver already in the water.
- b) The dive shall be terminated while there is still sufficient cylinder pressure to permit the diver to safely reach the surface, including decompression time, or to safely reach an additional air source at the decompression station.

Emergencies and Deviations from Manual

Any volunteer may deviate from the requirements of this manual to the extent necessary to prevent or minimize a situation that is likely to cause death, serious physical harm, or major environmental damage.

4. Post-Dive Procedures

Post-Dive Safety Checks

- a) After the completion of a dive, each volunteer shall report any physical problems, symptoms of decompression sickness to RLSF.
- b) Dives should be planned and completed within no-decompression limits.
- c) If a dive extends outside the no-decompression limits, volunteers should remain awake for at least 1 hour after diving, and in the company of another person who is prepared to transport them to a decompression chamber if necessary.

5. Emergency Procedures

Each volunteer will develop emergency procedures that follow the standards of care of the community, and must include any RLSF procedures for emergency care, recompression and evacuation for each dive location.

6. Flying After Diving or Ascending to Altitude (>300 m)

Following a Single No-Decompression Dive:

Volunteers should have a minimum pre-flight surface interval of 12 hours.

Following Multiple Dives per Day or Multiple Days of Diving:

Volunteers should have a minimum pre-flight surface interval of 18 hours.

Following Dives Requiring Decompression Stops:

Volunteers should have a minimum pre-flight surface interval of 24 hours.

Before ascending to Altitude (>300 m) by Land Transport:

Divers should follow the appropriate guideline for pre-flight surface intervals unless the decompression procedure used has accounted for the increase in elevation.

7. Record Keeping Requirements

Personal Diving Log

Each volunteer should log every dive made under the auspices of RLSF, and is encouraged to log all other dives. The diving log should include at least the following:

- a) Name of diver, buddy, and any other diver(s).
- b) Date, time, and location.
- c) Diving modes used.
- d) General outline of surveys conducted.
- e) Approximate surface and underwater conditions.
- f) Maximum depths, bottom time, and surface interval time.
- g) Diving tables or computers used.
- h) Detailed report of any near or actual incidents.

Required Incident Reporting

All diving incidents requiring recompression treatment, or resulting in moderate or serious injury, or death shall be reported to RLSF. The report will specify the circumstances of the incident and the extent of any injuries or illnesses, as set out in Clause 2 below. If pressure-related injuries are suspected, or if symptoms are evident, the following additional information shall be recorded and retained by the volunteer, with the record of the dive, for a period of 5 years:

1. Complete RLSF Incident Report
2. Written descriptive report to include:
 - Name, address, phone numbers of the principal parties involved.
 - Summary of experience of divers involved.
 - Location, description of dive site, and description of conditions that led to incident.
 - Description of symptoms, including depth and time of onset.
 - Description and results of treatment.

- Disposition of case.
- Recommendations to avoid repetition of incident.

RLS shall investigate and document any incident of pressure-related injury and prepare a report for the RLSF Advisory Committee.

Appendix 1.

INDEMNITY

I, the undersigned, hereby acknowledge that I undertake surveys on behalf of RLSF as a volunteer and of my own volition, that I am free to participate or not as I wish, and that I am in no way assisting or under the control or guidance of the organisers of any particular field excursion. I also acknowledge that I am not in receipt of any remuneration for my assistance or presence (except for payment of out-of-pocket expenses which shall be at the full discretion of RLSF).

I further acknowledge that I am completely responsible for my own safety, have no medical condition, permanent or temporary, that may affect my ability to dive safely, and am not reliant on any undertaking, guarantee or statement given to me by RLSF or its agents, and am under no obligation to contribute to any plans or goals which RLSF may have. Further,

In the event of any mishap or accident, howsoever arising out of any notified survey, or occurring on a survey expedition I HEREBY INDEMNIFY and agree to KEEP INDEMNIFIED RLSF and its agents organising any such survey or survey expedition, in which I am participating, against all and every claim from myself, my executors, next of kin, or assigns, howsoever arising out of my presence on the said survey or survey expedition.

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