

RLS policies relating to volunteer participation, support and data quality



RLS diver experience

All divers who regularly contribute data to the RLS program are experienced SCUBA divers with advanced dive skills, as needed to undertake various activities underwater in a safe fashion and not damage or unduly disturb marine life whilst doing so. New diving members of RLS must satisfy the following criteria in order to receive RLS support and contribute effectively to the program:

- Recreational dive certification, plus > 50 logged dives
- Dive medical in last 3 yrs
- Minimum 10 dives in last year
- Experience using Microsoft Excel
- Own all necessary SCUBA gear or have regular access to gear

It is also preferable that divers have at least basic underwater photography experience and a digital camera that can be used underwater.

The primary purpose of these criteria is to discourage people from undertaking RLS surveys during recreational SCUBA dives unless they are experienced divers, with fresh dive skills and good health. The last two criteria are included because additional support would be required for divers that don't meet these to be able to contribute effectively to the program.

Divers that meet these criteria and believe that they could contribute data to the program with regular technical and logistic support by RLS are encouraged to contact the RLS team at: enquiries@reeflifesurvey.com

RLS data quality

Data quality is a major emphasis of RLS and is achieved through multiple processes, including intensive training of divers with suitable experience in survey methods, and thorough data checking and quality control before data are added to the database. A level system is used to rate data from volunteer divers according to their survey experience, and comprises 4 levels:

- **Level 1.** This is essentially a level where divers are learning how to do surveys and gaining necessary practise. Interested divers with suitable experience can contact RLS and submit a registration of interest form. After confirmation that the diver meets the criteria above, RLS will provide (most often) remote technical support to divers, who after carefully reading the methods manual, undertake regular practise of the survey methods during recreational dives. Practise should preferentially involve undertaking surveys with divers whose data are rated at Level 3 or 4 when possible, duplicating data along the same transect lines. Note that divers whose data are rated at Level 1 do not need to enter or submit data from these practise surveys, but any entered data can optionally be sent in for feedback, and other feedback, support and ID

assistance is available by contacting RLS. We also recommend that such a diver participate in other local volunteer survey groups where possible, such as Sea Search (Vic), Reef Watch (SA and Vic) and Reef Check (QLD) to help gain in-water survey experience.

- **Level 2.** Data collected by these divers in their local waters is considered of good quality. To have their data rated at Level 2 (and consequently participate actively in supported RLS surveys of priority regions), divers need to have either had data checked and approved during an organised group survey weekend, or completed at least 10 transects (or 20 blocks) alongside a diver whose data are rated at Level 3 or 4 for the region (as defined below), and have provided data to RLS from at least 5 transects (or 10 blocks) that, when checked, are found comparable with data provided by divers experienced at RLS surveys at nearby sites. Please note that the number of practise surveys required before data are found to be of good enough quality will vary considerably according to differences in experience of people entering the system, and also differences in complexity of local marine life (i.e. achieving Level 2 in more diverse environments may take considerably longer). Thus, it may take submission of many more than 5 transects for checking to have data rated at Level 2.
- **Level 3.** This level indicates divers are expert at assessing composition and densities of local marine life in their local region, with data collected of excellent quality. Divers must have provided data for at least 50 transects (or 100 blocks) rated at Level 2 within their region that, when checked, are found comparable to data provided by divers experienced at RLS surveys at nearby sites.
- **Level 4.** This level is achieved by the very few RLS divers with strong commitment to the program. Divers need to submit at least 100 transects (or 200 blocks) rated at Level 2 or 3 in their region for their data to be rated at Level 4. They also need to show a high level of capability when working in non-local regions by submitting data for at least 20 transects (or 40 blocks) for distant locations.

To remain current at Level 3 or Level 4, at least 10 transects (20 blocks) must be undertaken per year, with a maximum of 9 months between surveys.

Recognised Australian regions:

- Temperate East (Vic, Tas and NSW south of Coffs Harbour)
- Temperate West (SA and WA south of Geraldton)
- Subtropical East (Coffs Harbour, NSW to Bundaberg, QLD)
- Subtropical West (Geraldton to Cape Cuvier, WA, including the Abrolhos Is.)
- Tropical East (Bundaberg to Cape York, QLD, including GBR)
- Tropical West (WA north of Cape Cuvier, including offshore islands)
- Tropical North (NT and QLD west of Cape York)

The Level system thus recognises survey experience in a diver's local region as a form of rating data quality and to demonstrate the level of commitment of a diver to RLS. Outside of a diver's most regularly dived region, demonstration of their ability to collect consistently high quality data in unfamiliar locations is far more important

in rating of data than the number of surveys undertaken in other regions. Thus, when a diver undertakes surveys in other regions (i.e. those outside of the region they most often survey), an appropriate level will be assigned to the data based on a combination of the amount of survey experience the diver has had in other areas with a similar fauna (or level of difficulty), any relevant dive experience they have in the new area, and when possible, comparison of their data with surveys rated at Level 3 or 4 from other divers operating nearby in that region.

Note – transition to level system: Existing divers will be allocated a level based on recent surveys undertaken with RLS team. If little activity has occurred since initial training dives, divers may commence at Level 1.

RLS diver support

RLS provides substantial support to help divers in their survey endeavours, so that the data collected during recreational dives are as useful as possible to managers and scientists, and also so long-term efforts to undertake surveys during recreational dives are not hampered by the costs incurred by volunteers.

RLS provides ongoing technical and logistic support to skilled volunteers, including assistance with species identifications, data entry and survey method queries, and organisation of accommodation and dives for areas in which the data are of greatest use. Financial support is provided not only in the form of subsidised accommodation and dive costs (for specific locations only. Details of supported expeditions can be found on the RLS website, or will be circulated to RLS divers when they are available), but also in the form of reimbursement for some costs associated with recreational diving where a volunteer is incurring greater costs diving (e.g. diving more frequently or in different places) in order to provide the program with more data. Such surveys undertaken during dives outside of subsidised surveys are referred to as 'casual surveys'. Financial support for casual surveys, when applicable, is only available to divers collecting data rated at Level 2 and above. More details on what support is currently available can be obtained by contacting RLS at enquiries@reeflifesurvey.com.

Survey weekend selection protocol

Group surveys are regularly organised by RLS to get groups of volunteers together to survey areas of particular interest (e.g. the priority regions for annual monitoring) with accommodation and dive costs subsidised. These typically run from a Friday until a Monday inclusive, and so are called 'organised survey weekends', but could potentially operate on any days and for more or less than 4 days.

The team of volunteers on an organised survey weekend may consist of divers whose data are rated at different levels (and who are from different regions), depending upon the need to balance collection of useable data with assistance for divers to get data from Level 1 up to Level 2, and various other factors. In general, a genuine effort will be made to try to include all divers (who collect Level 2 data, or above) that are interested in participating, provided that they have undertaken at least one survey (in any region) in the preceding 4 months, but hopefully more. This ensures that only active and appropriately-trained divers who maintain fresh skills are involved in data

collection. Exceptions can be made if the number of spaces available exceeds the number of divers interested.

When available spaces on organised survey weekends are fewer than the number of volunteer divers who wish to take part, the available spaces (after any necessary training spaces for divers at Level 1 have been allocated) will be offered based on the number of casual surveys done (i.e. surveys outside subsidised survey weekends) in the preceding 6 months. The team will be organised at least one month before the survey weekend where possible, but often further in advance, so the 6 month period is up until the time of finalisation of the team. An attempt will also be made to provide all divers (who collect data of Level 2 or above) with the opportunity to participate in some subsidised survey weekends each year, wherever possible.