Science has neither the work force nor the financial resources to meet the demands that are being placed upon it. However, much of the research that is needed to fulfil biodiversity action plans is labour intensive but technically straightforward. Volunteer-based monitoring is a potential solution to this problem. The use of macrodescriptors, easily recordable even by non-specialists, allows the involvement of laypeople, in order to add further data to those provided by the scientific community.

Reef Check: involvement of SCUBA diver volunteers in the Coastal Environment Monitoring Protocol for the Mediterranean Sea


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Proper training is essential to improve the awareness of citizens and their ability to participate in monitoring programs.

Volunteers have already made significant contributions to scientific knowledge through their participation in a range of studies. The potential of this workforce is well illustrated in the tropical programme ‘Reef Check’. Recreational divers surveyed over 300 reefs in 31 countries in a global survey that was certainly beyond the resources of conventional scientific projects. In northern Europe, NELOS (www.biologie.nelos.be) in Belgium and The Netherlands, and SEASEARCH (www.seasearch.org.uk) in the UK, are well-established projects that have developed observation protocols appropriate for their target areas and objectives.

Since 2006, the Mediterranean network, coordinated by Reef Check Italia Onlus (RCI), involves more than 600 trained recreational divers that conduct around 2,000 surveys. They apply a standardised visual census method concerning up to 39 easily identifiable target species. All the data are stored in an online database (www.reefcheckitalia.it).

RCI’s Coastal Environment Protocol includes seasonal assessment of epibenthic assemblages in selected monitoring stations. Expert volunteers analyse the presence/absence of morphological functional groups within standardised and replicated squares. This method allows the identification of long term trends linked to human impacts and global changes. Some Italian Marine Protected Areas adopt this method within their standard monitoring program.