

## HOW TO GET INVOLVED

For more information about the development of WA's community monitoring program please contact:

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Skindiver examining *Drupella*  
(snail) feeding scar on plate coral.

## MARINE COMMUNITY MONITORING PROGRAM

**A program for  
community involvement  
in marine conservation  
and management**



DEPARTMENT OF CONSERVATION  
AND LAND MANAGEMENT





The Department of Conservation and Land Management and the Australian Marine Conservation Society of WA are developing a package of monitoring tools to enable community groups to

participate in the conservation and management of their local marine and coastal environments.

Monitoring is the repeated set of observations that keeps track of changes in the health of the environment.

The Marine Community Monitoring Program will provide a framework to integrate the expertise and extensive local knowledge of community groups in Western Australia through the development of marine life identification tools, standardised monitoring methods, data management procedures and community training programs.

## VISION

*To ensure community ownership and participation in the conservation and management of the marine environment of WA.*

## PROGRAM OUTCOMES

The Marine Community Monitoring Program is being developed in three stages.

### STAGE 1

1. The development of a CD-ROM-based marine identification guide entitled *Marine Life in Western Australia*. The CD-ROM identifies about 400 of the most common marine fauna and flora from Western Australia's coastal waters.

The CD-ROM will be available in March 1999 from CALM.

### STAGE 2

1. An assessment of existing community monitoring programs.
2. A workshop assessment of community concerns and interests.
3. The production of a manual of user-friendly monitoring methods.
4. Field trials to test and refine the methods.
5. The development of data-handling procedures to facilitate information flow to and from community groups through the establishment of a marine data page within CALM's internet site, NatureBase.  
**Web page: <http://www.calm.gov.au>.**
6. The identification of priority community monitoring projects throughout Western Australia.

Expected completion date for manual and database is late 1999.

### STAGE 3

1. The development and implementation of a community-based training program that will focus on training community groups to use the tools developed in stages 1 and 2.

Expected completion date late 2000.



## WHO IS 'THE COMMUNITY'?

The community is everyone with an interest in marine and coastal conservation and management. This includes:

- Local residents and rate payers
- Indigenous communities
- Vacation visitors
- Neighbouring land owners
- Recreational boating groups
- Recreational diving groups
- Recreational fishing groups
- Nature study and collectors
- Conservationists
- Scientists
- Teachers and school children
- Local Government
- Commercial fishing operators
- Aquaculturalists (including pearl farm operators, etc.)
- Commercial tourism operators
- Mining industry
- Petroleum industry

## ISSUES OF COMMUNITY CONCERN AND MONITORING METHODS

There are many issues that community groups might be concerned about. However, the resources available to community groups are often limited. To make the best use of resources, monitoring programs needs to focus on the issues that are of interest and concern to community groups and management agencies. Monitoring should also focus on activities that best use the skills, expertise and local knowledge of those involved.

Both ecological and social issues will be included in the manual monitoring methods.

By using carefully designed and scientifically based monitoring methods, community groups can make an important contribution to the conservation and management of the marine environment. The methods described in the manual will include some which can be carried out with limited training, and also more complex methods that will be covered in the training programs to be developed in stage three.

Below are some typical examples of issues and monitoring methods.

### Ecological (Physical and biological)

ISSUE: Erosion of beaches due to coastal structures  
WHAT TO MONITOR: Changes in beach profile  
METHOD: Photography: repeated photographs of a beach over time from a fixed position.

ISSUE: Changes in water clarity over a seagrass bed due to waste discharges  
WHAT TO MONITOR: Water clarity  
METHOD: Secchi disk: a black and white disk attached to a line. The disk is lowered into the water until the black and white sections can not be distinguished from each other. This point is recorded as the 'secchi disk depth'.

ISSUE: Anchor damage to coral reefs  
WHAT TO MONITOR:  
The number of damaged coral colonies  
METHOD: Number of coral colonies showing visible signs of breakage in a prescribed area.





**ISSUE:** Disturbance of resident reef fish by divers  
**WHAT TO MONITOR:** The number of fish (e.g. potato cod) observed at a dive site  
**METHOD:** Roving diver technique: The number of potato cod observed in a standardised swim.

**ISSUE:** Disturbance of birds nesting on beaches as a result of high human activity  
**WHAT TO MONITOR:** The number of birds nesting on a beach  
**METHOD:** Stationary Point Counts: Bird counts made from a fixed point, making a 360° sweep over a set period of time.

## Social

**ISSUE:** Litter on beaches or seabed  
**WHAT TO MONITOR:** the types and amount of litter  
**METHOD:** Transect of a specified length (e.g. a 500 m run along the beach or seabed). All litter along the transect is collected, categorised and quantified.

## SOME EXISTING COMMUNITY MONITORING PROGRAMS

The following community-based monitoring programs have been reviewed in detail as part of this project and are summarised in a report entitled Review of Community Monitoring Programs.



### WESTERN AUSTRALIA

- **Monitoring at HMAS Stirling:** A program currently being developed which will monitor seagrass health in Cockburn Sound.
- **Pocillopora Reef, Rottnest Island:** 1992-98: A project coordinated by a local diving club which monitored coral health.



- **AMCS WA Mussel Survey:** A program that monitors for the presence of the introduced green-lip mussels and other introduced species.  
WEB PAGE: <http://www.ozemail.com.au/~amcs/>
- **Ribbons of Blue:** A program that monitors water quality.  
WEB PAGE: <http://www.wrc.gov.au/ribbons/>

### AUSTRALIA

- **COTS WATCH:** A program operating in the northern regions of Australia which monitors the abundance and distribution of Crown of Thorns starfish (COTS).
- **Dragon Search:** A program operating in the southern states of Australia that collects records of seadragon sightings.  
WEB PAGE: <http://www.ozemail.com.au/~amcs/>
- **Kuku Yalanji Turtle and Dugong Management & Education Project:** A Queensland program that involves indigenous communities in monitoring the hunting of turtles and dugongs.
- **Seagrass Watch:** A Queensland program that monitors seagrass health.

### INTERNATIONAL

- **Reef Base (Aquanaut):** A world-wide program which monitors coral reef health.  
WEB PAGE: <http://www.reefbase.org>
- **Reef Check:** A world-wide program which monitors coral reef health on an annual basis. There are Reef Check sites in Western Australia.  
WEB PAGE: <http://www.ust.hk/~webrc/reefcheck>