

## **Progress Report SP 2012-008**

# **The Western Australian Marine Monitoring Program (WAMMP)**

**Marine Science**

### **Project Core Team**

|                              |                 |
|------------------------------|-----------------|
| <b>Supervising Scientist</b> | Kim Friedman    |
| <b>Data Custodian</b>        | Florian W Mayer |
| <b>Site Custodian</b>        | Florian W Mayer |

### **Project status as of July 11, 2016, 1:18 p.m.**

Approved and active

### **Document endorsements and approvals as of July 11, 2016, 1:18 p.m.**

|                       |         |
|-----------------------|---------|
| <b>Project Team</b>   | granted |
| <b>Program Leader</b> | granted |
| <b>Directorate</b>    | granted |

# The Western Australian Marine Monitoring Program (WAMMP)

K Friedman, K Bancroft, G Shedrawi, T Holmes, M Rule, AR Halford, A Kendrick, S Wilson, S Whiting

## Context

A state-wide system of marine protected areas is being established in Western Australia as part of Australia's National Representative System of Marine Protected Areas. Long-term monitoring of the condition of environmental assets and social values is recognised as an integral aspect of adaptive management. The Department's marine monitoring program is a state-wide, long-term, marine monitoring, evaluation and reporting program that is being developed and implemented to increase the efficiency and effectiveness of marine reserve and threatened marine fauna conservation and management.

## Aims

- Develop and implement a long-term monitoring program for Western Australia's marine parks and reserves and threatened marine fauna to facilitate and promote management effectiveness in the protection and conservation of marine biodiversity and related social values.
- Conduct research projects that provide methodological information necessary for the implementation of monitoring programs.
- Communicate (through formal advice, peer reviewed publications, presentations and the popular media) the findings of the monitoring programs to stakeholders and the general public where appropriate.

## Progress

- A review was initiated into the scope and operations of the marine monitoring program to ensure that it is being conducted in an efficient manner, and in line with changes to reporting structures and operational capacity.
- Monitoring was undertaken for numerous biophysical assets (e.g. finfish, coral, seagrass, macroalgae, mangrove, penguins, turtles, little penguin, water quality, human use) across twelve marine reserves from Walpole Nornalup Inlets Marine Park in the south to Lalang-garram / Camden Sound Marine Park in the north.
- Monitoring reports were provided to Marine Park Coordinators on the condition of biodiversity assets and the significance of pressures acting on them in 12 marine parks and reserves to inform adaptive management strategies and Departmental reporting processes.
- Marine monitoring datasets were integrated into the Divisional CKAN data catalogue.
- Training on monitoring protocols for ecological assets such as coral, fish, seagrass, mangroves and little penguins was provided to Departmental staff, interns and volunteers.
- A paper on the distribution, abundance, diversity and habitat associations of fishes across a bioregion experiencing rapid coastal development was published in *Estuarine, Coastal and Shelf Science*.
- Presentations were made to regional staff, the Cockburn Sound Management Council, South West Catchments Council, science/management peers and the general public on findings and management significance of the marine monitoring program.
- A presentation based on marine monitoring program data was made at the 2016 *International Coral Reef Symposium*.

## Management implications

- The long-term marine monitoring program provides data that informs the evidence-based adaptive management of Western Australia's marine parks and reserves and threatened and specially protected marine fauna.
- Monitoring data is collected on key ecological assets, the pressures acting on those assets and the management response. This performance assessment and adaptive management framework allows conservation

managers to respond appropriately to changes as they become apparent, and to refine approaches to managing ecological assets based on rigorous scientific evidence.

## **Future directions**

- Finalise and publish supporting documentation that describes the the aims and structure of the marine monitoring program, including rationale for the selection of monitoring indicators and methods for key ecological assets.
- Continue the design and implementation of ecological asset monitoring across the marine reserve system, including at new and proposed reserves at Ngari Capes Marine Park and in WA's Kimberley region.
- Continue to provide marine park managers with evidence-based knowledge of the condition of key ecological assets and the pressures acting on them to inform and assist the delivery of adaptive management.
- Continue to provide the scientific knowledge required for the Department's marine parks and reserves reporting process.