

## What does the Biodiversity Strategy for the Great Barrier Reef aim to do?

**The Biodiversity Strategy aims to guide and to help coordinate management actions that will protect and conserve biodiversity in the Great Barrier Reef Region.**

An independent review as part of the *Great Barrier Reef Outlook Report 2009* identified that while there were many programs in place to conserve and manage biodiversity, there was no over-arching framework to guide and coordinate management actions. The development of a Biodiversity Strategy for the Great Barrier Reef is therefore a priority task for the Great Barrier Reef Marine Park Authority, and will assist all other users and industries that rely on this magnificent ecosystem.

## Why do we need a Biodiversity Strategy?

The *Outlook Report 2009* identified climate change, declining water quality, loss of coastal habitats from coastal development and remaining impacts from fishing, illegal fishing and poaching as the priority issues reducing the inherent capacity of the Great Barrier Reef ecosystem to survive and adapt to change and disturbances (its 'resilience'). It also recognised that management is challenged because three of these major issues, namely climate change, catchment runoff and coastal development, originate outside the Great Barrier Reef Marine Park.

The *2009 Outlook Report* identified that the 'assessment' for certain populations of species and groups of species and elements of ecosystem health were 'poor'. Included in these 'poor' assessments were iconic species like dugong, seabirds, marine turtles and sharks and rays, and critical elements of ecosystem health like increased exposure to sedimentation and increases in sea temperatures.



Almost all the biodiversity of the Great Barrier Reef will be affected by climate change, with coral reef habitats the most vulnerable. Increasing the resilience of the Great Barrier Reef ecosystem to climate change must be a strong driver of future management actions in order to avoid the loss of biodiversity.



## Why is biodiversity important?

Biodiversity is a term used to describe the variety of life on Earth at all its levels, from genes to ecosystems, and the ecological and evolutionary processes that sustain it. Our world relies on biodiversity, from the animals, plants and fungi to the micro-organisms too small for the eye to see.

Loss of biodiversity has the potential to impact directly on the ecosystem itself, the industries that rely on a healthy ecosystem for their operations and the social values of that ecosystem. More importantly, threats to biodiversity can impact not only the ecosystem we see, use and value today, but also the ecosystem that will be seen, used and valued by future generations.

Conserving biodiversity is an essential part of safeguarding the Earth's biological life systems. All living creatures depend on these life support systems for the necessities of life, and collectively these are described as *ecosystem services*. Maintenance of biodiversity is critical for the provision of these ecosystem services. Therefore biodiversity is not just desirable – it is essential. By protecting biodiversity, we are protecting our future and our children's future.

## The outstanding biodiversity of the Great Barrier Reef

The Great Barrier Reef is the largest and best known coral reef ecosystem in the world and remains one of the healthiest. The Great Barrier Reef is one of the world's most complex natural systems and it is internationally recognised for its outstanding biodiversity. In fact, in 1981 the Great Barrier Reef was inscribed as a World Heritage Area in recognition of its great diversity of species and habitats. Surprisingly, new species are regularly being discovered and named from the Great Barrier Reef. For example, a 2009 publication on amphipods (small, shrimp-like crustaceans) of the Great Barrier Reef documented 235 species, about half of which were new to science!

Effective management of biodiversity is a fundamental component of achieving the main object of the *Great Barrier Reef Marine Park Act 1975* which is: *'to provide for the long-term protection and conservation of the environment, biodiversity and heritage values of the Great Barrier Reef Region'*.



### At a glance: a summary of biodiversity in the Great Barrier Reef Region

The Great Barrier Reef:

- Is the world's largest coral reef ecosystem, extending over 14° of latitudinal range
- Includes about 2900 separate coral reefs
- Includes deep water features of the adjoining continental shelf including canyons, channels, plateaux and slopes
- Is made up of 70 'bioregions' (broad-scale habitats) comprising 30 reef bioregions and 40 non-reefal bioregions
- Has over 2000 km<sup>2</sup> of mangroves, with species representing 54 per cent of the world's mangrove diversity
- Has about 43 000 km<sup>2</sup> of seagrass beds
- Includes about 900 islands ranging from small coral cays to large continental islands.



In addition, the Great Barrier Reef supports:

- One of the world's most important dugong populations and six of the world's seven species of marine turtle
- >175 species of bird
- >1500 species of fish
- >350 species of hard coral
- >5000 species of molluscs
- ~1500 species of sponges (~30 per cent of Australia's diversity in sponges)
- ~500 species of marine algae
- ~80 species (one third) of the world's soft coral and sea pen species
- ~800 species of echinoderms (e.g. for sea stars; = 13 per cent of the world's total species)
- ~2200 species of native plants (representing 25 per cent of Queensland's total native plant species).

### A multiple use Marine Park

The Great Barrier Reef Marine Park is a multiple-use marine park, supporting a wide range of uses including ports and shipping, many different types of recreation, Indigenous traditional use, commercial marine tourism, fishing, and scientific research. It brings billions of dollars into Australia's economy every year and directly and indirectly supports more than 50 000 jobs. Management of the Park ensures these activities are carried out in an ecologically sustainable way.





## How is biodiversity managed in the Great Barrier Reef?

Biodiversity in the Great Barrier Reef is managed using a range of management tools including:

- Legislation
- Zoning plans
- Permits and licenses
- Management plans
- Site management
- Policy
- Research
- Partnerships and best practice
- Education and community awareness
- Compliance.

## Aiming for success – the collaborative approach

One of the most important considerations for the long-term management of biodiversity in such a large and complex ecosystem as the Great Barrier Reef is that it cannot be achieved by any one organisation working in isolation. As identified in the *Great Barrier Reef Outlook Report 2009*, 'Many government agencies, stakeholders and community members contribute to the management of the Great Barrier Reef, both on the water and in the catchment.' The GBRMPA is not the sole provider of services to manage and conserve biodiversity in the Great Barrier Reef and many other stakeholders, including Queensland and Federal agencies, play a crucial role.



The development of a Biodiversity Strategy for the Great Barrier Reef must recognise the diversity of roles and responsibilities that all stakeholders have in conserving and managing biodiversity, and the contributions we all make. Without this collaborative approach, the biodiversity of the Great Barrier Reef will be compromised.

## What will the Biodiversity Strategy address?

The Biodiversity Strategy will provide a framework for how the biodiversity of the Great Barrier Reef will be managed. The Strategy will identify what is done well, what needs improving and ways of addressing the threats to biodiversity identified in the *Great Barrier Reef Outlook Report 2009* and other documents.

The Biodiversity Strategy will provide a 'roadmap' for management actions for the Great Barrier Reef Marine Park Authority, and all other stakeholders who have a role in managing the reef and maintaining its biodiversity.

## How will the Biodiversity Strategy for the Great Barrier Reef be developed?

Biodiversity strategies for Australia and Queensland are currently under development and will tackle the issue of conserving and managing biodiversity at the national and state level. The Biodiversity Strategy for the Great Barrier Reef will be nested within the national and state biodiversity strategies, but tackle the issue of biodiversity at the regional level – at the level of the Great Barrier Reef.



The Biodiversity Strategy for the Great Barrier Reef will be based on the assessments contained in the *2009 Outlook Report* and other contemporary information on the state of biodiversity for the Great Barrier Reef. The Strategy will utilise the best available information and approaches for assessing the threats to biodiversity, and once key vulnerabilities have been identified for each element of biodiversity, priorities for action with measurable targets will be identified to address these threats.

A key group for guiding the development of the strategy will be GBRMPA's Ecosystem Reef Advisory Committee (ERAC). The ERAC will be the key advisory committee to provide high-level advice and guidance on the strategy, and other Reef Advisory Committees will also be consulted to provide input.



## Where to from here?

In the coming months we aim to:

- Complete vulnerability assessments on those elements of biodiversity considered at risk in the Great Barrier Reef Region and seek input from specialists and experts on these assessments;
- Identify priorities for action with measurable targets to address identified threats to biodiversity;
- Complete the Biodiversity Strategy and distribute for public comment; and
- Incorporate comments, finalise the strategy and aim for a release in early 2011.

## Feedback or questions?

To provide input or to find out more about this important initiative, please contact the GBRMPA at [species@gbmpa.gov.au](mailto:species@gbmpa.gov.au) or phone 07 4750 0700.



## Developing the Biodiversity Strategy for the Great Barrier Reef

