

**Senate Standing Committee on Environment and Communications
Legislation Committee
Answers to questions on notice
Environment portfolio**

Question No: 219

Hearing: Budget Estimates

Outcome: Agency

Programme: Great Barrier Reef Marine Park Authority

Topic: Reef trends

Hansard Page:

Question Date:

Question Type: Written

Senator Urquhart asked:

Is the Reef currently maintaining its diversity of species and ecological habitats with a stable or improving trend? What is the overall trend for these indicators?

Answer:

Species diversity remains very high and there have been no records of species extinction.

Examples of species showing good recovery after past serious declines are: humpback whales, estuarine crocodiles, loggerhead turtles and green turtles (southern stock) — demonstrating that recovery is possible with long-term, strategic intervention.

The habitats, species and ecosystem processes of the northern third of the Great Barrier Reef remain in very good condition while those in the southern two-thirds — especially those inshore — have deteriorated, particularly seagrass meadows and coral reefs.

The major pressures facing the Reef are climate change, poor water quality from land-based run-off, impacts from coastal development, and some remaining impacts of fishing. Since 2006, a series of major storms and floods have affected an ecosystem already under pressure from, for example, past use and development of the adjacent catchment.

The *Great Barrier Reef Outlook Report 2014* presents the following assessment findings in relation to the condition and trend of Reef habitats and of the species and species groups they support:

- The Great Barrier Reef remains one of the world's most unique and biologically diverse ecosystems.
- At the scale of the whole Region, the majority of its habitats are assessed to be in good to very good condition, however an increasing number are assessed as being in poor condition. This includes the two key habitats of coral reefs and seagrass meadows in the southern two-thirds of the Region.
- The condition of a number of species has deteriorated since the assessment in the Outlook Report 2009, with some important species now assessed as being in poor condition.

- On a regional scale, the habitats and species north of the Port Douglas–Cooktown area are in better condition than those further south. Also, habitats further offshore and in deeper water are typically subject to fewer threats and are therefore presumed to be in better condition, including the lagoon floor, shoals, Halimeda banks, deeper reefs and the continental slope.
- A range of past and current threats, including pollutants in land-based run-off, crown-of-thorns starfish outbreaks, death of discarded species, incidental catch of species of conservation concern and recent extreme weather, have caused declines in the biodiversity values of the southern two-thirds of the Region, especially in inshore and mid-shelf areas.
- Populations of species and groups of species**
 - Condition – **Good**
 - Trend (since 2009 assessment) – **Deteriorated**
 - Assessment summary statement – There is condition and trend information for only a limited number of species and species groups; hence the assessment of some components is highly uncertain. Of those for which there is information, there have been significant declines in many, especially in the inshore southern two-thirds of the Region, and some iconic and cultural keystone species. For example, significant declines have been recorded in most hard corals and seagrasses, some fishes and sharks, dugongs, plus some seabird populations. There are four examples of species showing good recovery after past serious declines: humpback whales, estuarine crocodiles, loggerhead turtles and green turtles (southern stock). However, even these species have not recovered to their original numbers. The overall condition of the Region's species appears to have deteriorated significantly and the assessment of 'good' is considered borderline with 'poor'.

Grading statements	
Very good	Only a few, if any, species populations have deteriorated as a result of human activities or declining environmental conditions.
Good	Populations of some species (but no species groups) have deteriorated significantly as a result of human activities or declining environmental conditions.
Poor	Populations of many species or some species groups have deteriorated significantly as a result of human activities or declining environmental conditions.
Very poor	Populations of a large number of species have deteriorated significantly.

- **Habitats to support species**

- Condition – **Good**
- Trend (since 2009 assessment) – **Deteriorated**
- Assessment summary statement – Information on the condition and trend of habitats is highly variable with some well-known (for example shallower coral reefs) and others poorly known, particularly habitats in remote areas or deep waters (for example Halimeda banks). The habitats of the northern third of the Region are believed to remain in very good condition and are able to support dependent species. Habitats in the southern two-thirds of the Region — especially those inshore — have deteriorated, particularly seagrass meadows and coral reefs.

Grading statements	
Very good	All major habitats are essentially structurally and functionally intact and able to support all dependent species.
Good	There is some habitat loss, degradation or alteration in some small areas, leading to minimal degradation but no persistent, substantial effects on populations of dependent species.
Poor	Habitat loss, degradation or alteration has occurred in a number of areas leading to persistent substantial effects on populations of some dependent species.
Very poor	There is widespread habitat loss, degradation or alteration leading to persistent, substantial effects on many populations of dependent species.