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## **Inquiry into Australia's national parks, conservation reserves and marine protected areas**

Senate Enquiry Submission from the

### **Indo-Pacific Sea Turtle Conservation Group Inc.**

The Indo-Pacific Sea Turtle Conservation Group (IPSTCG) feels that insufficient funding and resources are made available to meet the objectives of managing Australia's marine protected areas, with particular reference to marine turtle populations using the Coringa-Herald National Nature Reserve (CHNNR) as an index nesting rookery.

#### **Summary**

- *The Commonwealth has an international responsibility to protect its sea turtle nesting sites. The CHNNR is one of the few green turtle nesting sites for which it has total responsibility; it is therefore imperative that the Commonwealth provides long-term support for an ongoing monitoring program to aid in management decisions of this unique genetic stock of nesting sea turtles.*

#### **Background**

The Coringa-Herald National Nature Reserve (CH-NNR) and Lihou Reef National Nature Reserve (LR-NNR), collectively known as the Coral Sea National Nature Reserves (CS-NNR) were proclaimed by the Commonwealth Government in 1982. The reserves contain national and internationally significant near pristine reef ecosystems, cays, breeding seabirds and important undisturbed breeding sites for marine turtles.

Monitoring of sea turtle populations has been carried out at in the CHNNR from 1991-2003. Since then a lack of funding has prevented ongoing monitoring from occurring. Due to the long life span and late maturation of these animals, many years of continuous data are necessary in order to predict, with any level of confidence, trends in population stability.

**IPSTCG feels that the values of the CHNNR are not being maintained and management objectives are not being met in spite of these issues being detailed in various management plans and conservation legislation.**

For example the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) requires the Commonwealth to protect the reserves and conserve the wildlife within them. The primary objective is to maintain ecological processes and systems and to protect the habitats and biodiversity of the reserves from the pressures associated with human use. Under section 367 of the EPBC Act, the reserves are to be managed as World Conservation Union (IUCN) category 1a nature reserves; protected areas managed primarily for scientific research or monitoring to ensure habitats, ecosystems and species are protected in as

undisturbed state as possible and genetic resources are maintained in a dynamic and evolutionary state (IUCN 1994). However if monitoring of marine turtle nesting populations is not continued it will be impossible to determine if these management objectives are being met.

Further, the CS-NNR reserves form part of the National Representative System of Marine Protected Areas (NRSMPA). The primary aims of the NRSMPA are *'to establish and manage a comprehensive, adequate and representative system of marine protected areas, to contribute to the long-term ecological viability of marine systems, to maintain ecological processes, and to protect Australia's biological diversity at all levels'* (EA 2001). Moreover the Marine Protected Areas are supposed to be managed as reference sites for scientific research and long-term monitoring. Secondary aims are to provide for the needs of threatened and migratory species and species vulnerable to disturbance. While this commitment was re-affirmed through *Australia's Oceans Policy* (Commonwealth of Australia 1998) it is now no longer being undertaken.

Additionally, the *Coringa-Herald National Nature Reserve and Lihou Reef National Nature Reserve Management Plan* (EA 2001), states that research and monitoring will focus on the primary conservation values of the Reserves including sea turtle presence and breeding activity. The Management Plan outlines key conservation values, strategic objectives, management goals and management strategies for the Reserves. With regard to marine turtles in the Reserves, the following have particular importance;

#### *Key Conservation Values*

- The near pristine marine ecosystems that have been protected from human induced impacts.....by their isolation from the mainland
- The undisturbed and important habitat for nesting green turtles, *Chelonia mydas*

#### *Strategic Objectives*

- Protect key breeding and nesting habitat
- Manage the reserves as a reference site for scientific research and long-term monitoring

#### *Management Goals*

- Protect important breeding habitat for turtles
- Encourage and develop research and monitoring that will provide information to enhance management and increase knowledge of the natural and cultural values of the Reserves, and measure management success

#### *Management Strategies*

- Develop cooperative arrangements with research organisations to conduct research and monitoring activities that will increase knowledge, enhance management and which are consistent with the management objectives of the Reserves

While the Management Plan states that it will conform to the *Best Practice in Performance Reporting in Natural Resource Management* (ANZECC 1997), which emphasises goals, strategies, performance measures, targets and monitoring, IPSTCG strongly believes that without continued monitoring that these obligations will not be met.

IPSTCG also feels that the Federal Government has failed in its responsibility to effectively manage CHNRR, given that it is a signatory to long-term management plans. For example

the management goals and strategies listed in the Management Plan for the Reserves are consistent with Australia's obligations under several international conventions, including the *United Nations Convention on the Law of the Sea 1982* (UNCLOS) and the *Convention on Biological Diversity 1992*. The Management Plan is also aligned with Australia's obligations toward the conservation of migratory species, such as green turtles, listed in the appendices of the *Convention for the Conservation of Migratory Species of Wild Animals* (Bonn Convention). Parties to this convention have agreed to: protect migratory species and negotiate agreements for the conservation and management of these species with other range countries, including support of related research. Without long term monitoring it will be impossible to accurately determine if the government is meeting these obligations.

Green turtles are listed as 'endangered' on the IUCN Red List and protected under the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES). Australia is a party to both these instruments. Protection can be greatly assisted through cooperative research into population trends and identification of discrete Management Units (genetic stock), and legal instruments that provide for mutual international protection and conservation. The conservation and monitoring of nesting turtles in the CH-NNR, therefore, contributes to Australia's obligations as a party to the IUCN and CITES.

The green turtle is listed as 'vulnerable' under the EPBC Act and is the only turtle so far recorded mating and nesting in the CH-NNR. Under the *Recovery Plan for Marine Turtles in Australia* (EA 2003), research and monitoring to assess the size and status of sea turtle populations are key components to better inform management agencies on appropriate conservation strategies for the recovery of Australia's green turtle populations. The *National Recovery Plan* (EA 2003) takes a national approach and seeks cooperation between the States, the Northern Territory and the Commonwealth in managing and conserving marine turtles with the recovery of their populations as the principal objective.

According to section 528 of the EPBC Act, 'biodiversity' is defined as the variability among living organisms from all sources (including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part) and includes: a) diversity within species and between species, and b) diversity of ecosystems. The success of wildlife management requires understanding the evolutionary and demographic parameters underpinning contemporary biodiversity. Tagging and telemetry of marine turtles provides vital information about the demography, site fidelity and migration of individual animals, whilst genetic analysis enables geographical boundaries of breeding populations and their migrations to be better understood. As little as five years ago it was thought that turtles nesting in the CH-NNR were of the same genetic stock as those nesting in the southern GBR. Recent research suggests otherwise. Only further studies will verify this. Knowledge of the marine turtles nesting in the Coral Sea Island rookeries enables sound management decisions to be made for this genetically discrete and remote population.

Because of the life cycles of marine turtles, short term monitoring will not provide adequate information on trends in the population, including numbers nesting, number of years between nesting events, carapace size, number of eggs and hatching success. As a result possible indicators of decline or stability in the population will not be detected adequately. After 13 years monitoring these trends are only now becoming apparent and additional years of monitoring are required to obtain results from the effort expended up to this point.

The CH-NNR is significant as an important scientific reference area because of its undisturbed nature and isolation from influences such as lighting, beach-use, pollution, feral animal predation and boat traffic, compared to coastal and GBR sites. Continued monitoring on NE Herald Cay, as the primary field site for the CH-NNR, will extend the time-series of data available for the islet since the 1991/92 nesting season. Where possible other islets should be monitored, in particular SW Herald Cay, which offers scope to examine nesting migration from the adjacent NE Herald Cay.

The monitoring of nesting marine turtles in the CH-NNR has made a substantial contribution to the knowledge of these aggregations and to the reserve's national and international significance as a nesting site. The program has provided an important relatively undisturbed reference point for regional stock assessment of green turtles in Australian waters.

**Continuation of the sea turtle nesting monitoring program is, therefore, vital to provide indicators of the status of this population and to assist in its conservation.**

Tim Harvey  
President

Sara Townsend  
Secretary