

Status of leatherback turtles in Jordan

1. Introduction

The coastline of the Hashemite Kingdom of Jordan extends approximately 27 km along the north eastern-reaches of the Gulf of Aqaba. The coast is home to Jordan's only seaport and is a centre of industry, tourism and transportation. Approximately 30 % of the coast is used for port facilities. Fringing reefs border up to 50 % of the coast, supporting a high diversity of coral and associated fauna, but limiting nesting potential for leatherback turtles.

2. The legal protection status for leatherback turtles

2.1 Overview

Jordan is party to several international conventions which are relevant to the conservation of turtles. These are, among others, the Convention on International Trade in Endangered Species of Wild Fauna or Flora (CITES), the International Convention for the Prevention of Pollution from Ships (MARPOL); the Regional Convention for the Conservation of the Red Sea and the Gulf of Aden Environment (Jeddah Convention); the United Nations Convention on Biological Diversity (CBD); and the United Nations Framework Convention on Climate Change. The Middle East peace process and the opening up of relations between Jordan and Israel have also created commitments for regional cooperation on a range of environmental issues. Jordan is also a signatory to the IOSEA Marine Turtle MoU.

A number of national laws exist that are directly or indirectly pertinent to reef conservation, in particular the Law of Environmental Protection and several Articles within. The Law of the Aqaba Region Authority No. 7 (1987) delegates the power to plan and execute tourism, industrial and agricultural projects in the region. The law has been the key instrument for strengthening environmental controls including the use of Environmental Impact Assessments and coastal zone management guidelines. Regulations for the Jordanian Red Sea Marine Park are being developed under this law. The Law of Environmental Protection No. 12 (1995) establishes a national framework for environmental policy, including the formation of a Higher Council for Environmental Protection (HCEP). The HCEP sets national environmental policy and reviews proposed laws, specifications and standards prepared by the General Corporation for Environmental Protection (GCEP). The GCEP implements pollution prevention regulations including inspection and monitoring.

2.2 Management agencies responsible for marine turtle conservation

The responsibility for development of the Aqaba region is borne by the Aqaba Regional Authority (ARA), with conservation works carried out through the ARA Environment Unit (established in 1994). ARA supervises town planning, tenders and public works, finance, administration, regional planning and research and studies. The Aqaba Marine Science Station (MSS) monitors trends on coral reefs and provides facilities for training and research, but little of this is related to marine turtles. Studies are conducted on water quality, impacts of pollutants and baseline coral reef ecology. The MSS also administers the Aqaba Marine Science Centre which occupies 500 m of the coastline (making it a *de facto* protected area). Three NGOs also address marine environmental concerns in Aqaba: The Royal Society for the Conservation of Nature, which funds an inspector to patrol merchant vessels; the Jordan Environment Society, which introduces awareness programmes, and the Jordan Royal Ecological Diving Society, which organises underwater cleanups, awareness programmes and monitoring of coral reefs.

3. Nesting populations

Jordan's coastline is short and practically entirely fronted by reefs or developments, and no nesting of any marine turtles takes place.

4. Foraging populations

4.1 Overview

While hawksbill and green turtles are known to feed along the reefs fronting Jordan, no leatherback turtle records of any kind exist. It is possible that the relative isolation of the Red Sea, where most of the few leatherback turtles are found in the south, coupled with the further seclusion of the Gulf of Aqaba far in the north, combine to limit leatherback turtle distribution into Jordanian waters. The Gulf of Aqaba is deep and relatively narrow, and is characterized by its geographical isolation and the

number of species that are either restricted to or from the area, including several species of reef-building corals and fish. Cool sea temperatures and a dispersal 'bottle-neck' into and out of the Straits of Tiran may be important factors in turtle distributions.

4.2 Threats to leatherback turtles

The Gulf of Aqaba is highly susceptible to pollution. At present, however, pollution is limited and localised. The main threats are oil spills and discharges, industrial discharges, municipal and ship-based sewage and solid waste. Fisheries are limited to some 25 small fibreglass power boats, and no commercial-sized vessels operate in the region.

4.3 Protection of foraging areas

There are currently no marine protected areas in Jordan, although one is proposed that will encompass coral reefs at the northern tip of the Gulf of Aqaba. The Aqaba Coral Reef Protected Area is the only proposed protected area for Jordan. It will enclose an undefined area of diverse reefs and associated fauna at the northern tip of the Gulf of Aqaba.

4.4. Gaps in capacity and requirements for improved conservation

Most of Jordan's departments and organisations appear to be reasonably well staffed. Certain areas including coastal zone management and computing need to be strengthened to meet the demands of effective development and implementation of legislature, and for the establishment of a Marine Park. Recommendations have been made to develop and implement a training programme to strengthen the capacity to regulate industrial performance (Pilcher and Al-Moghrabi 2000). Essential for the development of this program are an industrial pollution prevention specialist and an environmental monitoring technician to implement the new permitting process, conduct facility inspections and review specific industry documents and practices relevant to control of industrial pollution, and for collection and analysis of both air and water samples.

5. References

Pilcher N, Al-Moghrabi SM (2000) 'The Status of Coral Reefs in Jordan - 2000, Unpublished Technical Report.' PERSGA.