

Status of leatherback turtles in Oman

1. Introduction

Oman is the second largest country in the Arabian Peninsula. An enclave, the Musandam Peninsula, is surrounded by the United Arab Emirates (Hunter, 1991). Oman possesses about 1,800 km of coastline bordering on the Indian Ocean. Traditional forms of protected area or range reserves may have origins over 2,000 years ago in the pre-Islamic period and still occur to some extent in Oman.

Seawater temperature is an important factor controlling the distribution of marine flora and fauna in the Northern Arabian Sea and Gulf of Oman. There are differences in the thermal environment between the Gulf of Oman and the Northern Arabian Sea during the summer southwest monsoon season, and this is reflected in the nature and distribution of coral communities in along the coast of Oman. During this period the Gulf of Oman is highly stratified with warm water (28-32°C) in upper layer separated from underlying cooler water (24-25°C) by a shallow, sharp thermocline. Wind is probably the main factor to cause the depth of the thermocline to rise and fall and this results in a highly fluctuating temperature regime with changes at 10m of up to 8°C in 2 hours (Coles, 1997). In contrast, upwelling in the northern Arabian Sea results in low (approximately 19°C) seawater temperatures in throughout coastal waters during summer months that moderates annual maximum temperatures.

2. The legal protection status for leatherback turtles

2.1 Overview

Existing legislation for wildlife and nature conservation is largely based on the following: Decree No. 26/79 of 15 May 1979 providing authority to establish national parks and nature reserves. The Decree calls for the establishment of a technical and consultative committee of members from specific ministries to prepare and study draft schemes for establishing protected areas. It also specifies the kinds of activities to be regulated in such areas. Local authority regulations have been in force for some time and three sites have been granted protected area status. Other pieces of legislation include Royal Decree No. 53, 1981 entitled the "Law of Sea Fishing and the Preservation of Marine Biological Wealth", which regulates fishing. The Royal Decree was followed by Ministerial Decree No. 3/82, 1982 which includes executive regulations for law of marine fishing and conservation of aquatic resources. All capture of turtles is prohibited during the nesting season, as determined by the appropriate authority (the Ministry of Rural Municipalities, Environment and Water Resources). Specific areas are protected by law and collection of eggs within them is prohibited within a distance of the coast to be determined by the MRMEWR. Hunting of turtles on their way to lay eggs on the islands and coasts is prohibited during periods which are determined by the MRMEWR.

In addition to specific protected area legislation is a whole series of planning controls which have evolved to include environmental protection. There are obligations of building developers to obtain a certificate of No Environmental Objection (NEO) from the Ministry of Rural Municipalities, Environment and Water Resources, which is applicable to all areas of Oman. Important nature conservation areas can thus be protected by declining to grant NEO certificates (Munton 1991). In addition, the Ministry is working on the principle of undertaking ecosystem conservation in wider areas extending beyond reserve boundaries: these are most finely tuned in the Development Plan for the Southern Region, where all areas are classified according to the degree of planning control in operation or category of use, and legislated through the authority of the PCDESR which was set up under Royal Decree No. 48 of 1984. Two classes of nature conservation area have been approved in 1991: reserve zone 1 and reserve zone 2 (Munton 1991).

At the international level, the Sultanate of Oman has entered a number of cooperative agreements and legal obligations. Oman is party to the Convention concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention), which it accepted on 6 October 1981. In 1979 the Sultanate of Oman ratified the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution (Kuwait Action Plan). Oman actively participates in meetings concerned with additional protocols to the Kuwait Regional Agreement, and is a signatory to the IOSEA Marine Turtle MoU.

2.2 Management agencies responsible for marine turtle conservation

In 1991 responsibility for nature conservation was passed from the Dewan (Royal Court) to the (now named) Ministry of Rural Municipalities, Environment and Water Resources. With this change, the emphasis of ideas and activities shifted from the conservation of high profile species through specification of protected areas to the development of a national conservation strategy (NCS), with its emphasis on ecosystem conservation. As a result of this evolution of ideas over the past 20 years, the Sultanate now has a variety of strategies and plans for conserving natural resources and a number of administrative measures that can be taken to conserve and ensure the sustainable use of resources. The NCS is broad, and if effectively implemented, will change both attitude towards nature and natural resources and action towards such resources by government agencies (Munton 1991).

The Ministry now controls the work of 43 municipalities, 14 municipal sections and 22 cleaning units in remote areas of the Sultanate. The Ministry is responsible for the continued monitoring and research of marine turtles in Oman. The turtle breeding beaches at Ras al-Hadd / Ras al Jinz are protected by Royal Decree as a nature reserve, to which entry is controlled by the Ministry. There are plans to extend the protection of turtles in other areas and to further train Omanis as rangers to monitor the beaches where they lay their eggs. Since the turtles are proving to be a major eco-tourist attraction, the Ministry has introduced a code of conduct for visitors and imposed a limit on their numbers. The Ministry has also has measures in place to protect its flora and fauna, and the newly-proposed National Biodiversity Strategy and Action Plan (NBSAP) will ensure a coordinated and systematic approach by all concerned.

3. Nesting populations

There are no historical or contemporary accounts of leatherback turtles nesting in Oman.

4. Foraging populations

4.1 Overview

Both SOMER (2000) and Ross & Barwani (1982) suggest leatherback turtles are occasionally seen in coastal waters, but these do not occur on a regular basis and no contemporary records exist of any sightings. While Oman has extremely well-developed marine turtle conservation projects at Ras Al Hadd and at Masirah Island, there are no research projects aimed at foraging turtles, and none at leatherback turtles in coastal waters. Similarly, there are no conservation projects aimed specifically at the leatherback turtle, although all marine turtles are protected by law in the Sultanate.

4.2 Threats to leatherback turtles

Fishing is likely a significant threat to leatherback turtles in Oman, as they may be entangled/drowned in long line fisheries. Fishermen operate from bases and landing sites spread along the mainland coastline down to Salalah and from Masirah Island. While nesting turtles have received great attention in the Sultanate, foraging turtles have not been so high on the list. For leatherback and other turtles to be completely protected there is a need for in-water research and conservation activities to complement the nesting beach protection and research work. The Sultanate also straddles one of the world's major shipping routes, ships are known to dump their wastes and dirty ballast water in open waters but still close to shore, and dirty ballast waters result in the formation of tar balls which have been found along the coastline of the Arabian Sea and Indian Ocean proper.

4.3 Protection of foraging areas

Oman has a strong commitment to a coastal zone management program, which has been developed with IUCN that includes the identification, declaration and management of MPAs. Oman is a particularly successful example of coastal zone management planning in the Arabian Seas. The government's commitment to coastal zone management has resulted in significant contributions to conservation of coastal and marine environments.

There are five coastal protected areas, three of which are MPAs and cover a range of environments, species, objectives and management issues. These vary from the remote Daymaniyat Islands where there are minimal resource use conflicts and globally significant habitats for hawksbill turtles and seabirds to the Qurum mangroves that lie in the heart of a major residential area (Price and Humphrey 1993). Other factors also contributing to marine conservation include traditional fishing controls, fisheries legislation and strict controls over land developments. The following MPAs have been identified:

1. Daymaniyat Islands National Nature Reserve
2. Khawr Salalah BS Managed Nature Reserve
3. Quru Managed Nature Reserve
4. Ra's al Hadd (Turtle Reserve) Managed Nature Reserve
5. Ra's al Jumayz National Nature Reserve

In addition, the Barr Al Hikman and Masirah Island area is important for wetland birds, turtles, coral reefs and others, and is currently being proposed as an MPA. The policy of promoting sustainable utilization of these types of areas, in accordance with Oman's policy of controlled domestic tourism, is one the major objectives of the MRMEWR.

4.4. Gaps in capacity and requirements for improved conservation

Of the potential administrative and management constraints in the country, there is still a need to strengthen the activities of the Ministry of Rural Municipalities, Environment and Water Resources with regard to management of turtle populations and analysis of long-term data sets.

There is still a significant lack of on-the-ground monitoring and enforcement and a need for a strong educational component in the NCS to explain the basis of sustainable resource conservation. For the NCS to be effective, funds need to be devoted both to an active educational programme and also to on-the-ground monitoring of natural resources and enforcement of their proper use. It has been indicated that such monitoring should take place in nature conservation areas where the natural resources has been identified as being of particular importance and outside such areas where particular ecosystems have to be conserved because of their value or sensitivity. At present, although there are many plans, provisions, legal and administrative measures available, there is a lack of application on the ground.

5. References

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