

THE MANAGEMENT AND CONSERVATION OF MARINE TURTLES IN BRUNEI DARUSSALAM: COUNTRY REPORT*

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INTRODUCTION

Out of the seven turtle species found in the world, only three species land to nest in Brunei Darussalam's beaches. These are the Green turtle (*Chelonia mydas*), the Hawksbill turtle (*Eretmochelys imbricata*) and the Olive Ridley (*Lepidochelys olivacea*). However, the numbers are relatively very small and expected to fall further if steps are not taken to reverse the trend.

Research and conservation efforts by government agencies and research institution have been very minimal and if there is at a slow pace. However, as recent as May 1998, there has been an upsurge in the government effort to see that the dwindling turtle population saved from further decline.

The government strategy encompasses around the need to maintain the biodiversity and the population of the turtle. Initially efforts are geared towards the creation of awareness among the public especially the school children. The setting up of the National Marine Turtle Management and Conservation Committee and its programmes and activities are testimonial of the government's effort to realise its strategy of increasing the turtle population.

POPULATION AND DISTRIBUTION OF SEA TURTLE

Of the three most commonly found sea turtle in Brunei Darussalam's waters, the most 'populous' is the Olive Ridley turtle (*Lepidochelys olivacea*). The actual numbers, however, are not available as works on monitoring turtle landings are not being carried out.

The nesting beaches are distributed along the coast stretching from Pelompong Island (formerly Brunei headland) to Belait beach. Map 1 shows the locations of the nesting beaches.

All the three common species are found evenly distributed throughout Brunei Darussalam. However, the Olive Ridelies are the most common species to land and nest in the northwest part of Brunei Darussalam.

However, turtle landings and nesting are seen to be declining due to several factors. Turtle nesting beaches have been competing with other coastal development such as reclamation and for tourism facilities in the form of marina. For example, the coastal profile at Jerudong beach, which was a turtle nesting site, has been changed completely. The extensively constructed marina with its concrete shore-line protection system has eliminated the gentle slope of the beach. However, pockets of nice beaches have been artificially made.

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With the majestic beach-front hotel and exclusive beach extending several kilometers, turtles may unduly be disturbed by the hotel lights and the presence of human activities on the beach.

Other possible form of interference to turtle landings especially in the northeast part of Brunei Darussalam is the bright lights of the coastal highway which almost run parallel to the coastline.

The story is different, however, at the northwest of Brunei Darussalam. The coastal area is less affected and the turtle landings and nestings have been consistent eventhough the major oil and gas installations are located in that part of the country.

NESTING SEASON AND EGG COLLECTION

The nesting season in Brunei Darussalam coincides with the northeast monsoon period. It starts in November and ends in June. From the limited data available to the department given by an egg collector, a total of eleven turtles landed in December 1998, one in January 1999 and twenty four in February 1999. These are mainly the Olive Ridley turtle. Of these, a total of 291 eggs were laid in December 1998, ninety in January 1999 and 283 in February 1999. These are from the northwest part of Brunei Darussalam. Some of the eggs have since hatched and the hatchlings released to the sea.

No other information are available from the other nesting beaches.

Eggs are collected by the local egg collectors. There are no provisions yet to disallow the collection of turtle eggs though the banning for the collection of turtle eggs are included in several Acts under the jurisdictions of various departments. Of notable is Chapter 102 of the Wildlife Protection Act (Revised 1984) under the Museums Department which prohibits any person from hunting, killing or capturing any protected animals. Turtles are protected animals under the Wildlife Protection Act.

Turtles land and nest on beaches and one of the offshore islands. All of these belong to the state. There is no private property or individual ownership of any portion of the beach or island. Though it may be easier to control because of being a state land, the public has also the right to be in those areas for whatever purpose. The gazetting of beaches for sanctuary may eliminate some of the problems of egg collecting. In fact some beaches have been gazetted but for other purposes such as recreational park.

Due to the shortage of technical manpower and expertise, efforts to gather as much information as possible on turtles are somehow not possible. However, the Department of Fisheries has collaborated with several egg collectors and also started to introduce a volunteers programme to gather information on turtle nesting and assist in the conservation of turtles.

The eggs collected by the local are mainly for own consumption or direct selling to friends. However, this has to be further verified as there are many turtle eggs being sold in the wet market and the beach market (tamu). Those sold are always claimed to come from neighbouring countries which are smuggled in.

These eggs are sold at 16 pieces for B\$ 10.00 (approximately at RM 22.00). The eggs are sold openly and illegally in the market with many potential buyers unaware of the threat to the turtle population.

To curb the selling of turtle eggs in the market, the Fisheries department has started to create awareness and work closely with the controlling authority. This has shown some reasonable success though albeit slow.

CONSERVATION AND MANAGEMENT PROGRAMS

To instill awareness among the public on the threat of the dwindling turtle population, the government has set up the National Marine Turtle Conservation and Management Committee. It is chaired by the Director of Fisheries and the members are made up of several government agencies and the private

sector. The secretariat is at the Fisheries department. The objective of the committee is to facilitate the conservation and management of marine turtles in Brunei Darussalam. This is in line with the objectives of the national strategy which are to manage for the maintenance of biodiversity and manage to increase the total turtle population. The Terms of Reference of the Committee is in Appendix A.

Basically the national committee gives the policy direction and guidelines for the turtle conservation and management strategy. To ensure the several activities and projects proposed and approved under the national committee are carried out, a technical committee was set up. This committee, called the Marine Turtle Conservation and Management Working Committee, implements and monitors all the projects and activities under it. The working committee is led by the Director of Fisheries and members come from government departments, university and the private sector.

To ensure practicality for the implementation of the several programmes, several ad-hoc minor task forces are created and led by relevant agencies. These are as follows:

(a) Research and Development Task Force

Projects under this task force includes;

1. Setting up of hatcheries,
2. Egg collection and supplies,
3. Tagging, and
4. Turtle excluder devices.

(b) Public Awareness Task Force

Projects under this task force includes;

1. Publications,
2. Setting up of information/display center, and
3. Volunteers programme.

(c) Regulations and Legislation Task Force

Project under this task force includes;

1. Reviewing legislation.

Most of the above projects are currently being implemented especially on the creation of awareness among the public. This is easily implementable because of the tendency to receive, accept and learn new information especially among school children.

Other projects are slow at being implemented due to the lack of manpower and technical expertise.

RESEARCH ACTIVITIES

Activities pertaining to research works are not or little being carried due to the above reasons. All efforts are currently towards the first step of instilling awareness among the public especially school children and those involved in the collection and selling of turtle eggs.

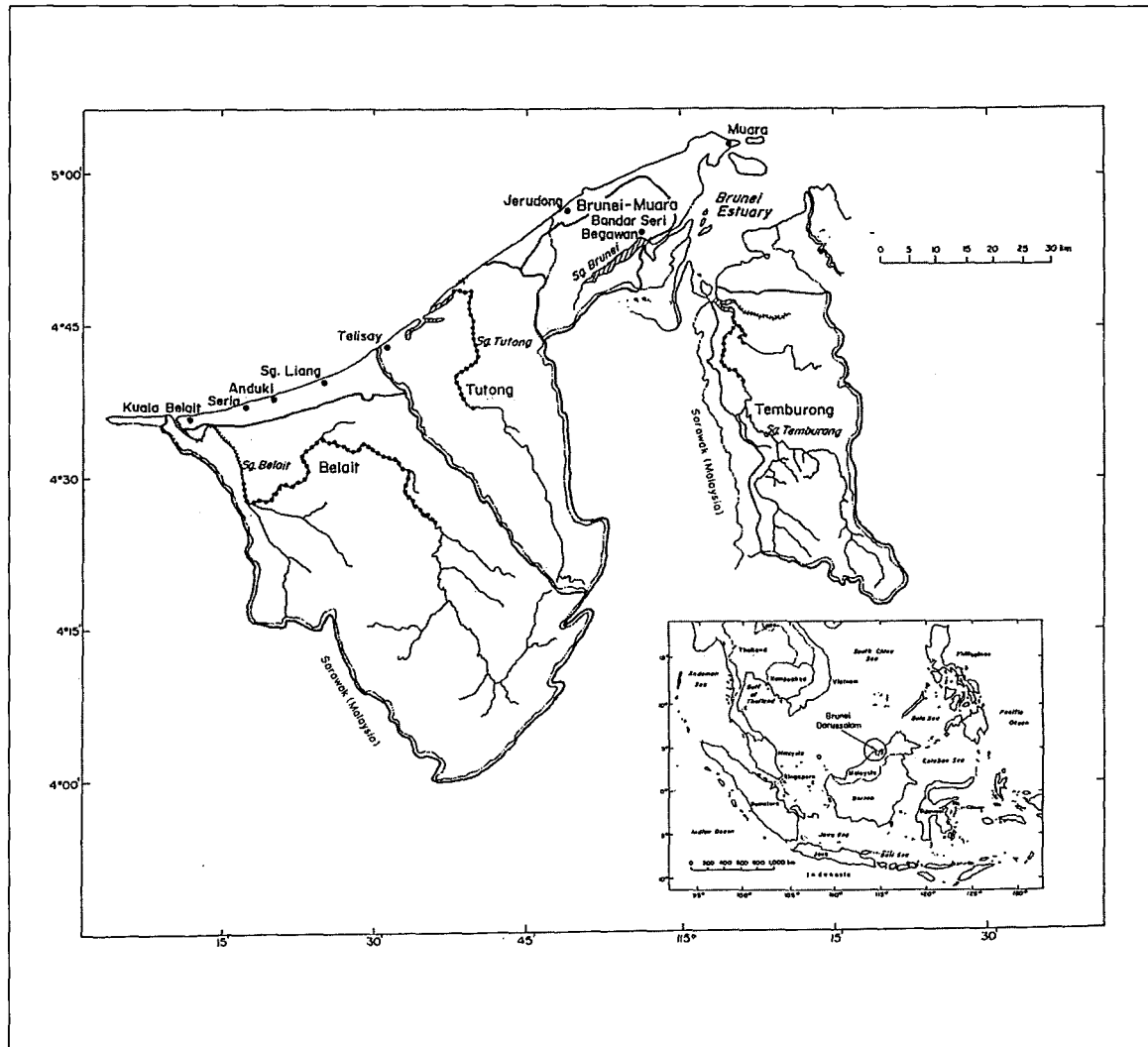
LAW AND ENFORCEMENT

There are several government agencies involved in the protection of wildlife and the management of the coastal and marine environment. And for the protection of turtles, the Department of Fisheries and the Museums Department both have some form of responsibilities towards them. The former due to the

marine environment and the latter due to being the national administrator for the Convention on International Trade of Endangered Species (CITES) for fauna and flora and being responsible for wildlife protection.

Both departments have provisions in their enactment to protect turtles. While the Museums Department does not have the enforcement capability to carry out its responsibility on the protection of turtles, the Fisheries Department has enforcement capability but does not have the provisions to enact.

Map 1: Locations of the nesting beaches



TERMS OF REFERENCE
NATIONAL MARINE TURTLE CONSERVATION AND MANAGEMENT COMMITTEE

1. The Committee exists to facilitate the conservation and management of marine turtles in Brunei Darussalam in line with the objectives of the national strategy which are to:
 - 1.1. Manage for maintenance of biodiversity; and
 - 1.2. Manage to increase the total turtle population
2. The Committee will promote awareness campaigns to highlight the need to protect and conserve marine turtles in Brunei Darussalam.
3. The Committee will facilitate the full functioning and operation of turtle hatcheries. This will include the mechanisms to obtain the necessary funds and supply of turtle eggs for the hatcheries.
4. The Committee will ensure agencies responsible for the conservation and protection of turtles and their habitat carry out their duties accordingly. This may include in the strengthening and harmonizing of legislation and regulations pertaining to the protection and conservation of turtles.
5. The Committee will encourage participation of local experts in regional and international for in order to upgrade knowledge and expertise in the protection and conservation of marine turtles.
6. The Committee will encourage among its members and local experts to actively participate in networking with other experts outside the country.
7. The Committee will also promote tourism potentials of marine turtles in line with the above awareness campaigns.