



MYANMAR

Introduction

Myanmar is situated in the easternmost Indochina Peninsula. It boasts of richly-varied marine resources along extensive coastal shores which can be divided into three regions, namely Rakhine, Ayeyarwaddy and Gulf of Mottama (the Delta Zone) and the Taninthayi. The Myanmar coastline is approximately 2,831 km long. Regions are bounded by territorial sea and the Exclusive Economic Zone (EEZ). The territorial sea of Myanmar extends 12 nautical miles from the base line towards the sea and the EEZ covers all areas of territorial sea and extends 200 nautical miles from the base line seawards (Lwin, 2004).

Sea turtles are one of the most valuable and rare marine animals inhabiting in the Myanmar marine environment. Nesting of turtles is observed around Andaman Sea in Mon State and Taninthayi Division, Gulf of Mottaba in Ayeyarwaddy and Bay of Bengal in Rakhine State.

Since 1963, the Department of Fisheries (DOF) has taken up a project to incubate and protect sea turtles on Diamond Island in Ngaputaw Township, Ayeyarwaddy. Then, in 1986-87, the program was fully revived and more departmental hatcheries were established with skillful technicians (Lwin, 2004).

Although Myanmar started sea turtle conservation in 1986 the momentum of the activity was not accelerated till Myanmar became a member of SEAFDEC in 1999. As a member, Myanmar was able to participate in training related to conservation and enhancement of turtles organised by SEAFDEC/MFRDMD.

The Myanmar coastal areas harbour five species of sea turtles nesting regularly. They are olive ridley (*Leik Hlaung*), loggerhead (*Leik Khway*), green (*Pyin Tha Leik*), hawksbill (*Leik Kyet Tu Yway*), and leatherback (*Leik Zaung Lyar*). The hawksbill and leatherback, which were reported by fishermen from



Plate 57. Thameehla Island Nesting Beach



Plate 58. Kadongalay Kyun Nesting Beach

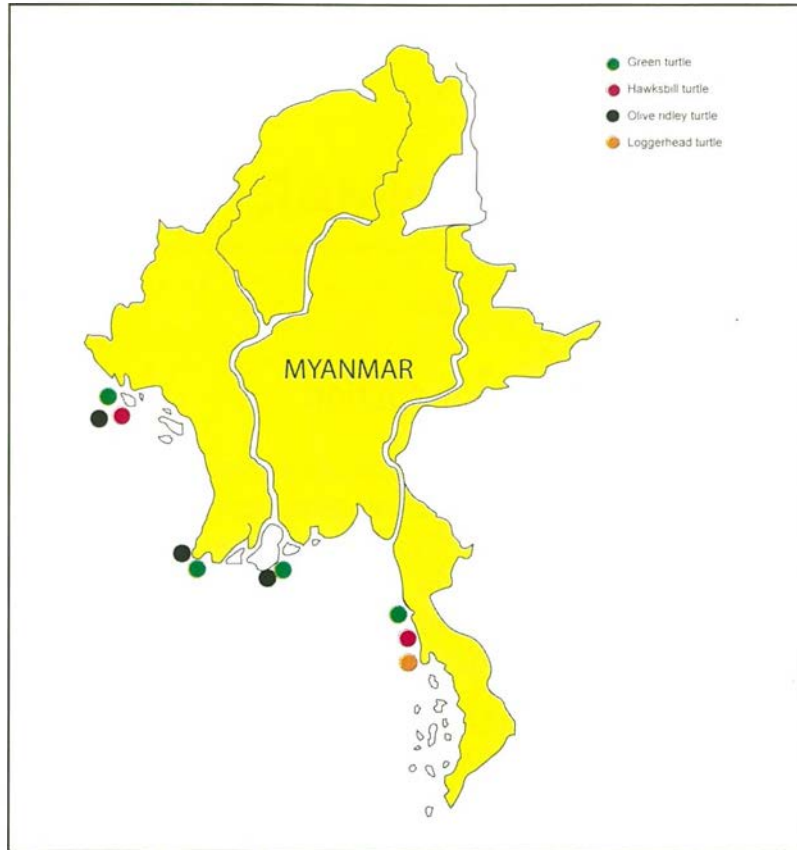


Figure 13. Distribution of Sea Turtle Nesting Beaches in Myanmar

some part of Rakhine and Taninthayi coastal areas, are totally absent in the Ayeyarwaddy Delta Coastal areas. These two species were evidently abundant in the past. The beaches of Thameehla Island, an island at the mouth of the Patheingyi River, is a nesting ground of green and olive ridley turtle. Meanwhile, Kaing Thauung Kyun and Kadongalay Kyun, the two small islands, which are situated at the mouths of Ayeyarwaddy and Bogalay Rivers, are the nesting ground of olive ridley (Lwin, 2004).

In 1911, a research was extensively conducted on the “turtle banks” of coastal areas in Myanmar, as part of a review for the Burmese Fisheries Act of 1902. In 1897-98, it was learnt that 1.6 million green turtle eggs were harvested annually during that period. Based on this egg harvest and several assumptions regarding female fecundity, it was estimated that adult female green and loggerhead turtles were 5,000 and 3,750 respectively. In 1931, annual harvest of olive ridley eggs in the Ayeyarwaddy Division was estimated about 1.5 million.

According to the data from the DOF, the total number of nests in the Ayeyarwaddy Division are currently about 300 olive ridley and 400 green turtles annually, indicating a drastic reduction in regional turtle population during this century.



Plate 59. Gayetgyi Kyun Nesting Beach

Sea Turtles Conservation and Enhancement

Legislations and Regulations

Sea turtles conservation started in Myanmar under the Burma Fisheries Act (III-1905). Protection for the nesting beaches and sea turtles is included. The trespassing on those areas without official consent was prohibited. In 1924, the Government of Burma, Agriculture (Forest Department) Notification No.1 made an official announcement that no trespassing within 3 miles radius from the turtle nesting beach.

In 1989, the Government promulgated four fishing laws. The law mentioned that no person should engage in harassing, catching, killing, storing, transporting, processing, and transferring sea turtles. Other laws related to the protection of sea turtles are:

- Ministry of Livestock and Fisheries promulgated the notification regarding conservation of sea turtles (1986).
- DOF law relating to the Fishing Rights of Foreign Fishing Vessels; Section 32 b, 32 c, Section 36 (1989).
- Myanmar Marine Fisheries Law; Section 39, 40 (1990).
- Department of Fisheries declared the Notification No. II/ 93 for “Turtles and Tortoises Conservation” (1993).
- Wildlife, Wild Plants and Conservation of Natural Areas Law replacing the old Myanmar Wildlife Protection Act of 1936 was enacted under Forest Department (1994).

Hatcheries

The Department of Fisheries, Ministry of Livestock and Fisheries has been operating one hatchery at Thameehla Island of Ngaputaw Township, Ayeyarwaddy Division which started operation in 1986. This island is the year-round nesting area for sea turtles. The sea turtle nesting area of Thameehla Island, at the mouth of Patheingyi River, is about one mile in length and half mile in breadth and hosts the nesting of green and olive ridley turtles. For the year 1991 and from 2000-2003, a total of 159,252 eggs of green turtle were incubated and 133,043 hatchlings were released as shown in Table 5. In 2002, a total of 201 olive ridley eggs were incubated and 126 hatchlings were released. In 2003, a total of 100 olive ridley eggs were incubated and 69 hatchlings were released (Lwin, 2004).

Although Myanmar has many islands and sandy beaches for sea turtle nesting, the DOF only operates sea turtles hatcheries and releasing program in Ayeyarwaddy Delta areas at present due to the limited capacity. Nevertheless, since the law enforcement is strictly applied, the illegal collection of sea turtle eggs and incidental catch of sea turtles is efficiently reduced.



Plate 60. Green Turtle Hatchlings



Plate 61. Sea Turtles Hatchery at Thameehla Island

Table 5. Green Turtle Hatchlings Released from Thameehla, Ngaputaw Township in 1991 and from 2000-2003

Year	No. of Eggs	Hatchlings released
1991	34334	26939
2000	45673	43472
2001	46680	43590
2002	11549	9133
2003	21016	9909
Total	159,252	133,043

Protected Areas/Sea Turtle Sanctuaries

Myanmar has one National Marine Park at Lampi Island under the supervision of the Department of Forestry. Lampi Island is one of the islands with eco-tourism activity in Myanmar.

Education/Public Awareness

The public needs to be widely educated and informed of the importance of the conservation and protection of sea turtles. For this purpose, the Ministry of Livestock and Fisheries distributed pamphlets, inserting educational program in newspapers, magazines, radio and television (Aung and Maung, 1999). In Myanmar, a Turtle Conservation and Management Training Course was conducted for the first time from 21 February to 31 December 2001 at Gayet Gyi Sea Turtle Conservation Station in Bogalay township with the participation of 17 trainees. In that course, theory and practical application of tagging



Plate 62. Lampi Island National Park (Photo: WCS)

activities were included. In the Inspector Training Course No. 6/2003 for the DOF staff conducted by the DOF at the Institute of Fishing Technology (IFT) in Yangon, sea turtles conservation and management was also introduced.

Conservation of sea turtles in Myanmar and their prosperity mostly depend on the participation of the local people. Education programs have been initiated targeting the fishery communities and the people along the Myanmar coastline. With regards to strengthen effective conservation activities, the Ministry of Livestock and Fisheries prohibited any capture, killing and any other form harmful to sea turtles, along the Myanmar coastline. In addition, a notification has been issued on 20 February 1986 prohibiting the collecting, transferring, carrying or distributing of turtles and their eggs. Fishermen have been instructed to release sea turtles unharmed if they are caught accidentally in their fishing gears. The DOF has also prohibited the use of destructive fishing gears harmful on sea turtles and sand mining activities on turtle rookeries and their habitat (Lwin, 2004a).



Plate 63. Public Awareness Campaign on the Conservation of Sea Turtles in Myanmar

Tagging and Satellite Telemetry Tracking Activities

Tagging activities started in 2001 using inconel tags. PIT tags provided by SEAFDEC/MFRDMD were used in March 2004. Even though there are many islands and beaches identified as turtle rookeries, there are only four places where tagging activities are being carried out. Tagging activities were conducted at Thameehla, Khone Gyi, Kadongalay and Gayet Gyi rookeries. Myanmar tagging activities are still at initial stage and so far 104 greens and 97 olive ridleys have been tagged. At present, Myanmar does not have any satellite telemetry tracking activities (Lwin, 2004b).



Plate 64. Application of PIT Tag on Nesting Green Turtle in Myanmar



Plate 65. Scanning of Nesting Turtle with a PIT Scanner



Plate 66. Front Flipper Tagging on a Green Turtle Using Inconel Tag

International/Regional Cooperation

At present, sea turtles conservation and enhancement activities in Myanmar are conducted with the collaboration of SEAFDEC/MFRDMD, SEASTAR2000, IOSEA/CMS and CARE Myanmar. Myanmar also signed the MoU on ASEAN/SEAFDEC Marine Turtle Conservation and Management.

Research Activities

Research activities are being carried out by the Ministry of Education, Ministry of Livestock and Fisheries and also CARE Myanmar (Non-Governmental Organization). Tagging activities using PIT tags are now in progress using tags in the collaboration with SEAFDEC/MFRDMD.

Key persons who are previously and currently involved in sea turtles research in Myanmar are as follows:

1. Cho Hla Aung,
Department of Fisheries,
Sinmin Road, Ahlone Township,
Yangon, Myanmar.
Tel: 95-01-220597
Fax: 95-01-228258
E-mail: DOF@mptmail.net.mm
2. U Maung Maung Lwin,
Department of Fisheries,
Sinmin Road, Ahlone Township,
Yangon, Myanmar.
Tel: 95-01-220597
Fax: 95-01-228258
E-mail: DOF@mptmail.net.mm
3. Daw Khin Myo Myo,
Department of Fisheries,
Sinmin Road, Ahlone Township,
Yangon, Myanmar.
Tel: 95-01-220597
Fax: 95-01-228258
E-mail: DOF@mptmail.net.mm
4. Assoc. Prof. Dr. Win Maung,
Department of Zoology,
University of Yangon, Myanmar.
5. Win Ko Ko
Wildlife Conservation Society,
Myanmar Program Office,
Bldg , C-1, 2nd FL(R),
Aye Yeik Mon 1st street,
Yadana Mon Housing Avenue,
Ward (3), Hlaing Township,
Yangon, Myanmar.
6. Dr. Sann Aung,
Academy of Agriculture, Forestry,
Livestock and Fisheries,
No. 460, Merchant Street,
Yangon, Myanmar.

