



VIETNAM

Introduction

The seawater of Vietnam is recognized as a critical habitat for the sea turtles in the world. There are only 5 species of sea turtles, namely greens, hawksbill, olive ridley, loggerhead and leatherback turtles found in Vietnam waters (Vinh and Tuoc, 1999; Dung, 2003). The distribution of the sea turtle in Vietnam is shown in Figure 19.

The Government of Vietnam recognizes the important of the sea turtles' conservation and enhancement. Since early 1998, the Ministry of Fisheries has appointed the Research Institute for Marine Fisheries (RIMF) as the national institution taking responsibility for research activities and proposing the general framework in conservation and enhancement of sea turtles in Vietnam (Dung, 2003).

Sea Turtles Conservation and Enhancement

Legislations and Regulations

There were no special enactments, regulations pertaining to sea turtles in Vietnam before April, 2002. However, the following legal documents issued by the Government of Vietnam relating to the fisheries resources protection and development (including sea turtles) can be used:

- Ordinance dated 25 April 1989 on protection and development of fisheries resources, which stipulated that:

“Prohibit any actions causing harmful affects on resources, habitats of aquatic living resources“(Chapter I, Article 5).

“Exploitation and commerce of living aquatic resources of high economic value being rare, threatened or endangered should be banned”(Chapter II, Article 12).

The Ministry of Fisheries of Vietnam has also issued other relating documents, namely:

- Circular No 04-TS/TT dated 4 August 1990 guiding execution of ordinance on protection and development of fisheries resources.
- Circular No 04-TS/TT dated 21 November 1994 guiding the execution of enactment No 85-CP on administrative punishment in fisheries resources protection.
- Decision 682 TS/QD dated 11 September 1993 enacting the provisions on marine resources exploitation and management in key fishing grounds.
- The ordinance dated 25 April 1989 stipulates that “ The Government of Vietnam welcomes and is ready to cooperate closely with any regional and international organizations in protecting, conserving fisheries resources, their habitats and other shared aquatic living resources”.

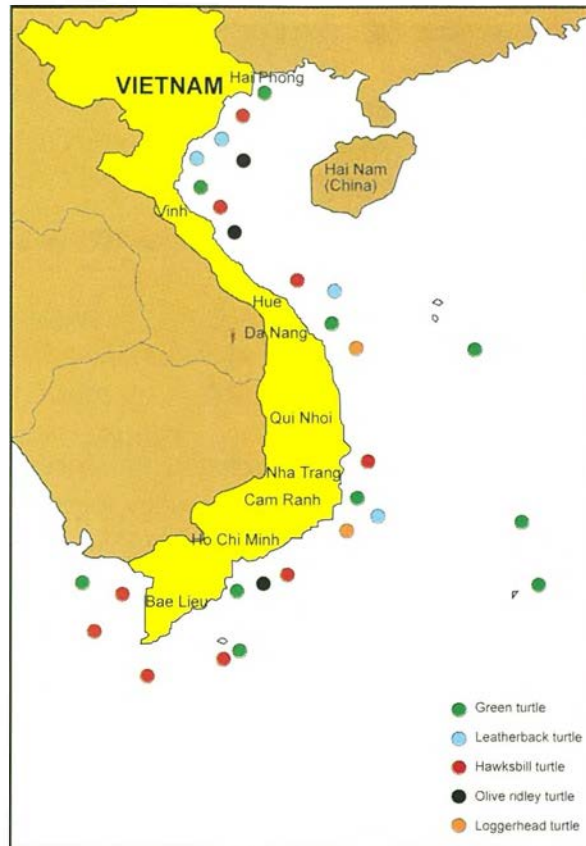


Figure 19. Distribution of Sea Turtle Nesting Beaches in Vietnam

- Most importantly, in April 2002, the Government of Vietnam amended Decree 48/CP to include sea turtles. Under this decree the deliberate catch, killing or use of sea turtles is illegal.

There are also rules and regulations related to sea turtles conservation in Con Dao National Park:

- Con Dao District People’s Committee issued an announcement on the continuing enforcement of the previous introduction on 1 August 1978. The announcement defined: “from now on, fishing groups and people must not catch marine turtles, including male green turtles. In case of incidental catch, live turtles must be released immediately. Selling and killing for food is not allowed”.
- Con Dao District People’s Committee issued announcement No. 22/TB.UBQ defining “nobody is allowed to take any green or hawksbill turtle, or their products out of Con Dao” on 15 May 1981.
- The standing Committee of Con Dao District People’s Committee issued an Instruction No. 01/TTLL defining: “Hawksbill, green turtles belong to the National Park, managed by the State on 1 September 1988. Violation will be settled according to the law”.
- Con Dao District People’s Committee issued introduction No. 02/CT.UB.890 regarding the protection of fishing grounds, natural resource and environment in marine and coastal areas in Con Dao on 14 February 1989. This instruction had more comprehensive outlines.

- Defined a corridor of 10 nautical miles around Con Dao. In this corridor, hunting of hawksbill and green turtles is banned. In marine turtle nesting season, fishing nets of all kind are not allowed to be set in front of their nesting beaches.
- Hunting, catching of green and hawksbill turtles or turtle egg collection is banned.
- In nesting season of marine turtles, people are not allowed to make fires on their nesting beaches. People must not cause any damage to the nesting beaches such as polluting the beaches, or to carry out any activities which have impacts on marine turtles.
- Buying and transport of marine turtles (live, stuffed or processed products) is banned.
- Con Dao District People's Committee issued an Introduction No. 02/CT.UB.96 regarding the strengthening of the management of natural resource and environmental protection in Con Dao District on 3 April 1996. The introduction has the content of awareness raised on forest protection, forest fire prevention, immediate actions against forest destruction, hunting of wildlife, using chemicals to catch fish, destruction of coral reefs, which have bad impacts on the marine, coastal and terrestrial environment, especially the buffer zone around Con Dao.

Hatcheries

The sea turtles hatcheries in Vietnam are located at Nui Chua (Ninh Thuan Province), CDNP(5 hatcheries), Phu Quy Island, Phu Quoc Island and Tho Chu Island. These hatcheries are managed by RIMF and the Fish Protection Department under the Ministry of Fisheries and also the Protected Forest Department under the Ministry of Agriculture and Rural Development.

From 1994-2002, a total of 304,950 hatchlings were released into the sea, and this figure is gradually increasing as shown in Table 9. WWF-Indochina is actively involved in sea turtle hatchery activities in Vietnam.



Plate 78. Sea Turtle Hatchery at Con Dao National Park

Table 9. Hatchlings Released from the Hatcheries in Vietnam: 1994-2002

Year	Hatchlings Released
1994	6,000
1995	28,500
1997	70,000
2001	90,000
2002	110,450
Total	304,950

The emergence success ranged between 19.9-84.4% with an average of 67% during the period of 1994-2003 as shown in Table 10.

Table 10. The Emergence Success of Sea Turtles: 1994-2003

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	Average
Hatching rate (%)	19.9	35.3	74.4	75.3	78.3	80.3	81.2	84.4	73.2	67.0

Source: (RIMF_MoFI, WWF and IUCN, 2003).



Plate 79. Releasing of Sea Turtle Hatchlings from the Hatchery

Protected Areas/Sea Turtle Sanctuaries

Protected areas in Vietnam consists of 15 of Marine Protected Areas (MPA) and 10 coastal wetlands in coastal areas. Con Dao National Park (CDNP) was established in 1984, while Nui Chua natural reserve area and the other 14 MPAs were established in 2000. They are under the management of RIMF, Fish Protection Department and Protected Forest Department. CDNP is the most popular protected area in Vietnam.

Con Dao National Park (CDNP)

Con Dao is an island archipelago of Ba Ria - Vung Tau Province, located to the southeast of the coast of South Vietnam, 97 nautical miles from Vung Tau. The archipelago consists of 16 islands, with total areas of over 72 km². The forest and marine ecosystems are still relatively pristine due to less destructive activities compared to other areas of Vietnam (Thuong, 1999).

It was first set up in 1985 to protect the terrestrial ecosystems, mainly forest, on the islands. Full National Park status and recognition was granted by the Vietnam Government in 1993. In 1997, the park borders were extended to 19,998 hectares, including 5,998 hectares of forest and 14,000 hectares of sea. As such, the park occupies 80% of the islands' area, including all of the outlying islands. The marine resources of the park are rich and include coral reefs, seagrass beds and endangered species such as green and hawksbill turtles and the rare dugong, or sea cow (Thuong, 1999).

Seagrass beds are found in the waters of the archipelago, notably the Con Son bay area. Seagrass beds are an important feeding ground for green turtles, but more importantly they are the main grazing grounds for the dugong. Con Dao has been included in the list of “areas of highest regional priority” in the World Bank’s Global System of Marine Protected Areas. For these reasons, conservation activities on Con Dao should be considered of paramount importance for the marine ecosystems of the Asia-Pacific Region (Thuong, 1999).



Plate 80. Sea Turtle Rookery at Con Dao National Park

Con Dao is the most important sea turtles site in Vietnam, and is likely to be one of the most important in Southeast Asia. There were nearly 500 turtle nests recorded in 1998 on the only five monitored beaches on Con Dao, not including the many other sites on beaches all over the archipelago. The idea of sea turtles conservation in Con Dao was mooted by the park authorities in 1995. This is a program of reducing hatchling mortality of sea turtles. The south-western wind annually makes sand expanses in islands eroded by tides and hence the nesting grounds of the sea turtle are affected. As a consequence, a large number of turtle eggs are destroyed. Therefore, the program of sea turtle’s rescue has been conducted to minimize the loss from this ‘washout’ effect (Thuong, 1999).

A small grant was provided to CDNP in June 1995. A visit by marine experts from the World Wildlife Fund (WWF-Philippines) from August to September 1995 resulted in a series of recommendations which enabled the CDNP staff to make important improvements to their program to protect and conserve nesting beaches for hawksbill and green turtles. These beaches lie on four of the outer islands of the Con Dao archipelago. WWF-Indochina Program in collaboration with the CDNP set up a sea turtles conservation project, which started in 1995 and has been on-going since then. The project has been funded by WWF-International, WWF-United States and WWF-Netherlands during the last four years (Thuong, 1999).

Currently, there are a few studies that are being done at CDNP and Nui Chua natural reserve area. They are:

- The study on tagging, nesting behaviour and biology.
- The study on affect of environmental factor/hatchling rate, negative impact of fishing gears on sea turtles.
- The study on satellite telemetry tracking of sea turtles.

Education/Public Awareness

The Government of Vietnam, in collaboration with other agencies and also NGOs such as United Nation Development Project (UNDP), Global Environmental Facility (GEF), National Oceanic and Atmospheric Administration (NOAA), Danish International Development Aid (DANIDA),

International Union for the Conservation of Nature and Natural Resources (IUCN) Vietnam, Traffic Indochina and also WWF-Indochina have conducted training activities, seminars, exhibitions, posters, pamphlets, TV programs and videos to educate the public and create awareness among them on the importance of sea turtles' conservation.

Awareness-Raising Activities

Various activities on public awareness of sea turtles conservation and enhancement are conducted in Vietnam. The activities are as follows:

- The Science Department of CDNP briefed about Con Dao marine resources and sea turtles conservation activities to 3 agencies, namely the Local History Museum (20 people), Vo Thi Sau Secondary School (20 people) and C10 Military barracks in the Park on 20 March 1998.
- The CDNP organized a workshop on "Natural Resources Conservation and Planning of Con Dao National Park" on 15 June 1998. The workshop explained about the sea turtles conservation program to the park staff and local authority. A total of 50 people attended the workshop.
- The Science Department of CDNP organized a program for C10 Military Barracks to study the natural resources of CDNP, including an introduction the dugong and sea turtles on 23 September 1998. A total of 40 people joined the program.
- The CDNP organized a meeting with students of Vo Thi Sau Secondary School and briefed on the coral reefs, seagrass and Con Dao marine mammals with a slide show and lectures on 25 September 1998. A total of 40 students and 15 teachers attended the meeting and showed their interest in nature conservation.

Clean-up Activities

In the beginning of every nesting season, the park rangers carry out clean-up activities on nesting beaches in order not to disturb adult female turtles easy access to nesting sites.

On Environment's Day dated 5 June 1998, the CDNP in collaboration with the local History Museum and Vo Thi Sau Secondary School organized a clean-up program in Con Dao Bay, including Con Dao Port. A total of 60 people took part in the program with a banner "Save Our Sea".

Other Activities

- Printing of sea turtles pictures on t-shirts for public awareness in 1998.
- Notice billboards around the park.
- English language training to senior staff members to help in communication skills and reading/writing international reports.

Tagging and Satellite Telemetry Tracking Activities

Tagging of sea turtles started at CDNP in 1998 using 2000 inconel tags provided by SEAFDEC/MFRDMD and also self-made tags. From August 1998 to August 2003, a total of 1320 turtles had been tagged (Dung, 2004).

The satellite telemetry tracking studies for two green turtles had been conducted to determine their routes and feeding ground at the southern part of Vietnam waters. The studies were conducted at two rookeries at Hon Bay Canh and Hon Cai Lon Island of CDNP. Unfortunately, a green turtle attached with PTT with its identification number TE 19590 (USA) was lost at Hon Cai Lon Island. Another one was attached with a PTT on 3 July 2001. After 8 days, a turtle was traced near Vung Tau, 150 km north-west landward. She travelled for 30 days before nesting on Phu Quy Island, which is about 342 km from the starting point. These satellite telemetry tracking activities were sponsored by NOAA of the United States of America (Dung, 2004).



Plate 81. Tagging of Front Flippers of Green Turtle in Vietnam



Plate 82. Fitting of PTT on the Carapace of a Green Turtle for Satellite Tracking

International/Regional Cooperation

List of international and regional organizations that Vietnam has collaborated with are as follows:

1. CITES: Study on sea turtles taxonomy.
2. SEAFDEC/MFRDMD: Study on sea turtles tagging.
3. CMS: Sea turtles survey.
4. ASEAN: Establishment of marine park.
5. IUCN: Setting up National Action Plan.
6. Fauna and Flora International: Marine biodiversity.
7. NOAA and WWF: Satellite telemetry tracking.

Research Activities

Persons who are actively involved in sea turtles issues in Vietnam are as follows:

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