



Indian Ocean – South-East Asian Marine Turtle Memorandum of Understanding



Malaysia

GENERAL INFORMATION

Agency or institution primarily responsible for the preparation of this report:

DEPARTMENT OF FISHERIES MALAYSIA

Other agencies, institutions, or NGOs that have provided input:

Sabah Parks, Sarawak Forestry Corporation and University Malaysia Terengganu (UMT)

Designated Focal Point:

Mr. Gulamsarwar bin Jan Mohammad
Director of Licensing and Resource Management Division
Department of Fisheries Malaysia
Level 1, Block 4G2, Wisma Tani
Precinct 4, Federal Government Administrative Centre
62628 Putrajaya
Malaysia
Tel: +603-88704407
Fax: +603-8889 1233
E-mail: gulamsawar@dof.gov.my

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OBJECTIVE I. REDUCE DIRECT AND INDIRECT CAUSES OF MARINE TURTLE MORTALITY

1.1 Introduction to marine turtle populations and habitats, challenges and conservation efforts. [INF]

Four species of marine turtles (leatherback, green turtle, hawksbill, and olive ridley) are found in Malaysia. Current statistics indicate that the leatherback and olive ridley turtle populations are nearing extinction in Malaysia. With the exception of the green turtles of the Sabah Turtle Islands, which appear to be increasing, the other species (hawksbills and green turtles, elsewhere) are generally in steady decline.

The leatherback turtle (*Dermochelys coriacea*) nests mainly along a 15 km stretch of beach centred in Rantau Abang, Terengganu. Records show that nesting density in the 1950's exceeded 10,000 but have plummeted to near extinction in recent years, whereas once Rantau Abang was regarded as one of the world's most important nesting sites for leatherbacks.

The olive ridley turtle (*Lepidochelys olivacea*) nests in northern Terengganu, Penang, possibly Perak and Sarawak. It has undergone the same fate as the leatherback turtles. In the mid 1980s, 500 nests were deposited annually in Terengganu, but the species has not been seen nesting at Terengganu since 2005. Notwithstanding, remnant numbers may still occur in

Penang and Perak and Sarawak.

The hawksbill turtle (*Eretmochelys imbricata*) nests in the Sabah Turtle Islands, Melaka and to a lesser degree in Redang Island, Terengganu. Declines have not been as dramatic as the leatherback and olive ridley turtles. In Sabah, where current nesting density is registered at around 450 nests per annum, a 25% decline has been registered over the last ten years. According to available data, the Melaka nesting density has fluctuated from 208 – 471 nests per annum. However it is not possible to comment on the trend as yearly nesting data is not available. In Terengganu, a 70% decline has been registered in the last 20 years. Currently, about a dozen nests are deposited annually.

The green turtle (*Chelonia mydas*) is a widely distributed species with significant nesting populations occurring in Sabah, Sarawak and Terengganu. The population in Sabah staged a recovery from 1987-2000. An average of 6549 nests per annum has been recorded from 2004-2008, compared to the 9071 annual nests deposited from 1994-1998. In 2009, over 13,000 nests were deposited. The Sarawak population has declined from over 13,000 nests per year in the 1950s to about 2,000 in recent years, giving a decline of 85%. Nesting data for Terengganu from the mid 1980s to 2008 show a decline of 25% from over 3,000 nests in the 1980s to the average of 2355 nests annually from 2004-2008.

1.2.1 Describe any protocol or approaches practiced in your country, which you consider exemplary, for minimising threats to marine turtle populations and their habitats, which may be suitable for adaptation and adoption elsewhere. [BPR]

- Conversion of major nesting beaches into sanctuaries where eggs collection is prohibited.
- Involving local NGOs and university groups to help manage some of the nesting sanctuaries
- Creating volunteer programs to help monitor nesting beaches and help make marine turtle conservation self-sufficient.

1.3.1 Describe any socio-economic studies or activities that have been conducted among communities that interact with marine turtles and their habitats. [BPR, INF]

A study of consumption and trade of marine turtle egg in Malaysia (WWF 2009) was focused in the vicinity of Terengganu but the results may be applicable to other areas of the country, at least until further localised studies are conducted. Eggs are consumed by a certain quarter of the population which a small portion of the eggs are found in the market and cost plays an important part in consumption practices.

See: WWF 2009. Survey of Marine Turtle Egg Consumption and Trade in Malaysia Report prepared by TRAFFIC Southeast Asia for WWF-Malaysia March 2009 WWF – World Wide Fund for Nature (formerly World Wildlife Fund), Petaling Jaya, Malaysia.

1.3.2 Which of these adverse economic incentives are underlying threats to marine turtles in your country? [TSH]

- High prices earned from turtle products relative to other commodities
- Lack of affordable alternatives to turtle products
- Ease of access to the turtle resource (eg. by virtue of proximity or ease of land/water access)**
- Low cost of land near nesting beaches
- Low penalties against illegal harvesting
- Other1:
- Other2:
- Other3:
- None of the above or Not Applicable

Some of the nesting beach are located very close to main road and villages and as well as hotels and resorts. Thus the nesting beach very easy to access by the public.

1.3.3 Has your country has taken any measures to try to correct these adverse economic incentives? [BPR]

YES NO NOT APPLICABLE (no adverse economic incentives exist)

Establish turtle sanctuary and declare the nesting beach as gazetted area to avoid and development activities

1.4.1 Indicate, and describe in more detail, the main fisheries occurring in the waters of your country, as well as any high seas fisheries in which flag vessels of your country participate, that could possibly interact with marine turtles. [INF]

a) Shrimp trawls: YES NO

The otter trawl net is the main fishing gear used to catch demersal finfish from deep water and penaeid prawn resources, particularly on the west coast of Peninsular Malaysia. However, no record/report on incidental catch of turtle by fishermen.

b) Set gill nets: YES NO

Set gill nets are used by the coastal fishermen mainly catch demersal fish species like marine catfish and jewfish. However, no record/report on incidental catch of turtle by fishermen.

c) Anchored Fish Aggregating Devices (FADs): YES NO

No information available

d) Purse seine (with or without FADs): YES NO

The purse seine net is used to catch pelagic fishes. Two main types of purse-seine nets are used. Small pelagic fish are caught using the fish purse seine (operated with or without fish aggregating devices (FADs)) and anchovies are caught using the anchovy purse-seine. However no record/report on incidental catch of turtle by fishermen.

e) Longline (shallow or deepset): YES NO

Longlines are used in both shallow and deep water, however no record/report on incidental catch of turtle by fishermen.

f) Driftnet: YES NO

Drift nets are used in the coastal fisheries. Coastal fishermen use gill nets to catch pelagic fish such as mackerels, scads, scombridae and carangidae. However no record/report on incidental catches of turtle by fishermen.

g) Other1:

Other traditional fishing gear employed by the coastal fishermen include hook-and-line, bag nets, lift nets, seine nets, traps, barrier nets and scoop nets.

h) Other2:

The deep-sea fishing vessels operate beyond 30 nautical miles from the coastline and basically, commercial gear such as trawls, purse seines and hook-and line are used.

None of the above

1.4.2 Please indicate the relative level of **fishing effort and **perceived impact** of each of the above fisheries on marine turtles (e.g. in terms of by-catch). [TSH]**

a) Shrimp trawls

Fishing effort:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE UNKNOWN

Perceived Impact:

RELATIVELY HIGH **MODERATE** RELATIVELY LOW NONE UNKNOWN

Source: Report compile by SEAFDEC on the interaction between sea turtle and hatcheries which presented on 3rd Regional Consultation Meeting on Conservation of Sea Turtles in Southeast Asia - 2008

b) Set gill nets

Fishing effort:

RELATIVELY HIGH **MODERATE** RELATIVELY LOW NONE UNKNOWN

Perceived Impact:

RELATIVELY HIGH **MODERATE** RELATIVELY LOW NONE UNKNOWN

Source: Report compile by SEAFDEC on the interaction between sea turtle and hatcheries which presented on 3rd Regional Consultation Meeting on Conservation of Sea Turtles in Southeast Asia - 2008

c) Anchored Fish Aggregating Devices (FADs)

Fishing effort:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE **UNKNOWN**

Perceived Impact:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE **UNKNOWN**

Source:

d) Purse seine (with or without FADs)

Fishing effort:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE **UNKNOWN**

Perceived Impact:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE **UNKNOWN**

Source:

e) Longline (shallow or deepset)

Fishing effort:

RELATIVELY HIGH **MODERATE** RELATIVELY LOW NONE UNKNOWN

Perceived Impact:

RELATIVELY HIGH **MODERATE** RELATIVELY LOW NONE UNKNOWN

Source: Report compile by SEAFDEC on the interaction between sea turtle and hatcheries which presented on 3rd Regional Consultation Meeting on Conservation of Sea Turtles in Southeast Asia - 2008

f) Driftnet

Fishing effort:

RELATIVELY HIGH **MODERATE** RELATIVELY LOW NONE UNKNOWN

Perceived Impact:

RELATIVELY HIGH **MODERATE** RELATIVELY LOW NONE UNKNOWN

Source: Report compile by SEAFDEC on the interaction between sea turtle and hatcheries which presented on 3rd Regional Consultation Meeting on Conservation of Sea Turtles in Southeast Asia - 2008

g) Other1 (from 1.4.1): Traditional fishing gears

Fishing effort:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE **UNKNOWN**

Perceived Impact:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE **UNKNOWN**

Source:

h) Other2 (from 1.4.1): The deep-sea fishing vessels

Fishing effort:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE **UNKNOWN**

Perceived Impact:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE **UNKNOWN**

Source: Based on Country Profile Malaysia, Project Global (Global bycatch assessment of long-lived species).

Marine turtle by-catch is a significant problem (at least in some areas); the impact of fishing efforts also varies by species by area.

1.4.3 Describe any illegal fishing that is known to occur in or around the waters of your country that may impact marine turtles. Describe the measures being taken to deal with this problem and any difficulties encountered in this regard. [TSH]

- Illegal use of large-meshed bottom gill-nets for catching stingrays, which also frequently catch turtles. In Fisheries Act 1985, the use of meshed size more than 10 inches is prohibited.
- Illegal harvesting of marine turtles by foreign fishing vessels (especially from Hainan and Vietnam) in the territorial waters of Malaysia
- Measures: patrols by enforcement agencies, but need to be stepped up. Turtles are caught in remote areas and perpetrators often escape detection and apprehension

1.4.4 Which of the following methods are used by your country to minimise incidental capture/mortality of marine turtles in fishing activities? [IND]

a) **Appropriate handling** of incidentally caught turtles (e.g. resuscitation or release by fishers using equipment such as de-hooking, line cutting tools and scoop nets)

YES NO NOT APPLICABLE

Training on fishermen for proper handling of incidental caught turtles was conducted frequently. Series of training on fishermen will be conducted continuously.

b) **Devices that allow the escape of marine turtles** (e.g. turtle excluder devices (TEDs) or other measures that are comparable in effectiveness)

YES NO NOT APPLICABLE

Awareness program to trawl net fishermen was conducted actively in some area such in Sabah and Terengganu States of Malaysia. Research on using circle hook to long line fishermen was conducted actively in Melaka, Perak and Terengganu States of Malaysia. Promoting the use of circle hook to long line fishermen will be continued . TED research still on going.

c) **Measures to avoid encirclement** of marine turtles in purse seine fisheries

YES NO NOT APPLICABLE

Awareness program to purse seine fishermen to avoid encirclement were conducted frequently especially in the east coast of Peninsular Malaysia.

d) **Appropriate combinations** of hook design, type of bait, depth, gear specifications and fishing practices

YES NO **NOT APPLICABLE**

Research on the best practises of circle hook in long line fishing is still on going. The hook design, type of bait and gear specification were considered in the study.

e) **Monitoring and recovery of fish aggregating devices** (FADs)

YES NO NOT APPLICABLE

Monitoring and recovery of fishing aggregation devices was conducted regularly.

f) **Net retention and recycling schemes**

YES NO NOT APPLICABLE

g) **Spatial and temporal control of fishing** (e.g. seasonal closures of fishing activities)

YES NO NOT APPLICABLE

"For the purpose of regulating the fishing activities the marine waters are divided into four fishing zones (FAO 2009).

"For each Zone the optimum number of fishing vessels has been determined based on estimation of maximum sustainable yield. The issuance of new fishing licences for the inshore waters has been suspended. A limited number of licences is still being issued annually to offshore vessels" (FAO 2009).

"A series of marine parks has been established in the coastal waters. Fishing within two nautical miles from the marine parks boundaries is prohibited. Surplus fishermen are diverted to the tourism sector, ferrying tourists to the parks, acting as tour or dive guides." (FAO 2009)

FAO (2009). Fishery and Aquaculture Country Profiles: Malaysia. FAO. FID/CP/MYS (On-line).

h) **Effort management control**

YES NO NOT APPLICABLE

Other (list and explain):

None of the above

1.4.5 Which of the following programmes has your country developed - in consultation with the fishing industry and fisheries management organisations - to promote implementation of measures to minimise incidental capture and mortality of turtles in national waters and in the high seas? [IND]

Onboard observer programmes

YES NO NOT APPLICABLE

But limited.

There is no reference to observers in the literature on Malaysian fisheries. No observer scheme is currently in place in Malaysian fisheries according to Flewwelling and Hosch (2006).

Source: Flewwelling, P. and Hosch, G. (2006) Country Review: Malaysia. In: De Young, C. (ed.) Review of the state of world marine capture fisheries management: Indian Ocean. FAO Fisheries Technical Paper. No. 488. Rome, FAO. 2006. 458p.

Vessel monitoring systems

YES NO NOT APPLICABLE

Limited for deep sea fishing vessels

Inspections (i.e. at sea, in port, at landing sites)

YES NO NOT APPLICABLE

Once a year

Training programmes / workshops to educate fishers

YES NO NOT APPLICABLE

Awareness, training and workshop for fishermen were conducted actively throughout the country.

Informative videos, brochures, printed guidelines etc.

YES NO NOT APPLICABLE

The Department of Fisheries Malaysia and other responsible agencies actively produce the pamphlets, brochures and guidelines and disseminated to target group.

Other (list and explain):

YES NO NOT APPLICABLE

None of the above

1.4.6 Are the mitigation measures described in 1.4.4 and 1.4.5, periodically reviewed and evaluated for their efficacy? [SAP]

YES NO UNSURE

Some of the mitigation measures were periodically reviewed and evaluated.

1.4.7 In your country, what types of data collection, research and development have been undertaken to support the reduction of marine turtle incidental catch (while taking into consideration the impact of various mitigation measures on other species)? [SAP]

Number of dead turtle found on the beach, information on incidental catch by fishing gear. Number of trawler used TED, number of long line fishermen used circle hook and number of fishermen involved in awareness program.

1.4.8 Has your country exchanged information and provided technical assistance (formally or informally) to other Signatory States to promote the activities described in 1.4.4, 1.4.5 and 1.4.7 above? [SAP]

YES NO UNSURE

Especially within the Southeast Asian Countries through the meeting, seminar. Workshop conducted by SEAFDEC-MFRDMD Kuala Terengganu. Provide technical assistant to Myanmar, Brunei, Indonesia and Vietnam through SEAFDEC funding.

1.4.9 What legislative and practical measures has your country taken in support of UN General Assembly Resolution 46/215 concerning the moratorium on the use of large-scale driftnets? [SAP]

None

1.5.1 Does your country have legislation to prohibit direct harvest and domestic trade in marine turtles, their eggs, parts and products; and to protect important turtle habitats? [IND]

YES NO UNSURE

Wildlife Protection Act (1990-Federal); Fisheries Regulations (1990-Prohibition of method of fishing, Federal); Wildlife Protection Ordinance (1999, Article 26(3)-Federal); Fisheries Regulations (1991- Prohibited Areas, Rantau Abang); Fisheries Rules (1984-Turtles and turtle eggs, Johor); Fisheries Rules (1989-Turtles and turtle eggs, Malacca); Wildlife Protection Ordinance (1990-Sarawak); Amendments to the Turtle Enactment 1951 (1987, 1989-Sabah). Signed the Association of South East Asian Nations (ASEAN) Sea Turtle Memorandum of Understanding (MoU) in 1997.

Based on :

Shanker, K. 2004. Marine turtle status and conservation in the Indian Ocean. Papers Presented at the Expert Consultation on Interactions between Sea Turtles and Fisheries within an Ecosystem Context, Rome, 9-12 March 2004. FAO Fisheries Report No. 738, Supplement, p. 85-134.

Survey of Marine Turtle Egg Consumption and Trade in Malaysia Report prepared by TRAFFIC Southeast Asia for WWF-Malaysia March 2009

1.5.2 Which, among the following list, are economic uses and cultural values of marine turtles in your country? Please rate the relative prevalence / importance of each consumptive or non-consumptive use. [INF]

USES / VALUES

Meat consumption

YES **NO**

None cases had been report on meat consumption in last five years

RELATIVE PREVALENCE / IMPORTANCE

HIGH MODERATE LOW UNKNOWN

Egg consumption

YES NO

Only 5 % of total turtle eggs were sold at the market especially in Terengganu

HIGH MODERATE **LOW** UNKNOWN

Shell products

YES **NO**

No report on shell product in last five years

HIGH MODERATE LOW UNKNOWN

Fat consumption

YES **NO**

HIGH MODERATE LOW UNKNOWN

No report on fat consumption during the last five years

Traditional medicine

YES NO

HIGH MODERATE LOW UNKNOWN

No report on the use traditional medicine

Eco-tourism programmes

YES NO

HIGH MODERATE LOW UNKNOWN

Some nesting beach was open to tourist as part of awareness programme

Cultural / traditional significance

YES NO

HIGH MODERATE LOW UNKNOWN

None turtle was used for cultural and traditional purposes

Other

1.5.3 Please indicate the relative level and impact of traditional harvest on marine turtles and their eggs. [IND, TSH]

Level of harvest:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE UNKNOWN

Impact of harvest:

RELATIVELY HIGH MODERATE RELATIVELY LOW NONE UNKNOWN

Source of information:

1.5.4 Have any domestic management programmes been established to limit the levels of intentional harvest? [SAP]

YES NO UNKNOWN

Some protected areas have been established where egg collection is prohibited and some areas of restricted access for fishing vessels have also been established.

1.5.5 Describe any management agreements negotiated between your country and other States in relation to sustainable levels of traditional harvest, to ensure that such harvest does not undermine conservation efforts. [BPR]

Malaysia is a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the Convention on Biological Diversity (CBD). MoU on ASEAN Sea Turtles conservation and protection, MoA between the government of Malaysia & The government of the Republic of the Philippines on the establishment of The Turtle Islands Heritage Protected Areas (TIHPA).

1.6.1 First, select one of the options at left to indicate whether or not your country has any of the following measures in place to minimise the mortality of eggs, hatchlings and nesting females. If yes, then estimate the relative effectiveness of these measures. [IND, SAP]

MEASURES

RELATIVE EFFECTIVENESS

Monitoring/protection programmes

YES NO N/A

EXCELLENT GOOD LOW UNKNOWN

Malaysia had identified 22 major nesting sites. Landing and nesting of sea turtles were monitored during nesting season.

Education/awareness programmes

YES NO N/A

EXCELLENT GOOD LOW UNKNOWN

Number of turtle eggs incubated was increased in last ten years. In 2001 2,440 eggs were incubated and increased to 4,330 in 2010.

Egg relocation/hatcheries

YES NO N/A

EXCELLENT GOOD LOW UNKNOWN

Malaysia had established 26 hatcheries and only two were practised in-site hatcheries. Most of the eggs were reallocated and incubated in hatcheries to avoid poaching and natural predators as well as environmental factors.

Predator control

YES NO N/A

EXCELLENT GOOD LOW UNKNOWN

Controlling and protecting predator were undertaken in each nesting beaches and hatcheries.

Vehicle / access restrictions

YES NO N/A

EXCELLENT GOOD LOW UNKNOWN

All vehicles are prohibited to enter the nesting beaches and hatcheries area.

Removal of debris / clean-up

YES NO N/A

EXCELLENT GOOD LOW UNKNOWN

Clean-up and removal debris were conducted regularly in each nesting beach which involved various level of communities through awareness programmes.

Re-vegetation of frontal dunes

YES NO N/A EXCELLENT GOOD LOW UNKNOWN

Re-vegetation of frontal dunes activity was conducted in some major nesting beaches.

Building location/design regulations

YES NO N/A EXCELLENT GOOD LOW UNKNOWN

Light pollution reduction

YES NO N/A EXCELLENT GOOD LOW UNKNOWN

Regular negotiation with hotel and chalet operators was conducted by Department of Fisheries to control lighting at night.

Other (list and rate them)

YES NO N/A

1.6.2 Has your country undertaken any evaluation of its nest and beach management programmes? [\[SAP\]](#)

YES NO NOT APPLICABLE

Each nesting beach had to prepare monthly and annual report and submitted to Department of Fisheries.

OBJECTIVE II. PROTECT, CONSERVE AND REHABILITATE MARINE TURTLE HABITATS

2.1.1 What is being done to protect critical habitats *outside* of established protected areas? (NB: It is assumed that legislation relating to established protected areas will have been described in Section 1.5.1) [\[BPR, SAP\]](#)

Most of the nesting beaches located in islands. Gazetting these islands as a Marine Parks in which under Fisheries Act 1985 is one of the measures to protect the marine turtle habitat. Gazetting the nesting area which located in main land as none development area.

2.1.2 Are assessments routinely made of the environmental impact of marine and coastal development on marine turtles and their habitats? [\[IND, SAP\]](#)

YES NO NOT APPLICABLE

Assessment was undertaken at some of the nesting beach such as Ma' Daerah, Mak Kepit and Geliga.

2.1.3 Is marine water quality (including marine debris) monitored near turtle habitats? If yes, describe the nature of this monitoring and any remedial measures that may have been taken. [\[SAP\]](#)

YES NO **NOT APPLICABLE**

2.1.4 Are measures in place to prohibit the use of poisonous chemicals and explosives? [SAP]

YES NO NOT APPLICABLE

2.2.1 Are efforts being made to recover degraded coral reefs? If yes, give details (location, duration, effectiveness, lessons learned, future plans etc). [IND, SAP]

YES **NO** NOT APPLICABLE (no degraded coral reefs)

2.2.2 Are efforts being made to recover degraded mangrove habitats that are important for turtles? If yes, give details (location, duration, effectiveness, lessons learned, future plans etc.) [IND, SAP]

YES NO **NOT APPLICABLE** (no mangrove habitats important for turtles)

2.2.3 Are efforts being made to recover degraded sea grass habitats? If yes, give details (location, duration, effectiveness, lessons learned, future plans etc.). [IND, SAP]

YES **NO** NOT APPLICABLE (no degraded sea grass habitats)

OBJECTIVE III. IMPROVE UNDERSTANDING OF MARINE TURTLE ECOLOGY AND POPULATIONS THROUGH RESEARCH, MONITORING AND INFORMATION EXCHANGE

3.1.1 Give a list of available literature that includes baseline information from studies carried out in your country on marine turtle populations and their habitats. [INF]

Chan, E. H. 2010. Malaysian turtles in crisis. Opinion paper written for WWF Malaysia in support of the Memorandum to the Most Honourable Prime Minister of Malaysia, Dato' Sri Mohd Najib bin Tun Abdul Razak Re Enactment of Comprehensive Federal Legislation for Turtles.

Chan, E.H. 2009. Population trends in South East Asian sea turtles. Pp 11-12 and 33-42 in: Chan, E.H., N. Pilcher and K. Hiew. Report of the Workshop on Regional Cooperation to Address Direct Capture of Sea Turtles 1-3 June 2009, Kuala Terengganu. Penerbit UMT, Universiti Malaysia Terengganu.

Chan, E.H., N. Pilcher and K. Hiew. 2009. Report of the Workshop on Regional Cooperation to Address Direct Capture of Sea Turtles 1-3 June 2009, Kuala Terengganu. Penerbit UMT, Universiti Malaysia Terengganu.

Chan, E.H. 2004. Turtles in Trouble. Siri Syarahan Inaugural KUSTEM : 7 (2004). Kolej Universiti Sains dan Teknologi Malaysia (now known as Universiti Malaysia Terengganu). ISBN 983-2888-07-7. Pdf available at :<http://www.turtleconservationcentre.org/wp-content/uploads/TurtlesInTrouble.pdf>

Chan, E. H. (1988). "A note on the feeding of leatherback (*Dermochelys coriacea*) hatchlings." *Pertanika* 11(1): 147-149.

Chan, E. H. (1989). "White spot development, incubation and hatching success of leatherback turtle (*Dermochelys*

coriacea) eggs from Rantau Abang, Malaysia." Copeia 1989(1): 42-47.

Chan, E. H. (2006). "Marine turtles in Malaysia: On the verge of extinction?" Aquatic Ecosystem Health and Management 9: 175-184.

3.1.2 Have long-term monitoring programmes (i.e. of at least 10 years duration) been initiated or planned for priority marine turtle populations frequenting the territory of your country? [IND, BPR]

YES NO UNSURE

Long-term monitoring program was conducted in various major nesting sites such Talang-Talang Island, Sarawak - started in 1980, Selingan Island, Sabah - started in 1972, Bakungan Besar Island, Sabah started in 1980, Bakungan Kechil Island, Sabah - started in 1980, Rantau Abang, Terengganu - started in 1970, Mak Kepit, Terengganu - started in 1989, Cagar Hutan, Terengganu - started in 1980, Ma' Daerah, Terengganu - started in 1992, Geliga, Terengganu - started in 1992, Cherating, Pahang - started in 1993.

3.1.3 Has the genetic identity of marine turtle populations in your country been characterised? [INF, PRI]

YES NO UNSURE

Study was conducted in 1999 - 2004 and the result was indicate that Mak Kepit, Ma Daerah nesting beach considered as one unit population.

3.1.4 Which of the following methods have been or are being used to try to identify migration routes of turtles? Use the text boxes to provide additional details. [INF, PRI]

Tagging YES NO

Inconel tagging exercises was conducted at Mak Kepit, Ma Daerah, Geliga, Cagar Hutang, Upeh Island, Cherating, Kerachut, Talang-Talang Besar Island, Talang Talang Kechil Island, Selingan Island, Bakungan Besar Island, Bakungan Kechil Island and Sipadan Island.

Satellite tracking YES NO

Was conducted in various nesting sites such as Ma Daerah, Cherating, Upeh Island, Cagar Hutang, Rantau Abang, Tioman Island, Talang Talang Besar Island, Selingan Island, Padang Kemunting and, Kerachut Beach.

Other

None of the above

3.1.5 Have studies been carried out on marine turtle population dynamics and survival rates (e.g. including studies into the survival rates of incidentally caught and released turtles)? [INF, PRI]

YES NO UNSURE

3.1.6 Has research been conducted on the frequency and pathology of diseases in marine turtles? [INF, PRI]

YES NO UNSURE

Study was conducted by University Malaysia Terengganu in 2009 & 2010.

3.1.7 Is the use of traditional ecological knowledge in research studies being promoted? [BPR, PRI]

YES NO **UNSURE**

3.2.1 List any regional or sub-regional action plans in which your country is already participating, which may serve the purpose of identifying priority research and monitoring needs. [INF]

Department of Fisheries Malaysia had established collaborative research work which several agencies and NGOs such as SEAFDEC-MFRDMD, Sabah Parks and Marine Research Foundation.

3.2.2 On which of the following themes have collaborative studies and monitoring been conducted? Use the text boxes to describe the nature of this international collaboration or to clarify your response. Answer 'NO' if the studies/monitoring undertaken do not involve international collaboration. [INF, PRI]

a) Genetic Identity **YES** NO NOT APPLICABLE

Collaboration with SEAFDEC-MFRDMD Kuala Terengganu. Provide tissue sample of green and hawksbill turtle collected from several nesting sites; Upeh Island, Segari, Kerachut, Mak Kepit, Ma Daerah.

b) Conservation status YES **NO** NOT APPLICABLE

Malaysia is a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the Convention on Biological Diversity (CBD). MoU on ASEAN Sea Turtles conservation and protection, MoA between the government of Malaysia & The government of the Republic of the Philippines on the establishment of The Turtle Islands Heritage Protected Areas (TIHPA).

c) Migrations **YES** NO NOT APPLICABLE

Study on satellite telemetry on green and hawksbill turtle in Padang Kemunting, Upeh Island nesting sites for hawksbill turtles and at Kerachut, Juara and Cherating for green turtles.

d) Other biological and ecological aspects YES **NO** NOT APPLICABLE

Other

3.3.1 List, in order of priority, the marine turtle populations in your country in need of conservation actions, and indicate their population trends. [PRI]

Leatherback turtles-population decline drastically; in 1982 annual nesting 250 and 8 nest in 2010

Olive ridley turtle –population decline drastically, in 1990 annual nesting 154 and 4 nest in 2010

3.3.2 Are research and monitoring activities, such as those described above in Section 3.1 periodically reviewed and evaluated for their efficacy? [SAP]

YES NO UNSURE

Research on these marine turtles had been conducted since in 1995 and always reviewed for their efficacy.

3.3.3 Describe how research results are being applied to improve management practices and mitigation of threats (in relation to the priority populations identified in 3.3.1, among others). [SAP]

As for leatherback turtle base on research finding the major threats is incidental catch by stingray net. In 1996 the use of stingray net with mesh size above 10 inches was totally banned in Malaysia.

3.4.1 Has your country undertaken any initiatives (nationally or through collaboration with other Range States) to standardise methods and levels of data collection? [BPR, INF]

YES NO UNSURE

Through SEAFEC Sea Turtle Conservation Program had standardized the Tagging Code of Sea Turtle for the Southeast Asian Countries.

3.4.2 To what extent does your country exchange scientific and technical information and expertise with other Range States? [SAP, IND]

OFTEN (SYSTEMATICALLY) OCCASIONALLY RARELY NEVER

3.4.3 If your country shares scientific and technical information and expertise with other Range States, what mechanisms have commonly been used for this purpose? Comment on any positive benefits/outcomes achieved through these interactions. [INF]

Under the SEAFDEC-MFRDMD Kuala Terengganu Malaysian researches

(i) Conducted training on tagging exercises in Myanmar, Vietnam Cambodia, Brunei Darussalam and Indonesia

(ii) Conducted satellite tracking study in Brunei Darussalam, Indonesia, Vietnam and Myanmar

(iii) Sharing scientific information by participate in regional workshop/meeting/symposium

3.4.4 Does your country compile and make available to other countries data on marine turtle populations of a regional interest? [INF]

YES NO UNSURE

Collaborate with SEAFDEC-MFRDMD Kuala Terengganu to publish the proceeding of regional workshop or meeting which conducted by SEAFDEC and disseminated to ASEAN countries.

OBJECTIVE IV. INCREASE PUBLIC AWARENESS OF THE THREATS TO MARINE TURTLES AND THEIR HABITATS, AND ENHANCE PUBLIC PARTICIPATION IN CONSERVATION ACTIVITIES

4.1.1 Describe the educational materials, including mass media information programmes that your country has collected, developed and/or disseminated. [INF, PRI]

- (i) Publish Standard Operating Procedure on Sea Turtle to be used as guideline for implementation conservation activities
- (ii) Disseminate the pamphlets and brochures on sea turtle conservation
- (iii) Conduct the educational and awareness programme weekly to all level of communities
- (iv) Conduct awareness programme with the media - as annual event
- (v) Produce documentary programme with national television programme on sea turtle conservation

4.1.2 Which of the following groups have been the targets of these focused education and awareness programmes described in above in Section 4.1.1? [PRI, INF]

- Policy makers
- Fishing industry
- Local/Fishing communities
- Indigenous groups
- Tourists
- Media
- Teachers
- Students
- Military, Navy, Police
- Scientists
- Other:
- None of the above

Departments of Fisheries Malaysia, Sabah Parks and Sarawak Forestry Corporation collaboration with national universities, NGOs and private sectors had conducted awareness programmes in various nesting site throughout Malaysia.

4.1.3 Have any community learning / information centres been established in your country? [BPR, SAP]

YES NO

Department of Fisheries Malaysia has established six (6) Information and Conservation Centre of Sea Turtles in which a total of 150,000 to 200,000 people had involved in awareness and educational programmes annually.

4.2 Alternative livelihood opportunities [IND, BPR] Describe initiatives already undertaken or planned to identify and facilitate alternative livelihoods (including income-generating activities) for local communities.

Not applicable

4.3.1 Describe initiatives already undertaken or planned by your country to involve local communities, in particular, in the planning and implementation of marine turtle conservation programmes. Please include details of any incentives that have been used to encourage public participation, and indicate their efficacy. [BPR, IND]

(i) Series of awareness programme which involved fishermen, school children, university students and hotel/resort operators were frequently conducted throughout the year.

(ii) Involve trawl fishermen on conducting the research on the used of TED in Terengganu and Sabah States.

(iii) Involved private sectors on adopt a turtle and a nest programme.

4.3.2 Describe initiatives already undertaken or planned to involve and encourage the cooperation of Government institutions, NGOs and the private sector in marine turtle conservation programmes. [IND, BPR]

Department of Fisheries Malaysia had established collaboration on marine turtle conservation programme with several private sectors such as HUNTSMAN, AQUARIA KLCC, BP ACETHYL AND PETRONAS and financial company as well as NGO - WWF Malaysia.

OBJECTIVE V. ENHANCE NATIONAL, REGIONAL AND INTERNATIONAL COOPERATION

5.1.1 Has your country undertaken a national review of its compliance with Convention on International Trade in Endangered Species (CITES) obligations in relation to marine turtles? [SAP]

YES NO NOT APPLICABLE

Government of Malaysia had establish the CITES (ACT 686) in which to protect the trade of endangered species including the marine turtles.

5.1.2 Does your country have, or participate/cooperate in, CITES training programmes for relevant authorities? [SAP]

YES NO NOT APPLICABLE

5.1.3 Does your country have in place mechanisms to identify international illegal trade routes (for marine turtle products etc.)? Please use the text box to elaborate on how your country is cooperating with other States to prevent/deter/eliminate illegal trade. [SAP]

YES NO NOT APPLICABLE

5.1.4 Which international compliance and trade issues related to marine turtles has your country raised for discussion (e.g. through the IOSEA MoU Secretariat, at meetings of Signatory States etc.)? [INF]

Not applicable

5.1.5 Describe measures in place to prevent, deter and eliminate domestic illegal trade in marine turtle products, particularly with a view to enforcing the legislation identified in Section 1.5.1. [INF]

Not applicable - no marine turtle product sold in Malaysia.

5.2.1 Has your country already developed a national [action plan](#) or a set of [key management measures](#) that could eventually serve as a basis for a more specific action plan at a national level? [IND]

YES NO

National Plan of Action for Conserving Sea Turtle in Malaysia was developed on November 2008.

5.2.2 From your country's perspective, which [conservation and management activities](#), and/or which particular [sites or locations](#), ought to be among the highest priorities for action? [PRI]

1. National ban on commercial sale of turtle eggs.
2. At least 80% eggs incubation in all states.
3. At least 80% eggs incubation in all states.
4. Relevant states to gazette turtle sanctuaries in all important nesting beaches.
5. Establish Malaysian Marine Turtle Working Group (MTWG).
6. Tagging and monitoring of marine turtles on all important nesting beaches.
7. Assessment and reduction of turtle by-catch (e.g. through observer program).
8. Signatory to IOSEA MoU on Marine turtles.
9. Be a party to relevant MOU on marine turtle.
10. Restoration of degraded nesting beaches.

5.2.3 Please indicate, from your country's standpoint, the extent to which the following [local](#) management issues require [international](#) cooperation in order to to achieve progress. [PRI]

Illegal fishing in territorial waters	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Incidental capture by foreign fleets	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Enforcement/patrolling of territorial waters	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Hunting/harvest by neighboring countries	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Poaching, illegal trade in turtle projects	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Development of gear technology	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Oil spills, pollution, marine debris	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Training / capacity-building	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Alternative livelihood development	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Identification of turtle populations	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Identification of migration routes	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Tagging / satellite tracking	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Habitat studies	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Genetics studies	<input type="checkbox"/> ESSENTIAL <input checked="" type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL

5.3.1 Identify existing frameworks/organisations that are, or could be, useful mechanisms for cooperating in marine turtle conservation at the sub-regional level. Please comment on the strengths of these instruments, their capacity to take on a broader coordinating role, and any efforts your country has made to enhance their role in turtle conservation. [INF, BPR]

MoU on ASEAN Sea Turtles conservation and protection, MoA between the government of Malaysia & The government of the Republic of the Philippines on the establishment of The Turtle Islands Heritage Protected Areas (TIHPA).

5.3.2 Has your country developed, or is it participating in, any networks for cooperative management of shared turtle populations? [BPR, INF]

YES NO NOT APPLICABLE

5.3.3 What steps has your country taken to encourage Regional Fishery Bodies (RFBs) to adopt marine turtle conservation measures within Exclusive Economic Zones (EEZs) and on the high seas? [SAP]

5.4.1 Describe your country's needs, in terms of human resources, knowledge and facilities, in order to build capacity to strengthen marine turtle conservation measures. [PRI]

- (i) Comprehensive data analysis on genetic study
- (ii) Training on the use remote sensing technology for detecting turtle landing and nesting (this technique had been applied in South Korea)

5.4.2 Describe any training provided in marine turtle conservation and management techniques (e.g. workshops held, training manuals produced etc.), and indicate your plans for the coming year. [PRI, INF]

No plan to conduct training since no budget allocate in 2012.

5.4.3 Specifically in relation to capacity-building, describe any partnerships developed or planned with universities, research institutions, training bodies and other relevant organisations. [BPR]

So far none.

5.5.1 National policies and laws concerning the conservation of marine turtles and their habitats will have been described in Section 1.5.1. Please indicate their effectiveness, in terms of their practical application and enforcement. [SAP, TSH]

In the year 2010 and 2011 a total of 210 stingray net were seized in Terengganu waters.

5.5.2 Has your country conducted a review of policies and laws to address any gaps, inconsistencies or impediments in relation to marine turtle conservation? If not, indicate any obstacles encountered in this regard and when this review is expected to be done. [SAP]

YES NO UNSURE

To uniform turtle enactment in every states that have turtle landings.

5.5.3 From the standpoint of law enforcement, has your country experienced any difficulties achieving cooperation to ensure compatible application of laws across and between jurisdictions? [TSH]

YES NO UNSURE

OBJECTIVE VI. PROMOTE IMPLEMENTATION OF THE MoU INCLUDING THE CONSERVATION AND MANAGEMENT PLAN

6.1.1 What has your country already done, or will it do, to encourage other States to sign the IOSEA MoU? [INF]

6.1.2 Is your country **currently favourable, in principle, to amending the MoU to make it a legally binding instrument? [INF]**

YES NO NO VIEW

6.1.3 Would your country be favourable, over a **longer time horizon, to amending the MoU to make it a legally-binding instrument? [INF]**

YES NO NO VIEW

6.2 Secretariat and Advisory Committee

6.2.1 What efforts has your country made, or can it make, to secure funding to support the core operations of the IOSEA MoU (Secretariat and Advisory Committee, and related activities)? [IND]

6.3.1 What funding has your country mobilised for domestic implementation of marine turtle conservation activities related to the IOSEA Marine Turtle MoU? Where possible, indicate the specific monetary values attached to these activities/programmes, as well as future plans. [IND]

6.3.2 Has your country tried to solicit funds from, or seek partnerships with, other Governments, major donor organisations, industry, private sector, foundations or NGOs for marine turtle conservation activities? [IND]

YES NO

6.3.3 Describe any initiatives made to explore the use of economic instruments for the conservation of marine turtles and their habitats. [BPR]

6.4.1 Has your country designated a lead agency responsible for coordinating national marine turtle conservation and management policy? If not, when is this information expected to be communicated to the IOSEA MoU Secretariat? [IND]

YES NO

Department of Fisheries Malaysia is the lead agency for coordinating the Malaysia marine turtle conservation and management policy.

6.4.2 Are the roles and responsibilities of all government agencies related to the conservation and management of marine turtles and their habitats clearly defined? [IND]

YES NO UNSURE

Department of Fisheries Malaysia responsible on conservation and management of marine turtles in Peninsular Malaysia.

Sabah Parks responsible on conservation and management of marine turtles in Sabah state.

Sarawak Forestry Corporation responsible on conservation and management of marine turtles in Sarawak state.

Universities focus on research activities

NGO focus on awareness and educational program with target group

6.4.3 Has your country ever conducted a review of agency roles and responsibilities? If so, when, and what was the general outcome? If not, is such a review planned and when? [SAP],

YES NO UNSURE

Comments/suggestions to improve the present reporting format:

Additional information not covered above: