



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



## Bangladesh

### GENERAL INFORMATION

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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. [\[INF\]](#)

Bangladesh coastline measures 710 kilometres approximately (ICZM 2003). Not all the coastline is suitable for nesting, because sandy beaches are available only in sections along the mainland coast (Islam 2006). Apart from the mainland coast, there are numerous offshore islands whose sandy beaches are ideal for marine turtle nesting (Islam 2006).

As of the world's sea turtle population depleted all over the oceans more drastic, in Bangladesh marine waters, nesting

declined 80 % during last 4 decades and currently nesting habitat is threatened by tourism. Here turtle conservation is new hence the outcome of the efforts depends on continuous enhanced long-term measures. Five species forage in the Bay of Bengal and so far only 2 of them viz., Olive Ridley (*Lepidochelys olivacea*) and Green turtle (*Chelonia mydas*) currently nest at suitable beaches along the coast and facing dangers from bycatch, egg poaching, predation, beach alteration and tourism/lighting. Currently tourism development is the main inland threat along south eastern coast at Cox's Bazar and St. Martin.

Unlike the other parts of the world sea turtle lately enlisted in protected list of the Bangladesh Wildlife (Preservation & Protection) Act, in 2012. Sea turtles with other marine wildlife are facing dangers from bycatch in offshore fishing efforts. Every year almost thousands of sea turtle washed ashore mostly results of indiscriminate bycatch. The most vulnerable species are olive ridley and juvenile or subadult green turtle as occurred in our territory. In addition, there are gaps in scientific information on sea turtle species diversity, population size, habitat and seasonality.

Although five species of marine turtles occur in the territorial waters of Bangladesh (Rashid and Islam 2005), only three species have been reported to nest in Bangladesh. Among them, olive ridleys (Ahmed et al 1986, Khan 1987, Rashid 1984, 1986, Rashid and Islam 1999, Islam 2002, Rashid & Islam 2005) and green turtles (Khan 1982, 1987, Rashid 1997, Rashid and Islam 1999) are common, while hawksbills are rare (Islam 2002, Rashid 1997). There was an unconfirmed nesting record of a loggerhead based on a specimen collected by the staff of the Marine Fisheries Research Institute (MFRI) in Cox's Bazar, but the specimen was not found to examine. It likely to misidentified by people as everyone like to record one new species. Few leatherback turtles dead bodies recorded during last fifteen and no known records of nesting, in Bangladesh; although, crawl mark recorded in Cheradia, St. Martin's Island and at one place of west beach according to local sea turtle watcher although there is no authentic evidence, but the elders said about leatherbeack nesting at remote beach of St. Martin Island, Badamgonia during four decades back before 1980. (Islam, 2002).

Green turtles are less widespread than olive ridleys; they nest along the mainland coast as well as on island beaches. They have been reported to nest on south-central island beaches, mainland beaches in the southeast (from Cox's Bazar to Teknaf) and also on some coastal islands (e.g., St. Martin's, Sonadia, Kutubdia, Hatiya and Sandweep islands). Nesting records for this species are either rare or absent for the coastal beaches of the Sunderbans. Currently green turtle only nest at few spots of St. Martin Island, Sonadia and Teknaf peninsular beach. Green turtles nest recorded during winter months in St. Martin islands with pre and post monsoon period and only post monsoon at Sonadia Island (Islam 2011), At St. Martin they prefer remote high slope beach with coarse sand. (Islam 2002).

Nesting hawksbill turtles are rare visitors to the beaches of Bangladesh (Rashid & Islam 2005). There are a few unconfirmed reports of nesting on St. Martin's Island, the most recent being in 1992 (Rashid 1997). The last nesting records was done in 1998 at St. Martin Island (Islam 2002). Reports from the local people of the island indicate that it used to nest here regularly in the 1950s. Little information is available on the loggerhead species in Bangladesh. The nearest sites where nesting of loggerheads has been reported are the islands off Myanmar (Thorbjarnarson et al. 2000), which lie east of St. Martin's Island; a few may nest in Bangladesh.

Leatherback turtles have not been recorded nesting in Bangladesh (Islam 2006). A search of the literature found no historic evidence of leatherback nesting in Bangladesh. However, on 11 April 1997 a dead adult leatherback turtle was washed ashore on St. Martin's Island (Islam 1999, Rashid & Islam 2005). In 2006 two leatherbacks washed ashore and in 2007 a live young leatherback was brought to the Bakkhali river fish landing, Cox's Bazar after it got trapped in a fishing net. The turtle later died of exhaustion and heat.

Sea turtle conservation started with a small pilot project at St. Martin Island by a NGO named CARINAM in 1996-98. Later by NCSIP of MoEF through St. Martin Pilot Project (2000-01) and later St. Martin Project (MoEF)(2001-2004). Sea Turtle activity started by DoE in 2005 that has been ended without sustainable good result mostly carried out by NGOs without maintaining scientific protocols and not complete comprehensive results.

Research and conservation organization Marinelife Alliance (MLA) conducting nesting and stranding sea turtle monitoring at all spots of the coast since 2000 and maintaining the database since the beginning of work. MLA have been conduct sea turtle conservation work at St. Martin island, Teknaf peninsula & Sonadia Island with the support from KNCF-Japan & FWS-US since 2004 and maintaining complete status database.

MLA maintaining sea turtle website for Bangladesh under which total data would be available in later days ([www.seaturtlebd.org](http://www.seaturtlebd.org)). MLA also started satellite tracking project of sea turtle in Bangladesh in 2010. (Islam 2013).

In 2013, SRCWPP (Strengthening Regional Co-operation for Wildlife Protection Project) under Forest Department, supported MLA to conduct sea turtle conservation and monitoring in Bangladesh. The project title is- "Conservation of Sea

Turtle in Bangladesh Coastal & Marine Territory". It is the most comprehensive work in Bangladesh sea turtle monitoring and conservation. MLA allocated almost 100 local community for sea turtle nesting monitoring along the entire coast except the largest mangrove Sundarban. After one season 2013-14 monitoring the nesting frequency raise around 650 olive ridleys from South Central Beach Kuakata to South east most St. Martin island. (Islam, 2014).

See References in Section 3.1.1

**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]**

Involvement of the local community is the key to successful conservation and management; Bangladesh has a good level of participation.

1. Participation of the locally elected public representatives, community members and local government agencies/officials through formation of Ecologically Critical Area Management Committees at the Union (smallest administrative unit), Upazila and district levels.

2. In-situ and Ex-situ conservation along the beach at minimum cost.

3. The 'best practice' approach adopted with success is the community based approach by Marinelife Alliance (MLA), SRCWPP activity.

4. Involving offshore fishermen in bycatch reduction effort through their hands on training.

3. Community involvement through employment of community members for guarding beaches.

**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]**

Socio-economic studies were carried out for St. Martin's Island under NCSIP-1 (1996-2001), under St. Martin's Project (2002), and under the CWBMP (2005) project. Some changes are visible, such as the exploitation rate of corals, mollusc shells and marine turtle eggs have decreased significantly.

See:

Islam, M. Z. (2001). Final Report, St. Martin Pilot Project, NCSIP-1, Ministry of Environment & Forest, GOB, 2001, 72 pp.

Hasan, M. M. (2009). "Tourism and Conservation of Biodiversity: A Case Study of St. Martins Island, Bangladesh." Law, Social Justice & Global Development (An Electronic Law Journal).

**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: Unregulated expansion of tourism**

☒ **Other2: Lack of enforcement of regulations**

☐ **Other3: large number of fisher's & fishing boats, destructive gears increasing bycatch**

☐ None of the above or Not Applicable

Various measures have been proposed to counteract adverse economic incentives, namely:

- 1) Alternative livelihoods for the local community people;
- 2) financial support for creating public awareness;
- 3) incentives for NGOs in turtle conservation activities;
- 4) Protection for in-situ conservation of breeding grounds;
- 5) Logistics support for conservation agency.
- 6) Involvement of stake holders through collaborative management;
- 7) Awareness building program;
- 8) Technical & logistic support to conduct in-water survey and enforcement.

### **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)

The Government of Bangladesh (GoB) has declared three of the coastal beaches and islands as ecologically critical areas (ECA). As a measure to conserve biodiversity and to lessen the burden on the St. Martin's Island's limited resources (e.g., freshwater, undeveloped sewage system), the GoB has put a restriction on the construction of hotels/motels/resorts in St. Martin's Island and Cox's Bazaar-Teknaf sea beach.

Some poachers have been employed by the project authority in St. Martin's Island and now poachers have become protectors.

SRCWPP/Forest Department & MLA/NGOs are also working in some areas.

It must be realized that "alternative income generating opportunities of the coastal fishing communities are very limited" (BoBLME 2010, p 38).

See:

BOBLME (2010). BOBLME National Inception Workshop- Bangladesh 6-7 January 2010 BRAC Centre Inn, Dhaka, Bangladesh. BOBLME-2010-Project-01.

### **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

In the last twenty years, fishing in the marine sector has expanded rapidly due to initiatives in the 1970's. The expansion has gone on without any real control and management. This has lead to a sharp increase in fishing effort. The ownership of the industry has changed dramatically. With the introduction of more expensive fishing methods most of the boats are no longer owned by fishermen, but by business men who then employ fishers on a catch sharing basis. Even for those fishermen not using boats, they are no longer in control of the fishing resources.

For effective management of marine and coastal fisheries the management regimes are divided into three principal categories: I) Artisanal Fisheries Management, II) Mechanised Commercial Boat Fisheries Management and III) Industrial Trawl Sector Management (Marine Fisheries Sector Sub-Strategy, Dept. of Fisheries (DOF). 2006) No data are available on the marine turtles from Fishery Statistical Yearbook 2006-07. More than 200 fishing trawlers (Shrimp trawler & Fish trawler) are involved in the marine fisheries (DOF 2013).

See also BOBLME 2010.

**b) Set gill nets:** ☒ YES ☐ NO

Set gill nets, though banned by the government, are still operational. A total of 25,369 (18,992 mechanized and 6,377 non-mechanized) boats with 71,768 and 34,548 gill nets (Total 106,316 net units) are operational, respectively (DOF 2008).

See also BOBLME 2010.  
Hussain, M.G. and Hoq, M.E. (eds.). 2010

**c) Anchored Fish Aggregating Devices (FADs):** ☒ YES ☐ NO

Very Limited, status unknown.

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

Purse seines contribute around 2,082 units to the total fishing effort; these nets (with or without FADs) are allowed for fishing (DOF 2008).

See also BOBLME 2010.  
Hussain, M.G. and Hoq, M.E. (eds.). 2010

**e) Longline (shallow or deepset):** ☒ YES ☐ NO

Long-line fishing is well represented in the total fishing effort: Mechanised 1,350 (with 13,619 net units); Non-mechanised 222 (1,592 with net units); other Long Line 1,069 (with 9,403 net units) operating for artisanal fishing (DOF 2008).

See also BOBLME 2010.  
Hussain, M.G. and Hoq, M.E. (eds.). 2010

**f) Driftnet:** ☒ YES ☐ NO

Around 1,103 drift nets are in operation (DOF 2008).

See also BOBLME 2010.  
Hussain, M.G. and Hoq, M.E. (eds.). 2010

**g) Other1:**

There are 1,091 seasonal mechanized crafts with 2,007 net units; 4,664 non-mechanized crafts with 18,970 net units and 7,010 all-season non-mechanized crafts with 29,106 nets operating in the Bay (DOF 2008).

See also BOBLME 2010.  
Hussain, M.G. and Hoq, M.E. (eds.). 2010

**h) Other2:**

Large number of nets and currently fished mostly with this at the Cox's Bazar to west marine fishing area.

☐ 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: The total fish catch was 35,391 metric tons for 2006-07: from Shrimp trawl - 5,908 mt and fish trawl - 29,483 mt. (DOF 2008). These trawlers have an impact on the marine turtle population during their long trawls but this needs investigation. Normally the trawler operators are reenactment to allow researcher to observed their fishing as some of the secret threats level would be disclose to people. And most of the trawler owners are muscle man, ministers' MP and none of them use TED.

***b) Set gill nets***

**Fishing effort:**

☐ RELATIVELY HIGH ☒ **MODERATE** ☐ RELATIVELY LOW ☐ NONE ☐ UNKNOWN

**Perceived Impact:**

☐ RELATIVELY HIGH ☒ **MODERATE** ☐ RELATIVELY LOW ☐ NONE ☐ UNKNOWN

Source: (DOF 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: (DOF 2008).

***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: (DOF 2008).

***e) Longline (shallow or deepset)***

**Fishing effort:**

☐ RELATIVELY HIGH ☒ **MODERATE** ☐ RELATIVELY LOW ☐ NONE ☐ UNKNOWN

**Perceived Impact:**

☐ RELATIVELY HIGH ☒ **MODERATE** ☐ RELATIVELY LOW ☐ NONE ☐ UNKNOWN

Source: (DOF 2008).

Islam M. Z. (2013). Bycatch Report, Marinelife Alliance, 2013.

**f) Driftnet****Fishing effort:**

☐ RELATIVELY HIGH ☒ **MODERATE** ☐ RELATIVELY LOW ☐ NONE ☐ UNKNOWN

**Perceived Impact:**

☐ RELATIVELY HIGH ☐ MODERATE ☒ **RELATIVELY LOW** ☐ NONE ☐ UNKNOWN

Source: (DOF 2008).

Islam M. Z. (2013). Bycatch Report, Marinelife Alliance, 2013.

**g) Other1 (from 1.4.1): Trammel Nets****Fishing effort:**

☐ RELATIVELY HIGH ☒ **MODERATE** ☐ RELATIVELY LOW ☐ NONE ☐ UNKNOWN

**Perceived Impact:**

☐ RELATIVELY HIGH ☐ MODERATE ☐ RELATIVELY LOW ☒ **NONE** ☐ UNKNOWN

Source: (DOF 2008).

**h) Other2 (from 1.4.1): Marine Set Bag Net (MSBN)****Fishing effort:**

☒ **RELATIVELY HIGH** ☐ MODERATE ☐ RELATIVELY LOW ☐ NONE ☐ UNKNOWN

**Perceived Impact:**

☒ **RELATIVELY HIGH** ☐ MODERATE ☐ RELATIVELY LOW ☐ NONE ☐ UNKNOWN

Source: Marine Set Bag Net is the major cause of sea turtle bycatch in current situation.

Islam M. Z. (2013). By-catch Report, Marinelife Alliance, 2013.

**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]**

Occasionally, some foreign fishing vessels enter the Bangladesh territorial water and fish illegal. The major problem arise from the mechanized shrimp and fishing trawler and by Marine Set Bag Net (MSBN). The fisheries Department should take the matter in consideration to manage or ban or seasonal ban. There is no use of TEDs in Bangladesh. MSBN destroying total marine biodiversity, not only the sea turtle and other key species, marine invertebrates, fishlings etc. The situation needs clarification.

See:

Islam, M. Z. (2001). "Notes on the Trade in Marine Turtle Products in Bangladesh." Marine Turtle Newsletter 94: 10-11.

Islam M. Z. (2013). Bycatch Report, Marinelife Alliance, 2013.

Rahman, M. M. (2006). Marine Turtle Illegal Trade in the Southwest Coastal part of Bangladesh. Centre for Coastal Environmental Conservation (CCEC), Bangladesh.

**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

Yes with small scale Marinelifa Alliance/SRCWPP providing training fisher's to reduce bycatch. Fisher's are observe turtle bycatch during fishing and if happened they cut the nets with scissors to help turtle free. The items are gradually donated to fisher's during training. Before the sea turtle project sea turtles trapped in the nets were usually killed to free the nets. Many of these turtles wash ashore. Still large number of fisher's and boat have to be in the program to reduce bycatch substantially.

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

Use of TEDs is not in place at present.

Marinelifa Alliance/SRCWPP trying to develop use TED in MSBN, and use in mechanized trawler.

The TED training is necessary.

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

☐ YES ☐ NO ☒ **NOT APPLICABLE**

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

☐ YES ☒ **NO** ☐ NOT APPLICABLE

Need to Band J-Hooks, and in Bangladesh Circle-Hooks are not imported. It should be initiated.

Fisheries Department declared to increase the mesh size of the COD end of MSBN that basically have to change of the destructive impact of MSBN, the gear should be band totally.

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

☐ YES ☒ **NO** ☐ NOT APPLICABLE

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**

The following seasonal band of fishing is just only for safe breeding of fish resources not for sea turtle.

In order to protect the breeding grounds and breeding seasons for the different species, sanctuaries and off seasons were declared (DOF 2006). These need to be established through a committee comprising of fishermen, researchers and DoF. In shore sanctuaries and banned seasons affecting artisanal fishermen should be enforced by the authorities at Upazila level. Offshore sanctuaries and banned seasons should be enforced by the coast guard in collaboration with DoF and fishermen's organisations (FAO 2007). Monitoring of the sanctuaries and banned seasons need to be undertaken to examine the effects these have on fish stocks. Sanctuaries to protect nursery grounds will be identified and prioritized for gradual legislative actions. The Upazila level Fishery officers with technical support from the Marine /Coastal Fishery Officers will implement the rules in this regard. Administrative powers under the Marine Fishery Ordinance will be delegated to them.

The Forest Department is responsible for management of the Sundarbans resources. They are collecting revenue for fishing without any attempt to control the fishing effort.

See also: Flewelling, P. and Hosch, G. (2006) Country Review: Bangladesh. 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.

h) **Effort management control**

☐ YES ☐ NO ☒ **NOT APPLICABLE**

Marine Fisheries Sector Sub-Strategy has been proposed to the GoB by the Department of Fisheries (DOF 2006) but has yet to implemented.

☒ **Other (list and explain):**

Motivation and Awareness: Through Sea Turtle Project by Marineline Alliance/SRCWPP/FD offshore fishermen are being trained and motivated to release the turtles during fishing and also seeking possibilities to reduce net deployment period.

☐ 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

Source: Flewelling, P. and Hosch, G. (2006) Country Review: Bangladesh. 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.

Sea Turtle Project by Marineline Alliance/SRCWPP/FD deployed fisher's in the fishing boat to observe, record bycatch and help release.

## Vessel monitoring systems

☐ YES ☒ NO ☐ NOT APPLICABLE

Under the planned strategy, all mechanized commercial fishing boats that undertake up to 7-15 day long trips should land their catch in landings defined by the Department of Fisheries. Since these boats are operated from coastal districts, management responsibility of these boats currently vested with the marine wing of DoF will be decentralized to coastal districts. This management regime will include all mechanized commercial fishing boats operating drift gill nets, marine set bag nets and long lines in the sea up to a depth of 40 meters. The area from 10 km off the shore up to a depth of 40 meters shall be allocated to mechanized boat operating drift gill nets, marine set bag net and long lines. All mechanized commercial boats, of the stipulated size and capacity shall be brought under licensing.

Fisheries Department has taken initiatives to register all vessels that fish in the Bay. The use of TEDs in marine trawl to minimize incidental mortality rate in the national waters and on the high seas is on the table for discussion and implementation but initiatives are yet to be taken (DOF 2006).

In addition the thousands of MSBN are unregistered and have several thousand MSBN that is responsible for large number of bycatch. Sea Turtle Project by Marinelife Alliance/SRCWPP/FD deployed fisher's in the fishing boat to observe, record bycatch and help release.

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

☒ YES ☐ NO ☐ NOT APPLICABLE

Not on a regular basis, data also irregular and incomplete.

Sea Turtle Project by Marinelife Alliance/SRCWPP/FD deployed community sea turtle activist observe local fish landing centers and the trained fisher's observe at large central Fish lands centers. Marinelife Alliance/SRCWPP observe the bycatch at sea during winter months for 3 months during Dec-Feb. The efforts should be increased.

## Training programmes / workshops to educate fishers

☒ YES ☐ NO ☐ NOT APPLICABLE

Marinelife Alliance/SRCWPP/FD conducting offshore fishermen training to observe, record bycatch and help release.

## Informative videos, brochures, printed guidelines etc.

☒ YES ☐ NO ☐ NOT APPLICABLE

Marinelife Alliance published bycatch information during the project of marine megafauna bycatch reduction during 2011-13. Donated bycatch T-shirts to almost more than thousands of fisher's during awareness and training program.

The efforts are enhanced through Marinelife Alliance/SRCWPP/FD project. Fisher's guideline to reduce bycatch, ID guides of marine megafauna, posters, T-shirts have been produced and distributing free of charge.

## 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

Marinelife Alliance/SRCWPP/FD is collecting information on some of the aspects of monitoring through regular meetings with community members with fishermen and local sea turtle conservation people.

**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)? [\[SAP\]](#)**

Dead records Data on regular basis are collected by Marinelife Alliance since 1996.

Currently through Marinelife Alliance/SRCWPP/FD project data are collected by the offshore fishermen and by the community turtle watcher. This is ongoing and collect also other marine megafauna species like whale shark and dolphins.

**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

Yes Marinelife Alliance/SRCWPP have connection with regional and international various organization working on sea turtle and marine megafauna bycatch. This exchange of information is through various way like social network, blogs, list serve emailing, direct correspondence.

**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? [\[SAP\]](#)**

Driftnets have been prohibited in some restricted areas of Sundarbans. Gill nets (including nets made of monofilament locally called current net) have been prohibited during breeding season of fish in the Sundarbans and in the open sea waters. But it is very negligible impact of the sea turtle conservation and even for fish resources as MSBN is the major cause of threats.

Marine turtles have been included in the list of protected animals in the revised Bangladesh Wildlife Preservation Act 2012.

**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

Amendment of Bangladesh Wildlife Preservation Act - 1974 is under consideration for inclusion of marine turtles in the list of protected animals. However the GoB has given a blanket protection to all wildlife including marine turtles. The Environment Conservation Act 1995 has restricted any killing or capturing of the marine turtles. Marine turtles have been included in the list of protected animals in the revised Bangladesh Wildlife Preservation Act 2008. It is currently in a draft form, yet to be approved by the Parliament.

Revised Bangladesh Wildlife Preservation Act - 2012. Rashid, S. M. A. & M. Z. Islam. (2005). Review: Conservation and research on marine turtles in Bangladesh. In: Shanker, K & B. C. Choudhury (eds.) Sea Turtles of the Indian Subcontinent. Wildlife Institute of India, Dehradun, India. Pg. 200 - 216.

**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**

**RELATIVE PREVALENCE /  
IMPORTANCE**

**Meat consumption**

☒ **YES** ☐ **NO**

☐ **HIGH** ☐ **MODERATE** ☒ **LOW** ☐ **UNKNOWN**

Some fishermen consume meat at Patharghata, Chittagong.

**Egg consumption**

☒ **YES** ☐ **NO**

☐ **HIGH** ☒ **MODERATE** ☐ **LOW** ☐ **UNKNOWN**

Eggs are consumed on a regular basis, mostly by the people from the tribal communities (Islam 2001).

**Shell products**

☒ **YES** ☐ **NO**

☐ **HIGH** ☐ **MODERATE** ☒ **LOW** ☐ **UNKNOWN**

**Fat consumption**

☒ **YES** ☐ **NO**

☐ **HIGH** ☐ **MODERATE** ☒ **LOW** ☐ **UNKNOWN**

**Traditional medicine**

☒ **YES** ☐ **NO**

☐ **HIGH** ☐ **MODERATE** ☒ **LOW** ☐ **UNKNOWN**

**Eco-tourism programmes**

☒ **YES** ☐ **NO**

☐ **HIGH** ☒ **MODERATE** ☐ **LOW** ☐ **UNKNOWN**

**Cultural / traditional significance**

☒ **YES** ☐ **NO**

☐ **HIGH** ☒ **MODERATE** ☐ **LOW** ☐ **UNKNOWN**

Particularly among the followers of Hindu religion and some tribal members.

**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:

Harvest of eggs relatively high. If there was no conservation program even currently there was 100 % egg poaching would have occurred.

But the sea turtles for meat is not harvested directly. There were record of killing turtles for getting eggs from nesting females. (Islam 2014).

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

☒ **YES**   ☐ NO   ☐ UNKNOWN

Harvesting marine turtles is illegal under the proposed Bangladesh Wildlife Preservation Act 2012, and also under the Environment Conservation Act 1995. As such no harvesting limits are set.

**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]

None.

**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

Previously Marinelife Alliance/SMP/CWBMP used to guard and monitor the nesting turtles and undertook ex-situ measures to protect the nesting turtles, eggs and hatchlings at St. Martin's Island.

Currently Marinelife Alliance/SRCWPP/FD enhanced the program towards the entire coast of Bangladesh extending to the south central beach Kuakata for the first time and 100 % coverage of the peninsular beach and filling the gaps of the small fragmented beaches.

See references in Section 3.1.1

**Education/awareness programmes**

☒ **YES** ☐ NO ☐ N/A

☐ **EXCELLENT** ☐ GOOD ☐ LOW ☐ UNKNOWN

Currently Marinelife Alliance/SRCWPP/FD conducting regular sea turtle education program in the coastal schools. with exam, quiz, incentives.

#### **Egg relocation/hatcheries**

☒ **YES** ☐ NO ☐ N/A

☐ EXCELLENT ☒ **GOOD** ☐ LOW ☐ UNKNOWN

Currently Marinelife Alliance/SRCWPP/FD relocation hatching rates attained to 95 % in most cases.

#### **Predator control**

☒ **YES** ☐ NO ☐ N/A

☐ EXCELLENT ☐ GOOD ☒ **LOW** ☐ UNKNOWN

Through Marinelife Alliance/CWBMP feral dogs were killed to reduce marine turtle mortality from these predators. Feral dogs were involved in the deaths of many nesting female marine turtles.

Several hundreds of dogs have been killed during the last several years but dog population could not be minimised as their very good breeding and growth. So the problem always remains. Currently Marinelife Alliance/SRCWPP is trying to develop the dog reduction process but removing them in breeding period and also by use of predator control device in future.

#### **Vehicle / access restrictions**

☒ **YES** ☐ NO ☐ N/A

☐ EXCELLENT ☒ **GOOD** ☐ LOW ☐ UNKNOWN

For the overall environmental and tourism purpose it is illegal to drive on the beaches of Cox's Bazaar - Teknaf sea beach; however, this has yet to be enforced. In some sections of the long beach, identified as important marine habitats, mooring of fishing boats/tractors is also restricted. It helps safe sea turtle nesting beach.

#### **Removal of debris / clean-up**

☒ **YES** ☐ NO ☐ N/A

☐ EXCELLENT ☐ GOOD ☒ **LOW** ☐ UNKNOWN

Annual beach clean-up programs are organized by several NGOs and business firms on 2-3 kms of 100 kms beach. In addition the Cox's Bazaar District Beach Management Committee also takes up programs to keep some sections that are mostly visited by the tourists clean.

Marinelife Alliance conduct beach cleanup at the Sonadia island, and non touristic nesting beach area every year and need basis.

See management plans.

#### **Re-vegetation of frontal dunes**

☒ **YES** ☐ NO ☐ N/A

☐ EXCELLENT ☐ GOOD ☒ **LOW** ☐ UNKNOWN

CWBMP has taken up activities to re-vegetate/plant the dunes at the three coastal ECA sites with very low success of visibility.

## Building location/design regulations

☒ **YES** ☐ NO ☐ N/A

☒ **EXCELLENT** ☐ GOOD ☐ LOW ☐ UNKNOWN

According to the Bangladesh Environment Conservation Act 1995 under which the ECAs have been declared, construction of buildings along the beach is restricted within the ECA areas.

But all the building and hotels are being constructed along beach of St. Martin island, and Teknaf peninsula. There is no implementation of laws.

## Light pollution reduction

☒ **YES** ☐ NO ☐ N/A

☐ EXCELLENT ☐ GOOD ☒ **LOW** ☐ UNKNOWN

Lighting is all over from the resorts at St. Martin & Teknaf peninsula area.

In nesting season attempts are taken by the DoE and Marinelifelife Alliance/SRCWPP/FD. The success level becoming very low during current seasons as more tourism activity. specially at St. Martin Island and northern areas of Cox's Bazar - Teknaf peninsular beach.

## 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

Currently regular evaluations were done by the Forest Department the activity of Marinelifelife Alliance/SRCWPP/FD, in quarterly and review meetings.

In addition the Cox's Bazaar district administration also has a beach management committee that meets once a month and takes initiatives to keep the beaches clean and in good condition only for tourism purpose.

## 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) [\[BPR, SAP\]](#)

Critical nesting habitats for the marine turtles have been identified (Islam 2005, 2014, Rashid 1997). Nothing significant is being done in areas except that the legislation gives a blanket cover to protect the marine turtles and habitats critical to their nesting. The St. Martin island, Teknaf-Cox Bazar and Sonadia Island is ECA but have no conservation regulations in place except the papers.

Sonadia is going to be protected area by the Forest Department soon. Other nesting beach North of Sonadia, Kutubdia, Small islands at south central coast like Kuakata will be proposed by Marinelifelife Alliance/SRCWPP/FD project for consideration. That hopefully include some new good site for sea turtle nesting.

### 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

The beach status and nesting status with threat level are regularly mentioned in the annual report of the sea turtle monitoring by Marinelife Alliance.

Marinelife Alliance Sea Turtle Conservation Report.

**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

Previously once DoE has identified some sites that correspond with the marine turtle nesting beaches (St. Martin's Island and Sonarpara near Inani beach). Data were collected for the chemical composition as but the results have yet to be released. Shrimp hatchery released polluted sea water along the coast at those point.

Marine debris are observed only when those come to shore and minimize or collected by the sea turtle watcher work for Marinelife Alliance.

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

☐ YES ☒ NO ☐ NOT APPLICABLE

Not yet.

There is no current monitoring of chemicals used by the Shrimp hatcheries along the long coast and also the hotels sewage at Cox's Bazar and St. Martin island.

**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)

The Ministry of Environment & Forest is actively pursuing actions to conserve and rehabilitate the corals in St. Martin's Island. Previously some actions were undertaken by Conservation of Biodiversity, Marine Park Establishment and Eco-Tourism Development Project and later DoE has taken up the initiative for coral mapping to identify the areas where corals have degraded and to mark areas with good coral and sea grass habitats around the St. Martin's Island. But currently not place and coral extraction and pollution is a major problem.

**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)

Actions were taken to recover degraded mangrove at Sundarbans by the Forest Department and at the Sonadia Island.

**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)

Few sea grass beds were identified during the survey under the NCSIP-1 during 1996-97.

Marinelife Alliance/SRCWPP/Forest Department taken initiative to identify location and status of the sea grass bed as green turtle foraging habitat.

### **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]**

Ahmed, B; K.M.N. Huda and G. S.M. Asmat. (1986). The Breeding of Olive Ridley at St. Martin's Island, Bangladesh. J. Zool. 14(I):59-69.

Hasan, M. M. (2009). Tourism and Conservation of Biodiversity: A Case Study of St. Martins Island, Bangladesh. Law, Social Justice & Global Development (An Electronic Law Journal) .

Hossain, M. M. (2004). National Report of Bangladesh Sustainable Management of the Bay of Bengal Large Marine Ecosystem (BOBLME).

Humayun, K. (Undated). Marine Fisheries in Bangladesh An Overview.

Islam, M. Z. (2001). Notes on the Trade in Marine Turtle Products in Bangladesh. Marine Turtle Newsletter 94: 10-11.

Islam, M. Z. (2002). Marine turtle nesting at St. Martin's Island, Bangladesh. Marine Turtle Newsletter 96: 19-21.

Islam M. Z. (2002) Impact of coastal development on sea turtle at St. Martin and Cox's Bazar coast. Threats to in Bangladesh; Technical Report. Marine Life Alliance. 25.

Islam M. Z. (2003) 'Records of sea turtle in Cox's Bazar coast, Bangladesh, Marine Life Alliance. Technical Paper.'

Islam M. Z. (2005) Live leatherback records in Bangladesh: News to IOSEA MoU secretariat 2005.

Islam M. Z. (2005) Impact of coastal development on sea turtle at St. Martin & Cox's Bazar coast and Sonadia Island in Bangladesh; Technical Report. CWBMP.

Islam, M. Z. (2006). Status of leatherback turtles in Bangladesh. Indian Ocean – South-East Asian Leatherback Turtle Assessment IOSEA Marine Turtle MoU – 24-29.

Islam, M. Z., M. S. Islam and S. M. A. Rashid. (1999). Marine turtle conservation program in St. Martin's Island, Bangladesh by CARINAM: A brief review. Tigerpaper. 26: 17-28.

Kabir, D. S. a. S. B. M. (2002). A review of the present state of the protected areas of Bangladesh. Bangladesh Environment 489-503.

IUCN-Bangladesh. (2000). Red Book of Threatened Amphibians and Reptiles of Bangladesh. IUCN-The World Conservation Union. xii+95pp.

Khan, M. A. R. (1982). Wildlife of Bangladesh - A Checklist. Dhaka University, Dhaka. 96pp.

Khan, M. A. R. (1987). Wildlife of Bangladesh - Amphibians & Reptiles. Bangla Academy, Dhaka. Bangladesh.

Mitra SC (1914. Reprinted 2001). 'Jessore-Khulnar Itihas. Rupantar, Khulna.

Quader, O. (2010). Coastal and marine biodiversity of Bangladesh (Bay of Bengal). Proc. of International Conference on Environmental Aspects of Bangladesh (ICEAB10), Japan, Sept. 2010.

Rashid S.M.A. (1986). Conservation Plan for Marine Turtles in St. Martin's Island, Bangladesh VI Nat. Zool. Conf. Chittagong University. 8pp.

Rashid S.M.A. (1997). Bangladesh National Report for the Northern Indian Ocean, Sea Turtle Workshop and Strategic Planning, 13-18 Jan', Bhubenshwar, India.

Rashid, S. M. A. (2002). Letter to the editors: Viewpoint - Sea turtle management in Bangladesh. Marine turtle Newsletter 96: 23.

Rashid, S. M. A. (2004). Faunal diversity of Bangladesh: Conservation Prospects and Constraints. National Biodiversity Strategy Action Plan report to IUCN-Bangladesh Country Office. x + 196 pp.

Rashid, S. M. A. & M. Z. Islam. (1999). Establishing marine turtle hatchery in St. Martins Island, Bangladesh. Proceedings of the 4th Asia-Pacific NGOs Environmental Conference. National University of Singapore. pp. 150-162.

Rashid, S. M. A. & M. Z. Islam. (2005). Review: Conservation and research on marine turtles in Bangladesh. In: Shanker, K & B. C. Choudhury (eds.) Sea Turtles of the Indian Subcontinent. Wildlife Institute of India, Dehradun, India. Pg. 200 - 216.

Thorbjarnarson, J. B., Platt, S.G. and Khaing, S.T. (2000). Sea Turtles in Myanmar: Past and Present. Marine Turtle Newsletter 88: 10-11.

**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

CARINAM conducted a study on the marine turtles nesting in the St. Martin's Island in 1996-98 through the MTSG/Small Grant Program.

Since 2000 NCSIP/MoEF and SMP/MoEF during 2000-04 at St. Martin island.

Marinelife Alliance is conducting monitoring long term basis for St. martin island (data maintaining 1996- present), Teknaf Peninsula Sonadia Island (2005-present).

Current project by Marinelife Alliance/SRCWPP/Forest Department, will have most comprehensive monitoring program for sea turtle nesting along entire coast except Sundarban.

Flipper Tagging program are being conducted and data will be used to identify the current nesting population. Islam (2014).

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

☐ YES ☒ **NO** ☐ UNSURE

Not yet done.

Initiative has been taken by Marinelife Alliance/SRCWPP/Forest Department.

DNA/tissue samples are being collected for the study. A discussion with the respective professors of the University of Alabama, USA has been done to conduct the study.

**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

Tagging of marine turtles at St. Martin's Island was initiated in 2000 by Marine life Alliance (Islam 2004). All the tags were monel (#1005-49, National Band and Tag Co., Kentucky), numbered from N401 to N500. The return address inscribed on the tags was: Research Box 736, Durban, South Africa. The tags were attached to the hind margin of the front flipper (left or right) of both olive ridleys and green turtles. In some cases, the tags were attached to the rear right or left flipper. Sixty-five turtles (olive ridleys and green turtles) were tagged beginning in October 2000. Tagging stopped in March 2001. Tagging provided primary data on multiple clutches, inter-nesting intervals between clutches and nest site fidelity.

Marinelife Alliance produced flipper tags and started tagging in 2011. The tags are numbered BD0001-BD3000 and included in the of IOSEA flipper tag database. tags are Inconel, Model 681s, from NBT-USA.

Currently under the Marinelife Alliance/SRCWPP/Forest Department project sea turtles are tagged being attached.

Olive ridleys were recorded to nest twice during a nesting season with an interval of 14-16 days (average=14.8 days; n=18). There were only three re-nesting records for green turtles, with the nesting interval ranging between 14-17 days (Average=15.3 days; n=3); the females laid eggs two to three times during a season.

**Satellite tracking** ☒ YES ☐ NO

The first-ever sea turtle tracking project in Bangladesh has been initiated by Marinelife Alliance. An Olive ridley turtle – named “Urmee”, which means “wave” in Bangla – was fitted with a Platform Terminal Transmitter (PTT) and released into the Bay of Bengal from Sonadia Island during the evening of 29 March 2010. The signal was lasted for about one year.

Marinelife Alliance/SRCWPP/Forest Department attached so far 8 satellite tag and within next year the project will attach 20 more satellite tags on olive ridley and on green turtle.

Turtle movement can be observed in the website link: [http://www.seaturtle.org/tracking/?project\\_id=487...](http://www.seaturtle.org/tracking/?project_id=487...)

☐ **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

Initiative taken by Marinelife Alliance/SRCWPP/Forest Department.

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

☐ YES ☒ NO ☐ UNSURE

**3.1.7 Is the use of traditional ecological knowledge in research studies being promoted?** [\[BPR, PRI\]](#)

☒ **YES** ☐ NO ☐ UNSURE

Information gathered by Marinelife Alliance, SMP, available to the scientific and local fisher communities. Information is collected from the fishermen on a regular basis through interviews and documented in project reports.

The most common traditional knowledge used is during the turtle walks. The weather conditions (wind, tide) and the intensity of moonlight are some of the clues used by the local fishermen to find nesting turtles. Most of the monitoring and conservation activity are infact conducted through the discussion with community that relates mostly with traditional knowledge. The traditional knowledge also shared with the researchers in India, Sri Lanka and other country people during annual Sea Turtle Symposium.

**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]**

Some activities are initiated in collaboration with SACEP.

There is not much activity regionally except the BOBLME program,, but very little is focused on sea turtle. A regional program on sea turtle for the Bay of Bengal country can be initiated.

**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

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

c) Migrations ☒ **YES** ☐ NO ☐ NOT APPLICABLE

Not yet any discussions done with other parties. Bangladesh sea turtle spent most of the inwater period in India waters so far we see the satellite tracking path. Our turtle died and we lost signal along the coast of Orissa, India.

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]**

Hawksbill turtle - Last nesting recorded in 1998 in St. Martin's Island and since then there has been no nesting record. A young hawksbill was, however, caught in a fishing net in 1997. Very recently one young one recorded at Sonadia with rudimentary hind flipper in June 2014.

Green turtle - significant population decline. Khan 1982 mentioned it to be a common nesting turtle and, presently, it is very uncommon (Rashid & Islam 2005). The nesting habitat varies in some physical features from that of the common olive ridleys; for example, sand grain size & composition, slope angle, and distance from shoreline (Islam 2002, 2011, Rashid & Islam 1999).

Most of the nesting in recent years is by olive ridleys, however, their numbers have declined. The ridley number of records being increased by 2013-14 as the monitoring area and efforts increased.

**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

Reviewed Yearly by Marineliflife Alliance and currently by Marineliflife Alliance/SRCWPP/Forest Department.

**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]**

Currently within project of Marineliflife Alliance/SRCWPP/Forest Department the threats are discussed within the community turtle monitoring people and forest officials along the coast and find solution for possible threat elimination.

**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

The knowledge gathered by some of the MTSG members on the methods for data collection is transferred during various marine turtle workshops to the younger generation who work on marine turtles. The MTSG book on research techniques is use as the standard reference for filed work.

Marineliflife Alliance develop sea turtle ID and various guides for local use in local language.

**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]**

Sharing through regional workshops and scientific publications.

**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

Published data available online.

The total database will be available in future through Marinelife Alliance/SRCWPP/Forest Department in the national database.

## **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]**

Posters, brochures, stickers, booklets, ID guides, T-shirts have been prepared and disseminated for public education and awareness by Marinelife Alliance during the last 12 years.

Video documentation has been prepared and disseminated to the local community people and stake holders.

Marinelife Alliance/SRCWPP/Forest Department is producing a comprehensive set of all kinds of educational materials and documentaries. It would be of great help if international support for editing documentaries are available. Some of the items are shown in the [seaturtlebd.org](http://seaturtlebd.org) website.

### **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

Information provided to the CWBMP personnel by the fishermen on sightings of marine turtles during their fishing trips, and accidental catches are also reported. Tourists are particularly instructed not take a stroll on the beaches between 10pm and 6am. If anyone accidentally comes across a nesting marine turtle they are instructed not to disturb the animal and inform the nearest patrolling team. Local people have been hired to patrol the beaches during night time in all the three coastal ECAs.

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

☒ **YES** ☐ **NO**

Marinelife Alliance/SRCWPP/Forest Department conducting education program in local school. Awareness program is done in local growth centers. A permanent sea turtle center in going to be established by Marinelife Alliance at Cox's Bazar where training and awareness program will be conducted.

**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.**

Marinelife Alliance/SRCWPP/Forest Department sea turtle project directly involving around 100 people for sea turtle monitoring activity that helps them to earn money regularly. Future tourism based activity is underway.

Previously temporary and project-based alternative income generating activities and livelihood skill development training were undertaken for the local community people at St. Martin's Island by the St. Martin's Project, and CWBMP but unfortunately they did little good for the community.

**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]**

The local people engaged in Marinelife Alliance/SRCWPP/Forest Department are paid and most of them earn throughout the year even in non nesting rainy season.

The Marinelife Alliance project is also engaged offshore fishermen. It is very important to engaged all boats operated in the fishing territory of Bangladesh. Fishermen get T-shirts, gift items, net cutting device, and small honorarium to attend the meeting and discussion program on bycatch. Handicraft centers for sustainable economic activity is very necessary for each of the sea turtle monitoring centers and for this we need supports.

The previous Village Conservation Groups (VCG) formed by the CWBMP infact not sustainable and could not be followed as the activity changed the moral attitude of the leaders of the group to do mismanagement of the Group money for personal purpose only not for group as a whole and conservation.

**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]**

The Forest Department started the Strengthening Regional Cooperation for Wildlife Protection Project(SRCWPP). and Marinelife Alliance conducting the sea turtle project under the SRCWPP with project ID W2/06/2013. So far the comprehensive work for sea turtle. The aim of the project is to establish the activity through Forest Department with research organization support and make long term monitoring program. The outcome result and the action plans of the project will be implemented by the Forest department in coming years with NGO participation.

**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

Forest Department is the management authority for CITES. Information not available.

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

☒ YES ☐ NO ☐ NOT APPLICABLE

Forest Department officials regularly attend CITES training programs. Details not available.

**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

Under the SRCWPP forest department started Wildlife Crime Control Unit (WCCU) and professional wildlife officers has been recruited to locate and inspect the illegal wildlife materials around the country. Sea Turtle is being importantly observed and much vigilant than before.

this Bangladesh Coast Guard and Bangladesh Navy are in place to check all boats for illegal trade (in general) throughout the coast line of Bangladesh. The Customs Department is vigilant at all entry/exit points of the country.

**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]**

Sufficient information not available.

Not yet raised anything like that. But Deep Sea Port issues have been written as IOSEA website article several years before. It would be good to raise the issues in coming meeting SS7. The deep sea port is in government priority but country authority is waiting only for funding. The port if established will destroy Sonadia island and adjacent area sea turtle nesting habitat and mangrove, and also will pollute the long Cox's Bazar sea beach, nesting area through lighting and oils, ballast water. That ultimately will destroy tourism of Cox's Bazar.

**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]**

According to the Wildlife Preservation Act 1974 trade in protected animals is prohibited in Bangladesh. Government of Bangladesh has issued a circular in this regard. Revised Wildlife Preservation Act 2012 included sea turtle in the protected list and ban trade related to sea turtles. Also Forest Department started publishing the laws notifications in national newspaper. Doing the current enforcement of the application of laws and through the Marineline Alliance/SRCWPP/Forest Department project it is being practiced by the local Forest officials.

**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

The actions are being implemented by the Marineline Alliance/SRCWPP/Forest Department will be incorporated as national action plan within next year to follow by the forest department.

**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) Protection of known nesting beaches and fishing grounds 2) Bycatch Reduction 3) Research and monitoring 4) Capacity building, Motivation and awareness 5) Legislation up-dating 6) Regulating tourism 7) Socio-economic survey 8) Enforcement and punitive measures 9) Network development and bilateral cooperation with other regional countries. 10) Priority sites include: St. Martin's Island, Sonadia Island, Cox's Bazaar -Teknaf beach.

**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]**



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

Bangladesh has signed the CBD, CMS, and CITES treaties, and is promoting synergies with regional and other countries under CBD, CMS and CITES.

Bangladesh is signatory of IOSEA agreement. That is the best fit for sea turtle conservation with regional cooperation.

Rashid, S. M. A. & M. Z. Islam. (2005). Review: Conservation and research on marine turtles in Bangladesh. In: Shanker, K & B. C. Choudhury (eds.) Sea Turtles of the Indian Subcontinent. Wildlife Institute of India, Dehradun, India. Pg. 200 - 216.

**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]**

Yes (details not available)

BOBLME  
BIMSTEC

**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]**

Its difficult for local community to identify sea turtle to species level. But since Olive ridley and green turtle they can identify those very well. Previously identification was a problem. Currently through several years training community now capable to conduct the work.

We need better knowledge to develop TED for MSBN. Currently population study and the in-water research knowledge technique is lacking in our country with logistics and finance.

**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]**

Marinelife Alliance/SRCWPP/Forest Department provided training to local community before the monitoring season. It is regular and will be conducted every year.

Marinelife Alliance will provide training and orientation program for the Forest Department officials regularly in shortly. The training and short course program for the University students will be developed soon in coming years.

**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]**

Locally it is being in the process.

Internationally Marinelife Alliance has direct research collaboration with WIDECAST-USA, Univresity of Alabama, USA, Mote Marine Lab, USA, Seaturtle.org webbased various program etc.

**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]**

Law and legal provisions exit, but enforcement is still limited before. Now through the SRCWPP forest department is enforcing illegal wildlife activity through WCCU and through the Marinelife Alliance/SRCWPP/Forest Department project.

Under the Forest Department a separate wild management and nature conservation division has been created which has special laws and legal provisions under the Wildlife Act 2012.

See: <http://www.bforest.gov.bd/>

**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

The review of The Wildlife Act 1974 has been done.

The Wildlife Act 2012 included the sea turtle as protected species.

**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

The Wildlife protection law is there. But there is large gap in implementing this actions at Cox's Bazar beaches as other departments expand there tourism activity without any difficulties and ignoring the wildlife laws.

**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]**

The country intends to contribute in the future. IOSEA memorandum has already played an important role in the field of conservation.

**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

Subject to final approval of the responsible authority.

**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]**

The GoB is contributing in kind through providing information and financing in-country projects to protect marine turtles.

e.g. Marinelife Alliance/SRCWPP/Forest Department...

**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]**

The GoB invested more than US \$20,000 from its own revenue budget for the sea turtle conservation as part of St. Martin's Project (2000-2006), A large amount also used for sea turtle activity through DoE in 2005-09.

Currently SRCWPP of the Forest Department is supporting Marineliflife Alliance 220,000 US\$ specifically for the protection of sea turtle.

**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

FWS-US, Whitley Fund for nature, KNCF-japan helped Marineliflife Alliance and other NGOs to conduct sea turtle work during 2005-present.

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

Not yet

**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

Wildlife and Nature Conservation Circle of Forest Department.

**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

Wildlife and Nature Conservation Circle of Forest Department has been identified and entrusted with the responsibility to conserve the activities of marine turtles.

**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

Review of the situation for wildlife and nature conservation with in the Forest Department.

The Department is reorganizing for better management in future with emphasize for wildlife conservation and management.

#### **Comments/suggestions to improve the present reporting format:**

The format is quite exhaustive and it takes a lot of time to complete. Moreover information provided in this document require information from various government agencies which at times is difficult to get. However there is a provision to correct or update if in any case the information provided is either not satisfactory or incomplete.

In the site threat information sheet the use of the word "harvest" contradicts with "exploitation". Usually "harvest" is for human use/consumption or other commercial use. Whether the killings of turtles on land without any reason/use be also treated "harvest" needs clarification.

#### **Additional information not covered above:**

Bangladesh needs support from regional and other IOSEA member countries to develop her capacity in monitoring and application of technological developments in the field of marine turtle studies.

More funding needs to be tapped. The fact is that relevant government agencies have limited technical know-how in conservation of marine turtles particularly related to the use of TEDs. Training opportunities may be created by IOSEA for people from the relevant government departments.

IOSEA may organize workshops on marine turtle related events in collaboration relevant agency in Bangladesh to raise the profile of marine turtles and awareness among the policy makers, NGOs and the general masses.

IOSEA may also facilitate researchers/educational institutions/NGOs for working on marine turtles.

#### **Other Citations**

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BOBLME (2011) Country report on pollution in the BOBLME – Bangladesh. BOBLME-2011-Ecology-01.

CWBMP (2006a) St Martin's Island ECA Draft Conservation Management Plan Coastal and Wetland Biodiversity Management Project BGD/99/G31

CWBMP (2006b) Sonadia Island ECA Draft Conservation Management Plan Coastal and Wetland Biodiversity Management Project BGD/99/G31

CWBMP (2006c) Teknaf Peninsula ECA Draft Conservation Management Plan Coastal and Wetland Biodiversity Management Project BGD/99/G31

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DOF (Department of Fisheries). 2008. Fisheries Resources Development Campaign-2008. Directorate of Fisheries, Dhaka. 95 p. (in Bengali).

DoF. 2009. Fishery Statistical Yearbook of Bangladesh. Department of Fisheries, Bangladesh. 42p.

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