



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



### Bahrain

#### GENERAL INFORMATION

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

The General Commission for the Protection of Marine Resources, Environment and Wildlife

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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]

The Green and the Hawksbill turtles are the only turtle species which are frequently found in Bahrain's waters; with Green turtles being more abundant than Hawksbills. Miller (1989) suggested a ratio of 1 hawksbill to 23 green turtle in the Saudi waters of the Arabian Gulf. A similar ratio is likely to exist in Bahrain waters which are located just short distance from Saudi waters.

An aerial survey conducted in November 1985 (Miller, 1989) over Bahrain's coastal areas indicated that turtles were not nesting within Bahrain's territories. In the case of Bahrain's marine turtles, it likely that they nest on the Karan, Kurayan, Jana, Jurayed and Harqus islands found off the coast of Saudi Arabia. Hawksbill turtles nest on Ras Laffan coastline of Qatar.

Green Turtles forage in Bahrain's shrimp fishing areas. This has caused frequent entrapment of turtles into shrimp trawling nets. The total turtle incidence in shrimp trawl nets was estimated for five seasons; 1998-99 to 2002-2003. The per season total incidence was 298 +/- 184, 264 +/- 171, 433 +/- 243, 394 +/- 227, 234 +/- 177 resulted by 39147 +/- 1269, 35671 +/- 12400, 42747 +/- 13637, 37071 +/- 11781, 43923 +/- 11994 fishing days for the respective seasons (Abdulqader, 2006).

The Bahrain coasts have witnessed considerable development for relatively long periods. These developments initiated numerous dredging, reclamation, and sand excavation activities in the marine environment. These activities can cause direct turtle injuries and mortalities. In addition these activities can destroy or minimize the sea-grass areas, which indirectly affect the Green turtle population.

From September 2007 a monitoring program on dead marine turtles was started (Abdulqader, 2008). Through questionnaire survey, it was estimated that a minimum number of 170 turtles died in 2007. The total number of cases reported to the program was 73 cases; out of these, 57 cases were inspected by the program. Out of the inspected

cases; 56 cases were Green turtles, and one case was a Hawksbill turtle.

Records of turtle sightings were collected along with an aerial survey conducted between 1st-5th October 2006 on Bahrain's dugong population (Hodgson, 2006). The minimum turtle population estimated provided by this survey was 284 (CI=190, 378), with the highest number occurring in the northern waters.

**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]**

From September 2007 a monitoring program on dead marine turtles was started. This program provides statistics on turtle mortalities which will help demonstrate the size of the problem. The program also provided evidence on the responsible sectors for these mortalities. Such information will empower the concerned institutions to facilitate the implication of marine turtle protection requirements.

Shrimp trawl fishery was found responsible for most turtle mortalities. It is believed that a considerable percentage of these mortalities could be stopped if fishermen were aware about handling procedures of living turtles.

Further programs were found necessary for protecting marine turtles in Bahrain's waters such as: \*Monitoring turtle incidences in shrimp trawls.

\*Adopting techniques and management procedures to minimize the impact of shrimp trawls on marine turtles.

**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]**

Abdulqader et al. (2004) conducted a socio-economic survey on all fishery sectors, including shrimp fishery. Furthermore, Abdulqader (2007) assessed the economical and financial performances of these fishing sectors.

**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: Increase in number of shrimp trawlers
- Other2:
- Other3:
- None of the above or Not Applicable

The number of shrimp trawlers has increased dramatically since the mid-1980s from 40 to 400 boats in the 1998/99 season. The number of shrimp trawlers has remained at level of 350 boats in recent years. This increase in the number of boats caused an increase in turtle incidence cases.

**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 fisheries authority introduced measures which aimed to reduce the number of shrimp fishing boat or to reduce the fishing efforts of these boats. These attempts achieved limited success and over-fishing continues. The measures introduced include the following:

\*Stopping issuance of new fishing licenses from 2002 to 2005 (internal procedure).

\*Obligated by law for Bahraini captains to be present on board the fishing boat when it is involved in fishing operations. The purpose of this regulatory tool is to support national fishermen and indirectly to reduce the number of boats or to reduce their efforts.

**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

About 400 boats are working in shrimp fishing. The total length of these boats ranges from 5 to 23 m. Most of them are fibreglass powered boats, using GPS for navigation. They are fishing in areas of 2 to 20m depth. The total incidence and fishing days per season were estimated as follows (Abdulqader, 2006): 1998-1999: 298 +/- 184 based on 39,147 +/- 1,269 fishing days. 1999-2000: 264 +/- 171 based on 35,671 +/- 12,400 fishing days. 2000-2001: 433 +/- 243 based on 42,747 +/- 13,637 fishing days. 2001-2002: 394 +/- 227 based on 37,071 +/- 11,781 fishing days. 2002-2003: 234 +/- 177 based on 43,923 +/- 11,994 fishing days. In addition Abdulqader (2008) estimated that a minimum number of 170 turtles died during 2007. Shrimp trawlers were found to be responsible for most of these mortalities.

**b) Set gill nets:**  YES  NO

Used on a small scale.

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

Used for benthic species

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

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

Longline was introduced to Bahrain's waters in the 1990s. In 2005, this method was practiced at 54% of landing sites. This gear is used in relatively shallow waters and targeted several fish groups including; grouper, seabream, Spanish mackerel and miscellaneous fish groups. It is possible that Hawksbill turtles could become hooked in this gears; but there is no further information on this at present.

**f) Driftnet:**  YES  NO

Used in Spanish mackerel fishery

**g) Other1:**

This gear is widely used in Bahrain waters and traditionally targets the finfish species. Recently the scope of this gear extended to include crab and cuttlefish. The dead marine monitoring program inspected one death case in 2007 and two death cases in 2008 for Hawksbill turtles trapped in wire trap used for finfish fishery.

**h) Other2:**

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: See response to 1.4.1 (a)

***b) Set gill nets***

**Fishing effort:**

RELATIVELY HIGH  MODERATE  **RELATIVELY LOW**  NONE  UNKNOWN

**Perceived Impact:**

RELATIVELY HIGH  MODERATE  **RELATIVELY LOW**  NONE  UNKNOWN

Source:

***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: See response to 1.4.1 (e)

***f) Driftnet***

**Fishing effort:**

RELATIVELY HIGH  MODERATE  RELATIVELY LOW  NONE  UNKNOWN

**Perceived Impact:**

RELATIVELY HIGH  MODERATE  RELATIVELY LOW  NONE  UNKNOWN

Source: No program is in place to monitor dead turtles. This makes it difficult to quantify the problem, and to determine possible causes of death.

**g) Other1 (from 1.4.1): Wire trap 'gargoor'****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):****Fishing effort:**

RELATIVELY HIGH  MODERATE  RELATIVELY LOW  NONE  UNKNOWN

**Perceived Impact:**

RELATIVELY HIGH  MODERATE  RELATIVELY LOW  NONE  UNKNOWN

Source:

**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]**

Despite the prohibition on the use of drift gillnets in Bahrain's waters, this gear is still commonly used to catch Spanish mackerel during the season from September to March. This gear is likely to cause the entrapment and consequent death of marine turtles, but no evidence has yet been produced to substantiate level of impact.

Furthermore, a considerable amount of illegal fishing efforts are conducted during the shrimp fishing ban period which usually extends from mid-July to mid-March. This illegal fishing can cause marine turtle entrapment and consequent death if conducted in sea-grass bed areas.

**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

The on going Dead Marine Turtle Monitoring program disseminated information among fishermen information on the proper handling procedures of live turtle caught in fishing gear. It is not known at this stage if fishermen are adopting these procedures.

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

Several experimental trials have been conducted on Bycatch Reduction Devices (BRDs) which includes Turtle Excluding Devices (TEDs). In addition, workshops have been conducted by the Global GEF/UNEP/FAO project in Bahrain and in other Arabian Gulf countries to train and demonstrate the use of BRDs.

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

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

Shrimp fishing is banned for 4 months, usually from mid-March until mid-July.

h) **Effort management control**

YES  NO  NOT APPLICABLE

See response to 1.3.3

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

**Vessel monitoring systems**

YES  NO  NOT APPLICABLE

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

YES  NO  NOT APPLICABLE

The concerned authorities conducted inspections that were not necessarily focused on turtles but for other issues, particularly during shrimp ban period. There is a need for additional supports to the enforcement bodies in order to achieve marine turtle's management goals.

**Training programmes / workshops** to educate fishers

YES  NO  NOT APPLICABLE

Abdulqader et al. (2004) found that 3.9% of the fishermen had participated in training program. The subject of these programs includes navigation, diving, making and maintaining trawl nets, fish finding devices, engine maintenance and swimming. Abdulqader et al. (2004) also found that about 66% of the fishermen thought that they are not in need for any type of training.

[Informative videos, brochures, printed guidelines](#) etc.

YES  NO  NOT APPLICABLE

Has been done to inform fishermen on several fisheries issues.

**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

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

Shrimp fishermen are obliged to report their daily activities in a standard logbook. The information submitted includes date of fishing, name of fishing area, catch quantities (shrimp & other species), and effort (fishing hours). In addition, fishermen are required to record the number of turtles caught in the trawl. All (99%) fishermen submitted their monthly reports with only 40% being correct and 25% reporting turtle incidences.

**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

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

Drift nets are used to catch Spanish mackerel. This net can be extended to several kms. The use of drift gillnet is banned in Bahrain waters according according to item 20 of the Bahrain's fisheries law for the year 2002.

**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

Decree No. 3 for the year 2003 issued by the General Commission for the Protection of the Marine Resources, Environment, and Wildlife prohibited the catch of dugongs, turtles and dolphins in waters of the Kingdom of Bahrain.

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

**Egg consumption**

YES  NO

HIGH  MODERATE  LOW  UNKNOWN

**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

**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

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]

Not applicable

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
<b>Monitoring/protection programmes</b>	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> EXCELLENT <input type="checkbox"/> GOOD <input type="checkbox"/> LOW <input type="checkbox"/> UNKNOWN
<b>Education/awareness programmes</b>	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> EXCELLENT <input type="checkbox"/> GOOD <input type="checkbox"/> LOW <input type="checkbox"/> UNKNOWN
<b>Egg relocation/hatcheries</b>	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> EXCELLENT <input type="checkbox"/> GOOD <input type="checkbox"/> LOW <input type="checkbox"/> UNKNOWN
<b>Predator control</b>	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> EXCELLENT <input type="checkbox"/> GOOD <input type="checkbox"/> LOW <input type="checkbox"/> UNKNOWN
<b>Vehicle / access restrictions</b>	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> EXCELLENT <input type="checkbox"/> GOOD <input type="checkbox"/> LOW <input type="checkbox"/> UNKNOWN
<b>Removal of debris / clean-up</b>	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> EXCELLENT <input type="checkbox"/> GOOD <input type="checkbox"/> LOW <input type="checkbox"/> UNKNOWN
<b>Re-vegetation of frontal dunes</b>	
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> EXCELLENT <input type="checkbox"/> GOOD <input type="checkbox"/> LOW <input type="checkbox"/> UNKNOWN

**Building location/design regulations** YES  NO  N/A EXCELLENT  GOOD  LOW  UNKNOWN**Light pollution reduction** YES  NO  N/A EXCELLENT  GOOD  LOW  UNKNOWN**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**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) [\[BPR, SAP\]](#)

No regulations are being implemented at present. Critical habitat in relation to marine turtle have not yet been defined by legislation.

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

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

Item No. 22 of the Fisheries Law (No. 20 for the year 2002) prohibits the use of mass mortality methods by the use of poisons, explosives, electrical and any other method that has similar effects.

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)

Bahrain's main natural mangrove area is restricted to a small area at Ras Sanad. It is believed that this habitat does not impact the existence and survival of marine turtles. Mangroves are found in shallow areas which are unlikely to be used by the sub-adult and immature adult turtles. It is worth mentioning that about 90% of the mangrove areas were reclaimed in the mid-1970s during the construction of Manama-Sitrah causeway.

**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]**

Abdulqader, E. A. A. 2006. Turtle incidences in shrimp trawl nets during the seasons 1998/99 to 2002/03 in Bahrain's waters. Bahrain Centre for Studies and Research, pp. 24

Abdulqader, E. A. A., 2008. The death of marine turtles in the Kingdom of Bahrain's waters: Report of the Dead Marine Turtle Monitoring Program for the last quarter of 2007. Bahrain Center for Studies and Research, pp. 37. (in Arabic)

Al-Zayani, A. K. 2003. The selection of marine protected areas (MPAs): A model for the Kingdom of Bahrain. Centre for Environmental Sciences, University of Southampton, Ph D thesis, pp. 268.

Hodgson, A., 2006. The distribution, abundance and conservation of dugongs and other marine megafauna in Bahraini waters. Geomatec, James Cook University. pp. 50.

Miller, J. D. 1989. An assessment of the conservation status of marine turtles in Saudi Arabia. MEPA Coastal and Marine Management Series, report No. 9, Vol. 1, pp. 209.

Miller, J. D., Limpus, C. J., & Ross, J. P. 1989. An assessment of the conservation status of marine turtles in Saudi Arabia. MEPA Coastal and Marine Management Series, report No. 9, Vol. 2, pp. 63.

**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

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

YES  **NO**  UNSURE

**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**

Satellite tracking  YES  NO

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

**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]**

Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution.

Protocol Concerning Marine Pollution Resulting from the Exploration and Exploitation of the Continental Shelf of the Gulf.

Convention on Biodiversity

**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

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]**

Green turtle  
Hawksbill turtle

**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

**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]**

The on-going dead marine turtle monitoring program provided evidence that shrimp trawl fishery is responsible for most of the marine turtle mortalities in the Kingdom of Bahrain's territorial waters. This program also estimated that a minimum number of 170 turtles might have died in 2007. These results support concerned authorities in enforcing regulations and measures to minimize fishery impact on marine turtles.

**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

**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]**

Information is exchanged through published reports.

**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

#### **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]**

No special educational, awareness and information program has been carried out.

**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

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

YES  NO

The Bahrain National Museum and Al-Areen Wildlife Park could be considered as information centers on wildlife, but not specifically on marine turtle.

**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.**

There is no livelihood dependency on turtle exploitation in Bahrain.

**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]**

At the present no initiatives have been undertaken or are planned in this area.

**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]**

No specific initiatives are undertaken at the present to encourage cooperation of sectors concerned.

**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

Bahrain is not a party in CITES.

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.)? [\[INF\]](#)

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. [\[INF\]](#)

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

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? [\[PRI\]](#)

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 type="checkbox"/> IMPORTANT <input checked="" type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Incidental capture by foreign fleets	<input type="checkbox"/> ESSENTIAL <input type="checkbox"/> IMPORTANT <input checked="" type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Enforcement/patrolling of territorial waters	<input type="checkbox"/> ESSENTIAL <input type="checkbox"/> IMPORTANT <input checked="" type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Hunting/harvest by neighboring countries	<input type="checkbox"/> ESSENTIAL <input type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input checked="" type="checkbox"/> NOT AT ALL
Poaching, illegal trade in turtle projects	<input type="checkbox"/> ESSENTIAL <input type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input checked="" type="checkbox"/> NOT AT ALL
Development of gear technology	<input checked="" type="checkbox"/> ESSENTIAL <input 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 type="checkbox"/> IMPORTANT <input checked="" type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL
Alternative livelihood development	<input type="checkbox"/> ESSENTIAL <input type="checkbox"/> IMPORTANT <input type="checkbox"/> LIMITED <input checked="" type="checkbox"/> NOT AT ALL
Identification of turtle populations	<input type="checkbox"/> ESSENTIAL <input type="checkbox"/> IMPORTANT <input checked="" type="checkbox"/> LIMITED <input type="checkbox"/> NOT AT ALL

Identification of migration routes	<input checked="" type="checkbox"/> ESSENTIAL <input 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 type="checkbox"/> IMPORTANT <input checked="" 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]**

ROPME (Regional Organization for the Protection of the Marine Environment): Bahrain, I.R. Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates are the member countries.

PERSGA (Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden)

The GCC Permanent Committee for Fisheries & the GCC Permanent Committee for Environment: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates are the member countries.

**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]**

None

**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]**

**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]**

Bahrain has participated in several workshops, meetings and seminars with respect to shrimp bycatch reduction, initiated by the global GEF/UNEP/FAO project.

**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]**

**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]**

Marine turtle are not intentionally caught in Bahrain. In addition, the decree No. 3, for year 2003 prohibits catching marine turtles in Bahrain's 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

Most of the regulations applied in Bahrain are precautionary in nature; these regulations normally will not require reviewing on a routine basis.

**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]**

Bahrain can approach other GCC countries through the respective channels and propose their participation in the MoU.

**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]**

None

**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]**

Up to this time (June 2007) there have been no fund allocations for marine turtle conservation.

**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

The General Directorate for the Protection of the Environment and Wildlife is the concerned agency for the conservation of wildlife in Bahrain. This agency will be the leading agency if there are special requirements in the future for marine turtle protection plan.

**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

No conservation and management plan for marine turtles are adopted at the present.

**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:**