Comoros

GENERAL INFORMATION

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

Parc Marin de Moheli (Moheli Marine Park - MMP)
Direction nationale de l'Environnement (National Environment Directorate)

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

Biodiversity Project
ADSEI - Association pour le Developpement Socio Economique d'Itsamia (NGO); Kelonia (Reunion)

Designated Focal Point:

Direction nationale de l'Environnement
Ministere du Developpement Rural, de la Peche, de l'Artisanat et de l'Environnement (MDRPAE)
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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 Comoros Archipelago comprises four Islands, namely Grand Comore, Moheli, Anjouan and Mayotte. The Federal Islamic Republic of Comoros consists of Grand Comore, Anjouan and Moheli; Mayotte is an overseas territory ("community") of France, whose status is scheduled to change to "oversees department" in 2011.

The dominant marine turtle species occurring in the Comoros are green turtles (*Chelonia mydas*) and hawksbill turtles (*Eretmochelys imbricata*). Green turtles are the most abundant species in the region (Fretey and Fourmy 1996; Ben Mohadji et al. 1996; Project Biodiversity 2000). There have been a few observations of leatherback (*Dermochelys coriacea*) and loggerhead (*Caretta caretta*) turtles in the region, none of which is known to nest in the archipelago (Mortimer 1993; Ben Mohadji et al. 1996).

Both green and hawksbill turtles have been noted to nest in the Comoros (Frazier 1985; Mortimer 1993), but only green turtles have been reported to nest here in recent years (Woodworth 1992; Project Biodiversity 2000). Nesting occurs mainly on Moheli and nearby islands (Ben Mohadji 1996; Project Biodiversity 2000). Of the 30 beaches constituting the Moheli Marine Park (MMP), the most important are: Five beaches in Itsamia - Moheli (for nesting and feeding); and seven beaches on the small islands of Nioumachoi (for nesting and feeding). Of lesser importance: Five beaches in the north of Moheli; four beaches in Grande Comore (nesting), which are not frequented by turtles anymore; and three beaches in Anjouan (for nesting and feeding), also not frequented any more.

A small number of hawksbills do, however, appear to nest on Mayotte (Fretey and Fourmy 1996). Of the islands comprising the Comoros Archipelago, Moheli and Mayotte provide the most important feeding grounds (Frazier 1985; Ben Mohadji 1996). Habitat destruction and coastal bathymetry (narrow, steep coastal shelf - Mortimer 1993) results in limited feeding sites on Grand Comore and Anjouan.

The green turtle population of the Comoros showed a decline between 1972/1973 and 1994 (Woodworth 1992; Ben Mohadji et al. 1996). Previous estimates for green turtles in the Comoros Archipelago were 1100 to 1800 nesting

females (Frazier 1985). More recent estimates for the Comoros indicate a possible increasing trend in nesting population numbers (NMFS/FWS 2007a): 7000 to 8100 (on Moheli Island, Ben Mohadji and Paris 1999), 6000 (Project Biodiversity 2000), and 5000 reproducing females (NMFS/FWS 2007a, for the year 2000). Bourjea et al. (2007) concluded that the nesting green turtle population of Mayotte is stable and healthy, averaging 1545 females per annum. Hawksbills numbers (currently estimated at 10 - 50 nesting females), however, are declining (NMFS/FWS 2007b).

Habitat destruction due to the mining of sand and live corals for building purposes, and dynamite fishing and coral bleaching, is of great concern in the Comoros (Project Biodiversity 2000; Ballorain 2002). It causes the direct destruction of nesting and forage grounds, and in addition leads to erosion, particularly during the wet season. Grand Comore and Anjouan in particular are affected by these practices. The transition of forest watersheds to agricultural land exacerbates coastal erosion, which also affects seagrass beds around the islands (Project Biodiversity 2000).

Poaching of nesting green turtles increased from an estimated 13 to 44% (or about 800 turtles per annum) of the nesting population on Moheli, between 1972 and 1994 (Frazier 1985; Mortimer 1993; Project Biodiversity 2000). Turtle meat is either consumed on the island, or sold on Anjouan Island (Mortimer 1993). Hunting pressure on nesting turtles is even greater on Grande Comore and Anjouan. Although eggs are not frequently harvested from nests, nesting females are often deliberately slaughtered before they were able to nest - reportedly to enhance the taste of the meat - resulting in essentially the same outcome (Mortimer 1993). The introduction of motorboats ("japawa") has made isolated (nesting) beaches more accessible, and has also made transport of turtles between islands much easier (Ben Mohadji et al. 1996). Poor law enforcement, including in Moheli Marine Park (due to a lack of funding and capacity), is worsening the current situation (C3 Comoros 2007; Hauser et al. 2008).

Other threats to marine turtles in the region include the use of poison for fishing, the use of various fishing nets (banned by law but employed by subsistence fishermen), waste disposal on beaches, and pollution caused by passing maritime traffic (Ben Mohadji et al. 1996).

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]

- Conservation and management by local communities (MMP): involvement of eco-guards (from local communities) for sensitizing local communities, schools, fishermen etc.
- Monitoring of nesting beaches (Itsamia) with the help of Kelonia (marine turtle observatory, La Reunion)
- Policy and involvement of the population against poaching (by means of law enforcement)
- Information, education, and awareness campaigns (eg. articles in newspapers (Al Watwan etc.), radio and TV programmes.
- National day of marine turtles, held every year (28 May) since 1997. It involves different activities aimed at communities and the youth in particular. Year after year, the national day of marine turtles is increasingly frequented.
- NGO participation (eg. "C3" and "Kelonia") and development of conservation and awareness programs (t-shirts, videos, photos etc)
- Village associations: A number of village associations - volunteer civic organisations dealing with, for example, cultural, health and environmental issues - have become involved with the protection of marine turtles (Mortimer 1993). These include the villages of Itsamia, Hoani, Bimbini and Djoiezi.

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]

- Investigation of the sale and consumption of turtles (1998) and study about the price.
- Anthropologic thesis (Kelonia) about traditional use of marine turtles in Itsamia Village (2006) with film support.
- Investigation into the socioeconomics of subsistence fishing in Moheli (Tilot 1994).
- Comics (Mwana Nyamba: "Turtle Child") about environmental issues (2000-2003).
- Successful example of ecotourism by a local association (ADSEI - Association pour le Developpement Socio Economique d'Itsamia / Association for the Socio-economic Development of Itsamia).

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: Need for marine turtle meat as food for a part of the population (on the coast)*

☐ Other2:

☐ Other3:

☐ None of the above or Not Applicable

*Turtle meat is much cheaper than other meats, hence making it a very affordable source of protein (Mortimer 1993; Project Biodiversity 2000).

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)

Involvement of local communities in ecotourism activities (example of Isamia Village); sensitizing of the Grande Comore and Anjouan Islands (through policy and media) on the importance of conserving marine turtles (notably in Moheli).

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

b) Set gill nets: ■ YES ☐ NO

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

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

e) Longline (shallow or deepset): ■ YES ☐ NO

f) Driftnet: ■ YES ☐ NO

g) Other1:

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: National Environment Direction (DNE Comores); Moheli Marine Park (MMP)

b) Set gill nets

Fishing effort:

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

Perceived Impact:

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

Source: National Environment Direction (DNE Comores); Moheli Marine Park (MMP)

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: National Environment Direction (DNE Comores); Moheli Marine Park (MMP)

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: National Environment Direction (DNE Comores); Moheli Marine Park (MMP). No data available on "Illegal, Unregulated and Unreported" (IUU) fishing.

e) Longline (shallow or deepset)

Fishing effort:

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

Perceived Impact:

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

Source: National Environment Direction (DNE Comores); Moheli Marine Park (MMP). No data available on "Illegal, Unregulated and Unreported" (IUU) fishing.

f) Driftnet

Fishing effort:

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

Perceived Impact:

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

Source: National Environment Direction (DNE Comores); Moheli Marine Park (MMP). No data available on "Illegal, Unregulated and Unreported" (IUU) fishing.

g) Other1 (from 1.4.1): **Spear fishing**

Fishing effort:

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

Perceived Impact:

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

Source: Comoros does not have any control of fisheries in the high seas and we do not have any data in this field. (National Environment Directorate (DNE Comores); Moheli Marine Park (MMP)).

h) Other2 (from 1.4.1): Dynamite fishery

Fishing effort:

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

Perceived Impact:

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

Source: National Environment Directorate (DNE Comores); Moheli Marine Park (MMP); Ben Mohadji et al. 1996

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

Illegal fishing is frequent in Comoros waters, but we do not have any information on the extent. Notably, in the Moheli Marine Park (MMP) and some other fishing zones, illegal fisheries are known (according to local NGOs), but authorities usually do not enforce the law with foreign fisheries.

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

No devices are used, as such, but sometimes there is a control of the size of the nets.

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**

No TEDs are used because we do not have this kind of fishery.

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

Monitoring organized by the Direction Nationale des Ressources Halieutiques

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

Until the end of 2006, just a few studies were conducted on stocks and fishery (Direction Nationale des Ressources Halieutiques, Moheli Marine Park), but we expect to improve data thanks to European Union funds on fishery studies (fishery protocols).

h) **Effort management control**

■ **YES** ☐ NO ☐ NOT APPLICABLE

Laws are already in place but not effectively applied in most of the fishing areas excluded in the MMP.

■ **Other (list and explain):**

Awareness/information

☐ 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

Not yet

Vessel monitoring systems

☐ YES ■ **NO** ☐ NOT APPLICABLE

Not yet

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

■ **YES** ☐ NO ☐ NOT APPLICABLE

Inspections are sparsely conducted.

Training programmes / workshops to educate fishers

■ **YES** ☐ NO ☐ NOT APPLICABLE

A fishermen syndicate and the Direction Nationale des Ressources Halieutiques work together on educating fishermen.

Informative videos, brochures, printed guidelines etc.

☐ YES ■ **NO** ☐ NOT APPLICABLE

Not yet

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]

For the moment, data collection, research and development are not done with a view to sea turtle conservation. On the other hand, Comorian fisheries do not have a real impact with respect to incidental captures.

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

Information is exchanged with the European Union. Technical assistance was provided in 2007 aimed at improving technologies and data collection in Comoros.

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]

There is a law that forbids the use of this kind of fishery. The Comorian fleet does not have large scale driftnets, but control of foreign fleets is not effective. No information available on commercial fisheries is available.

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

International (CITES), regional instruments (Nairobi Convention), and national laws (Decrets presidentiels et arrete ministeriel). Specifically, the capture and commercialisation of turtles are forbidden throughout the national territory (Presidential Decree No. 79-012, April 1979 and the Interministerial Decree No. 92-015, March 1992; Mortimer 1993).

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

In Comoros, there has not been general consumption of turtle meat because of religious and traditional aspects. An anthropologic thesis has been prepared on cultural and economic issues of marine turtle uses (Kelonia, Reunion). However, the situation is changing, with people of different religious customs migrating between the islands, who introduce the idea of turtle meat consumption to areas where previously it was not eaten (Mortimer 1993). The price of turtle meat is lower than that of other meats, which also results in increased turtle meat consumption (Mortimer 1993; Projects Biodiversity 2000).

Egg consumption

■ **YES** ☐ NO — ☐ HIGH ■ **MODERATE** ☐ LOW ☐ UNKNOWN

Eggs appear to be of lesser importance than turtle meat (Mortimer 1993; Ben Mohadji 1996).

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

e.g. Initiatives by the UK-based NGO, C3 Comoros.

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:

Poaching of nesting green turtles increased from an estimated 13 to 44% (or about 800 turtles per annum) of the nesting population on Moheli, between 1972 and 1994 (Frazier 1985; Mortimer 1993; Project Biodiversity 2000). Hunting pressure on nesting turtles is even greater on Grande Comore and Anjouan. Although eggs are not frequently harvested from nests, except when fishermen failed to catch turtles, nesting females are often deliberately slaughtered before they were able to nest - reportedly to enhance the taste of the meat - resulting in essentially the same outcome (Mortimer 1993; Ben Mohadji 1996).

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

■ **YES** ☐ NO ☐ UNKNOWN

The MMP has eco-guards who inform and survey the sensitive zones (nesting beaches) with the support of local associations (eg. ADSEI's fight against poaching). Awareness programmes and enforcement of laws have to be well-applied for efficient management.

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]

There are some regional (Indian Ocean Commission) projects on fisheries to improve the conservation of coastal and marine resources.

The MMP has good cooperation with Kelonia (the Marine Turtle Observatory on Reunion Island) and cooperation with C3 Comoros (UK-based NGO) is ongoing.

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
(but limited coverage - concentrated on Moheli)	
Education / awareness programmes	
■ **YES** ☐ NO ☐ N/A	■ **EXCELLENT** ☐ GOOD ☐ LOW ☐ UNKNOWN
Egg relocation / hatcheries	
☐ YES ☐ NO ■ **N/A**	☐ EXCELLENT ☐ GOOD ☐ LOW ■ **UNKNOWN**

Predator control

■ **YES** ☐ NO ☐ N/A ☐ EXCELLENT ☐ GOOD ■ **LOW** ☐ UNKNOWN

Vehicle / access restrictions

■ **YES** ☐ NO ☐ N/A ☐ EXCELLENT ■ **GOOD** ☐ LOW ☐ UNKNOWN

Removal of debris / clean-up

■ **YES** ☐ NO ☐ N/A ☐ EXCELLENT ■ **GOOD** ☐ LOW ☐ UNKNOWN

Beaches are cleaned regularly during the nesting period.

Re-vegetation of frontal dunes

■ **YES** ☐ NO ☐ N/A ☐ EXCELLENT ☐ GOOD ■ **LOW** ☐ UNKNOWN

The ideas are there to re-vegetate frontal dunes at nesting beaches, but there are no means to implement them.

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

Involvement of the local communities (through local village associations) for the protection of the turtles.

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

■ **YES** ☐ NO ☐ NOT APPLICABLE

In the Moheli Marine Park (MMP), an evaluation has been made of some species, including turtles; and a amarine action plan exists. There is also a sea turtle database maintained by IFREMER / Kelonia.

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]

C3 Comoros, together with the village association of Hoani (FADEVICHO), established a turtle awareness centre in Hoani, an important green turtle nesting site located outside the Moheli Marine Park (MMP; C3 Comoros 2007).

Encouraging the local community through education and to monitor the beaches.

Establishment of an Action Plan for the protection of turtles.

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

Yes, but not regular

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

Water quality is not monitored. However, there is a project on maritime protection, and communities from all the islands are educated to prevent this type of pollution.

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

■ YES ☐ NO ☐ NOT APPLICABLE

Law enforcement: an "environmental brigade" is being established and will be in place in 2007.

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)

There is monitoring of the coral reef and good recruitment was observed in 2003. No other information is available on specific recovery efforts.

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)

Not possible, due to human, technical, and financial problems.

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)

In the MMP, some studies had been done on taxonomy, cartography, and remote sensing by Kelonia from 2003 to 2005. C3 Comoros also mapped the seagrass meadows of Moheli, Grande Comore and Anjouan from 2006 to 2008, and is currently monitoring these habitats (Blake 2008; Le Courtois and Blake 2008). No other information is available on specific seagrass recovery efforts.

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]

Ballorain, K. 2002. Etude d'un site de ponte de Chelonia mydas a Moheli. Suivi effectue a Itsamia du 26 fevrier au 12 mai 2002. Rapport dans le cadre d'un stage de DEUG au CEDTM. 1-31 p.

Ben Mohadji, F., Paris, B. 1999. Les tortues marines en Republique Federale Islamique des Comores: Bilan de la situation actuelle. PNUD/FEM.

Blake, D. 2008. Seagrass mapping and monitoring in the Comoros Islands. Seagrass Watch 33: 4.

Bourjea, J., Frappier, J., Quillard, M., Ciccioine, S., Roos, D., Hughes, G.R., Griezel, H. 2007. Mayotte Island: Another important green turtle nesting site in the southwest Indian Ocean. Endangered Species Research 3: 273-282.

C3 Comoros. 2007. Turtle information centre and awareness-raising campaingn Moheli, Comoros. 1-36 p.

Formia, A., Godley, B.J., Dontaine, J.-F., Bruford, M.W. 2006. Mitochondrial DNA diversity and phylogeography of endangered green turtle (Chelonia mydas) populations in Africa. Conservation Genetics 7: 353-369.

Frazier, J.G. 1977. Marine turtles in the Western Indian Ocean: British Indian Ocean Territories, Comoros. Oryx 13: 162-175.

Frazier, J.G. 1985. Marine turtles in the Comoros Archipelago. Koninklijke Nederlandse Akademie van Wetenskappen 84: 1-177.

Fretey, J., Fourmy, J. 1996. The status of sea turtle conservation in French territories of the Indian Ocean: Mayotte. 133-143 p. In: Humphrey, S.L., Salm, R.V. (Eds.), Status of sea turtle conservation in the Western Indian Ocean. 133-143 p. IUCN / UNEP, Nairobi, Kenya. 133-143 p.

Gruelich, A. 2001. Etude des populations de tortues vertes sur l 'ile de Moheli (Comoros). Resultats preliminaires du suivi effectue a Itsamia de mars 2000 a mars 2001 (CEDTM / IFREMER). 1-23 p.

Hassani, H. 2007. Iconi en pole position dans la protection de la tortue. La Gazette Jeud 1-2.

Le Courtois, S. and Blake, D. 2008. Mapping seagrass meadows on the remote Bimbini Peninsula of Anjouan Island. Seagrass Watch 18.

Leroux, G. 2007. Tortues Marines: L'Espoir en Marche. Univers Maore 8: 32-43.

Mohadji, F.B., Zarcach, H.E., Mbindo, C. 1996. The status of sea turtle conservation in the Comoros. 125-132 p. In: Humphrey, S.L., Salm, R.V. (Eds.), Status of sea turtle conservation in the Western Indian Ocean. 125-132 p. IUCN / UNEP, Nairobi, Kenya. 125-132 p.

Mortimer, J.A. 1993. Marine turtles in the Comoros Federal Islamic Republic: Their status and recommendations for their management. 1-31 p.

NMFS/FWS 2007a. Green sea turtle (Chelonia mydas) 5-year review: Summary and evaluation.

NMFS/FWS 2007b. Hawksbill sea turtle (Eretmochelys imbricata) 5-year review: Summary and evaluation. 1-93 p.

Project Biodiversity 2000. Conservation action plan for marine turtles in the Federal Islamic Republic of the Comoros. Projet Conservation de la Biodiversite et Developpement Durable (PNUD/FEM). 1-20 p.

Roos, D., Pelletier, D., Ciccione, S., Taquet, M., Hughes, G.R. 2005. Aerial and snorkelling census techniques for estimating green turtle abundance on foraging areas: a pilot study in Mayotte Island (Indian Ocean). Aquatic Living Resources 18: 193-198.

Taquet, C., Taquet, M., Dempster, T., Soria, M., Ciccioine, S., Roos, D., Dagorn, L. 2006. Foraging of green sea turtle Chelonia mydas on seagrass beds at Mayotte Island (Indian Ocean), determined by acoustic transmitters. Marine Ecology Progress Series 306: 295-302.

Tilot, V. 1994. Republique Federale Islamique des Comores: Etude de l'environnement marin et cottier et des aspects socio-economiques de la peche autour de l'ile de Moheli. UICN Programme Marin et Cotier. Projet PNUD / UNESCO / UICN - COI/91/006. Appui a la Programmation Nationale en - Matiere D' Environnement. 1-76 p.

Woodworth, G. 1992. Sea turtles in the Comoros Islands. Marine Turtle Newsletter 59: 4-5.

Additionally:

- Action Plan for marine turtle conservation (Moheli Marine Park), as well as Marine Park reports;
- Reports from Kelonia (Reunion): 2002/2005: Anthopologic thesis on cultural use of marine turtles in Moheli and Madagascar; 2003-2005: Seagrass monitoring (remote sensing, biomass, taxonomy, distribution); Ongoing 2006/7: Population trends on Itsamia beaches monitoring

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

Conducted by a turtle research centre in Reunion (CEDTM - Study and Discovery Center for Marine Turtles) in collaboration with MMP and ADSEI (Association for the Socioeconomic Development of Itsamia) in Itsamia. (1998/2006)

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

■ **YES** ☐ NO ☐ UNSURE

A thesis on the genetic identity of the Marine Turtles of the SWIO has been started (Ifremer / Kelonia, Reunion). The results are ongoing for 2007. Updated information is needed.

Formia et al. (2006) investigated the genetic relationship between nesting green turtle populations from the Atlantic and Indian Oceans (including the Comoros).

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

Between 2000 and 2003, some 5,100 turtles were tagged. An additional 1000 will soon be tagged. A new tagging programme was started in 2007 as part of the collaboration between MMP and Kelonia.

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

Tracks of nesting females have been monitored since 1998 in Itsamia (Moheli) and nest survival results with population trends are ongoing for 2007.

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

■ **YES** ☐ NO ☐ UNSURE

Once, when people from Bimbini Anjouan were poisoned after consuming turtle meat.

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

■ **YES** ☐ NO ☐ UNSURE

Comoros occasionally disseminates traditional knowledge on marine turtles, especially on the National Marine Turtle Day. The Marine Turtle House in Itsamia is already in place for marine turtle exposition.

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]

These have been identified in a national action plan for turtle conservation.

WIOLAB Project under the Nairobi Convention.

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

In collaboration with Kelonia and Ifremer (Reunion Island).

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

There are several documents on the conservation status of turtles in Comoros. C3 Comoros, a British NGO, established a monitoring programme and the MMP will update, promote and improve the marine turtle action plan.

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

Tagging programmes have been conducted by the MMP and Kelonia.

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

Seagrass monitoring has been started by Kelonia and data will be updated by C3 Comoros - NGO. A number of studies investigating aspects of green turtle reproduction and population dynamics have been conducted by Kelonia, Reunion.

☐ **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 turtles (population trends will be published in 2007).

The green turtle population showed a decline from 1972/1973 to 1994 (Woodworth 1992; Ben Mohadji et al. 1996). Previous estimates for green turtles in the Comoros Archipelago were 1100 to 1800 nesting females (Frazier 1985), although this could have been an overestimate (Mortimer 1993). More recent nesting population estimates are about 7000 to 8100 (on Moheli Island, Ben Mohadji and Paris 1999), 6000 (Project Biodiversity 2000), and 5000 reproducing females (NMFS/FWS 2007a, for the year 2000). However, the more recent estimates are unverified and the observed increasing trend should be viewed with caution (NMFS/FWS 2007a).

Bourjea et al. (2007) concluded that the nesting green turtle population of Mayotte is stable and healthy, averaging at 1545 nesting females per annum. Moheli in particular, and Mayotte are very important nesting sites in the WIO; Moheli is one of the largest / most important rookeries globally (NMFS/FWS 2007a). The persistence of these populations and

their habitats are hence of great importance.

Hawksbill turtles are present in the MMP, but they have never been monitored.

Hawksbill turtles appear never to have been abundant in the Comoros Archipelago (NMFS/FWS 2007b). Nonetheless, population numbers in the Federal Islamic Republic of the Comoros and Mayotte are decreasing (NMFS/WFS 2007b). Hawksbills used to nest in the Federal Islamic Republic of the Comoros prior to 1972/1973 (Frazier 1985), but not any longer (Woodworth 1992; Mortimer 1993; Project Biodiversity 2000).

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

■ **YES** ☐ NO ☐ UNSURE

Research and monitoring activities are ongoing. NGOs and the MMP have also promoted the monitoring activities in order to search for new long-term funding. The next step will be to improve advertising of these activities.

Degradation of the habitat has to be taken into account. Seagrass monitoring has shown major degradation of seagrass and coral reefs by erosion and groundwater discharge. Poached areas have to be surveyed efficiently. Strict protected areas have to be created, and important feeding and nesting sites have to be identified.

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 measures have not yet been put in place.

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

There is a memorandum of understanding with the CEDTM (Kelonia) in Reunion. Moreover, the collaboration between Kelonia and the MMP allows for standard tagging programmes, monitoring programmes and standard genetic studies.

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]

- Posters, manuals, television, radio, exhibitions.
- Exchange of data between ADSEI and Kelonia allowed Itsamia to receive a computer to facilitate data storage, funding research and ecotourism transactions.
- Participation in international conferences, notably by representatives from NGOs (C3 Comoros).

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

By using a centralised database; however, it is presently not well organized and much data still need to be analysed. A GIS has not been put in place yet.

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]

- School manuals
- Posters, comics (Mwana Nyamba)
- Occasionally some television and radio broadcasts are made

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

Organise meetings;
Work with school and students;
Work with local communities;
Broadcast through radio and television;
Promote National Day of Marine Turtle

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

■ **YES** ☐ NO

We have built a "Turtle House" for information purposes in Itsamia (Moheli). The material (computer, marine turtle exposition, movies) have been sent by Kelonia. There is also a stack at the MMP office in Nioumachoua (Moheli) where C3 uses to distribute information and search for fundings as well.

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.

Building of bungalows and organising nesting beach tours are alternative livelihood opportunities used in Itsamia and the rest of the MMP (Moheli). The income is used for the protection of the turtles (monitoring of beaches) and for local development.

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]

Workshops, meetings, education and information

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]

They are invited to workshops and other events.

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

Comoros is a Party to CITES. We have sent the CITES Secretariat our national list of protected species, and the marine turtle is among them.

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

Certificates are issued for the exportation of protected species. A control unit is to be organized soon on our frontier. Updated information is needed.

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]

At OMC meeting.

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]

Legislation
Training
Information
Awareness

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 existing action plan for marine turtle conservation could be considered a possible model.

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) Research and monitoring
2) Intregated management
3) Community participation
4) Building and reinforcement of capacity
5) Public awareness and information
6) Regional and international cooperation

7) Long-term funding

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

Surveys of territorial waters
Long-term funding
Other research
Regional and international cooperation

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]

Exchanges, such as the existing exchange programme with Reunion (Kelonia/Ifremer) and C3.

Synergies with other regional/global convention secretariats should be promoted through bilateral or multilateral cooperation.

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]

Departmental order

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]

Development of an eco-guard corps for monitoring and surveys.
Research on socio-ecconomics, cultural habits and conservation of marine turtles.

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]

Workshop on turtle biology
Production of a school manual
Training programmes, workshops etc. are coordinated nationally and regionally by the National Direction of Environment.

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]

Exchanges of experts, scientists and trainees.

The MMP is building a collaboration with the University of Comoros; and has a long-term collaboration with the CEDTM (Kelonia).

The monitoring of different marine habitats is organized with different associations or NGOs.

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]

The implementation is not completely effective.

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

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

☐ YES ■ **NO** ☐ UNSURE

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

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

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

■ **YES** ☐ NO ☐ NO VIEW

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

■ **YES** ☐ NO ☐ NO VIEW

6.2 Secretariat and Advisory Committee

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

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

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

■ YES ☐ NO

UNDP seeks funding to continue the activities of the park.

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

- Building of two bungalows on one of the nesting beaches.
- Building of the turtle centre.
- Building of a marine turtle observatory on the small islands of Nioumachoua (MMP).

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 National Direction of Environment with support of the Moheli Marine Park.

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

The marine and coastal species, ecosystems, habitats and all environment issues are clearly defined in term of conservation and management.

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

The organisation has changed to a different department in order to improve the environmental management.

Comments/suggestions to improve the present reporting format:

Additional information not covered above: