CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Sixteenth meeting of the Conference of the Parties
Bangkok (Thailand), 3-14 March 2013

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

To transfer *Trichechus senegalensis* from CITES Appendix II to CITES Appendix I, in accordance with:

a) Resolution Conf. 9.24 (Rev. CoP15), Annex 1, Paragraphs A i) and v): The wild population is small, and is characterized by **"**an observed, inferred or projected decline in the number of individuals or the area and quality of habitat"; and "a high vulnerability to either intrinsic or extrinsic factors."

b) Resolution Conf. 9.24 (Rev. CoP15), Annex 1, paragraph C ii): "A marked decline in the population size in the wild, which has been either inferred or projected on the basis of a decrease in area of habitat; a decrease in quality of habitat; levels or patterns of exploitation; a high vulnerability to either intrinsic or extrinsic factors".

B. Proponent

Benin, Senegal, Sierra Leone[1].

C. Supporting statement

1. Taxonomy

1.1 Class: Mammalia

1.2 Order: Sirenia

1.3 Family: Trichechidae

1.4 Genus, species or subspecies, including author and year: *Trichechus senegalensis* (Link, 1795)

1.5 Scientific synonyms:

1.6 Common names:
English: West African Manatee, Sea cow
French: Lamantin d'Afrique de l'Ouest
Spanish: Manatì de Senegal
Portuguese: Manatim senegales

1.7 Code numbers: 117.002.001.003

[1] *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat or the United Nations Environment Programme concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

2. Overview

The impressive physique of the West African manatee and its apparent vulnerability prompted the colonial authorities to provide early protection for the species from hunting across its range. Since 1978, it has been classified as «Vulnerable» in the IUCN Red List of Threatened Species (Criteria A3cd and C1, Powell and Kouadio 2008). A new review of the species is anticipated in 2013.

The species is present in coastal and estuary habitats, coastal lagoons and lower reaches of most river systems, from Mauritania to Angola. It goes back into the river systems as far inland as Mali, Niger and Chad.

It is the least studied of the Sirenia order, but despite the low level of scientific knowledge, it is clear from the various studies led over the past decade by Wetlands International Afrique and individual scientists that the population is continuously declining, particularly due to the loss or modification of significant portions of its habitat, poaching, fragmentation of water courses by dams, diverse pollution and accidental catch in fishing nets and dams valves (Powell, 1996 ; Wetlands International Afrique, 2010). These constraints have currently reached alarming levels due to:

* strong growth of human populations along coastlines and rivers in search of better living conditions than those inland,

* disturbance and subsequent environmental degradation, and

* great variability in the regimes of hydrographic systems within any given year.

It is now clear that the current level and trends of threats to its survival call for concerted action for more effective protection at national, regional and international levels.

History of IUCN assessments

2008 : Vulnerable (IUCN 2008)

2006 : Vulnerable (IUCN 2006)

1996 : Vulnerable (IUCN 1996)

1994 : Vulnerable (Groombridge 1994)

1990 : Vulnerable (IUCN 1990)

1988 : Vulnerable (IUCN Conservation Monitoring Centre 1988)

1986 : Vulnerable (IUCN Conservation Monitoring Centre 1986)

Source: J. Powell and Kouadio A. 2008

The available information indicates that the West African manatee is threatened with extinction in accordance with biological criteria in Resolution Conf. 9.24 (Rev. CoP15), Annex 1, Paragraphs A i) and v): The wild population is small, and is characterized by **"**an observed, inferred or projected decline in the number of individuals or the area and quality of habitat"; and "a high vulnerability to either intrinsic or extrinsic factors" and Annex 1, paragraph C) ii), due to a marked decline in the population size in the wild, which has been inferred or projected on the basis of a decrease in area of habitat and a decrease in quality of habitat; levels or patterns of exploitation.

3. Species characteristics

3.1 Distribution

The range of the West African manatee covers Mauritania, Senegal, The Gambia, Mali, Guinea, Guinea Bissau, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Togo, Benin, Niger, Nigeria, Cameroon, Chad, Congo, Equatorial Guinea, DRC, Gabon and Angola.

The species is present in most marine and estuary waters of coastal ecosystems from southern Mauritania (16°N) to Central Angola (18°S) (Nishiwaki, 1984 ; Grigione, 1996 ; Powell, 1996 ; Dodman, 1999 ; et Perrin 2001). It is also present in most of the lower and middle reaches of river systems that flow into the Atlantic Ocean (see map in appendix 1). In some cases, like the Senegal River and the Niger River, it reaches the upper course, seemingly impeded only by sandy or rocky banks. In other river systems like the Benue, the main tributary of the Niger River in Nigeria, its presence varies according to the season. In those areas, it hides during the dry season in zones that have water all year, and thus remains in isolation until the flood of the next rainy season. Permanently isolated populations can be found in particular in the wetlands of northern Cameroon and in Chad, in the Logone River, the Chari River and Mayo Kebi River. Finally, the species is found far from the coast at sea, off-Bissau, in the Bijagos archipelago. Currently the initial center of endemism of the West African manatee is unknown.

The table in Appendix 2 shows the distribution by country of the West African manatee in its natural range.

3.2 Habitat

The West African manatee occupies virtually any accessible marine, river or lake habitat which provides shelter, food and fresh water. Thus, it colonizes coastal areas, estuary lagoons, brackish water of lower reaches of rivers, and freshwater of upper reaches up to the upstream thresholds that are difficult to cross. When traveling between two zones, it can be observed in open areas, although this is a rare occurrence. In coastal areas, it prefers shallow waters (less than 3m) close to sandbanks and waters lined with mangroves in estuaries and close to lagoons adjoining feeding areas with marine macrophytes (*Cymodocea nodosa* and *Halodule wrightii* ; Green and Short, 2003). In freshwater environments, especially those characterized by large variations in water flows and water levels, it seems to prefer habitats with herbaceous plants (*Vossia cuspidata*, *Echinochloa sp*, *Pistia stratiotes* and *Phragmites sp*, in particular) or aquatic submerged plants (*Nymphea sp*., *Nymphoides indica* et *Crinum natans*, in particular), and relatively deep areas. In the northern part of its range, it uses areas connected to an adjacent lake that can serve as a refuge during the dry season.

3.3 Biological characteristics

Of the three species of manatees that make up the Trichechidae family, *Trichechus senegalensis* is the least studied. However, over the past decade, multiple studies conducted or supported by Wetlands International Afrique as part of its manatee conservation program, assessments made by IUCN for the update of its Red List of threatened species, and studies by independent scientists (see list of references), have provided a better understanding of the biology of the species. It is primarily herbivorous, however it was observed that manatees also feed occasionally on small fish caught in fishing nets and on other mollusks.

No scientific information is available to determine the age of sexual maturity, the length of gestation, the interval between litters or the longevity of the West African manatee. However, some studies currently being led by L. Keith Diagne and K. Brill to assess its age from the examination of ear bones, indicate that the most advanced age of West African manatees is 39 years old (L. Keith Diagne et K. Brill., unpublished data). If life history is similar to that of the better-known West Indian manatee, gestation could be around 12-14 months and age at maturity about four to five years (Powell 2002).

Except in cases of females accompanied by their young, the West African manatee lives alone most of the time. Small groups may however be formed during seasonal migration, mating, periods of rest or to enjoy warm areas. Manatees can travel either by day or by night to feed (Powell, 1996; Keith and Collins, 2006; Keith, 2007) and can travel very long distances during seasonal migrations in search of food or more secure areas (Keith Diagne, Fernandez de Larrinoa, Diagne, et Gonzalez., 2011.)

3.4 Morphological characteristics

The West African manatee is an aquatic mammal measuring in general between 2.38 and 2.47 m when mature (Powell, 1996; Keith Diagne, unpublished data) but able to reach more than 3m and to weigh between 300 and 500 kg. Its spindle shaped body is protected by an adipose layer, under a thick and rough skin, which can vary from gray to black depending on the environment. In young animals, the body is covered with thin and scattered sensory hair which manatees keep all their life.

Like in other Trichechidae species, the neck of the West African manatee is extremely short and can hardly be distinguished from the rest of the body. The animal has small prominent eyes endowed with a sphincter. Its trisected upper lip covers the lower lip and enables it to grab and manipulate food. Its muzzle is endowed with sensory hairs (vibrissae) which enable it to better detect its environment. When diving, its nostrils are closed by valves which open only when it rises to the surface to breathe. Its forelimbs are pectoral flippers ending with a sort of hand with 3 to 4 rudimentary nails. Its hind limbs are transformed into a rounded swim paddle (Domning and Hayek, 1986 ; Reep and Bonde, 2006).

3.5 Role of the species in its ecosystem

Although primarily herbivorous, feeding on a wide variety of plant parts (leaves, stems, roots and fruits), the West African manatee will eat small fish and mollusks if the opportunity arises. Thus, it can occupy various types of aquatic habitats that are accessible and which offer sufficient protection. In these habitats, it may contribute to maintaining a certain ecological balance, including through controlling aquatic vegetation in the corridors used while migrating. As result, in most areas where it is present, the West African manatee is considered by the indigenous populations as an indicator of high concentrations of fish. In these sites, it is likely that the manatees' clearance of vegetation from watercourses enables fishermen to better navigate and use their fishing gear. Furthermore, the species is also an indicator of the health of humid ecosystems.

4. Status and trends

4.1 Habitat trends

Habitat degradation, along with poaching, are the greatest threats affecting the West African manatee in its natural range. The series of droughts that struck countries of the Sudan-Sahel zone, especially in the 1970s and 80s, profoundly changed the characteristics and environment of the hydrographic basins of West Africa (UNEP/Wetlands International Afrique, 2008). The intense degradation of the vegetation intensified water runoff which resulted in a proliferation of sand banks in water beds and floodplains. Moreover, dams have been built on some watercourses, and many distributaries dammed, to irrigate large hydro-agriculture projects established in floodplains, or to provide energy. In some cases, the large dams have expanded or restored the habitat of the manatee, but in most cases, especially where small dams and hydro-agricultural infrastructures were built, the impact has been negative. In particular, habitat is reduced and fragmented, curtailing manatees' migrations or trapping them in unsuitable habitat (this is the case, for example, with the Diama dam in Senegal, the Akasombo dam in Ghana, the Kayes dam in Mali, and three dams on the Niger river (the Ségou dam, the Kaini dam and a new dam at the border between Niger and Mali)). Affected manatees have also become trapped in valves of irrigation canals and killed during the construction of the dams or of the port installations (for example, in Kainji in Nigeria, near Matam in Eastern Senegal, in Sami Wharf Town in Gambia, and in the Fatala estuary in Guinea) (UNEP/Wetlands International Afrique, 2008).

In coastal areas, excessive exploitation and the conversion of large mangrove areas resulting from increasing human pressure, also contributes to the reduction of manatee habitat. Other compounding factors include pollution of important portions of lagoons and deltas (Angola, Côte d'Ivoire, Nigeria and Congo, among others) through rubbish dumps, industrial waste and oil spills. The new mining zones located near the rivers (in Senegal and Guinea, in particular) are also potential sources of threat that must be closely monitored and regulated.

As human populations increase, the tendency will be towards the reduction and degradation of the West African manatee habitat.

4.2 Population size

Lack of information about population sizes and trends still remains a fundamental gap in the knowledge about the West African manatee. An ad hoc study is needed to reliably estimate the population across its range. However, localized field observations made by experts over a relatively long period, results of surveys in some areas, and testimonies collected from residents of areas where the species is still present suggest that the population size is decreasing, especially in areas where the meat and various products obtained from the species are known to be traded (Sierra Leone, Chad, Côte d'Ivoire, Cameroon, Nigeria, Gulf of Guinea) (Regional Workshop on the West

African Manatee, Wetlands International Afrique, 27-28 April 2011). This trend is corroborated by the last assessment update of the IUCN Red List.

Population estimates made to update the IUCN Red List are the most recent estimates which can be used for reference at present. Using survey data from Côte d'Ivoire, Guinea-Bissau, Gambia, parts of Senegal and Cameroon, and deducing from what we know of the manatees in other range States and from density data on the *T. manatus,* the population of West Africa manatees is estimated at fewer than 10,000 individuals. This population is likely to decrease by at least 10%, based on the continued and increasing anthropogenic threats to the species (Powell & Kouadio, 2008).

The trend is further confirmed by recent alarming reports of increased poaching and trade. See Section 5.2.

4.3 Population structure

Except in cases of females with their un-weaned young, the West African manatee naturally lives solitarily. The only gatherings are recorded at the time of mating and during the seasonal migrations when they can form small groups. This specific reproductive feature challenges the survival of the species when confronted with poaching and habitat degradation.

4.4 Population trends

The lack of demographic data generally leaves only the option of using isolated surveys done as part of projects, experts' findings in the course of specific missions, the testimony of villagers, and press reports to identify a trend. All these sources indicate explicitly or implicitly that this trend is clearly a decline and that there is a need to take effective conservation measures at the domestic, regional and international level to save the species. Based on these findings, CMS listed the species in its Appendix I at its 9th Conference of Parties (CoP9) in 2008.

4.5 Geographic trends

Overall, the number of range States for the West African manatee does not seem to have varied. However, in the range states, as well as at a more localized level, the species is now absent from areas and water bodies where it existed before. In particular, it is has not been reported in Lake Chad since 1929, nor in the Chari River in Central Africa and in some lagoons of Côte d'Ivoire. Furthermore, the dams and other impediments constructed on several watercourses have restricted migratory movements and isolated some parts of the population (in particular the Diama dam in Senegal, the Akasombo dam in Ghana and the numerous dams on the Niger river which restrict the movements of manatees in Mali, Niger and Nigeria). In the Sahel - Sudan area of the range where many river distributaries are no longer regularly flooded because of the decline and irregularity of rainfall, a large number of habitats that once sheltered the species, are now destroyed or no longer accessible. Thus, the general trend, particularly with regard to West Africa, is reduction of the range due to climate change and to anthropogenic pressures such as the cutting of mangroves (for rice farming, timber, smoking, salt extraction in particular) (UNEP/Wetlands International Afrique, 2008).

5. Threats

Under CITES, a species may be considered to be threatened with extinction and meet the biological criteria for inclusion in Appendix I, if it can be shown to be experiencing a decrease in area of habitat or a decrease in quality of habitat. West African Manatee habitat is both decreasing in area and quality. This exacerbates all other potential threats, including but not limited to, utilization and trade (see Section 6).

Threats to the existence of the African manatee are essentially related to humans; either directly as a predator, or indirectly as responsible for deterioration and reduction of its habitat. The species' vulnerability to the threats listed below is increased by its relatively long generation period and a low reproductive rate.

5.1 Threats related to habitat size and quality

Strong human population growth and its concentration in coastal areas and along major rivers exert direct pressure on the West African manatee by excessive takings (poaching and accidents) from the population, and indirect pressure from different developments (embankments, agricultural irrigation

projects, clearing of mangroves, wetlands embankments, etc.) that restrict and split the habitat (Wetlands International Afrique, 2010).

Climate change, by directly or indirectly changing water regimes and the quality of watercourses, subsequently alters wetland ecosystems (by erosion of riverbanks and coastlines, in particular), thus adding to the anthropogenic factors causing habitat degradation and increasing competition over water between wildlife and humans.

Navigation is not yet a threat, but the various development projects in this sector are potential causes of threats in the sub-region if one uses the other parts of the world where river navigation is important as a reference.

Although no reliable statistical data are available, numerous observations seem to indicate that these threats have an increasing impact on the species, especially in West Africa.

5.2 Threats from poaching, incidental catch and illegal trade

Traditionally, trading and bartering of manatees taken by local hunters and fishermen was restricted only to members of their community. Unfortunately, hunting and trading have increased in scale and geographic scope to threaten the very existence of the species in many areas. Today, national reports (Wetlands International Afrique, national reports to the Workshop on the Conservation of the West African manatee, 27-28 April 2011) indicate an active trade in meat and by-products of the species (see Annex 3) between Guinea, Sierra Leone and Cote d'Ivoire, and between Chad, Cameroon and Nigeria. Also in coastal areas, the development of illegal local, national or cross-border trade is reported from Senegal to the Gulf of Guinea. Although no reliable statistical data are available, the numerous observations seem to indicate that these threats have an increasing impact on the species, especially in West Africa.

In Sierra Leone, the financial stakes of the trade in manatee specimens are such that a kind of "Manatee Mafia" has now appeared. More than 350 manatee were the victims of commercial poaching over a period of three years (between 2007 and 2010) (Regional Workshop on the West African Manatee, Wetlands International Afrique, 27-28 April 2011; AFP - 08/02/2011 – Freetown). Concerns are growing that such organized hunting may eventually extend from Guinea and Sierra Leone to the entire sub-region (Workshop on the Conservation of the West African manatee, Wetlands International Afrique, 27-28 April 2011).

5.3 Contaminants and hydrocarbons

In highly populated areas (Abidjan and Lagos in particular), pollution from urban effluents eliminated manatees in several of the water areas they had naturally occupied before. Similarly, much of the Niger Delta is now removed from this species' habitat due to spills of unrefined oil.

Although this is not documented, it is likely that, in areas where there are large scale hydro-agricultural developments or mining operations, the significant quantities of pesticides and other chemicals dumped in the water courses (the valley of the Senegal River and Niger River, in particular, and in Guinea Bissau) constitute a threat to the health of individuals, as well as to their habitat.

5.4 Disease and predators

Data on these issues are very limited, but the scientific information available (Powell 1996; Ndour 2010) does not mention any disease or any parasite that could threaten the species.

With regard to predators, aside from humans, only the crocodile was reported by fishermen as an opportunist predator on young manatees.

6. Utilization and trade

6.1 National utilization

Manatees are mostly hunted for their meat, but all body parts, including oil, are used and actively traded throughout the entire range except in Central Africa where the meat is used and sold but the rest of the carcasses is thrown away (L. Keith Diagne, unpublished data, 2011). Although the beliefs

that attributed a relatively important mythical value to manatee products other than meat (fat, skin, viscera, sexual organs) are gradually fading, demand for these body parts still remains strong due to the therapeutic properties still attributed to them and because of the strong growth rate of the human population. The price of manatee parts and derivatives in different Range States seems to incentivize cross-border (international) trade. The following market prices have been reported:

Country	Price of manatee products on the market
Congo	Meat: between 1,250 and 2,500 FCFA (2.5 to 5 USD) per kg
Côte d'Ivoire	Whole animal: between 150,000 and 170,000 FCFA (303 to 344 USD) per animal Meat: between 11,250 and 12,500 FCFA (22.75 to 25.25 USD) per kg
Niger	Whole animal: a male can be exchanged or traded for 200,000 FCFA (404 USD) Skin: 5000 FCFA (10 USD) Bones: 4500 FCFA (9 USD) Genitalia: between 40,000 and 50,000 FCFA (between 80 and 100 USD)
Senegal	Meat: - between 200 and 300 FCFA (0,40 to 0,60 USD) per kg during the 1980s - between 1000 and 1500 FCFA (2 to 3 USD) per kg today Whip made from the dorsal skin: between 500 and 2000 FCFA (1 to 4 USD)
Sierra Leone	Meat: between 5,000 and 6,000 Leones (1.20 to 1.40 USD) per kg
Chad and Nigeria	Oil: 150,000 FCFA (304 USD) per liter (between 10 and15 liters of oil per manatee)
Togo	Meat: between 500 and 10,000 FCFA (1 to 20.20 USD) per piece. Whole animal: ranges between 100,000 and 200,000 FCFA (196 to 392 USD)

Source : Salkind, 1998b ; UNEP/Wetlands International Afrique, 2008 ; Marsh et al., 2011

6.2 Legal trade

Legislation in all range states prohibits trade in any part of the West African manatee, the species being classified as "fully protected" by all range States (see 7 below). As a result, all national, local, and trans-boundary trade is illegal. Ineffective protection is mainly due to the weak capacity of the developing country authorities responsible for manatee protection and wildlife law enforcement. Range States are optimistic, however, that an Appendix I listing, and the attendant publicity, will bring needed attention and resources to their task.

Between 2000 and 2010, international trade reported in the UNEP-WCMC CITES trade database was the following:

Note: no trade reported for the years not mentioned in the table;

T: commercial; E: education; Z: zoo; Q: circus or traveling exhibition; S: scientific

Product	2000	2002	2003	2004	2007	2008	2009	2010	Total	Wild (W)
Live animals			13	3		8		4	**28**	26
Bodies							1		**1**	1
Skins / skin pieces	2						26	2	**30**	30
Specimens	1	4			4		12	97	**118**	118
Bones							4	13	**17**	17
Bone carvings / bones								19	**19**	19
Skulls	1								**1**	1
Oil	150 ml								**150ml**	150 ml

Purpose codes for the CITES trade in West African manatees between 2000 and 2010				
T	**E**	**S**	**Z**	**Q**
6 live animals	1 skull	150 ml of oil, 118 specimens, 2 skin pieces, 30 skins, 13 live animals, 17 bones, 19 bones carvings and pieces.	1 body, 4 live animals	2 live animals

Trade reported from the range States and territories between 2000 and 2010			
Country	**Export**	**Importing country**	**Purpose code**
Cameroon	▪ In 2008: 2 live animals ▪ In 2010: 4 live animals	▪ Republic of Korea ▪ China	Q Z
Côte d'Ivoire	▪ In 2004: 3 live animals	▪ Taiwan Province of China	Z
Gabon	▪ In 2000: 1 skull ▪ In 2004: 4 specimens ▪ In 2010: 14 bone carvings 2 skins 60 specimens	▪ Canada ▪ United States ▪ United States	E S S
Ghana	▪ In 2010 : 5 bone pieces 3 bones	▪ United States	S
Guinea	▪ In 2008 : 6 live animals ▪ In 2009 : 1 body	▪ Chine ▪ Thailand	T Z
Mali	▪ In 2000: 1 specimen 150 ml of oil 2 skin pieces	▪ Italy	S
Niger	▪ In 2000: 4 specimens	▪ United States	S
Senegal	▪ In 2009 : 4 bones 26 skins 12 specimens ▪ In 2010 : 30 bones 39 specimens	▪ United States ▪ United States	S S

Live trade:

The wildlife breeding and trading facility, River Zoofarm, based in Guinea Bissau, advertises live wild-caught manatees for sale to zoos on its website (www.riverzoofarm.com). The facility is known to have exported 2 manatees to Toba Aquarium in Japan in 1996 (Asano and Sakamoto, 1997 ; Anon.b., 2000).

6.3 Parts and derivatives in trade

As mentioned above, all parts of the species are used and actively traded. See Annex 3. Salkind, 1998b reported from various sources that manatee meat is a meat of choice in Chad, and exported dried to Cameroon and Nigeria although the best cuts, including sexual organs, are given to tribal chiefs. Manatee oil is also traded; according to Salkind, Nigerians pay 150 000 Fcfa for a liter of oil (US $300). An average of 10 to 15 liters of oil can be obtained from an average sized manatee.

6.4 Illegal trade

Illegal international trade is a growing threat to the manatee across its range motivated by high market prices of manatee products and a growing human population. See paragraphs 5.2, 6.1, 6.2 and 6.3 above.

6.5 Actual or potential trade impacts

Although no statistical data are currently available for trade in the West African manatee, all stakeholders in the conservation of the species observe that the meat trade from Sierra Leone and cross-border trade of the species between Chad, Cameroon and Nigeria are already an established threat to the existence of the species in these parts of the range.

Elsewhere, particularly in the coastal strip, trade has now been established, and since it is very lucrative for poachers (see information about prices in paragraph 6.1) in the context of persistent poverty, it is likely that trade will continue to increase in the near future, and that it represents a growing threat to the existence of the species.

7. Legal instruments

7.1 National

The manatee has been classified as a fully protected species from the time when legislative steps were first taken by colonial authorities to protect wild fauna in Francophone, Anglophone and Lusophone Africa. Thus, from then on, it became illegal to hunt or capture the manatee across its range. This absolute protection status was maintained everywhere after the independence of the range States, but enforcement of legislative codes relating to wildlife, forest, river, lake or coastal ecosystems[2] has been poor due to lack of governmental capacity and resources. Details of the legislative status of the manatee in each range state is provided in Dodman, Tim, Ndiaye Mame Dagou Diop & Sarr Khady (eds.). 2008. Conservation Strategy for the West African Manatee. UNEP, Nairobi, Kenya et Wetlands International Afrique, Dakar, Sénégal 140pp.

7.2 International

The African Convention on the Conservation of Nature and Natural Resources (Algiers) included the West African manatee in Class A (totally protected species) in September 1968. Since July 1975, it has been listed in CITES Appendix II and it was classified as "Vulnerable" on the IUCN Red List of Threatened Species in 1978. The Sirenia Specialist Group of the IUCN Species Survival Commission recently designated a subgroup of specialists for the West African manatee to assess the status of the species and to serve as a resource for experts and managers of the species. At present, it is the only species of the Sirenia Order not included in CITES Appendix I.

In 1986, on the occasion of the ten year review of the Appendices by the Animals Committee, a proposal to transfer the species to Appendix I was prepared by Switzerland, but was not considered due to lack of reliable data on the species.

Although scientific evidence still remains scant compared to the other Sirenia species, all observations by scientists and professionals concerned with the conservation of the species recognize shortcomings in the current protection of the species. Taking this situation into account, CMS listed the species in its Appendix II in September 2002 (CoP7), then uplisted it to Annex I in December 2008 (CoP9). Subsequently, in partnership with UNEP, CMS developed a Memorandum of Understanding and an Action Plan on the conservation of manatees for CMS Parties in West Africa (see section 8).

As noted in the 2008 Conservation Strategy for the West African Manatee, "*Due to the threatened status of the West African manatee, increasing threats and an overall population decline, it is clear that conservation efforts are essential to safeguard the survival of the species across its range. Various national and local conservation efforts have taken place, and some important regional assessments compiled (…) but this is the first time that a wide range of stakeholders from across the manatee's range have been actively engaged in conservation planning for the manatee". The purpose of the Conservation Strategy is to "improve policies and protective legislation, determine research priorities, reduce existing pressures on the manatee and enhance awareness of the culture and value of the species*" (UNEP/Wetlands International Afrique, 2008).

[2] *These are essentially legislative codes on fauna, fisheries, water, environment and forestry*

8. Species management

8.1 Management measures

For slightly more than a decade, management initiatives have flourished at the state and regional levels.

At the regional level, the efforts of NGOs (mainly Wetlands International Afrique, WWF and the Nigerian Conservation Foundation) in the late 1990s/early 2000s to host meetings and fund studies (Benin, Guinea, Mali, Niger and Nigeria) and conservation projects (Dodman, 1999) coalesced under the aegis of the Regional Conservation Programe for the Coastal and Marine Area of West African (PRCM) with UNEP, the CMS Secretariat, the Secretariat of the Abidjan Convention and the Regional Coastal and Marine Program, to build a regional network, collect scientific data and develop a conservation action plan for the manatee across the PRCM region. This led to the development of the UNEP/Wetlands International "Conservation Strategy for the West African Manatee" and the CMS "Memorandum of Understanding concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Micronesia" which includes the "Action Plan for the Conservation of the West African Manatee".

Locally, significant efforts are regularly deployed by villagers, NGOs and nature management agencies to rescue individual manatees trapped by a too rapid withdrawal of water or caught in irrigation dams. In Guinea-Bissau, a comprehensive study of the distribution, status and threats to the species has led to a National Conservation Plan which includes recommendations (Silva and Araujo,1999). In Côte d'Ivoire, important work was undertaken between 1980 and 2002 (Nishiwaki *et al.* 1982; Powell 1992; Akoï 2000; Powell 1996) on the biology and management of the species, as well as on raising awareness in the area of the Fresco lagoon complex. In Angola, Cameroon, Ghana, Guinea Bissau, Mali, Nigeria, Niger, Gabon and Congo, studies led to better understand the distribution of the species and the threats to it. The classification of lakes Léré and Tréné, distributaries of the Mayo Kéby in Chad, as sanctuaries for the manatee is the most significant measure taken to save the species.

8.2 Population monitoring

Except for the periodic IUCN assessments which led to an update on the Red List of threatened species, there is no permanent national or regional monitoring of the population.

8.3 Control measures

8.3.1 International

CITES, the Bonn Convention (CMS), the Maputo Convention and the Abidjan Convention explicitly protect the West African manatee. Although control structures have not so far been effective to prevent cross-border trade, due to lack of resources and capacity, it is hoped that the listing of the species on CITES Appendix I, and the attendant publicity both internationally and within range states, will galvanise the authorities to better enforce domestic and regional trade prohibitions and increase public education about the threats to the species.

8.3.2 Domestic

Similarly, although the manatee is fully protected by law in all range States, enforcement action on the ground remains poor due to lack of capacity and resources. The species needs the attention that the proponents hope an Appendix I listing will bring.

Education and awareness actions in the Senegal River valley and along the coastline of Côte d'Ivoire, Gabon and Gambia conducted by NGOs (Océanium Dakar, Noé Conservation, Wildlife Conservation Society, Sea to Shore Alliance, WWF and NAAFO) are helping to foster community-level ownership of the species and reduce poaching. Detailed information on measures taken internally is included in the Conservation Strategy for the West African Manatee (UNEP/Wetlands International Afrique, 2008).

8.4 Captive breeding and artificial propagation

No captive breeding or artificial propagation of the West African manatee has been reported in its range.

8.5 Habitat conservation

Although only two areas are protected specifically as manatee habitat - the sanctuaries of Léré and Tréné in Chad, and the Tocc Tocc Reserve of the Guiers Lake in Senegal - any national park, forest reserve, special reserve and wilderness reserve is legally a protected area of manatee habitat, provided that the ecological conditions required for the presence of the species exist. In these areas as well as in non-protected areas, the natural environment is rapidly deteriorating, due to various forms of human pressure and to the dry climate. No conservation program focused on the species' habitat has been reported.

8.6 Safeguards

Apart from national laws, several international legal tools contribute to the preservation of the species. These include in particular CITES, CMS, the Maputo Convention and the Abidjan Convention. The preservation of the species is also included in the programmes and initiatives of international environmental conservation organizations, including UNEP, IUCN, WWF and Wetlands International Afrique. Finally, at the national and local levels, the stakeholders in environmental issues are increasingly aware of the need for more appropriate action on their part, if measures at the international level and external support are to be effective. The growing power of the media, and success achieved in sensitizing public opinion on nature conservation issues are creating an environment more conducive to greater efficiency in implementing the existing preservation measures.

9. Information on similar species

The Trichechidae and Dugongidae are the two families that constitute the Sirenia order. The Trichechidae include three species *(Trichechus senegalensis, T. manatus* and *T. inunguis)* and the Dugongidae one species *(Dugong dugon).*

Physically, the three species of *Trichechus* are very similar and it is difficult for non-experts at first glance to differentiate the West African manatee *Trichechus senegalensis* from the Florida (West Indies) manatee *T. manatus* by their appearance, weight or color. Scientific studies have nevertheless been published by experts on the morphological differences between these two species (Domning et Hayek, 1986). By contrast, *T. inunguis* (the Amazonian manatee) is smaller in size, darker in color and has pectoral fins without nails.

No other Sirenian species can be found in the range of *T. senegalensis*.

10. Consultations

This proposal to transfer the West African manatee from Appendix II to Appendix I of CITES is an important step in the process of preserving the West African manatee. It is based on recent field studies led in the range States, on subsequent sub-regional and regional meetings, as well as on a review of scientific publications. Some of these activities were initiated and coordinated by Wetlands International Afrique in the framework of the Regional Marine and Coastal Conservation Programme for West Africa and the Memorandum of Understanding of the Abidjan Convention. The process involved range States of the species, CMS, the Abidjan Convention, basin management organizations (OMVS, OMVG), sub-regional integration organizations (ECOWAS, UEMOA) and the main non-governmental nature conservation organizations (IUCN, WWF), among others. Following a meeting held in Dakar on 27 and 28 April 2011 to discuss the proposal, the CITES management authorities and CITES scientific authorities of the Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal and Sierra Leone endorsed it and decided to submit it jointly, as co-authors at the 16th meeting of the Conference of Parties to CITES. Gabon then contacted Senegal a little later to express its desire to join this initiative. Thus, Senegal was charged by its peers to present it to the Animals Committee before its session of March 2011 and to also simultaneously consult with the other range States for the species.

After the Animals Committee meeting, Senegal sent a letter to all range States to introduce a revised version of the proposal in May 2012 and received no response in return. In September 2012, Senegal presented the proposal to a meeting attended by the management authorities of 25 CITES Parties from the African region (17 of which were range countries of the West African manatee). Responses to the range States consultations led were favorable to the submission of the proposal.

11. Additional remarks

None.

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Map showing the distribution of the West African manatee throughout its range (IUCN)

Trichechus senegalensis

NE DD LC NT VU VULNERABLE EN CR EW EX

range type

Native (resident)

nationalboundaries

subnational boundaries

lakes, rivers, canals

salt pans, intermittent rivers

gall stereographit

central point:o-. o-

map created 0510412010

data source:
IUCN (International Union for Conservation of Nature)

kilometer

0 840

The boundanes and names shown and the des.gnations used on this map do not mpty any otfie.al endorsement acceptanc.or op.mon by IUCN

Table showing the distribution of the West African manatee throughout its range

Country	Presence	Status
Mauritania	Senegal River and associated wetlands.	Limited to the Senegal River.
Senegal	Senegal River, Guiers Lake, Sine Saloum Delta, Gambia River (Niokolo-Koba) and Casamance river system.	Widespread in the major rivers and coastal wetlands; likely decline in the Senegal River.
Gambia	Gambia River (middle and lower) also reported in coastal areas and coastal creeks and bolons.	Distributed mainly in the Gambia River.
Guinea-Bissau	Bijagós Archipelago; continental rivers, including Rio Cacheu, Rio Mansoa, Rio Geba, Rio Grande de Buba, the Rio and the Rio Tombali Cacine; Coastal creeks and bolons.	Widespread throughout coastal and river wetlands.
Guinea	Observed in coastal wetlands and the lower reaches of major rivers such as Rio Componi and Cogon River in the northwest, and Sangaréyah bay. Also present in the upstream waters of the Niger River such as Tinkisso and in the Gambia River.	Coastal wetlands and reaches upstream the Niger and Gambia Rivers. Is considered harmful by some coastal rice farmers.
Sierra Leone	Present in most river systems, including Sierra Leone, Great Scarcies, Little Scarcies, Bunce, Sherbro, Malam and Waanje. Also present in Mape and Mabesi lakes.	Widespread in the major river systems.
Liberia	Lake Piso, Cestos-Sankwen and major rivers, including Mesurado, Cavally, St. Paul, Morro, St. John and Cestos.	Present in most river systems.
Côte d'Ivoire	Observed all along the coast, especially in coastal lagoons and at some distance upstream of the major rivers including Cavally Sassandra Bandema, Comoé, Bia and Tano. The main areas include lagoon complexes of Aby-Tendo-Ehy, Ebrie-Comoé, West-Ebrie Agneby, Tagba-Makey-Tadio Niouzoumou-and-N'gni Fresco.	Widespread, especially in coastal lagoons and downstream reaches of rivers. Not reported in upstream reaches.
Ghana	Observed in coastal lagoons such as Abi, Tano and Ehy, and in Dayi, Asukawkaw, Obusum, Sene, Digya Oti and Tordzie rivers. Also present in the Volta river and Lake Volta, particularly in the area of the Afram tributary.	Present in the coastal lagoons and the Volta system. Lake Volta provides a good habitat for the manatee.
Togo	Manatees are reported in coastal areas of Togo, such as Aheme and Togo lakes in the Mono River.	Rare in coastal wetlands.
Benin	Present in coastal lagoons such as Nokoué and the lower reaches of rivers, including the Oueme and Mono rivers. Also in the Niger River in northern Benin.	Appears mostly in coastal lagoons. 50 individuals are estimated to be in the lower Ouémé valley.
Nigeria	Present in the Benue, Niger and Cross Rivers and associated wetlands, and also in Kainje and Yankari Lakes. Well known in Pandam Lake, a sanctuary off the Benue. Also appears in most of the Niger Delta, and is reported in the Lagos lagoon.	Widespread in rivers, lakes and coastal wetlands, but with a varied conservation status.

Country	Presence	Status
Mali	Present everywhere in the Niger River system, including the Bani, except when access is blocked by dams. Larger population likely in the Niger Inner Delta, with its numerous lakes such as Debo lake; also appears in the Senegal River, especially in the Kayes region.	Widespread in wetlands of the Niger River; the Niger Inner Delta can accommodate a reasonable number.
Niger	Present in the Niger River and associated wetlands, and in the lower reaches of tributaries.	Present in the Niger River, where there are about 10 key sites.
Cameroon	Observed throughout the coastal area in suitable wetlands, especially where there are large creeks and estuary habitat, for example in the Rio del Rey, the Cameroon Bay and the Sanaga River (downstream of Edea). Also present in the Benue River in northern Cameroon, including Lagdo Lake.	Widespread in coastal wetlands.
Chad	Present in the Mayo-Kebbi River and associated wetlands, including Lere and Tréné lakes, but apparently absent from the Chari River basin.	Limited distribution in south-western Chad. Apparently disappeared from the Chari basin.
Equatorial Guinea	General lack of information, possible presence in appropriate coastal wetlands, including the Rio Muni estuary.	Limited to a few coastal wetlands.
Gabon	Present throughout the coastal region of Gabon, including Mondah Bay, the Gabon river, the Ogooué river and its delta, and in coastal lagoons such as Setté Cama.	Widespread in coastal wetlands.
Congo	Present in most of coastal wetlands, including Conkouati-Douli, and in the river Kouliou and associated wetlands, including Nanga Lake. Also in the lower Loémé.	Reasonably common in coastal wetlands, but under pressure in some areas.
Democratic Republic of Congo	Present in the lower reaches of the Congo river, including the Marine Mangroves Park.	Limited to the lower Congo.
Angola	Present in the lower reaches of rivers up to Kwanza in the south, including the Mussulo Bay.	Dispersed from Cabinda to Cuanza.

Source : PNUE / Wetlands International Afrique, 2008

Table showing the various uses of manatee products in Africa

BODY PARTS	APPLICATION	SOCIOCULTURAL BELIEF
Skin with or without other plant products	Dermatitis (scabies, itching, acne, ...)	Confection of whips (for punishment to children and animals)
Oil	Ear infections, anemia, body aches, tetanus, contagious disease affecting horses (by introduction of grease into the nostrils of the animal) Loss of hair (rubbing) Antipyretic	Increased hearing capacity Promote hair growth
Bones in decoction or cremated Small rib bones	Rheumatism, sprains, sore flank, epilepsy, fever Sore side	Increased strength of the newborn by imbibing; Antidote against bad luck
Male sex organ	Impotence	Increased virility in men
Female sex organ	Infertility in women	Increased sexual drive in women but also in cattle
Heart	Discomfort	Source of vitamins and antibodies
Intestines	Stomach ache	Source of vitamins and antibodies
Lung	Asthma and lung conditions	Source of vitamins and antibodies
Meat and blood	Source of vitamins and antibodies	
Mucus covering the body of the manatee	Help with childbirth Cause burnout to the individual burning it	
Liver	Treatment of liver disease	
Bile	Real poison	

Source : Andrée Prisca Ndjoug NDOUR, Thèse de doctorat, 2010