



## 14<sup>ème</sup> RÉUNION DU CONSEIL SCIENTIFIQUE DE LA CMS

Bonn, Allemagne, 14 au 17 mars 2007

CMS/ScC14/Doc.7  
Point 6(a) de l'ordre du jour

### ETAT DE CONSERVATION DE LA POPULATION DU NORD-OUEST DE L'AFRIQUE DU MARSOUIN COMMUN

(Préparé par le Dr Koen Van Waerebeek, soumis par le Dr William Perrin)

#### Historique

1. Le marsouin commun est un mammifère qui n'est peut-être pas naturellement associé à l'Afrique, mais les eaux du plateau continental au large de la côte nord-ouest sont l'habitat de la population la plus méridionale de l'espèce. Cette répartition marginale a laissé largement la population du nord-ouest de l'Afrique en marge des études scientifiques et des efforts de conservation, bien que le marsouin commun soit l'un des odontocètes les mieux étudiés à l'échelon mondial, souvent profilé comme une espèce emblématique pour les efforts de conservation marine. Selon des indications la population du nord-ouest est peu abondante. Les eaux du plateau continental du nord-ouest de l'Afrique étant les zones les plus pêchées du monde (par ex. Zeeberg et autres, 2006), on craint que, si la population était significativement réduite, les chances que cela puisse être détecté à temps pour installer des mesures de conservation drastiques soient minimales.

#### Répartition, identité de la population, état

2. Les marsouins communs occupent typiquement un habitat néritique et s'aventurent rarement au delà du plateau continental, bien que certains individus aient été repérés dans des eaux profondes (Read et autres, 1996). La population du nord-ouest de l'Afrique s'étend d'Agadir, Maroc, vers le sud à Joal-Fadiouth (14°09'N, 16°49'O), Sénégal (Robineau et Vely, 1998; Van Waerebeek et autres, 2000, 2003). Ce qui fait la rareté de la population c'est une apparente lacune dans la répartition de quelque 895km du Cabo de Espichel, au sud du Portugal, jusqu'à Agadir vers le sud en passant par le détroit de Gibraltar. Smeenk et autres, (1992) ont montré que les marsouins communs de l'Afrique de l'Ouest peuvent avoir en moyenne un corps plus grand que ceux du Danemark. Par exemple, 5 marsouins de Mauritanie ne partageaient aucun haplotype mt-ADN avec d'autres populations de *P. phocoena* du nord-est de l'Atlantique (Tolley et Rosel, 2006). Le principal problème avec ces études est que tous les échantillons sont de petite taille.

3. La nouvelle aire la plus méridionale est significative en ce qu'elle montre que l'aire de répartition de l'espèce contourne la péninsule du Cap Vert, souvent considérée comme la limite

méridionale de l'influence du courant froid des Canaries, de quelque 100km. Au sud de Joal-Fadiouth, l'environnement marin devient de plus en plus chaud et ne convient pas aux marsouins communs. En Gambie il n'y a eu aucune confirmation de l'espèce.

4. On ne dispose d'aucune estimation de l'abondance pour la population du nord-ouest de l'Afrique. Les signalements d'observation et de spécimens sont peu fréquents, ce qui donne à penser que l'espèce n'est pas abondante, notamment au large du Maroc. Des indications provenant d'observations et de spécimens disponibles montrent qu'au sein de cette aire le marsouin commun est plus commun au large de la Mauritanie septentrionale (Robineau et Vely, 1998) où, au large du Cap Blanc, il traverse les frontières nationales probablement sur une base diurne.

### **Menaces**

5. La Commission baleinière internationale (1996) a noté un sévère problème de prises accidentelles pour l'ensemble de l'espèce. Dans les zones où existent des données adéquates sur les niveaux d'abondance et de prises accidentelles, la mortalité accidentelle dépasse les niveaux de durabilité. Naturellement, la principale menace envers la population du nord-ouest de l'Afrique provient, pense-t-on, des interactions avec les pêcheries, et spécifiquement les enchevêtrements dans les filets, étant donné la pêche très intensive dans les eaux du plateau continental (par ex. Pauly et autres, 1998; Mahmoud Cherif, 2001; Zeeberg et autres 2006). Bien que la mortalité annuelle par prises accidentelles ne puisse être estimée étant donné la piètre documentation à ce sujet, des marsouins communs ont été accidentellement capturés au Sénégal et en Mauritanie assez régulièrement pendant de nombreuses décennies (par ex. Cadenat, 1949; Fraser, 1958; Maigret, 1994; Van Waerebeek et autres 2000). On dispose de beaucoup moins d'indications sur les prises accidentelles au Maroc et au Sahara occidental. La norme dans la région est que les prises accidentelles de cétacés sont traitées clandestinement, les pêcheurs craignant des amendes ou autres sanctions (Van Waerebeek et autres, 2000). Pour ce qui est de la dégradation de l'habitat, la surpêche au large du nord-ouest de l'Afrique est, estime-t-on, très destructrice de l'écosystème du plateau continental. Une réduction des populations de poissons et un trafic maritime intense peuvent réduire l'efficacité de la fouille des marsouins pour se nourrir.

### **Conclusion**

6. Un haut degré d'isolement en matière de reproduction pour les marsouins communs du nord-ouest de l'Afrique, population largement « oubliée », est pratiquement certain. Le manque d'estimations de l'abondance et les maigres indications sur la répartition spatiale et temporelle ne permettent qu'une évaluation des plus superficielles et aucune possibilité d'évaluer les tendances. Associé à des menaces anthropogéniques bien établies, le cas pour une approche très précautionneuse en matière de conservation ne peut être plus évident. Une telle mesure renforce la protection juridique, c'est la raison pour laquelle il est proposé ci-dessous de placer cette population à l'Annexe II de la CMS. Cela stimulerait la prise d'une deuxième mesure urgente : la mise en œuvre d'une recherche approfondie comprenant notamment des enquêtes régulières visuelles et acoustiques et des études de population avec des échantillons adéquats afin d'établir une base solide à partir de laquelle on pourrait évaluer les tendances pour l'avenir.

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**DRAFT PROPOSAL FOR INCLUSION OF SPECIES ON THE APPENDICES OF  
THE CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF  
WILD ANIMALS (English only)**

- A. PROPOSAL:** Include the NorthWest African population of the harbour porpoise *Phocoena phocoena* on Appendix II.
- B. PROPONENT:** [Preferably a range state of the population].
- C. SUPPORTING STATEMENT**

**1. Taxon**

<b>1.1 Classis</b>	Mammalia
<b>1.2 Ordo</b>	Cetacea
<b>1.3 Familia</b>	Phocoenidae
<b>1.4 Genus, species</b>	<i>Phocoena phocoena</i> (Linnaeus, 1758)
<b>1.5 Common names</b>	E: Harbour porpoise F: Marsouin commun ES: Marsopa común DE: Schweinswal

**2. Biological data**

**2.1 Distribution (current and historical)**

Harbour porpoises are widely distributed in temperate to subpolar shallow waters in the Northern Hemisphere. This proposal relates to the NW African population, which is considered discrete (see below) from the geographically closest Iberia population and Black Sea subspecies *P. phocoena relicta* Abel, 1905. Distributional support for discreteness consists of an apparent distribution gap from Cabo de Espichel (38°25'N, 09°12'W), southern Portugal (Culik, 2004) over the Strait of Gibraltar south to Agadir, central coast of Morocco, some 895km. No evidence exists of normal occurrence in the western Mediterranean and Strait of Gibraltar now or in the past. A single confirmed record from the western Mediterranean, near Malaga, Spain (Frantzis *et al.*, 2001) was probably a vagrant. This absence is all the more striking considering the fact that harbour porpoises are relatively common and are present year-round along the Atlantic coast of the Iberian Peninsula (Sequeira, 1996).

The NW Africa population ranges from Agadir (30°25'N,09°36'W) (Bayed and Beaubrun, 1987; Robineau and Vely, 1998) south to Joal-Fadiouth (14°09'N,16°49'W) (Van Waerebeek *et al.*, 2000, 2003). This new southernmost range south to Senegal's Petite Côte is significant in that it demonstrates that the species' range bypasses the Cap Vert Peninsula (Dakar) by some 100km. The peninsula is often considered the southern limit for the influence of the cool Canary Current. Cadenat (1956) reported that several porpoises were taken off Hann, near Dakar, and Bathurst (the former name for Banjul, The Gambia) at 13°27'S. While only about 70km farther SE of Joal-Fadiouth, records at the boundary of a known range, more than any others, require substantiation. The fact remains that despite field work no *P. phocoena* have been documented from The Gambia (Van Waerebeek *et al.*, 2000, 2003; Jallow *et al.*, 2005). South from Joal-Fadiouth, waters are

increasingly dominated by the warm Guinea Current and the habitat becomes unfit for harbour porpoises. A vague reference to a case in Guinea, in March (Cadenat, 1957) is not credible. It must be noted that probably accurate distinctions between small cetacean species (and in particular porpoises) by knowledgeable locals such as fishermen can be lost in translation when reported in French or English.

## 2.2 Population (estimates and trends)

### *Population identity*

While Fraser (1958) found no significant cranial differences between harbour porpoises from Senegal and those from Britain, his sample was small and included immature specimens. Mostly distributional arguments led several authors to consider NW African harbour porpoises as a discrete population (Gaskin, 1984; Donovan and Bjørge, 1995). Smeenk *et al.* (1992) suggested that porpoises from West Africa, on average, have a larger body size than those from Denmark. Although their analysis was rather weak, results were consistent with the apparent Strait of Gibraltar/northern Morocco distribution gap. A recent study added further evidence in showing that five porpoises from Mauritania did not share any mt-DNA haplotypes with any other *P. phocoena* stock in the NE Atlantic and contiguous seas (Tolley and Rosel, 2006). A high degree of reproductive isolation now appears practically certain.

### *Abundance*

No abundance estimates are available for the NW African population (see Read, 1999; Culik, 2004). Reports of both sightings and specimens are infrequent, suggesting that the species is not abundant, especially off Morocco where porpoises are considered rare (Aloncle, 1967; Duguy, 1976). No porpoises were encountered off the Rio de Oro/Western Sahara coast during a 750km survey in the Bay of Dakhla and the Bay of Cintra, nor in-between (Notarbartolo di Sciarra *et al.*, 1998). Additional effort is desirable, however, considering that visual surveys of *P. phocoena* are very sensitive to sea conditions, with harbour porpoises easily missed in anything more than Beaufort 2-3 seas.

Indications, both from sightings and the number of available specimens, are that within this range harbour porpoises are most common off northern Mauritania (Smeenk *et al.*, 1992; Robineau and Vély, 1998) and especially around the Cap Blanc Peninsula, i.e. east in the Baie du Lévrier (Smeenk *et al.*, 1992) and west and south off Cap Blanc (Van Waerebeek and Jiddou, 2006). In a 3-day survey of waters in and adjacent to the Parc National du Banc d'Arguin (PNBA) in November 2006, five sightings were made. All involved loose aggregations composed of 2-14 (mode, 3) apparently feeding porpoises, either west or southwest off Cap Blanc. The overall encounter rate for the 3-day survey (226nm, 27h59min on effort) was 0.022 groups/nmile surveyed or 0.217 porpoises/nmile (Van Waerebeek and Jiddou, 2006). No porpoises were seen in the shallow waters of the Banc d'Arguin (PNBA), although sighting effort was much higher there, supporting earlier findings that porpoises avoid the Banc d'Arguin proper (Smeenk *et al.*, 1992; Robineau and Vely, 1998).

Recent inspection of two main collections in Mauritania, in an effort to set up a national database, revealed three and five cranial specimens, curated respectively at IMROP and PNBA (Van Waerebeek and Jiddou, 2006). At Dakar's IFAN institute, ten skulls are deposited, seven from Senegal and three from Mauritania (Van Waerebeek *et al.*, 2000). Skulls at other collections still require verification. With less than 10 specimen records and no documented sightings from Senegal, the species is considered uncommon. None were encountered during cetacean coastal

work in Senegal in 1995-97 (Van Waerebeek *et al.*, 1997). Surveys, preferably combined visual and acoustic, are needed in all range states.

### 2.3 Habitat (short description and trends)

Harbour porpoises typically occupy neritic habitat and rarely venture far beyond the continental shelf (Read, 1999; Culik, 2004), although some individuals have been found in deep water (Read *et al.*, 1996). Off NW Africa, the harbour porpoise, adapted to temperate waters, appears closely associated with the cool Canary Current flowing south along the NW African coasts down to about the Cap Vert Peninsula, coinciding with the approximate southern range of the species (Smeenk *et al.*, 1992; Robineau and Vely, 1998; Van Waerebeek *et al.*, 2000; 2003). Off Cap Blanc, Mauritania, porpoises seem to be linked to strong local upwelling, rip curls and eddies, the result of unusually strong currents off the peninsula's headland. Independently moving individuals, with non-directional high-speed swimming bursts and encountered in a very loose association (Van Waerebeek and Jiddou, 2006) seem consistent with individual feeding behaviour of harbour porpoises (Read, 1999). This species is known to prey on small, schooling clupeoid and gadid fishes. In some, but not all, areas their prey is found near the sea floor (Read, 1999).

### 2.4 Migrations (kinds of movement, distance, proportion of the population migrating)

There is no evidence that supports or rejects possible long-range movements of *P. phocoena* off NW Africa. Read and Westgate (1997) found harbour porpoises in Canada to be extremely mobile and capable of covering large distances in relatively short periods. From satellite tagging data, mean daily distances in the Bay of Fundy ranged between 14-58 km, and home ranges may encompass tens of thousands of km<sup>2</sup> (Read and Westgate, 1997). The porpoise community present off Cap Blanc (20°44'N, 17°03'W) moves freely between Mauritania and Rio de Oro waters; in fact, as the international border bisects the Cap Blanc Peninsula, daily cross-border movements are a virtual certainty (Van Waerebeek and Jiddou, 2006).

## 3 **Threat data**

### 3.1 Direct threat to the population (factors, intensity)

#### *Bycatches*

Although few cases have been documented in any detail, the principal threat to the West African population is thought to be accidental net entanglements, considering the very intensive coastal fishing effort in range states (e.g. Maigret, 1994; Zeeberg *et al.*, 2006). The International Whaling Commission (1996) noted the problem for the species as a whole, and in areas where adequate data on abundance and by-catch levels exist, incidental mortality exceeds sustainable levels.

Harbour porpoises have been captured in Senegal with some regularity for many decades (e.g. Fraser, 1958). A first bycatch was reported in 1949 off Hann when two harbour porpoises were taken in nets, but then such catches were considered rare (Cadenat, 1949). Cadenat (1957) reported that several harbour porpoises had been taken off Hann, near Dakar, and Banjul, The Gambia. However, there is concern about correct identification where reports were second-hand. In the 1990s, harbour porpoises were taken by the artisanal lobster fishery in the northern border areas of Mauritania. Several of the collection specimens from Mauritania are thought to originate from fisheries' victims. Maigret (1994) estimated bycatch 'at less than 20 per year', but he added 'the population is thought to be small along the northwestern African coasts'. A total of 51 stranded specimens were reported for Mauritania (Robineau and Vely, 1998) however the fraction due to bycatches was not estimated.

In 1999-2001, three captures of harbour porpoise were recorded on Senegal's Petite Côte (Van Waerebeek *et al.*, 2003), all were apparently landed at Joal-Fadiouth, but one was butchered in nearby Tidine. Overall, cetacean bycatches are rarely reported in Senegal because fishermen fear fines or other sanctions.

#### *Directed catches*

Duguy (1976) indicated that from verbal information gathered in 1968 harpooning of porpoises ('marsouins') was relatively frequent in that period, on board fishing boats working these waters [i.e. Senegal, Mauritania, Rio de Oro]. However, as pointed out before, the term 'marsouins' as used by locals may have referred to delphinids. Harbour porpoises avoid boats and are very hard to approach. It is doubted that they could be harpooned on a regular basis, unless netted or shot first (Van Waerebeek *et al.*, 2000).

While there are no substantiated incidents, porpoises that survive entanglement are unlikely to be released.

#### 3.2 Habitat destruction (quality of changes, quantity of loss)

Over-fishing is probably the most important damage inflicted on the marine habitat off Northwest Africa, as it is in many regions (e.g. Mahmoud Cherif, 2001; Brashares *et al.*, 2004; Pauly *et al.* 1998). Depleted fish stocks are thought to reduce foraging efficiency of the porpoises, forcing them to spend more time and energy to meet metabolism demands. Intensified traffic from fishing and cargo vessels may add significant disturbance, more so than for delphinids, considering the systematic avoidance behaviour seen in harbour porpoises in the face of an approaching vessel (Van Waerebeek and Jiddou, 2006).

#### 3.3 Indirect threat (e.g. reduction of breeding success by pesticide contamination)

Wildlife in coastal areas of Mauritania is threatened by pollution from industrial developments at Nouadhibou (Shine *et al.*, 2001). Heavy metal contamination may constitute a problem for the porpoise population feeding in and adjacent to the Cap Blanc PNBA Satellite Reserve. Huge quantities of high-grade iron ore are processed on the Cap Blanc Peninsula and shipped out via the port of Nouadhibou. On windy days, clouds of iron ore dust, no doubt laden with a variety of trace elements including heavy metals, are blown over adjacent waters (Van Waerebeek, personal observations) and may find their way into the marine food web. Porpoises as an upper trophic level predator will inevitably accumulate contaminants. The risks of these anthropogenic chemicals in harbour porpoises are still little understood (e.g. Read, 1999)

#### 3.4 Threat connected especially with migrations

There are no known threats because migrations remain unstudied.

#### 3.5 National and international utilization

### **4 Protection status and needs**

#### 4.1 National protection status

Small cetaceans are formally protected by national legislation in at least Senegal and Mauritania, but there are no specific measures to protect harbour porpoises. In practice, takes of small cetaceans in foreign and domestic fisheries off West Africa, even if systematic and predictable, are not sanctioned.

In 2006, to better protect the PNBA, the World Heritage Committee of UNESCO encouraged Mauritania to implement the Marine Environment Code (MEC) in order to implement MARPOL (International Convention for the Prevention of Pollution from Ships) provisions as soon as possible.

The coastal sector called Aguerguer or Côte des Phoques of the proposed 15,000- 20,000 km<sup>2</sup> Parc National de Dakhla could also protect potentially important habitat of *P. phocoena*.

#### 4.2 International protection status

The *P. phocoena* populations of the North and Baltic Seas are listed in Appendix II of CMS. The harbour porpoise is listed as 'Vulnerable' by IUCN (Black and Baltic Seas stocks are listed separately also as Vulnerable) and it is listed under Appendix II of CITES.

#### 4.3 Additional protection needs

Much better and updated information is necessary to allow a sound protection strategy to be drafted. Cetaceans could be added to the data sheets of species to be reported on by fisheries observers and some basic training should be provided. Although most fishermen will hide cetacean bycatches to avoid sanctions (Van Waerebeek *et al.*, 2000), some are landed or transported openly and could be documented. Even isolated cases may provide useful information. The harbour porpoise community off Cap Blanc may require specific protection as it inhabits some of the most heavily fished areas in all of Mauritania.

### 5. **Range States of West African population of harbour porpoise**

Confirmed range states: Morocco, Mauritania, and Senegal. (Western Sahara).

Possible range state: The Gambia.

### 6. **Comments from Range States**

### 7. **Additional remarks**

Indications are that the Cap Blanc community of harbour porpoises may be present year-round (re observations in Robineau and Vely, 1998 and Van Waerebeek and Jiddou, 2006). Foraging porpoises stay around for hours and can easily be sighted with regular binoculars from the cliffs of the Cap Blanc PNBA Satellite Parc. Considering zero-impact on porpoises with excellent possibilities to observe the Mediterranean monk seal, the cape deserves to be added to the list of recommended sites for low-impact marine mammal ecotourism.

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