

Agenda Item 4.2: Abundancy Survey Planning

**Review of 20 years of occasional cetacean sightings
off the French Channel coast (1980 - 2000)**

Submitted by: France



ASCOBANS

NOTE:

**IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO
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REVIEW OF 20 YEARS OF OCCASIONAL CETACEANS SIGHTINGS OFF THE FRENCH CHANNEL COAST (1980-2000)

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INTRODUCTION The English Channel is a relatively shallow stretch of sea in the North Atlantic extending from the south coast of England to the north coast of France. This junction area between the North Sea and the Atlantic Ocean is highly exposed to human activities such as fishing and commercial shipping traffic. This study compiles and analyses 21 years of occasional cetacean sightings data (1980 – 2000) collected between the Franco-Belgian coast and the northern Brittany (area located between 51°00'N-48°00'N in latitude and 06°00'W-02°00'E in longitude) (Fig. 1). This study is a preliminary investigation of cetaceans off the French coast in the English Channel.

MATERIAL AND METHOD Data were collected between 1980 and 2000 by various French institutes working on marine mammals in this area, stretching from northern France to Brittany : the "Coordination Mammalogique du Nord de la France" (Nord-Pas-de-Calais-Picardy region), the "Groupe Mammalogique Normand" (Normandy region) and the Laboratory of Marine Mammals Studies, OCEANOPOLIS (Brittany region). Observations were carried out near "sea users" (fishermen, yachtmen) or from naturalists such as ornithologists and marine mammalogists. The analyse presents sightings distribution and occurrence.

RESULTS Between 1980 and 2000, 1,356 sightings data involving ten cetacean species were recorded off the French Channel coast, they are in order of occurrence : Bottlenose dolphin (*Tursiops truncatus*), Long-Finned pilot whale (*Globicephala melas*), Common dolphin (*Delphinus delphis*), Harbour porpoise (*Phocoena phocoena*), Risso's dolphin (*Grampus griseus*), Killer whale (*Orcinus orca*), Striped dolphin (*Stenella coeruleoalba*), White-beaked dolphin (*Lagenorhynchus albirostris*), Sperm whale (*Physeter macrocephalus*) and Minke whale (*Balaenoptera acutorostrata*) (Table 1).

There is a heterogeneous inter-annual sightings distribution between 1980 and 2000 (Fig. 2). In addition, despite an all year round sightings distribution, there is a significant increase in data number during the summer months, especially in August (Fig. 3). Spatial distribution of the data shows a substantial opposition between the two areas (east and west) (Fig. 4), especially for Bottlenose dolphins, Common dolphin and Risso's dolphins.

The encountered species *Tursiops truncatus* (n=1,031 data; 76%) is the most encountered species, this number does not include either the data collected during the study of the group of about 60 individuals present in the archipelago of Molene (Brittany) (Guinet *et al.*, 1993 ; Ridoux *et al.*, 2000) or the data from the group of 100 individuals present in the Normandy region (western part of the Cotentin peninsula) (Pineau *et al.*, 2000). There is an occasional presence in the eastern part of the Channel, especially during the summer. This summer occurrence tends to increase since the early 1990's (Collet *et al.*, 1994).

Globicephala melas (n=123; 9.1%). Most sightings are concentrated in the Normandy region (Channel Islands, Eastern Seine estuary and Northern Cotentin peninsula) and in Western Brittany. The monthly distribution of data shows a seasonal presence (83%) (summer and early autumn).

Delphinus delphis (n=83; 6.1%). 91.6% of the data are located off the western area of the French Channel coast, mainly during the summer. The common dolphin is rarely encountered in the eastern area.

Phocoena phocoena (n=47; 3.5%) is still uncommon in coastal waters except in northern France (72.3% of all data). Scarce sightings off Normandy (n=11) and Brittany (n=4).

Grampus griseus (n=44; 3.2%) is considered as absent in the eastern part of the Channel (Collet *et al.*, 1994) but frequently observed in the western area during the summer months, off the northern Brittany coast and in the Normano-Breton Gulf. There is a presumed summer site in the western Mont-Saint-Michel Bay (Beaulieu, 1996; Hussenot, 1985).

Orcinus orca (n=10), *Stenella coeruleoalba* (n=7) and *Lagenorhynchus albirostris* (n=5) are occasional species and observations are probably the result of erratic group dispersion. White-beaked dolphins appear to be regular in northern France during winter (Kiszka, 2001 ; Tavernier, pers. com.).

Physeter macrocephalus (n=3) and *Balaenoptera acutorostrata* (n=3) are considered as incidental species except for Minke whale which appears common in the western English Channel, especially during the summer (Breton & Williams, 2001) and despite our three records.

DISCUSSION AND CONCLUSION This study reveals the limits of the use of occasional observations. Indeed there is a decrease in the number of sightings after 1992. This could indicate a lower number of cetaceans but it could also point to a decrease in observational effort (not quantified) if the observers are not regularly approached. The winter data may also be underestimated as observations are easier to undertake in the summer and recreational sailing activities increase during this period. Despite these limits, the English Channel and especially the French coastal waters seem to constitute an important area for a great number of cetacean species at different levels according to the exceptionally high occurrence of some of them. In fact, there are resident groups of Bottlenose dolphins and for other species, it is a seasonal foraging area. As the western part of the Channel is open to the Atlantic Ocean, the oceanic species such as Common dolphins, Long-finned pilot whales and Risso's dolphins can easily make incursions in their hunt for preys. Even though it is difficult to implement these occasional observations in order to monitor the precise abundance, occurrence and distribution of cetaceans off the French coast in the English Channel (wrong species identified and no quantified/regular observational effort). These data, however, help to define particular locations for cetaceans and more accurate studies should be carried out within a scientific protocol.

In conclusion, it is important that French marine mammalogists implement and manage more cetacean surveys and take part in greater regional/international co-operation.

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Table 1. Number and percentage of data for each species collected from 1980 to 2000.

Species	N data	%
<i>Tursiops truncatus</i>	1031	76
<i>Globicephala melas</i>	123	9,1

<i>Delphinus delphis</i>	83	6,1
<i>Phocoena phocoena</i>	47	3,5
<i>Grampus griseus</i>	44	3,2
<i>Orcinus orca</i>	10	0,7
<i>Stenella coeruleoalba</i>	7	0,5
<i>Lagenorhynchus albirostris</i>	5	0,4
<i>Physeter macrocephalus</i>	3	0,2
<i>Balaenoptera acutorostrata</i>	3	0,2

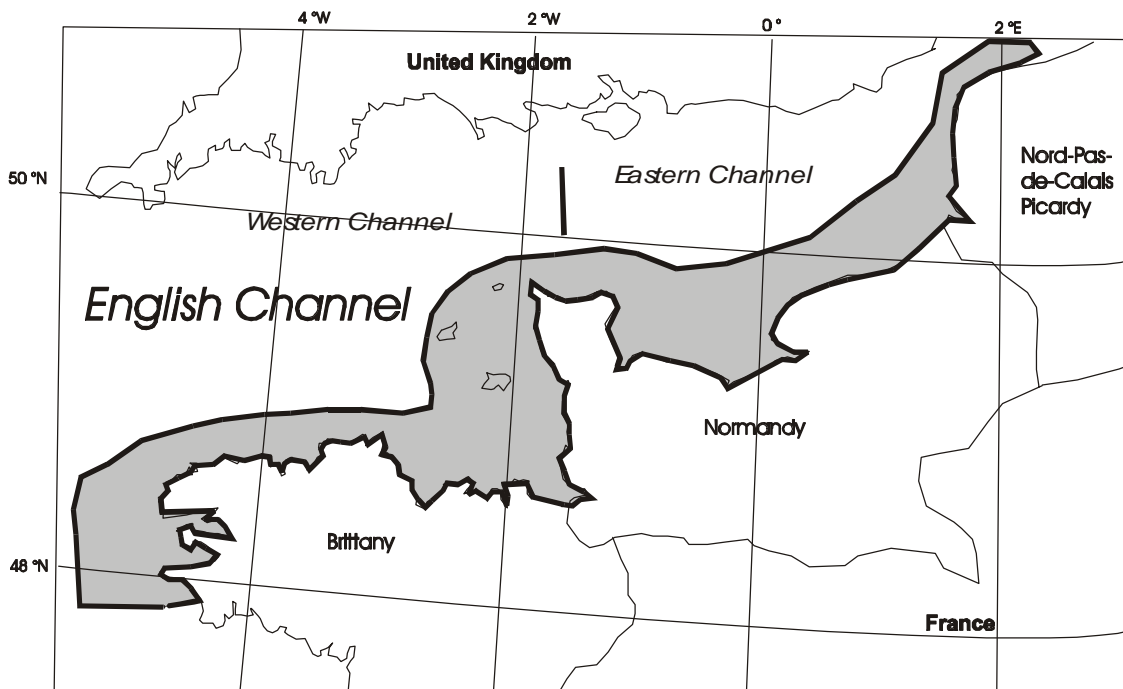


Fig. 1. The study area (grey area).

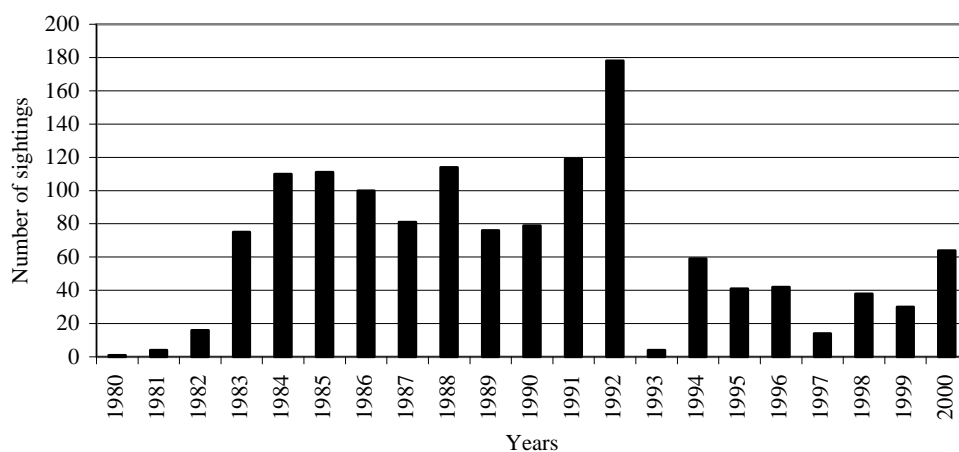


Fig. 2. Inter-annual distribution of occasional cetaceans sightings data (n=1,356) collected between 1980 and 2000 off the French coast in the English Channel.

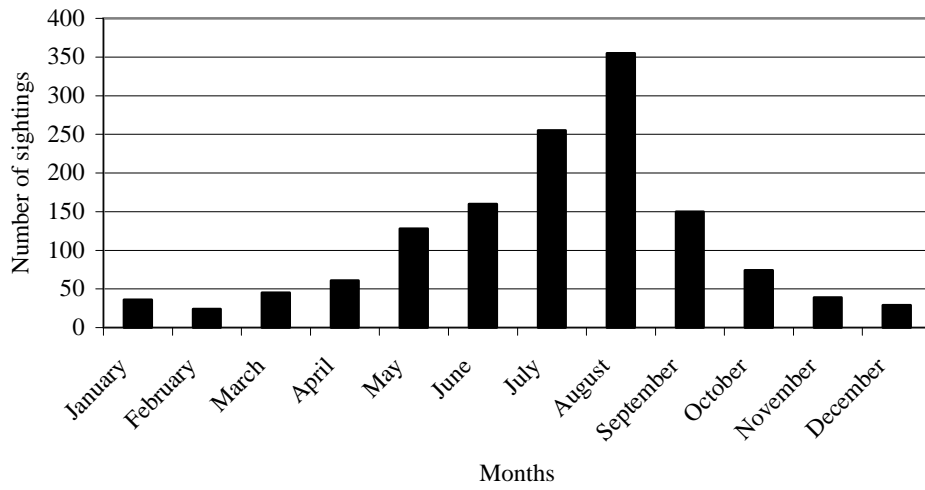


Fig. 3. Monthly distribution of occasional cetacean sightings data (n=1,356) collected between 1980 and 2000 off the French coast in the English Channel.

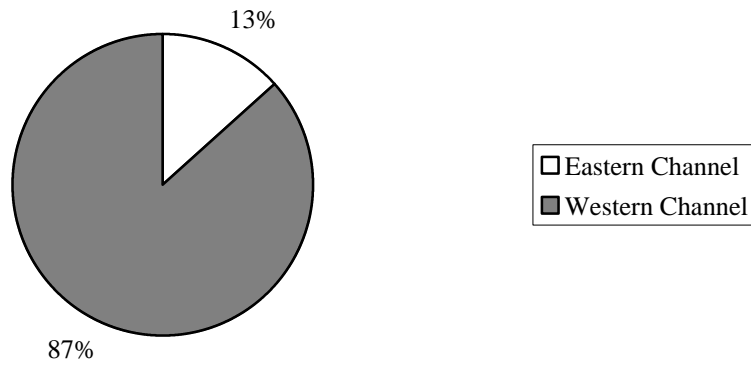


Fig. 4. Occurrence of cetacean sightings (n=1,356) off the Eastern and Western parts of the French Channel coast between 1980 and 2000.