Dutch research on cetaceans was virtually confined to stranded specimens and captive animals in zoo exhibitions (Smeenk 1987, Kastelein et al. 1990) since Bottle-nosed Dolphins *Tursiops truncatus* disappeared and Harbour Porpoises *Phocoena phocoena* became very rare in our inshore waters. Since 1973 living cetaceans have only been recorded occasionally during systematic seawatches at several sites scattered along the Dutch coastline (Campthuysen 1982).

Aerial survey of seabirds, carried out since 1985 by the Tidal Waters Department in Middelburg on the Dutch sector of the North Sea have shown that cetaceans occur in numbers in the offshore zone (Baptist 1987).

In 1987, Dutch seabird workers of the Netherlands Institute of Sea Research on Texel (M. Leopold) and Tidal Waters Division / Dutch Seabird Group (C. Campthuysen) started systematic ship-based surveys in the whole North Sea of seabirds and marine mammals. Although slightly different both mobile platforms use compatible methods, based on Tasker et al. (1984, 1987). This report only gives an overview of the sightings collected from 1985-1988 by plane and from 1987-1990 by ship.

From the plane four species of cetaceans were positively identified: Pilot Whale *Globicephala melasena* (2 individuals/1 sighting), White-beaked Dolphin *Lagenorhynchus albirostris* (159/28), White-sided Dolphin *Lagenorhynchus acutus* (3,3) and Harbour Porpoise (62,45). Seals were seen offshore (9/9), but only the last days of May and the first days of June. Under the unidentified dolphins (13/9) were probably some Bottle-nosed Dolphins.

Six species of cetaceans were positively identified during the ship-based surveys: Minke Whale *Balaenoptera acutorostrata* (10 individuals/10 sightings), Sei Whale *Balaenoptera borealis* (2,1), Pilot Whale (21/11), White-beaked Dolphin (324,68), White-sided Dolphin (34,11), Common Dolphin *Delphinus delphis* (50,1) and Harbour Porpoise (200,80). Of all cetaceans observed ca. 90 % could be identified as to species.

**Whales**

Minke Whales, Sei Whales and Pilot whales were spotted in an area off East England to the Dogger Bank. Only one sighting of two Pilot Whales was done on the Dutch sector of the North Sea.

**Dolphins**

Dolphins comprised the bulk of the sightings in offshore waters, with White-beaked Dolphins predominating. White-sided Dolphins were encountered mostly off the English east coast. In the same waters one herd of 50 Common Dolphins was seen. White-beaked Dolphins were observed throughout the year and were often attracted by the ship. Herds averaged 5.2 individuals. Close to the mainland shore these dolphins were uncommon (figure 1).
Harbour Porpoise
Harbour Porpoises were observed close to the coast, concentrated in a hydrographical frontal zone (Frisian Front) and scattered in offshore waters. Herds seen from the air averaged 1.4 individuals, herds seen from the ship 2.5 individuals. Most remarkably, Harbour Porpoises and White-beaked Dolphins were seen in separate areas offshore (compare both figures). In coastal zones where the water is not calmer Harbour Porpoises seem to be missed from the air.

Analysis
A full analysis of the sightings these surveys is now under preparation. Data processing occurs at several places but in such a way that data-exchange is possible. Although observer effort is known, at this stage of our project calculations of densities (and population estimates) are not yet made. In our opinion the number of observations is still to small to produce statistical fair figures.

References

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P.S.
During two days of aerial survey in june 1990 Bottle-nosed Dolphins (29/13) were seen all over the Dutch sector of the North Sea. Amongst the 29 individuals there were 9 young animals.
Sightings of White-beaked Dolphins (Lagenorhynchus 
acutus), White-sided Dolphins (Lagenorhynchus 
acutus) and unidentified patterned dolphins 
(Lagenorhynchus spp.) in the southern North Sea during 1984-1990 from ship-based and aerial surveys 

Sightings of Harbour Porpoise (Phocoena 
phocoena) in the southern North Sea during 1984-1990 from ship-based and aerial 