

Record numbers of porpoises in the Netherlands, dead and alive. Is there a problem?

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Harbour Porpoises were once (pre-WW-2) so common in the Netherlands that no-one bothered to even look at them. However, around WW-2 numbers declined sharply. This was first noted by Jan Verwey, the founding father of NIOZ, in 1951. His observations were limited to the shore and foreshore, and here the species had become nearly extinct by 1970. It got "full protection" under the EU's Habitat Directive, ratified by the Dutch government in 1992 and lo and behold, it subsequently showed a remarkable increase in Dutch waters. This increase in numbers was seen both in live sightings in nearshore waters and in numbers of dead animals stranded on our beaches. Further offshore the situation remained unclear for a long time, until both aerial and ship-based seabirds confirmed a return of the species into Dutch waters. However, this increase was not the result of larger numbers *per se*, but rather of a southward movement of the North Sea population. Question is: should we see the local increase in numbers as something good (improved situation here) or something bad (deteriorating situation further north)? Pathology of stranded animals and diet studies on these animals are being used in an attempt to get a better understanding of this.

Gross pathology shows that the three main courses of death of stranded porpoises are fisheries bycatch, starvation and disease (in that order). While fisheries bycatch is clearly something that is undesirable (for several reasons, including formal ones under the Habitats Directive), mass-starvation is probably more interesting in a biological sense. Why come (back) to Dutch waters to die? Or is death just a normal part of life? Should we be concerned about 827 dead porpoises on Dutch beaches in 2011? Our diet studies show that the most commonly taken prey are very small and lean fish (gobies). It is hardly feasible that these gobies can sustain porpoises, given their daily requirements. Particularly larger (older) porpoises need to supplement this diet with larger and preferably, fatter fish. Indeed, larger porpoises include more whiting in their diet, which is a larger, but still a lean prey. Moreover, whiting is in short supply nowadays, and years with low whiting stocks seem to result in higher numbers of dead porpoises on our beaches. Dutch waters may not be rich pastures for the invading herds of porpoises and an increase in numbers is not necessarily a good sign.

