Agenda Item 5.3

Implementation of the ASCOBANS Triennial Work Plan (2007-2009)

Review of New Information on Bycatch and Other Causes of Mortality

Document 62

Stranding numbers and bycatch implications of harbour porpoises along the German Baltic Sea coast

Action Requested

- Take note of the information submitted
- Comment

Submitted by

Germany

NOTE:
IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING THEIR OWN COPIES OF DOCUMENTS TO THE MEETING

Stranding numbers and bycatch implications of harbour porpoises along the German Baltic Sea coast

Helena Herr*, Ursula Siebert*, Harald Benke°

** Research and Technology Centre, University of Kiel, Hafentörn 1, 25761 Büsum, Germany*

°German Oceanographic Museum, Katharinenberg 14/20, 18439 Stralsund, Germany

At least two harbour porpoise (sub)populations are distinguished in Baltic waters (Tiedemann et al., 1996; Huggenberger et al., 2002), of which the Baltic Proper population, occurring east of the Darss and Limhamn ridge, has been severely reduced and is estimated at less than 600 remaining animals (Hiby & Lovell, 1996).

Bycatch of harbour porpoises (*Phocoena phocoena*) in the Baltic Sea is of great concern with respect to their conservation. As porpoise abundance is low, any non natural cause for mortality has to be considered as a strong impact on the population. Moreover, in addition to bycatch porpoises of the Baltic Sea face a variety of other anthropogenic impacts which make them especially vulnerable (ASCOBANS, 1999, 2000, 2002; Berggren et al., 2002) .

Bottom set gill nets are known as the major source of anthropogenic mortality of harbour porpoises and feature by far the highest bycatch rates among fishing gear types (ASCOBANS 2002). In the Baltic Sea, set net fisheries account for a major part of the total fishing activity. Bycatch of porpoises in set nets along the German coast occurs regularly. However, netmarks and mutilations found on stranded carcasses indicate that only a fraction of all bycaught animals is reported. Bycatch reports are suppressed and bycatch is actively hidden by opening body cavities and sinking carcasses with the help of rocks. Hence, true bycatch numbers remain unknown and most probably bycatch numbers are underestimated.

Since 1987 the Research and Technology Centre of the University of Kiel (FTZ) has been collecting carcasses found on the shores of Schleswig-Holstein and partly also along the coast of Mecklenburg Prepomerania, which since 2000 is covered by the German Oceanographic Museum (DMM). Fig.1 presents the combined results of both institutes. Carcasses collected were judged as *bycatch* only from direct reports and as *suspected bycatch* only due to mutilations (cut off fluke, fins, flippers or cut open abdomen) and netmarks indicating injury before death (thus excluding carcasses that might have drifted into nets). All other animals collected were classified as “stranded”. Reports of direct bycatch have been decreasing over the years, while suspected bycatch numbers have increased, indicating less willingness of fishermen to report bycatches.

During the past few years a rise of carcass numbers from an average of 30-40 dead animals collected per year to more than 150 in 2007 was observed (Fig.1).

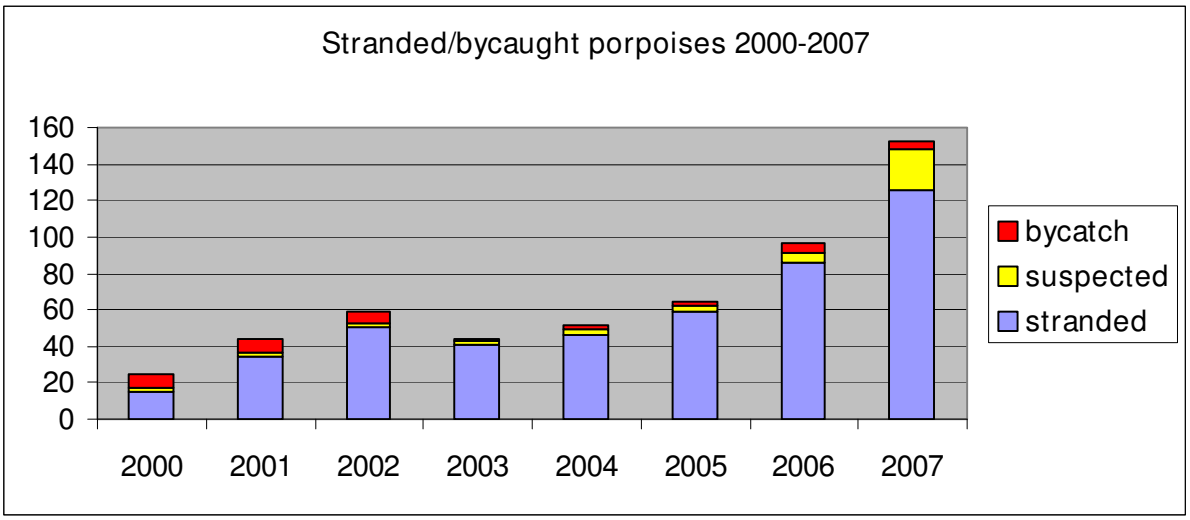

Fig.1: Carcasses collected along the German Baltic Sea coast from 2000 to 2007 by the FTZ and DMM. Category bycatch comprises only bycaught animals delivered by fishermen. "Suspected" bycatch comprises carcasses with netmarks and mutilations. All other carcasses were categorised as stranded.

Although search effort might have slightly increased over the years (e.g. due to public awareness), it could not possibly account for the high increase in animals found. Moreover, a 150 km strip of coastline in Schleswig Holstein with constant effort since 1987 exhibited the same trend as the overall trend. Increasing population numbers could be another explanation, but lack evidence. Abundance estimates from 2007 are not available and earlier population estimations neither exhibited an upward trend in population size nor a significant change in density.

17% of the carcasses were classified as (suspected) bycatch on average. However, more than 80% of all carcasses collected were in a bad state of preservation. It can thus be assumed, that many bycatches remained undetected. When considering only animals in good to moderate states of conservation (12% of the total number) 47% were classified as (suspected) bycatch. In case that 47% of porpoises (147 animals found in total) found in 2007 have been bycaught, estimates would result in a total of 69 bycatches in that year.

Current abundance estimates of harbour porpoises in the German Baltic Sea (and parts of the adjacent Danish waters) range from 457 (95% CI 0-1632) in March 2003 to 4610 (95% C.I. 2259 - 9098) in May 2005 (Scheidat et al. 2008). Applying our bycatch estimates to these abundance estimates suggests that bycatch exceeds recommendation for a maximum

sustainable bycatch of 1% in harbour porpoises provided by the Bergen Declaration (ASCOBANS 2002) and by the International Whaling Committee (IWC 2000).

Hence, rising numbers of strandings as well as an increase in suspected bycatch numbers should be a reason for concern.

Acknowledgements

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