

Offshore distributions of harbour porpoises in the northeast Atlantic from Norwegian sightings surveys 1988-2013

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In this working paper are presented harbour porpoise distributions from recent sighting surveys carried out by Norway.

Shipboard sightings surveys with minke whales as the target species have been conducted in Norwegian and adjacent waters during the summer months around July in each of the years 1988, 1989 and in 1993. With the survey methodology and procedures established in 1985 (Olson *N. 1985*, Norwegian Independent Line-transect Survey 1985, Intense mist, nr. 8 - 1995, Institute of Marine Research), a series of six-year mosaic surveys was initiated in 1996. The purpose has been to cover the northeast Atlantic over a six-year time frame by surveying about 1/6 of the total area with two vessels annually. The surveys have experienced methodological developments throughout the years with the specific aim to get a best estimate of minke whale abundance. Other whale species have nevertheless also been recorded during these surveys. However, given the focus on minke whales and associated tracking procedures, the collection of data for these other species may have been less optimal. It is also important to note that the mosaic surveys have been partial in areal coverage which also brings into question additional variance due to possible changes in distributions over the years. Thus the 1995 survey stands out as the only large-scale synoptic survey which together with the Icelandic and Faroese surveys that year covered a major part of the Northeast Atlantic during NA55-05.

The surveys have been conducted with an intended searching speed of 10 knots. Acceptable conditions for primary searching have been defined as a meteorological sightability of greater than 3 km and sea states of Beaufort 4 or less. Usually sea states above Beaufort 2 quickly diminish detection probability for harbour porpoises. The surveys have been conducted in "passing mode", such that sightings were never closed on, which is a factor which makes species identification validation more difficult. All vessels were equipped with two platforms usually placed above each other and operating independently. The distribution plots here are based on primary sightings made from what we have named the primary platform, which is always the upper platform (usually a barrel) on all vessels.