

EcoQO on harbour porpoise by-catch

Background

It was agreed at the fifth North Sea Conference in 2002 (5NSC) that an Ecological Quality Element relating to harbour porpoise by-catch in the North Sea would be given an Objective: “Annual by-catch levels should be reduced to levels below 1.7% of the best population estimate.” The further development of this Element and Objective was subsequently included in the work programme of BDC and at BDC 2003 the UK agreed to act as the lead country for it. ICES was also requested to undertake work in relation to the Element (see Section 6 of the 2003 ICES Advisory Committee on Ecosystems (ACE) Report: Ecological Quality Objectives).

OSPAR 2006 adopted the agreement on the application of the EcoQO system in the North Sea (*OSPAR agreement 2006-4*). This sets out *inter alia* the work to produce evaluations of each EcoQO, which will form the basis of:

- a. in 2008, a first evaluation of the results of the application of the EcoQO system, leading to
- b. in 2009, an improved evaluation of the results of the EcoQO system, as a contribution to the QSR 2010.

Guidance on reporting formats for the harbour porpoise by-catch EcoQO was circulated on 20 December 2006.

Reporting on certain cetacean by-catches from all EU Member States around the North Sea is required under EC Regulation 812/2004; these reports are relevant but are not fully comprehensive for the North Sea (OSPAR Region II). Those reports that are relevant and publicly available have been used in compiling this evaluation. In addition, evaluation of the scale of by-catch of cetaceans in fisheries is required under the EU Habitats Directive, but precise standards have not been set and there has been little actual evaluation or enforcement of this Directive requirement.

The UK and ICG-EcoQO evaluated the following issues:

- a. whether the EcoQO is met, and if not, why not;
- b. (potential) consequences of failing to meet the EcoQO;
- c. suitability of present monitoring and reporting;
- d. developments in harmonisation of monitoring and reporting schemes;
- e. costs of present monitoring and reporting;
- f. extra costs of harmonising the monitoring;
- g. performance of the EcoQO in terms of the ICES criteria for good EcoQOs and with regard to the Ecosystem Approach to management (both within OSPAR and the MSFD);
- h. the specific linkages with the MSFD and how the EcoQO might be used in relation to the MSFD initial assessment, drawing up programmes and measures and elaborating GES;
- i. gaps in knowledge, present conditions that hamper the implementation process and ways and means to overcome these problems;
- j. effectiveness of communication, i.e. amount of support and knowledge on this EcoQO among stakeholders;
- k. if needed, a proposal for modification and improvement of the EcoQO, including consideration on whether the EcoQOs set originally in 1999 would require revision in the

light of the timing for GES under the MSFD and are consistent with other regional agreements and legislation;

- l. proposals for possible milestones up to the achievement of the objective;
- m. potential applicability of the EcoQO in other OSPAR regions than the North Sea.

It should be noted that as part of the 2008 ICES work programme, OSPAR has asked ICES to evaluate the harbour porpoise by-catch in the North Sea in relation to the EcoQO. ICES' response was published as section 6.3.3.1 of the ICES 2008 Advice (Book 6).

Overview of results from recent monitoring

Reported information on harbour porpoise by-catch in the North Sea is shown in Table 4.1 (including information from ICES (2008)).

Table 4.1: Harbour porpoise by-catch reported by Contracting Parties around the North Sea in 2005-2007

Country	Observation	Extrapolation
Norway ¹	A total of 149 harbour porpoises were reported by-caught by 18 coastal gillnet vessels observed between 1 January and 31 December 2006	None reported
Sweden	No report received. Informal information from Sweden indicates that the on-board observation programme was performed according to EU Regulation 812/2004, and identified no by-catch of harbour porpoises	
Denmark	As required for Regulation 812/2004, Denmark is running an observer programme related to pelagic trawl fisheries in the North Sea, but this is not expected to show harbour porpoise bycatch	An extrapolation to Danish North Sea fisheries based on data of the late 1990s has been published
Germany	In 2007, one animal from the North Sea was reported by-caught. However, due to lesions two additional animals from the North Sea (140 total animals necropsied) were diagnosed during necropsy as possible by-catches	None reported
Netherlands	Based on the necropsy of 62 porpoises stranded in 2006 (total of more than 500 stranded animals) and the cause of death being established, it was estimated that between 53% and 70% of porpoises were by-caught	None reported
Belgium	Based on the necropsy of 70 porpoises in 2007 and the cause of death being established, it was estimated that between 30% and 45% of porpoises were by-caught. There has been a recent increase in strandings (and by-catch)	None reported
France	The report for Regulation 812/2004 covered only pelagic fisheries. No harbour porpoises were reported caught in these fisheries. Some stranded porpoises in northern France show evidence of by-catch in this area	
UK	Report on 2005-06 season was based on observations on selected fisheries in the North Sea. No harbour porpoise by-catch was observed in the North Sea and 14 animals were observed in the south-west UK waters (including in areas north and west Region II)	No estimate possible in North Sea, but c350 (2005) and c530 (2006) with wide confidence intervals, in southwest area (but note that this includes west of OSPAR Region II)

¹including Norwegian waters in OSPAR Region I

In order to assess any by-catch as a percentage in this EcoQO, a best estimate of harbour porpoise numbers is needed. An international survey of small cetaceans (SCANS II) occurred in north-west EU (and some Norwegian) shelf seas in July 2005, funded by the EU and most relevant Contracting Parties to OSPAR. For the North Sea north of the Straits of Dover, a best estimate of 239 061 harbour porpoises was made, while for the Celtic Shelf (the south-west part of OSPAR Region II but the Celtic Shelf also includes much sea area to the west of this) the best estimate was 79 468. The relevant portion of these figures (1.7%) is 4064 and 1351 respectively.

Has the EcoQO been met?

As can be seen from Table 4.1, it is not possible to evaluate whether or not the EcoQO has been met on the basis of reports received. This is due mostly to the lack of a comprehensive requirement for observing by-catch in fisheries that might affect harbour porpoises in the EU. It is regrettable that such a requirement is not in place at least for the most relevant fisheries.

Consequences of failing to meet the EcoQO

A potential consequence of not meeting the EcoQO would be a decline in the harbour porpoise population. This risk might be avoided by asking relevant fisheries managers to take suitable management measures. In essence, this has occurred in the past prior to the introduction of Regulation 812/2004. The Regulation though does not appear to be effective in that there are technical problems with some of the gear modifications required and there is no requirement to monitor effectiveness of any changes in the fisheries concerned. A consequence of this lack of knowledge might therefore be to improve the gear modification requirements and to ask fisheries managers to require monitoring of a sufficiently high standard in all relevant fisheries. OSPAR might bring this issue to the attention of relevant fisheries managers.

Suitability of present monitoring and reporting

It is plain that the present monitoring and reporting across the North Sea is inadequate for EcoQO purposes. As noted above, monitoring and reporting under EU Fisheries Regulations or equivalent Norwegian regulations does not fully match that needed for the EcoQO. Regulation 812/2004 does not require the monitoring of fisheries that should be using pingers on nets as a porpoise deterrent regardless of whether the pingers have actually been deployed; this Regulation does not cover vessels of less than 14 m in length (much netting that is risky to harbour porpoises is deployed from such vessels) and monitoring is not required in all fisheries that catch harbour porpoises. Although monitoring and reporting is needed under the Habitats Directive, and should cover relevant fisheries, the exact specification or scale of such monitoring has not been defined and may vary between Member States, and in practice is not adequate for evaluating the EcoQO. OSPAR might consider approaching ASCOBANS to discuss a joint approach to harbour porpoise by-catch and ensuring that suitable monitoring is undertaken by all relevant fishing nations.

Developments in harmonisation

ICES has established a group that is considering the harmonisation of monitoring and reporting for Regulation 812/2004. That group will also be looking at strategies for monitoring including requirements for sampling and extrapolation (from sample to population scale). OSPAR should ask ICES to determine how much further monitoring might be needed to meet the requirements of this EcoQO (this would incidentally also help ASCOBANS in their purposes). A proposal to ask ICES to undertake evaluation of this EcoQO at regular intervals was made to BDC 2007; this would help in ensuring that reporting occurs.

Costs of present monitoring and reporting

No costs have been reported.

Extra costs of harmonisation

These costs have not been evaluated.

Performance of the EcoQO

This does not differ from ICES evaluation when the EcoQO was established (OSPAR, 2006). In general the EcoQO performs well against the criteria with the exception that there is no long term data.

Specific linkages with the MSFD

Harbour porpoise by-catch is not mentioned specifically in the MSFD, however, this by-catch is certainly of concern to the public living around the North Sea. By-catch though is closely related to the Common Fisheries Policy and at present the links between this policy and the MSFD are not fully clear. It would be surprising if harbour porpoise numbers and trends, along with known by-catch were not reported as part of the MSFD initial assessment. Harbour porpoises do not respect national borders and the population is international and pressures on the population are international, so it follows that conservation responsibilities should also be international. Harbour porpoise numbers and trends are also reported under the 'Conservation Status' monitoring of the EU Habitats Directive (92/43/EEC). The EcoQO could be useful in indicating suitable measures that might be taken, should the EcoQO not be met.

Gaps in knowledge

See above. The full conditions hampering implementation of this EcoQO are not known. The core of the problem is a mismatch between what EU Fisheries Council (and the Norwegian equivalent) are prepared to implement for fisheries and the requirements for understanding the true impact of fisheries on harbour porpoises.

A proposal to ask ICES to undertake evaluation of this EcoQO at regular intervals was made to BDC 2007; this might make the collation of data from national sources a little more automatic than is evident at present. In addition, the composition of ICES Working Groups brings together the expertise often of those actually collecting the data, thus ensuring correct interpretation (with suitable caveats) and potentially helping in the harmonisation of collection procedures, and reporting procedures for the various frameworks that are interested in by-catch.

Effectiveness of communication

Knowledge of the EcoQO (as with most other EcoQOs) is low, however knowledge of the issue is generally high and is the cause of considerable public concern as demonstrated by letter-writing campaigns and political lobbying. Conversely many fishers (and their regulators), although in some cases being concerned are demonstrably unwilling to either allow observers aboard their vessels to assess the scale of by-catch or to be regulated to reduce that by-catch. It is debatable as to whether OSPAR is the most appropriate body to address these wider issues. ICG-EcoQO recommends that OSPAR should discuss these public support issues with ASCOBANS and the EU fisheries managers to determine the best way forward.

Proposal for modification and improvement of the EcoQO

The EcoQO, as currently formulated, is consistent with the objectives of other international agreements, most notably ASCOBANS. North Sea Ministers, meeting at Gothenburg in 2006 have

agreed a limit of 1% of the best population estimate, but gave no timescale (again consistent with the ASCOBANS objectives). No proposal is made for modifying the EcoQO at this time. It is recommended that the OSPAR Secretariat discuss this issue with ASCOBANS to see if any change in the EcoQO would be appropriate.

Possible milestones up to the achievement of the objective

Milestones are very difficult to set given the difficulties with political will.

Potential applicability of the EcoQO in other OSPAR regions

Harbour porpoises are present additionally in OSPAR Regions I, III and IV, although their density and distribution in Region IV is low (therefore making monitoring particularly difficult). The potential for using this EcoQO in further OSPAR regions, especially Region III therefore seems high. An evaluation would need to be made of the extra monitoring needs in these areas. In other areas, it might be more suitable to use by-catch of the commonest cetacean present in the area rather than harbour porpoise (e.g. common dolphin in Regions III, IV and V).

References

ICES (2008). Advice on the status of seals and harbour porpoises in the North Sea. ICES Advice Book 2008 Book 1 Section 6.3.3.1 6pp.

OSPAR (2006). Report on North Sea Pilot Project on Ecological Quality Objectives. OSPAR Commission. Publication Number: 2006/239.

↪ *Go to full QSR assessment report on the evaluation of the OSPAR system of Ecological Quality Objectives for the North Sea (publication number 406/2009 (update 2010))*