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Agenda Item 4.2: **Abundance survey planning (SCANS II), update**

Small Cetacean Abundance in the North Sea and adjacent waters: Further progress with SCANS II

Submitted by: **United Kingdom**

ASCOBANS

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Small Cetacean Abundance in the North Sea and adjacent waters: Further progress with SCANS II

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Introduction

An international survey to study the distribution and abundance of small cetaceans in the North Sea and adjacent waters (SCANS) was conducted during summer 1994 (Hammond *et al.*, 2002). The main objective was to provide information essential to the conservation and management of harbour porpoises through the estimation of baseline abundance estimates. Bycatch is potentially a major threat to small cetaceans and abundance estimates are an important first step in its assessment and subsequent monitoring. The results of SCANS led to estimates of abundance for the harbour porpoise, white-beaked dolphin and minke whale throughout the North Sea, Kattegat, Skagerrak and Celtic Sea. The Baltic was surveyed during SCANS but an abundance estimate for the harbour porpoise was not possible due to poor coverage. The abundance of common dolphins in the Celtic Sea was estimated using conventional line transect methods.

Achieving successful conservation of European cetaceans requires continual monitoring and updating of available information on their status, as called for by ASCOBANS (Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas). Indices of abundance are useful measures for monitoring cetaceans but there is a need for updated abundance estimates in the ASCOBANS region. Similarly, to the west of the area there are limited data available on the distribution and abundance of cetaceans and baseline estimates are required. A second SCANS survey (SCANS II) is planned for summer 2005 and 2006 to replicate and expand on the original SCANS survey in 1994.

Aims and objectives

The harbour porpoise and common dolphin will be the focal species of SCANS II, given the current concern regarding levels of bycatch. However, the shipboard and aerial survey methods used will enable multi-species data to be collected. One of the main objectives of SCANS II is the re-estimation of harbour porpoise abundance in the North Sea and adjacent waters. The survey area will be extended to include shelf and offshore waters within European jurisdiction. A large scale systematic survey to the west of the SCANS area is a priority because there are no robust estimates of small cetacean abundance in continental shelf waters and harbour porpoise numbers in this area are believed to be high. Survey coverage to the west of the British Isles, Ireland, France, Spain and Portugal (Figure 1) will enable the first European-wide estimate of harbour porpoise abundance. In offshore waters, baseline abundance estimates have been calculated for the Atlantic white-sided dolphin off northwest Ireland (Cadhla *et al*., 2001) and west of Scotland (Macleod, 2001) and for common dolphins also off northwest Ireland (Cadhla *et al*., 2001) and in the region of northwestern Bay of Biscay (Goujon *et al*., 1993). There has also been some coverage

during the early North Atlantic Sighting Surveys. The west coast of UK, Ireland, France and Spain has a rich cetacean fauna. Large baleen whales and deep diving odontocetes are likely to be encountered and abundance estimates of certain species may be possible. Both the harbour porpoise and bottlenose dolphin are identified as priority species by the EU Habitats Directive. The survey methods employed during SCANS are not optimal for estimating abundance of small coastal populations of bottlenose dolphins. However, collaboration through the SCANS II project will ensure they are not neglected.

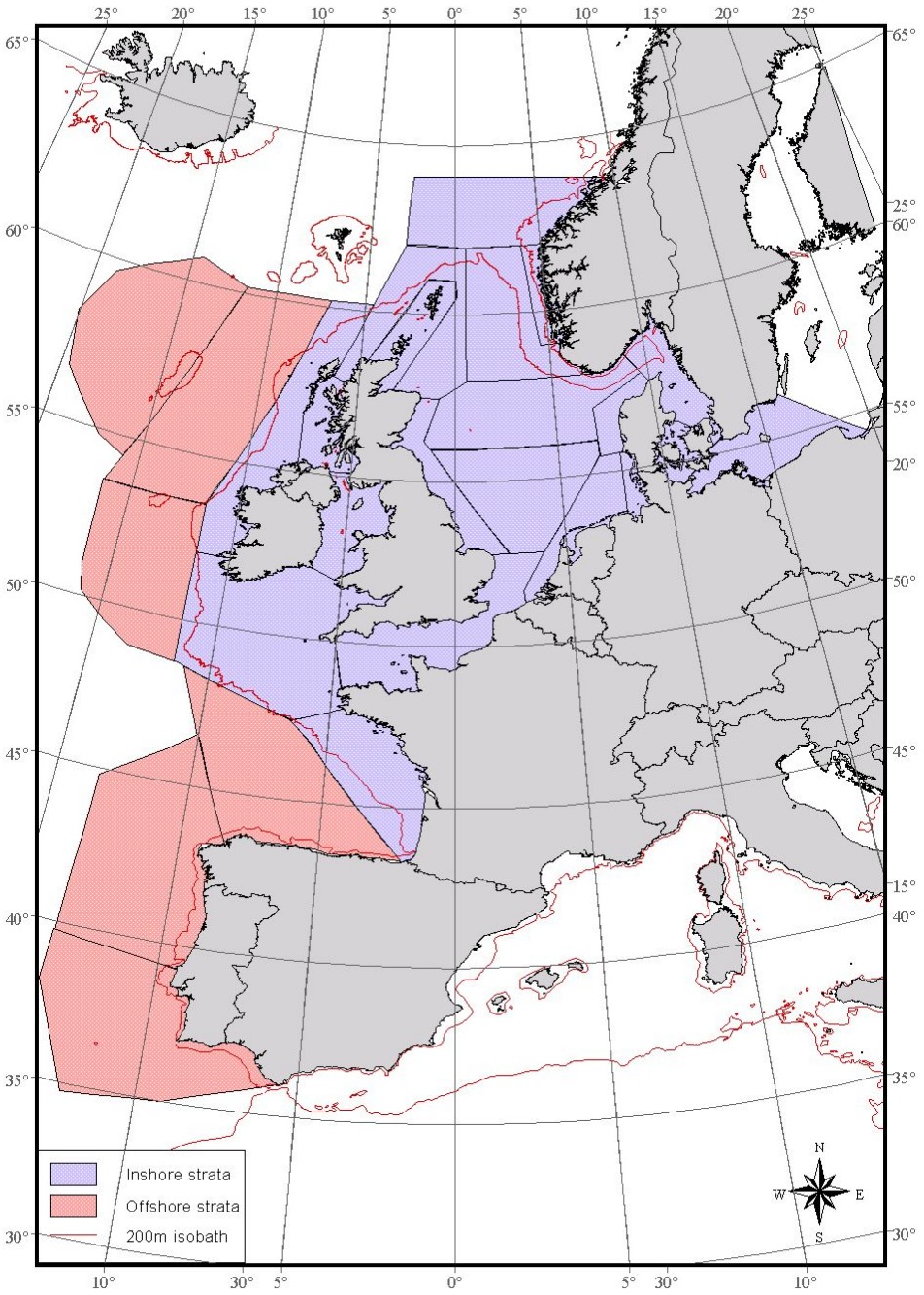

Figure 1: Proposed survey area for SCANS-II (strata yet to be confirmed)

Large-scale surveys to estimate abundance are only required intermittently. Methods for monitoring cetacean populations between periods of dedicated surveys will be developed and tested during SCANS II. These may include acoustic, aerial and/or visual methods and will require both practical and analytical developments to be effective.

A framework to use the results of abundance monitoring will be developed to help assess the effects of bycatch and to provide scientific information to managers to achieve conservation objectives. Information collected on the surveys and available from other sources will be used to investigate interactions between cetaceans and seabirds as influenced by oceanographic features of the marine environment.

Methodologies

The surveys will be split over two years: continental shelf surveys focusing on the harbour porpoise will be carried out in summer 2005 and offshore surveys, focusing on common dolphins, will be carried out in 2006. A combination of shipboard and aerial surveys will be used during SCANS II. The methods will be comparable to those used during SCANS but will also accommodate recent developments in shipboard (Palka & Hammond, 2001) and aerial (Hiby, 1999) survey methods. Established passive acoustic techniques will be used in conjunction with shipboard harbour porpoise surveys. Medium frequency arrays will also be used to detect sperm whales. Further development of equipment and software for delphinid detection and species identification may be possible.

Current status

The broad e-mail group established to generate discussion of SCANS II is now inactive. Formal partners have been identified. Phil Hammond at SMRU is undertaking the overall co-ordination of SCANS II. The employment of Kelly Macleod at the SMRU has been extended until August 2003. Under the supervision of Phil Hammond, her role is in the preparatory work for SCANS II. Two meetings of the project partners have taken place. During the first, objectives of SCANS II were broadly agreed and the meeting discussed funding opportunities, financial support and resources. An initial “concept proposal” encompassing this and subsequent discussion was drafted. The intention was partners should circulate this proposal to generate interest in the project from potential funders. The completion of the full SCANS II research proposal is scheduled for early August 2003. Prior to this, some re-analysis of the SCANS data will be carried out by Kelly Macleod and Sharon Hedley (SMRU) to aid planning of SCANS II.

Funding

A baseline estimate of funding required for SCANS II is €5.9 million. The large increase compared to the cost of SCANS of 1.5 million ECU is due to the much larger area to be surveyed (2.5 times SCANS) and ten years inflation. The most appropriate routes for EU and other funding are being explored. It is hoped that the European Commission can meet at least 50% of the funds, as occurred for SCANS. Participants will pursue relevant persons for appropriate means within their countries to secure national support and funding. Contributions in ship time are also possible from a number of participating countries. ASCOBANS has received €69K from the Department of Environment, Food and Rural Affairs (DEFRA) in the UK for

preparatory work leading to SCANS II. A further €435 has been committed from the UK. The German Federal Ministry has committed €160K to the SCANS II project.

Estimated outline budget

Item	**Estimated expenditure (€K)**
Staff: scientific and technical (including observers)	1,125
Equipment: sightings and acoustic surveys	325
Travel & subsistence	100
Ship charter (including experimental)	3,000
Aircraft charter	400
Overheads @20% total	990
TOTAL	**5,940**

References

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