

Agenda Item 14.4.1

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

Review of New Information on Population
Distribution, Sizes and Structures

Report of the joint ASCOBANS/HELCOM
Workshops, 8-10 October 2007

Document 20

**Joint ASCOBANS/HELCOM
Workshops, 8-10 October 2007**

Action Requested

- take note of the information reported
- comment

Submitted by

Secretariat



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

Secretariat's Note

This document is a compilation of the Terms of Reference for the workshops, the programme for the first one on population structure in the whole ASCOBANS Area and the lists of participants for both workshops.

Reports for the two workshops are still under revision from the participants. They will be made available on the ASCOBANS website as soon as a final text has been agreed.

Terms of reference for joint ASCOBANS/HELCOM workshops on genetics and population structure of the harbour porpoise in the Baltic Sea and on small cetacean population structure in the ASCOBANS area as a whole

A. Background

Workshop 1 – Small Cetacean Population Structure in the ASCOBANS Area

A pre-requisite to effective conservation management of small cetaceans is an understanding of how best to define populations in a biologically meaningful manner. There are substantive challenges to overcome since physical boundaries rarely exist, and a variety of approaches have been used that have different implications. Furthermore, there are both methodological and analytical issues that need addressing. The proposal is to draw together persons with appropriate expertise for a two-day workshop on small cetacean population structure. This meeting should have a broader scope than the workshop on genetics and population structure of the Baltic harbour porpoise (cf. Workshop 2 below). It should cover the entire ASCOBANS Agreement Area and the target species would be small cetaceans in general (with particular attention to bottlenose dolphin, short-beaked common dolphin, white-beaked dolphin and harbour porpoise), rather than the harbour porpoise only. Consequently, a wider group of biologists should be invited than for the Baltic Sea harbour porpoise workshop, and with possible input from outside of Europe.

Workshop 2 - Genetics and Population Structure of the Harbour Porpoise in the Baltic

Arising from the Jastarnia Plan is a management need to identify and agree upon appropriate population units for harbour porpoises in the Baltic Sea. To date, there have been a number of independent studies using samples obtained from different locations and time periods, and using different methodological approaches. These require synthesizing and evaluating. To achieve this, a one-day workshop on genetics and population structure of the harbour porpoise in the Baltic Sea should be organized.

B. Objectives

I. Common objectives for both workshops:

Both workshops should provide a forum for informal presentation and discussion of issues of interests of those involved and of means of promoting and facilitating cooperation across borders.

Agreement should also be reached on the best way ahead, which could be one of two alternatives:

- a) Establishment of a network that will gather and maybe re-analyse all available results to give the best overview of the population structure;
- b) Application for a research project where new samples and other data are collected over the next few years to get a more solid basis for understanding the population structure of the species in the region.

Specifically, the following aims should be achieved:

II. Workshop on small cetacean population structure (Convener: Peter Evans)

- 1) Establishment of a definition of population units of interest to management;
- 2) Identification of the strengths and limitations of different approaches used in discriminating between populations; these would include
 - a) genetic techniques (e.g. microsatellite, mtDNA, isozyme studies)
 - b) other approaches (e.g. metrical and non-metrical skeletal variation, contaminant and parasite burdens, fatty acid signatures, diet, variation in life history parameters, results of telemetry studies, etc.);
- 3) Establishment of an agreed set of criteria for investigating population structure;
- 4) Review of
 - a) sampling protocols (sample sizes, spatial and temporal intervals between sampling points, etc.)
 - b) methodologies for sample collection
 - c) standardization of laboratory techniques;
- 5) Review of statistical techniques for identifying population units (e.g. hypothesis testing versus clustering/other approaches);
- 6) With the best available information, attempt to derive population boundaries where appropriate for the following four species: harbour porpoise, bottlenose dolphin, short-beaked common dolphin, and white-beaked dolphin; and where this is not possible, identify what information gaps need to be filled.

III. Workshop on genetics and population structure of the harbour porpoise in the Baltic Sea (Conveners: Jonas Teilmann and Ralph Tiedemann)

- 1) Review of status of knowledge on population structure of harbour porpoises in the Baltic Sea (including Kattegatt and Belt Sea, as recommended by the Jastarnia Plan):
 - a) review genetic evidence for separate Baltic porpoise populations
 - b) review other lines of evidence for separate Baltic porpoise populations (morphometric skeletal variation, contaminant and parasite burdens, results of telemetry studies);
- 2) Agreement upon biologically meaningful boundaries for conservation management of the harbour porpoise in the Baltic Sea;
- 3) Identification of the characteristics of identified populations within the Baltic Sea in terms of
 - a) genetic variability
 - b) population history
 - c) movement patterns and seasonality, including any gender differences;
- 4) Identification of gaps in our knowledge of evidence for distinct populations, and recommendation of research programs to address any such gaps;
- 5) Agreement upon best methods and standards (genetic and ecological) to allow for more comparable and informative results in the future.

**Joint ASCOBANS/HELCOM Workshop on
SMALL CETACEAN POPULATION STRUCTURE
in the ASCOBANS Area**

8th October, 14:00 – 9th October 2007, 18:00

**UN Campus, Hermann-Ehlers-Str. 10
53113 Bonn, Germany**

Monday 8th October

14:00 - 14:30 *Introduction to workshop*

Methods for Discriminating Populations [5-minute presentations with 5 minutes for questions]

14:30 *i) Genetics a) Markers*

14:30 – 14:40 Neutral: mtDNA & microsatellites – Liselotte Andersen

14:40 – 14:50 Non-neutral Major histocompatibility complex genes (MHC) – Rus Hoelzel

14:50 – 15:00 Single nucleotide polymorphisms (SNPs) – Per Palsböll

15:00 *i) Genetics b) Analytical Methods*

15:00 – 15:10 Individual-based assignment methods – Per Palsböll

15:10 – 15:20 Wright's inbreeding coefficients (+ version of RHOst) – Simon Goodman

15:20 – 15:30 Spatial autocorrelation methods – Ada Natoli

15:30 – 15:40 Non-equilibrium approach using IM (Isolation with Migration) – Rus
Hoelzel

15:40 *ii) Skeletal Variation*

15:40 – 15:50 Metrical - Anders Galatius Jørgensen

15:50 – 16:00 Non-Metrical – Sinead Murphy

16:00 – 16:30 Break

16:30 – 16:40 *iii) Stable Isotope Signatures* – Aleta Hohn

16:40 – 16:50 *iv) Parasite Loads* – Kristina Lehnert

16:50 – 17:00 *v) Contaminant Loads* – Florence Caurant

17:00 – 17:10 *vi) Life History Variation* – Christina Lockyer

17:10 – 17:20 *vii) Telemetry* – Jonas Teilmann

17:20 – 17:30 *viii) Statistical Considerations* – Simon Goodman

17:30 - 18:30 Buffet supper

18:30 - 20:30 *viii) Integrating different lines of evidence* – Christina Lockyer

ix) Re-evaluation of the concept of Management Units – Per Palsböll,
followed by Round Table Discussion

Tuesday 9th October

Species Case Studies [5-minute presentations with 5 minutes for questions]

- 09:00 i) *Harbour Porpoise*
09:00 – 09:20 Liselotte Andersen
09:20 – 09:40 Carlos de Luna
09:40 – 10:00 Michael Fontaine
10:00 - 11:00 Round table Discussion on Harbour Porpoise
- 11:00 - 11:30 Break
- 11:30 ii) *Bottlenose Dolphin*
11:30 – 11:40 Aleta Hohn
11:40 – 11:50 Valentina Islas
11:50 – 12:00 Ada Natoli
12:00 – 12:10 Rus Hoelzel
12:10 – 13:00 Round table Discussion on Bottlenose Dolphin
- 13:00 – 14:00 Lunch
- 14:00 iii) *Short-beaked Common Dolphin*
14:00 – 14:10 Ada Natoli
14:10 – 14:20 Sinead Murphy
14:20 – 14:30 Ana Rita Amaral
14:30 - 15:30 Round table Discussion on Short-beaked Common Dolphin
- 15:30 - 16:00 Break
- 16:00 iv) *White-beaked & Atlantic White-sided Dolphins*
16:00 - 16:10 Peter Evans
16:10 – 16:20 Anders Galatus Jørgensen
16:20 – 16:30 Eulalia Banguera
16:30 - 17:00 Round table Discussion on White-beaked & White-sided Dolphins
- 17:00 - 17:30 Close of Meeting

**Joint ASCOBANS/HELCOM Workshop on
Small Cetacean Population Structure in the ASCOBANS Area
8+9 October 2007**

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Harbour Porpoise in the Baltic Sea
10 October 2007**

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