

A JOINT CETACEAN SIGHTING DATABASE: A COOPERATIVE EFFORT AMONG CIESM, ACCOBAMS AND THE PELAGOS SANCTUARY

Giuseppe Notarbartolo Di Sciarra¹ * and Caterina Maria Fortuna²

¹ Tethys Research Institute, Viale G.B. Gadio 2, 20121 Milano, Italy - disciara@tin.it

² Blue World Institute of Marine Research and Conservation, Kastel 24, HR-51551 Veli Losinj, Croatia

Abstract

The organization of a cetacean sighting database has been started by CIESM in cooperation with ACCOBAMS and the Pelagos Sanctuary. Aims of the database are to support the conservation and scientific goals of the participating organisations by providing a readily accessible body of knowledge, collected across time (past, present and future), concerning the occurrence, distribution, abundance and habitat use of cetaceans in the Mediterranean Sea, the Black Sea and contiguous Atlantic Ocean.

Keywords : Cetacea, Black Sea, Eastern Mediterranean, Western Mediterranean.

For several decades CIESM has been concerned with the progress of ecological knowledge of Mediterranean cetaceans, and such efforts and interest have resulted, among other things, in recent years in the publication of a preliminary Atlas on cetacean distribution [1], and of a Workshop Monograph [2] on the roles of cetaceans in marine ecosystems. Furthermore CIESM actively supports the functioning of ACCOBAMS - an inter-governmental organisation for the conservation of the region's cetaceans - by nominating five independent members in its Scientific Committee. Collecting and organising cetacean sighting data from the Mediterranean and the Black Seas has been a CIESM activity for a long time [1, 3]. Now ACCOBAMS and the Pelagos Sanctuary - another intergovernmental entity established in 2002 by France, Italy and Monaco to protect cetaceans in a large area of the NW Mediterranean basin - have decided to join efforts with CIESM to create a cetacean sightings database. A joint *ad hoc* meeting was organised in Monaco in September 2006 for this purpose.

Aim of the database will be to support the conservation and scientific goals of the participating organisations by providing a readily accessible body of knowledge, collected across time (past, present and future), concerning the occurrence, distribution, abundance and habitat use of cetaceans in the area of interest, i.e., the Mediterranean Sea, the Black Sea and contiguous Atlantic waters.

A better understanding of the distribution and occurrence of cetaceans in the area of interest is important for many reasons. First, although cetacean ecology is beginning to be reasonably well known in parts of the Mediterranean and Black Seas, knowledge is completely lacking from major portions of the area, and even where such knowledge exists, it is mostly limited to summer observations. Second, even if we were to succeed in securing state-of-the-art information (i.e., completion of a measure of effort and of the concurrent environmental co-variables) on future sightings over the whole area of interest, and across seasons, past details on the abundance and distribution of cetaceans in the region, not to speak of time series, are very scarce and difficult to find, making the detection of trends in an epoch of rapid change an arduous challenge. Third, creating a centralised database will facilitate the application to the data of increasingly sophisticated analytical techniques which will ensure that management and conservation decisions will rest on robust science and become more effective. Finally, a shared database will facilitate the creation of a network of like-minded scientists cooperating on a regional scale so as to better understand the ecology of cetaceans, and improve the conservation status of their populations.

In order to proceed with the establishment of the common database, the following priority objectives were identified:

1. Organising a single, accessible, scientifically credible and robust database, integrating relevant and validated existing datasets for future information. Such dataset will contain information collected within the area of interest.
2. Gathering data that can be analysed to obtain effective and predictive distribution and abundance maps for all cetacean species within the area of interest.
3. Implementing new spatial analysis tools, in order to define *ad hoc* models for the region that will allow the correct use of new baseline and monitoring data.

The database will be hosted in Monaco. A "Data Availability Group" shall

be created soon, including representatives from the three organisations and scientists holding the datasets. In recognition of the fact that data represent a significant temporal and financial investment by scientists and research institutes, the use of their data by third parties shall be accompanied by appropriate safeguards. The following general principles will constitute the base of the working approach: (1) data owners maintain ownership; (2) data owners are offered co-authorship in any relevant technical report of the involved Organisations; (3) publication rights remain strictly with the data owner.

The following basic Terms of Reference were indicated for the "Data Availability Group":

To clearly identify all procedures for:

- A.1 database accessibility policy, by establishing rules on:
a. data transmission to potential users (deciding on the applicants' eligibility);
b. submission of data access proposals;
c. evaluation of data access proposals.

A.2 data quality control, by defining rules on data validation methods (for example, on the eligibility of datasets and data providers, methods and protocols for data collection, data verification system).

In practice, the main work of the Data Availability Group will include:

1. Definition of data to be collected, and what fields are obligatory (e.g., latitude, longitude, time, date, group size, distance, angle, speed and height of the observation platform, sea and wind state, linear km covered or tracks, sampling design, etc.);
 2. Criteria to define acceptable data, and definition of basic research methods considered reliable (for example, one dedicated/ experienced observer, GPS position, picture, etc.); this would include a procedure for data quality control;
 3. Establish different levels of accessibility (data providers, "third parties", public/website);
 4. Data use (validity of aims of the proposed use of data by third parties), including the format and "temporal validity" for the distribution of documents;
 5. Data providers must be selected and data should be made available based on clear rules;
- The term "data owners" shall be clarified (e.g., data collector, data holder, data owner, opportunistic vs. systematic, experienced vs. opportunistic).

References

- 1 - CIESM, 1995. Preliminary atlas of distribution of the Mediterranean cetaceans. P. Beaubrun ed. CIESM/Musée Océanographique, Monaco, 87pp.
- 2 - CIESM, 2004. Investigating the roles of cetaceans in marine ecosystems. CIESM Workshop Monograph N. 25, 144pp.
- 3 - CIESM, 1998. Distribution of small cetaceans in the northern part of the Black Sea, a preliminary atlas. A. Birkun Jr and S. Krivokhizhin eds, 67pp.