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DRAFT LONG TERM MONITORING PROGRAMME FOR ESTIMATING TRENDS IN ABUNDANCE AND DISTRIBUTION OF CETACEANS

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Issue: Development of the ACCOBAMS long term monitoring program for estimating trends in abundance and distribution of cetaceans (ACCOBAMS LTMP).

1. Action requested

The Scientific Committee is invited to:

- a. note the information provided on the development of the ACCOBAMS long term monitoring program for estimating trends in abundance and distribution of cetaceans;
- b. advise on the development of this document.

2. Background

The ACCOBAMS Survey Initiative (ASI) represents an unprecedented effort and a first step towards the regular assessment of cetacean abundance and distribution at the ACCOBAMS area level. In order to assess trends in population status, which will inform decision makers and support relevant conservation measures, monitoring efforts must be replicated systematically and regularly over time, as reflected in the 6-year cycle of marine monitoring regional policies in the region (i.e. MSFD1, EcAp2). While the ASI 2018 and 2019 surveys of the Mediterranean and Black Sea provided a strong baseline for regional monitoring, it is essential to ensure the sustainability of harmonized monitoring operations to estimate abundance and distribution of cetacean populations in the Agreement Area.

By building on the ASI successful experience and as part of the 2020-2022 Programme of Work (Ca1a), the ACCOBAMS Secretariat aims to develop and adopt a long-term monitoring programme in order to enable systematic monitoring of cetaceans and other species in the long run, to assess trends in population abundance and distribution and improve conservation efforts throughout the overall Agreement area.

The ACCOBAMS Long Term Monitoring Program (LTMP) is a framework document that builds on the approach followed by the ASI. The surveying methods and protocols are not detailed in the document, since ACCOBAMS LTMP will use the multispecies monitoring protocols developed and used for the surveys carried out within the framework of the ASI Project in 2018 and 2019.

A preliminary draft of the LTMP was circulated to the Members of the ACCOBAMS Scientific Committee for comments and views and was also presented to the 5th Meeting of ACCOBAMS National Representatives held online 12-15 July 2021. Comments received were incorporated in the current draft.

A final version will be the object of a draft Resolution to be developed for the next Meeting of ACCOBAMS Parties (MoP8, 2022).

¹ *The Marine Strategy Framework Directive of the European Commission*

² *The Ecosystem Approach adopted by the Contracting Parties to the Barcelona Convention*

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Background

The main objective of ACCOBAMS being to achieve and maintain a favourable conservation status for cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area, the Agreement requests the Contracting Parties to undertake, individually and through collaboration, a series of conservation and management measures for the species and to develop cooperation for research and monitoring to fully implement them. The development of monitoring is clearly designated by the Agreement among the most recommended ways to enhance the knowledge about the biology, ecology, and population dynamics of cetaceans in order to identify and implement conservation measures.

In accordance with the ACCOBAMS strategic objective on improving the understanding of the conservation status of cetaceans at the Mediterranean/Black Sea macroregional level, the ACCOBAMS Survey Initiative (ASI) Project³, a collaborative initiative aimed at establishing an integrated and coordinated monitoring system for cetaceans, was launched in 2016 during the Sixth Meeting of the Parties to ACCOBAMS (Monaco, 22-25 November 2016).

After the successful implementation in 2018/2019 of the surveys over the Mediterranean Sea within the framework of the ASI Project, a survey in a large part of the Black Sea was conducted during the summer of 2019 through the CeNoBS⁴ and EMBLAS-Plus⁵ Projects.

Building on the experience gained so far through the development and the implementation of the ASI, the Secretariat of ACCOBAMS initiated the elaboration of the ACCOBAMS Long Term Monitoring Programme (ACCOBAMS LTMP) for estimating abundance and distribution of cetaceans and assessing trends in space and time.

Objectives of the ACCOBAMS LTMP

The primary motivation of the ACCOBAMS LTMP is to collect reliable data allowing to obtain accurate estimates of abundance and distribution of cetacean species in the ACCOBAMS Area. It [should] [may] also collect information on human activities at sea that could generate threats to cetacean (maritime traffic, leisure boating, fishing, marine litter, Chemical pollutants, etc.). This information may be used to identify hotspot zones of interaction between cetaceans and human activities in the ACCOBAMS area. The ultimate objective being to provide a robust scientific base for the setting and the regular adjustment of conservation and management measures that allow achieving a favourable conservation status for cetaceans in the Agreement area. Through such an achievement, the Parties will fulfil their obligations under ACCOBAMS, as well as their commitments towards other relevant Multilateral Agreements (CBD, CMS, Barcelona Convention, EU regulations, etc.).

The periodic implementation of the ACCOBAMS LTMP will allow to assess trends in species population size and distribution, and, also using information on human activities impacting cetaceans, to assess, and where necessary adapt, the conservation measures in place. The data collected by the ASI in the Mediterranean and Black Seas established a reliable baseline from which to measure future changes in the monitored parameters.

³ The ASI Project benefited, for its Mediterranean component, from the financial support of France, Italy, Monaco, Slovenia, Spain, the MAVA Foundation, the Prince Albert II Foundation and IFAW.

⁴ The CeNoBS Project "Support MSFD implementation in the Black Sea through establishing a regional monitoring system of cetaceans (D1) and noise monitoring (D11) for achieving GES" was implemented between 2018-2021 thanks to a financial support of the European Union (<https://www.cenobs.eu/>)

⁵ The EMBLAS-Plus project "Improving Environmental Monitoring in the Black Sea – Selected Measures" (<http://emblasproject.org/>) is funded by the European Union.

The geographical scope of the ACCOBAMS LTMP

Given the mobile nature of cetacean species, the ACCOBAMS LTMP should cover the whole "Agreement area" as defined in Article I of the ACCOBAMS Agreement⁶. This implies that it will cover within the Agreement area (i) the maritime waters under the jurisdiction of the Parties, (ii) the maritime waters of the non-Party States and (iii) the maritime waters located beyond national jurisdictions. Furthermore, it may cover also other maritime zones that could be included in the future in the Agreement area, such as the maritime zones of Portugal and Spain whose inclusion in the Agreement area was adopted by the Parties through Resolution A/4.1 amending the geographic scope of the Agreement, pending the entry into force of the amendment.

However, under certain circumstances it may not be possible to conduct monitoring surveys covering areas where administrative (permit-related) or political constraints do not allow monitoring teams to operate normally and safely. Furthermore, the geographical coverage of the monitoring may also depend on the availability of financial resources. Therefore, a synoptic survey may be limited to cover only part of the areas targeted by the ACCOBAMS LTMP. However, a maximum possible coverage should be aimed for.

Monitoring approach

The ACCOBAMS LTMP will be mainly based on periodic synoptic surveys covering the entire Agreement area. Each survey shall be a collaborative initiative involving all the ACCOBAMS Parties through their relevant national administrations, researchers and NGOs. It will be coordinated by the Secretariat of ACCOBAMS⁷ and implemented by national teams supported, where necessary and appropriate, by observers and/or cruise team leaders designated by the Secretariat of ACCOBAMS in consultation with the relevant Focal Points and based on their scientific expertise.

Conducting the synoptic surveys of the ACCOBAMS LTMP according to a six-year frequency would provide the right balance between monitoring cost and regular updating of information on abundance and distribution of cetacean species in the ACCOBAMS area. Ensuring such a frequency will be, however, a crucial challenge given the financial resources required for such monitoring effort.

For each synoptic survey, the Secretariat of ACCOBAMS will collaborate closely with the ACCOBAMS National Focal Points and a Contact Group whose members are designated by the National Focal Points. As demonstrated during the implementation of the ASI Project in 2018, the role of the Contact Group members is important, in particular for liaising with the relevant national authorities, ensuring the following-up at national level of the authorization request processes for aerial and/or boat surveys and to provide support with logistical aspects during the survey implementation phase. In order to support the coordination at national level of the synoptic survey, the Secretariat, upon request by the National Focal Point, shall inform the relevant National Authorities of the country, such as the Foreign Affairs Services, about the synoptic survey and provide them with information on the general framework of the initiative and its expected results.

⁶ the "Agreement area", is constituted by all the maritime waters of the Black Sea and the Mediterranean and their gulfs and seas, and the internal waters connected to or interconnecting these maritime waters, and of the Atlantic area contiguous to the Mediterranean Sea west of the Straits of Gibraltar. For the purpose of this Agreement:

- the Black Sea is bounded to the southwest by the line joining Capes Kelaga and Dalyan (Turkey);
- the Mediterranean Sea is bounded to the east by the southern limits of the Straits of the Dardanelles between the lighthouses of Mehmetcik and Kumkale (Turkey) and to the west by the meridian passing through Cape Spartel lighthouse, at the entrance to the Strait of Gibraltar; and
- the contiguous Atlantic area west of the Strait of Gibraltar is bounded to the east by the meridian passing through Cape Spartel lighthouse and to the west by the line joining the lighthouses of Cape St. Vicente (Portugal) and Casablanca (Morocco).

⁷ Where needed, the coordination may be delegated to a partner organisation.

A Scientific Coordinator will assist the Secretariat in the development and implementation phases of the synoptic surveys, in liaison with the ACCOBAMS Scientific Committee.

The Parties to ACCOBAMS and the non-Party States are encouraged to adhere to the ACCOBAMS LTMP and to ensure the maximum level of harmonisation between their “routine” cetacean monitoring activities in the ACCOBAMS area and the ACCOBAMS LTMP. In this context, given that several countries regularly conduct monitoring campaigns to assess the cetacean populations in their national waters included in the ACCOBAMS Area, it would be useful that the ACCOBAMS Secretariat, with the support of the Bureau, liaises with the relevant authorities in these countries and invite them to synchronize the realization of their cetacean monitoring campaigns with the surveys under the ACCOBAMS LTMP and to ensure a high level of harmonisation of the surveying protocols. This will allow a better use of the available resources and means to ensure the evaluation of the cetacean population status in the whole Agreement area.

Programmes aimed at monitoring parameters other than those covered by the ACCOBAMS LTMP (e.g. cetacean stranding monitoring programmes, long-term passive acoustic monitoring, monitoring of bycatch, etc.) should be encouraged since they provide additional data that complement the information gathered under the ACCOBAMS LTMP and are crucial component of conservation of cetaceans.

Monitoring protocols and platforms

The ACCOBAMS LTMP will use the multispecies monitoring protocols developed and used for the surveys carried out within the framework of the ASI Project in 2018⁸ and 2019 during which the aerial surveys, using appropriate airplanes and skilled and/or trained observers, enabled to collect data for obtaining robust estimates of density and abundance for most cetacean species in the Agreement Area. The synoptic surveys of the ACCOBAMS LTMP will be mainly based on aerial surveys however, shipboard surveys shall be used for species requiring passive acoustic monitoring techniques and/or in areas where flying permits cannot be obtained.

During the whole process of data collection and processing, special attention should be paid to ensure data quality. The parameters to be considered by the ACCOBAMS LTMP are those needed to estimate abundance and distribution of different cetacean populations in the Agreement Area and to provide information on the human activities impacting them.

The periodic surveys of the ACCOBAMS LTMP shall be implemented during the same season⁹ to ensure data comparability between surveys from different years. Their data will not inform therefore on the seasonal distribution of the species. This kind of information could be generated by other monitoring programmes undertaken at different temporal planning and smaller spatial scales or using opportunistic platforms (ferries, fishing boats, etc.).

To take advantage of possible future technological and/or methodological advances in the monitoring of cetaceans, the ACCOBAMS Scientific Committee will closely follow the development in cetacean monitoring techniques in order to propose adaptations and/or improvements to the monitoring protocols under the ACCOBAMS LTMP.

The monitoring targets

The ACCOBAMS LTMP will primarily target the cetacean species and the threats having a direct impact on them. However, to maximize the benefit from the involved surveying effort, observation data relating to other species of

⁸ Links to the field protocols for aerial surveys and boat-based surveys developed and used by the ASI Project to be added

⁹ The surveys shall be conducted preferably in summer season and their timing will take into account the weather specificities of each region.

megafauna and/or other threatened species may be collected, if the observation teams have sufficient skills to ensure the data quality, particularly with regard to the identification of observed species. The following taxa could be covered in addition to cetaceans: turtles, monk seal, large fish, including elasmobranch, species and birds.

It should also collect information about the presence during the monitoring transects, if relevant, of commercial ships, fishing boats, aquaculture farms, leisure boats, acoustic survey ships, oil slicks, marine litter and any other elements related to human activities that may threaten cetaceans. The collection of data concerning these human activities should allow the identification of areas with high level risk of adverse interactions with cetaceans, for example via spatial modelling approaches.

Data management and use

The Secretariat of ACCOBAMS is the depository of the data sets collected under the ACCOBAMS LTMP. Each Focal Point may receive, upon request, a copy of the data sets collected.

ACCOBAMS being an Intergovernmental Agreement aimed at promoting conservation of cetaceans, it therefore appears appropriate and advisable that the data collected under the ACCOBAMS LTMP be made available for the widest possible use for conservation related purposes. Raw data generated by the ACCOBAMS LTMP may be made available therefore, upon request, to scientists and partner organisations for use for conservation related purposes. Their dissemination and use in scientific publications and awareness raising material shall be subject to Terms of Use that take into account the ACCOBAMS objectives and possible requirements by Parties and donors. The Terms of Use will be available on the web site of ACCOBAMS.

For each synoptic survey, the Secretariat of ACCOBAMS shall establish a data analysis process in close consultation with the Scientific Coordinator. The data analysis will be conducted *a minima* by one skilled expert with the review/guidance of the ACCOBAMS Scientific Committee. If funding allows, the analysis process may be conducted by a team made of an ad hoc group of experts and other skilled scientists that Parties might designate to contribute in the data analysis.

The expert / the data analysis team shall produce a report rendering the outcomes of its/their works, focusing on the cetacean abundance and distribution estimates, as well as on trends when possible. The report shall be reviewed by the Scientific Committee of ACCOBAMS and published by the Secretariat.

At ACCOBAMS level, the ultimate use of the outcomes of synoptic surveys will be mainly for the development of conservation recommendations elaborated by the Scientific Committee that will serve as a basis of draft Resolutions prepared by the Secretariat and reviewed by the Extended Bureau with the view of submitting them to the Parties for consideration. The outcomes of the surveys conducted under the ACCOBAMS LTMP may also help in decision making in relation to conservation at national level and within the framework of other multilateral agreements concerned by the conservation and sustainable use of marine resources.

Skills availability/Capacity building

The accuracy and reliability of data collected within the framework of the ACCOBAMS LTMP will largely depend on the availability of skilled and/or trained observers able to identify the targeted species and to apply properly the monitoring protocols. As part of the ASI project, training sessions were organized for observers to familiarize with the monitoring protocols and to train in the safety procedures to be followed where necessary. These sessions made it possible to train several observers from countries of the ACCOBAMS area who had also the opportunity to improve their monitoring skills during the surveys carried out in 2018 and 2019. The future implementation of the LTMP can

therefore count on these skills. However, considering that some of the trained observers would no longer be available for future periodic surveys, the Secretariat should ensure for each monitoring survey under the ACCOBAMS LTMP the availability of qualified observers and cruise/team leaders¹⁰. To this end, the LTMP should include a training component targeting all actors of the field surveys (observers, team leaders, etc.) allowing the newly involved participants to qualify for their tasks and the skilled ones to brush up their skills and familiarise with new methodological updates. The trainings should include, in addition to issues directly related to data collection, other relevant aspects covering safety, logistics, administrative procedures, etc.

Funding

The financial needs for the implementation of the ACCOBAMS LTMP are relatively high, which requires a particular effort to mobilize the necessary funds. Furthermore, the effective implementation of such a long-term monitoring programme will require that assistance be provided, in a spirit of solidarity, to some Range States for capacity building and to contribute in covering their field surveying costs under the ACCOBAMS LTMP.

It is therefore important to establish a long-term mechanism for financing the programme actions that ensures the sustainability of the programme and contributes to rationalizing available resources from donors and national authorities.

The Secretariat in close collaboration with the Bureau of ACCOBAMS will investigate funding options and will liaise with possible donors as well as with relevant national authorities and relevant multilateral organisations with the view of securing the needed funds for the synoptic surveys.

Links with relevant initiatives

Cetacean monitoring programmes aimed at evaluating populations and their distribution in the ACCOBAMS area are implemented within the framework of several initiatives at national and also multilateral level.

At national level, member countries of the European Union need to regularly undertake cetacean monitoring programs to collect the information required for their reporting under Article 17 of the Habitats Directive as well as in relation to the assessment of the Environmental Status under Descriptor 1 (Biodiversity) of the EU Marine Strategy Framework Directive (MSFD).

In the Mediterranean, other cetacean monitoring programmes are expected to start from 2021 within the framework of the Integrated Monitoring and Assessment Programme (IMAP) of the EcAp process under the Barcelona Convention. A similar initiative is also expected for the Black Sea within the framework of the Bucharest Convention. Most of these monitoring programmes have similarities with the ACCOBAMS LTMP, in terms of monitoring targets and protocols. The estimates of abundance and distribution of cetacean species that will be generated on regular basis by the ACCOBAMS LTMP will constitute very useful data to report on favourable Conservation Status under the EU Habitats Directive and to assess Good Environmental Status (GES), both under the EU MSFD and IMAP of the Barcelona Convention's EcAp process.

¹⁰ Given the crucial role of cruise leaders in planning and conducting surveys as well as in overcoming difficulties faced during the different survey stages, their appointment is among the issues demanding a special attention.