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DELIVERABLE

D 5.2. Summary report of national and regional barriers and difficulties for getting data about cetacean populations and habitats and their distribution

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No	Participant organization name	Participant short name	Country
1	Centro Tecnológico Naval y del Mar	CTN	Spain
2	Permanent Secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area	ACCOBAMS	Monaco
3	Department of Fisheries and Marine Research	DFMR	Cyprus
4	Inštitut za vode Republike Slovenije/Institute for water of the Republic of Slovenia	IZVRS	Slovenia
5	Hellenic Centre for Marine Research	HCMR	Greece
6	Institute of Oceanography and Fisheries	IOF	Croatia
7	University of Malta -The Conservation Biology Research Group	UM	Malta
8	Politecnico di Milano-Department of Civil and Environmental Engineering	POLIMI-DICA	Italy
9	General Secretariat for Natural Environment and Water	GSNEW	Greece
10	Specially Protected Areas Regional Activity Centre	SPA/RAC	Tunisia
11	International Council for the Exploration of the Sea	ICES	Denmark



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Revision version	Company/Organization	Name and Surname
Main author	ACCOBAMS	Alessio Maglio
Contributions and final editing	CTN	Marta Sánchez

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Abstract

This document is the Deliverable “D 5.2. Summary report of national and regional barriers and difficulties for getting data about cetacean populations and habitats and their distribution” of the QUIETMED2 project funded by the DG Environment of the European Commission within the call “DG ENV/MSFD 2018 call”. This call funds projects to support the implementation of the second cycle of the Marine Strategy Framework Directive (2008/56/EC) (hereinafter referred to as MSFD), in particular to implement the new GES Decision (Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU) and Programmes of Measures according Article 13 of the MSFD. The QUIETMED2 project aims to support Member States Competent Authorities in the Assessment of the extent to which GES on Descriptor 11-Underwater noise has been achieved in the Mediterranean Region by providing practical outcomes to implement the new GES Decision through: i) a joint proposal of a candidate for an impulsive noise indicator in the Mediterranean Region ii) a common methodology for Competent Authorities to establish thresholds values, together with associated lists of elements and integration rules, iii) a data and information tool to support the implementation of the monitoring programmes of impact of impulsive noise based on the current ACCOBAMS joint register which will be demonstrated on iv) an operational pilot of the tool and v) several activities to boost current regional cooperation efforts of Barcelona Convention developing new Mediterranean Region cooperation measures.

This confidential document addresses national and regional barriers and difficulties for getting data about cetacean populations and their habitats, as well as their distribution. Identified difficulties are mainly the legal constraints that national responsible entities face concerning cetacean and noise data gathering and submission to both national and regional facilities (register for noise, open data platforms for cetaceans). More in general, the involvement of Member States and/or Contracting Parties appear as the main constraint.

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List of Abbreviations

CTN	Centro Tecnológico Naval y del Mar
ACCOBAMS	Permanent Secretariat of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
DFMR	Department of Fisheries and Marine Research
IZVRS	Inštitut za vode Republike Slovenije/Institute for water of the Republic of Slovenia
HCMR	Hellenic Centre for Marine Research
IOF	Institute of Oceanography and Fisheries
UM	University of Malta -The Conservation Biology Research Group
POLIMI-DICA	Politecnico di Milano-Department of Civil and Environmental Engineering
SSW	Special Secretariat for Water-Hellenic Ministry of Environment and Energy
SPA/RAC	Specially Protected Areas Regional Activity Centre
ICES	International Council for the Exploration of the Sea
MSFD	Marine Strategy Framework Directive
GES	Good Environmental Status
MS	Member States
MED	Mediterranean Sea Region
BC	Barcelona Convention
MEDPOL	MED POL Programme (the marine pollution assessment and control component of MAP)
MedOBIS	Mediterranean Ocean Biogeographic Information System

1. Introduction

The QUIETMED2 Project is funded by DG Environment of the European Commission within the call “DG ENV/MSFD Second Cycle/2018”. This call funds the next phase of MSFD implementation, in particular, to implement the new GES Decision (Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU) and Programmes of Measures according Article 13 of the MSFD.

The QUIETMED2 project aims to enhance cooperation among Member States (MS) in the Mediterranean Sea Region (MED) to implement the Second Cycle of the Marine Directive and in particular to assist them in the preparation of their MSFD reports through the the following specific objectives:

- ◆ Develop and implement a candidate impact indicator in the Mediterranean Region for D11C1 Criteria.
- ◆ Make a joint proposal of a methodology to establish threshold values, list of elements and integration rules to implement the GES decision in reference to D11 in the Mediterranean Region.
- ◆ Build an efficient data and information tool to support the implementation of the D11C1 Criteria and the update of the monitoring programmes of Impulsive Noise according the new GES Decision.
- ◆ Perform an operational pilot of an impulsive noise impact monitoring programme implemented with the updated Joint register to demonstrate its feasibility.
- ◆ Promote Mediterranean Region Coordination by i) boosting current regional cooperation efforts of Barcelona Convention and others and ii) developing new cooperation measures.
- ◆ Enhance collaboration among a wide network of stakeholders through the dissemination of the project results, knowledge share and networking.

To achieve its objectives, the project is divided in 3 work packages around 3 priorities and 10 activities whose relationships are shown in Figure 1.

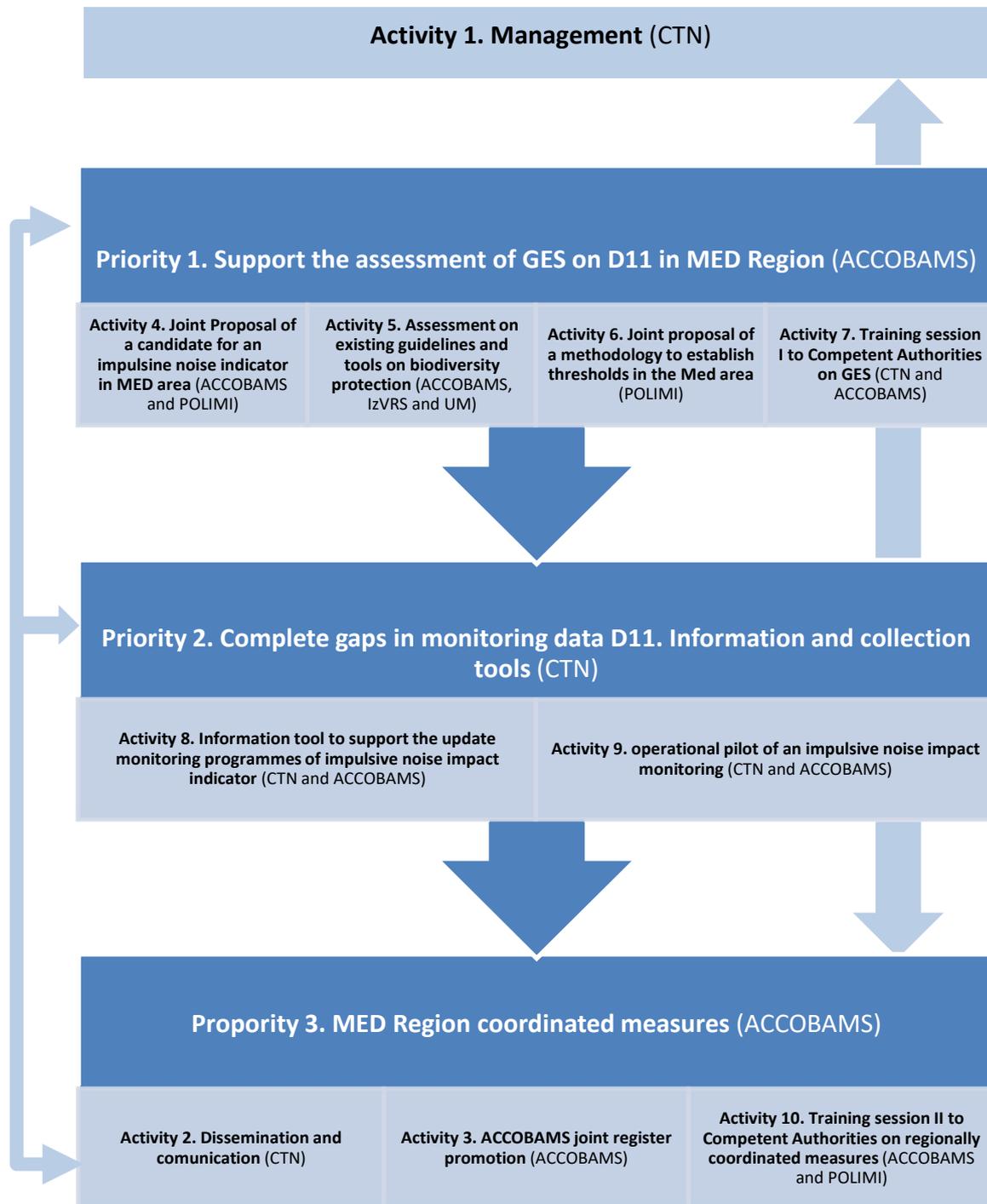


Figure 1. Work Plan Structure

The project is developed by a consortium made up of 11 entities coordinated by CTN and it has a duration of 24 months starting on February 2019.

This document reports national and regional barriers and difficulties for getting data about cetacean populations and their habitats, as well as their distribution.

2. Objectives of the document and work methodology.

Taking advantage of results from Deliverable 4.1 of QUIETMED2 and consistently with TG-Noise guidance, a risk-based approach is promoted as the most suitable methodological framework for GES assessment relative to the introduction of impulsive noise into the marine environment, where “risk” is intended as ecological risk. Based on this, the implementation of MSFD-D11C1 is possible once the following elements are gathered:

1. Impulsive noise event data taken from the Noise Register
2. Biodiversity data taken from existing monitoring and assessment programs, research projects, etc.
3. A methodological framework for linking noise and biodiversity through a risk-assessment approach
4. A methodological approach to assess when the risk is acceptable (threshold system)

Item 1 of the list above was first addressed during QUIETMED (development of the register) and now through a Call for Data issued during QUIETMED2. Item 2 is addressed in Deliverable 5.1 of QUIETMED2 (availability of data and recommendations for indicator species). Item 3 is addressed in Deliverable 4.1 of QUIETMED2, while item 4 is tackled in Deliverable 6.2. However, for each of these elements there may be difficulties and barriers that prevent an effective implementation of MSFD-D11C1. This document address difficulties linked to item 2. Especially, cetaceans are targeted in the document as they are identified as sensitive and emblematic species. Further work should certainly address fish and invertebrates as indicator species for a risk-based assessment of GES relative impulsive noise.

The work methodology is basically the analysis of information gathered from different sources:

- replies from competent authorities and stakeholders in different countries gathered through a questionnaire circulated at the beginning of QUIETMED2.
- Interviews of the Secretariats of ACCOBAMS and RAC/SPA during the execution of QUIETMED2.

3. A long way since the adoption of the MSFD, without GES assessment.

Before analyzing difficulties and related solutions, it is reminded here that the original goal of both EcAp and the MSFD is achieving and/or maintaining the Good Environmental Status (GES) by 2020. With this in mind, the current situation regarding noise pollution can be summarized as follows:

- After 12 years since the adoption of Decision 17/6 regarding EcAp implementation, and the adoption of the MSFD (both occurred in 2008), it is not possible yet to assess the environmental status concerning human-made noise in the Mediterranean Sea region and sub-regions.
- The only country where the assessment was done is France (Stephane et al 2012, Le Courtois 2018). However, 2012 assessment did not end in stating whether GES was achieved or not relative to noise. Furthermore, the assessment done in 2018 was based on simple qualitative comparison with results for D1 on cetacean populations.
- The only regional attempt currently available which is relevant for the European Union is the OSPAR 2017 intermediate assessment where available noise events in the OSPAR area (relative to 2016) are plotted in the same map with and with a unique mapping methodology for all the area. However, no assessment of the environmental status of OSPAR waters was done.

It is now acknowledged that, despite the many efforts put to develop methodologies and tools as well to raise awareness and communicate on the impacts of noise on marine ecosystems, results achieved are not satisfactory. The following chapter and sections propose an analysis of the issues, barriers and difficulties that should be overcome to enable the full implementation of MSFD-D11C1.

4. Difficulties for the implementation of D11C1 linked to cetacean population and habitat data

In Table 1 below, the implementation progress concerning D11C1 is summarized and the main issues and identified causes are drawn. Also, a list of possible solutions on how to mitigate some of them is proposed

REGIONAL LEVEL				
Definitions				
Items	Progress	Issues	Causes	Solutions and ongoing efforts
Indicators	Defined	-	-	-
Monitoring methodology and assessment outputs	Defined	-	-	-
GES	Defined (QUIETMED Deliverable 2.3)	-	-	-
GES assessment methodology	In progress (QUIETMED2 Deliverable 4.1 and 6.2)	Methodology is developing slowly as scientific consensus is not yet achieved on threshold values	Knowledge gaps on the consequences of noise inputs on indicator species (cetaceans); no clear what are the acceptable levels (threshold values)	A Risk-based approach is being developed (consistently with a risk-based GES definition) and active discussions on thresholds are going on
Targets	Not defined	Poor understanding from stakeholders of what a target may look like, poor view of costs & benefits;	Little effort done by expert bodies on target setting	Increase efforts to improve understanding and develop recommendations

Table 1. Progress in the definition of steps to implement D11C1 and CI26: issues, causes and possible solutions

REGIONAL LEVEL				
Implementation				
Items	Progress	Issues	Causes	Solutions
Noise register database	Done	Development delayed compared to northern European regions; uncertainties on long-term viability and management framework of the register	Absence of noise expert group within the BC; late instalment of cooperation between MEDPOL and ACCOBAMS noise expert group; late fund-raising efforts to start development	Continuation and strengthening of the cooperation between ACCOBAMS and the BC on the noise issue; maintain efforts to ensure long-term viability of the register
Collection of noise event data	Ongoing	Not included in IMAP initial phase Little understanding and/or awareness of technical aspects by stakeholders Wrong perception of noise monitoring as too complex and too expansive	Low perception of noise as a priority environmental issue Poor participation of BC stakeholders to other fora (e.g. MSFD technical groups) Little capacity building efforts.	Increase dissemination efforts within the cooperation between ACCOBAMS and the BC Secretariats Increase capacity building efforts Launch of Data Calls to promote the submission of noise event data from countries to the international noise register
Regional Cetacean database	Not done	Not planned in MSFD process and EcAp initiative, or within the ACCOBAMS scope	Other initiatives already exist centralising data at a regional scale (e.g. MedOBIS)	Exploiting the potential offered by open data platforms (such as MedOBIS) for using in D11C1 assessments.
Collection of cetacean data	1 regional survey completed (ACCOBAMS Survey Initiative)	Very long project construction phase; scientific challenges; difficult fund raising	Lack of a structured coordination unit from an international institution; extreme administrative and logistic issues	Capitalization of ASI experience to ease future similar initiatives
Periodic Assessment	Not done	Not included in IMAP initial phase (UNEP/MAP Quality Status report) nor in ACCOBAMS Programme of work	With regards to UNEP/MAP, the definitions and implementation framework were not ready at the time IMAP initial phase started. Concerning ACCOBAMS, an MoU is in place since 2016 but the assessment is linked to IMAP.	Continue the efforts to include noise in the next Mediterranean Quality Status Report in 2023

Table 2. Progress in the execution of tasks to implement D11C1/Ci26 definitions: issues, causes and possible solutions.

The situation appears even simpler at the **country level with regards to noise**. Countries which are not also EU Member States have not started the implementation of Ecological Objective 11. The main issues and causes are identified in the following elements:

- ◆ Low acknowledgment of noise as a pervasive environmental stressor.
- ◆ Lack of engagement at policy level probably due to the wrong perception of noise monitoring programmes as too complex and expensive. This wrong perception persists despite existing guidelines documents issued by ACCOBAMS and MEDPOL (including Guidance Factsheets on Common Indicators 26 and 27) contradicting this point of view in a detailed manner.
- ◆ Disparity of means and capacities hindering many southern Mediterranean countries to develop monitoring programmes.
- ◆ Low understanding of technical aspects, especially what data are needed to feed the register, their existence and availability, and means to collect them.

Possible solutions to improve this situation at the country level are drawn hereafter:

- Increase effort to rise awareness including through focal points of ACCOBAMS, SPA/RAC, MEDPOL, REMPEC;
- Disseminating ACCOBAMS guidelines documents “Basin-wide strategy on underwater noise monitoring” as well as Guidance Factsheets prepared by ACCOBAMS for MEDPOL;
- Carry out a cost assessment of implementing Common Indicator 26 (and 27);
- Carry out capacity building.

With regards to EU-Member States, a the state-of-the art was done in 2017 during QUIETMED and this is still valid today: Only France is running an operational monitoring programme for impulsive noise thanks to the development of a national noise register and a data collection methodology which is implemented by the national hydrographic and oceanographic service (SHOM). Italy, Spain and Greece have started the implementation and are at different development stages, but not yet providing results on impulsive noise events. The other countries are still at early development stages.

The same goes at **country level concerning cetacean** monitoring programmes. France and Italy have started regular monitoring since around 10 years with similar field protocols. However, most Mediterranean countries do not run nationally coordinated surveys and data collection mostly rely on single initiatives in local study areas. For all data collected from local initiatives, the main problems are the following:

- ◆ Long delays between the time data are collected at the time they are become available.

- Inconsistency of methods among initiatives.
- Data are very often stored in personal computers belonging to single researchers.
- Results are scattered, difficult to compare.
- Monitoring programmes and surveys are irregular and highly dependent on (unstable) fund raising efforts.

The causes of these problems are generally the low involvement of public/State institutions in several countries, as well as common “red tape issues” and the disconnection between monitoring efforts and MSFD/EcAp processes.

4.1. Solutions for increasing access to cetacean population and habitat data

Main solution identified during the execution of Activity 5 are the following:

- From a policy point of view, the main solution to increase data availability for southern Mediterranean countries is clearly increasing stakeholder commitment. This can be achieved through capacity building efforts, dedicated workshops (including in webinar mode).
- With regards to data themselves, databases centralizing data at a regional level exist (e.g. MedOBIS) and many local databases also exist. A central place where to store all relevant data concerning cetacean conservation and D11C1 assessment could be the new ACCOBAMS Digital Platform. Initiatives in this sense are highly encouraged.
- Finally, modelling tools are today well established that enable estimating cetacean population parameters and habitat suitability in poorly surveyed areas. Extensive use of these tools, together with increased effectiveness of monitoring programs, should be promoted and used, at least the regional level, to carry out D11C1 assessment.

4.2. Solutions for the implementation: targeted actions for “cetacean stakeholders” in both northern and southern Mediterranean countries

In order to enable the implementation of first steps for monitoring noise events, two actions cannot further be procrastinated with regards to southern Mediterranean countries: raising awareness at policy level and capacity building at technical level. One effective way to pursue these objectives is to organize side-events during regional and international conferences or meetings.

As for today, two opportunities appear suitable:

- The Biennial Conferences on Cetacean Conservation in South Mediterranean Countries organized by ACCOBAMS and SPA/RAC.
- The annual conference of the European Cetacean Society (ECS). Side-events or workshops are usually organized just before the beginning of the conference on matters covering the monitoring of threats to cetaceans. Many of such side-events and workshops already took place in the past on subjects related to cetaceans and underwater noise. A proposal from SPA/RAC and ACCOBAMS is to consider organizing side-events during the ECS conferences, to specifically address the needs of southern Mediterranean countries.

With regards to all Mediterranean countries, the main recommendation from ACCOBAMS is to explore the potential of the ongoing development of the ACCOBAMS Digital Platform with regards to existing regional initiatives gathering cetacean data (e.g. MedOBIS).

5. Conclusions

This report has addressed the difficulties for the implementation of D11C1 linked to cetacean population and habitat data and it also provides some solutions to facilitate that implementation.

Main conclusions are summarized below:

- 💧 Regarding the data collection on cetacean:
 - low involvement of public/State institutions in several countries,
 - the disconnection between monitoring efforts and MSFD/EcAp processes,
 - lack of a structured coordination unit from an international institution,
 - and extreme administrative and logistic issues

are identified as key issues to solve.

- 💧 Regarding noise data collection:
 - Higher participation of Barcelona Convention stakeholders to other fora (e.g. MSFD technical groups) would increase data availability.
 - Capacity building efforts are needed.
- 💧 Cooperation between ACCOBAMS and Barcelona Convention should continue to coordinate the level of implementation of MSFD and EcAp processes regarding Ecological Descriptor 11 and Objective 11, to improve data collection (noise and cetacean) and to ensure the long-term viability of actions.