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quietMED2

DELIVERABLE

D10.1 Specific Guidance for MS to establish new regionally coordinated measures (tools, methods and results)

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Abstract

This document is the Deliverable “D10.1. Specific Guidance for MS to establish new regionally-coordinated measures (tools, methods and results)” of the QUIETMED2 project funded by the DG Environment of the European Commission within the “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 (GES) 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 threshold 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 the Barcelona Convention developing new Mediterranean Region cooperation measures.

The objective of this Deliverable is to provide relevant information to MS with the aim of moving towards effective and regionally coordinated measures for the achievement and the maintenance of GES.

Table of Contents

1. Introduction..... 6

2. Background on Programmes of Measures 8

2.1. Programmes of Measures as described in the MSFD: Article 13, Article 16 and Annex VI) .. 8

3. Analysis of the overall implementation by the EC 10

3.1. Major issues in the overall MSFD implementation 10

3.2. Main conclusions on the Programmes of Measures from the 2020 EC assessment 11

3.3. All descriptors..... 12

3.4. Descriptor 11 12

4. Key figures concerning the 1st MSFD cycle..... 14

5. Specific examples of regionally coordinated measures 15

5.1. Special Areas under MARPOL..... 15

5.2. Particularly Sensitive Sea Areas (PSSA) established under IMO 17

5.3. Measures defined under ACCOBAMS with regards to Underwater Noise 17

6. Guidelines and Priority actions recommended to Member States by QUIETMED2 20

List of figures

Figure 1. Work Plan Structure 7

Figure 2. Example of MARPOL Special Areas (Sox Emission Control Areas from ships) 16

Figure 3. Example of setting up potential regionally coordinated measures to achieve and maintain GES: proposal for “quiet zones” contained in the Recommendation 10.5 of the Scientific Committee of ACCOBAMS. 19

List of tables

Table 1: Special Areas in MARPOL Convention with dates of adoption, entry into force and taking effect of mandatory measures for prevention of sea pollution. 15

Table 2. Guidelines and priority actions recommended to Member States by QUIETMED2 with regards to mitigating impacts from underwater noise (D11C1) 20

List of Abbreviations

CTN	Centro Tecnológico Naval y del Mar
ACCOBAMS	Agreement for 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
CA	Competent Authority
NR	National representative
SO	Specific Objective
PoMs	Programme(s) of Measures
MPA	Marine Protected Area

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 following specific objectives:

- Develop and implement a candidate impact indicator in the Mediterranean Region for D11C1 Criterion.
- 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 Criterion and the update of the monitoring programmes for Impulsive Noise according to 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.

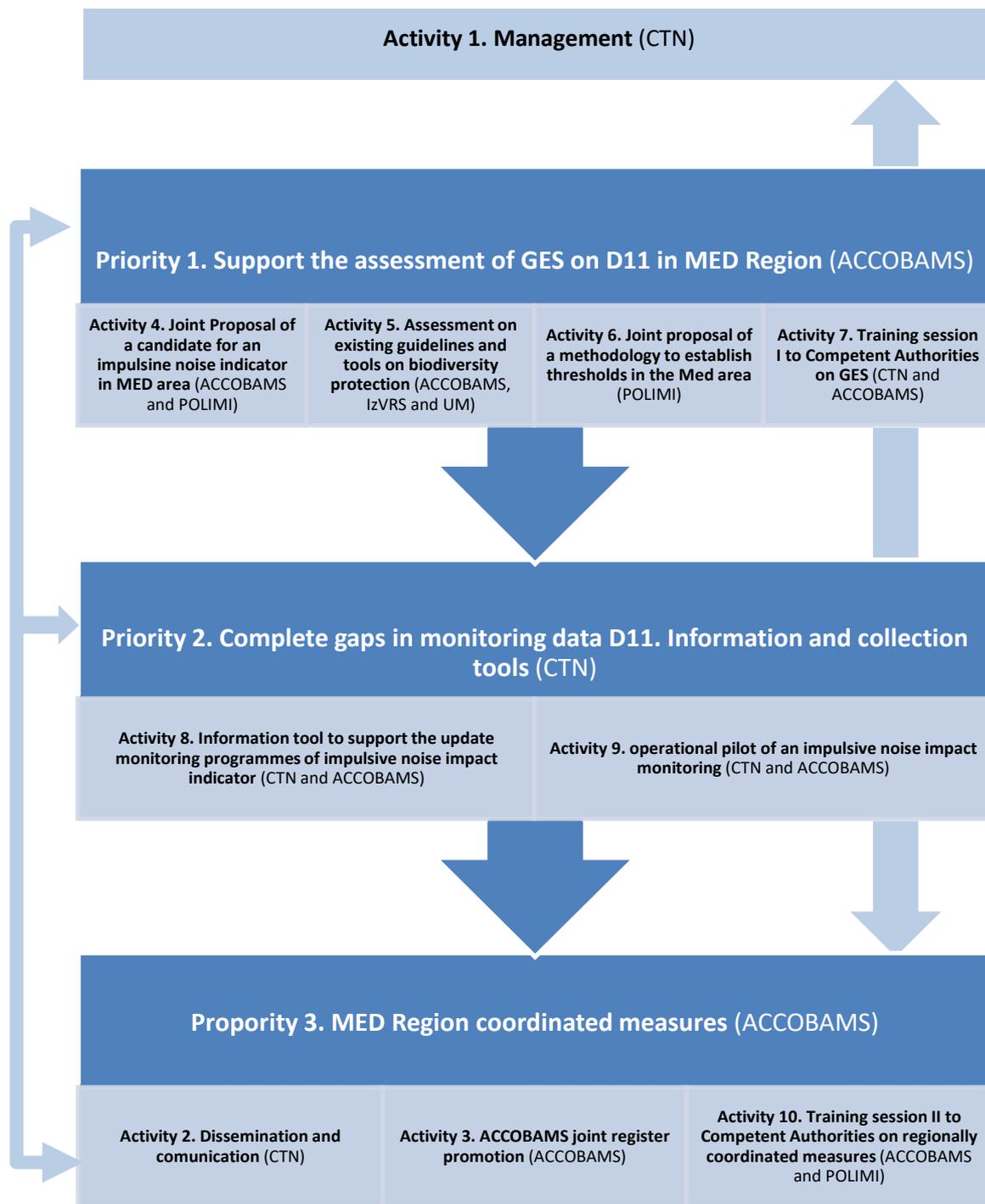


Figure 1. Work Plan Structure

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.

2. Background on Programmes of Measures

The first question that should be addressed concerns the overarching objective of the Programmes of Measures (PoMs). In the overall cycle of the MSFD, the PoMs is the element of the strategy that enables the achievement and/or maintenance of GES: if the PoMs are meaningful and effective, then GES can be achieved and/or maintained.



Therefore, the objective of setting and implementing a Programme of Measures is to achieve and/or maintain good environmental status.

2.1. Programmes of Measures as described in the MSFD: Article 13, Article 16 and Annex VI)

Article 13 is the article that mainly describes what PoMs are and how they should be implemented. Relevant extracts of Article 13 of the MSFD are reported here:

- “Member States shall, in respect of each marine region or subregion concerned, identify the measures which need to be taken in order to achieve or maintain good environmental status, [...] in their marine waters”.
- “Those measures shall be devised on the basis of the initial assessment made pursuant to Article 8(1) and by reference to the environmental targets established pursuant to Article 10(1), and taking into consideration the types of measures listed in Annex VI”.
- “Member States shall integrate the measures devised pursuant to paragraph 1 into a programme of measures, taking into account relevant measures required under Community legislation, in particular Directive 2000/60/EC, Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (1) and Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality (2), as well as forthcoming legislation on environmental quality standards in the field of water policy, or international agreements”.
- “Programmes of measures established pursuant to this Article shall include spatial protection measures, contributing to coherent and representative networks of marine

protected areas, adequately covering the diversity of the constituent ecosystems, such as special areas of conservation pursuant to the Habitats Directive, special protection areas pursuant to the Birds Directive, and marine protected areas as agreed by the Community or Member States concerned in the framework of international or regional agreements to which they are parties”.

Furthermore, Annex VI provides an overview of the different categories of measures that may be set and implemented by the MS:

- (1) Input controls: management measures that influence the amount of a human activity that is permitted.
- (2) Output controls: management measures that influence the degree of perturbation of an ecosystem component that is permitted.
- (3) Spatial and temporal distribution controls: management measures that influence where and when an activity is allowed to occur.
- (4) Management coordination measures: tools to ensure that management is coordinated.
- (5) Measures to improve the traceability, where feasible, of marine pollution.
- (6) Economic incentives: management measures which make it in the economic interest of those using the marine ecosystems to act in ways which help to achieve the good environmental status objective.
- (7) Mitigation and remediation tools: management tools which guide human activities to restore damaged components of marine ecosystems.
- (8) Communication, stakeholder involvement and raising public awareness.

Finally, Article 16 is also relevant in that it states that the Commission is tasked with assessing the coherence of PoMs with the objectives of the MSFD. In making those assessments, the Commission considers the coherence of PoMs within the different marine regions or subregions and across the Community.

3. Analysis of the overall implementation by the EC

The first cycle of the MSFD was assessed by the EC¹, including the PoMs. The results of this analysis are summarised here:

- Member States made significant efforts to develop their first MSFD programmes of measures by integrating different national, EU and international policies and covering the existing gaps with new cost-effective measures.
- They reported a total of **4653** measures.
- Overall, 79% of the reported measures were **direct technical or regulatory measures** while the **rest were more indirect** support actions.
- EC states that **just 53% of the PoMs assessed** (per descriptor and per Member State) **seem appropriate** to tackle the existing pressures.
- Member States also found it **difficult to assess what the effect of the different measures** they have put in place will be on the marine environment.

Of the roughly 4,700 measures reported by the MS under the MSFD, 246 were spatial protection measures.

These have doubled the space designated as Marine Protected Areas (MPAs) in Europe since 2012, reaching more than 10% coverage of its waters and fulfilling global commitments.

3.1. Major issues in the overall MSFD implementation

Based on the 2020 Commission Assessment, the following major issues were pointed out:

- Member States often failed to distinguish between targets and GES.
- They did not link their targets with their measures, to have a measurable record of how they are progressing towards achieving good environmental status.
- Monitoring programmes were likewise not always linked to the targets. Monitoring programmes were set before the targets (illogic, but likely very common).

Finally, progress in setting threshold values for determining good environmental status has so far been slow.

The slowness is a common characteristic also for PoMs definition and implementation: based on Article 5 of the MSFD, MS were expected to prepare PoMs by 2015, the notification to the European Commission was due in March 2016, and the measures had to be operational by the end of 2016 at the latest. However, the reality was quite different:

- Only six (6) MS reported their national programmes of measures on time; for the other MS, the Commission launched infringement procedures.
- By 2018, all had reported about their PoMs to the EC.

¹ Report on the implementation of the Marine Strategy Framework Directive, June 2020 COM(2020) 259 final.

- Sixteen (16) PoMs could be evaluated in 2018, seven (7) in 2019 due to delayed reporting.

3.2. Main conclusions on the Programmes of Measures from the 2020 EC assessment

Main conclusions are reported and discussed hereafter:

- Member States relied heavily on existing regulatory frameworks.
 - These are commonly classified as existing measures, that is to say that a MS did not add anything new, but inserted in the list of initiatives taken for the MSFD measures that were already implemented under other frameworks (for example the Habitat Directive, EIA Directive, etc.). This observation appears logic, considering that Article 13 of the MSFD expressly recommends relying on existing legal frameworks at EU level (Habitats Directive, Directives on urban waste-water treatment, on bathing water quality, etc.).
- Member States took measures specifically agreed with neighbours within an EU marine region (generally through Regional Seas Conventions). However, the number of cases with (sub)regional coordination of actions were limited.
 - This appears as an overall positive point, pointing out that regional cooperation plays an important role in MSFD marine regions, at least in that Regional Seas Conventions provide well established discussion fora where stakeholders may easily exchange information and feedback. On the other hand, (sub)regional coordination appears harder to achieve. Whereas it is not the scope of this document to analyse the reasons of these difficulties, it can be pointed out that regional organisations should be better used to achieve a better regional and subregional coordination, especially by taking advantage from successful initiatives. More elements about this discussion are provided later in this document.
- Member States reported a total of 4653 measures in their programmes (all Descriptors), where 34% were new measures (defined specifically for MSFD implementation), while the rest were existing measures. The highest proportion of new measures were defined for underwater noise (D11), with 39% of new measures.
 - Considering the total number of measures reported, though we do not know how this number was calculated, the first impression is that 4653 is a very high number, likely implying very little coordination/ cooperation in the implementation of measures in different MS. In fact, if all MS were implementing the same measures, the total number reported would be much less, and this would indicate very good coordination among MS. The other important key figure is the fact that D11 has the highest proportion of new measures among all descriptors. This indicates the novelty of D11 in marine/maritime management frameworks, and represents a positive point, in our sense, of the assessment of PoMs carried out by EC.
- Information about management effectiveness is scarce.
 - How much a measure, or set of measures, is helping to achieve and/or maintain GES? This is a crucial question which cannot be answered if there are no success indicators linked to measures or if GES, targets and measures are not clearly linked to each other.

1. Review of measures

A short review of measures defined by MS for the different Descriptors is proposed in the next section (4.1), in order to provide context and a high-level view. Then, section 4.2 will focus on measures set for D11 as reported to EC until 2020. This will be the basis to draw conclusions about the 1st MSFD cycle with regards to measures.

3.3. All descriptors

Three main categories of measures can be described: spatial protection measures, regulation, and transversal/indirect measures. They are briefly described hereafter:

- **Spatial protection measures:** are meant to be applied to specific areas, for example:
 - No-take zones (for fish and fisheries, D3); they are used as effective measures to restore both the biomass of fish assemblages and the resilience of ecosystems.
 - Designate new MPAs.
 - Establishment of management plans and/or conservation measures in existing and new MPAs.
 - Spatially-explicit limitations of human activities within the protected sites.
- **Regulation:** meaning rules which are applied for a given human activity without considering specific areas. They usually apply to large areas indeed. Regulation defines the environmental standards to be met in order to get a permission:
 - Licensing/registering of activities. Such regulation is used, for instance, in the framework of activities submitted to Environmental Impact Assessments.
 - Compliance monitoring, which implies the actions aimed at controlling whether the environmental standards are effectively met during works.
- **Transversal/indirect measures.** These actions have no direct impact on the pressure (as defined in the MSFD) and their contribution to the achievement and maintenance of GES is not expected in the short term. Instead, in the long term they are meant at building the foundation for improved and more effective management frameworks, as well as improved social acceptance of measures:
 - **Research aimed at increasing knowledge** (Mapping noise, habitats, studying alternative technologies, etc.), to better inform management actions.
 - **Prepare/update management guidance**, to build the necessary know-how in environmental managers.
 - **Awareness raising campaigns**, to contribute the necessary social shift toward sustainability.

3.4. Descriptor 11

With regards to Descriptor 11, measures proposed by MS fall in the three categories described in the previous section:

- **Spatial protection measures:** protecting specific areas from both impulsive and continuous noise.
- **Regulation:** Limiting the use of certain types of lights on oil and gas platforms.
- **Transversal/Indirect measures:** Developing 'eco-friendly' ships, carrying out research, raising awareness, developing guidelines for noise assessments.

Based on the EC assessment of the 1st cycle of the MSFD, it can be pointed out that most measures for D11, as reported by MS, fall in the category of *transversal/indirect measures*. This fact can be explained due to the observed gaps, lags and shortcomings in other elements of the marine strategies related to D11 in many MS (e.g., poor relationship between GES definition, targets and monitoring programmes) which likely affect the definition of consistent measures.

4. Key figures concerning the 1st MSFD cycle

Before dealing with regional coordination of measures aimed at reducing the pressure from underwater noise on the marine environment, key figures from the 1st cycle of the MSFD implementation at national level are summarised here:

- Based on the 2020 EC Assessment, it appears that the MS' PoMs are often very unclear concerning D11 (see section 3.1 of this document for more details).
- 4653 measures were reported by MS with regards to all descriptors. Assuming that this count is the sum of the total number of measures reported by each MS, it can be obtained that:
 - On average, about 200 measures per MS were reported (based on 23 MS with coasts).
 - On average, 18 measures per Descriptor were developed.
- Most measures for D11 reported by MS were generic and transversal, likely meaning that MS failed in addressing specific aspects of this pressure (underwater noise).
- Between 2012 and 2016, the overall coverage of MPAs in European seas almost doubled, rising from 5.9% to 10.8%, thereby fulfilling the Aichi Biodiversity Target 11 of Strategic Goal C (as regards coastal and marine areas) long before the 2020 deadline.
- 10% coverage was also broadly met at a regional scale in all four European marine regions.
- In contrary to the above two figures, 3 out of 4 Mediterranean sub-regions have coverages far below 10%.
- The sub-region with the highest proportion of MPAs is the Greater North Sea with 27.1%
- The sub-region with the lowest coverage of MPAs is the Ionian and Central Mediterranean Sea with 2.9 %.

With these figures in mind, the following section start dealing with regionally-coordinated measures.

5. Specific examples of regionally coordinated measures

A review of existing regional frameworks, with related success stories, is presented here with the aim of exploring possible parallel processes to be started or continued relating to D11.

5.1. Special Areas under MARPOL

The MARPOL Convention, established under the International Maritime Organization (IMO), defines certain sea areas as "Special Areas" in which the adoption of special mandatory methods for the prevention of sea pollution is required due to special oceanographical and ecological condition and to their sea traffic. Special Areas are classed according to categories of pollution. In this table, the absence of underwater noise is worth noticing.

Table 1: Special Areas in MARPOL Convention with dates of adoption, entry into force and taking effect of mandatory measures for prevention of sea pollution.

Special Areas	Adopted #	Date of Entry into Force	In Effect From
Annex I: Oil			
Mediterranean Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Baltic Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Black Sea	2 Nov 1973	2 Oct 1983	2 Oct 1983
Red Sea	2 Nov 1973	2 Oct 1983	Not yet
"Gulfs" area	2 Nov 1973	2 Oct 1983	1 Aug 2008
Gulf of Aden	1 Dec 1987	1 Apr 1989	Not yet
Antarctic area	16 Nov 1990	17 Mar 1992	17 Mar 1992
North West European Waters	25 Sept 1997	1 Feb 1999	1 Aug 1999
Oman area of the Arabian Sea	15 Oct 2004	1 Jan 2007	Not yet
Southern South African waters	13 Oct 2006	1 Mar 2008	1 Aug 2008
Annex II: Noxious Liquid Substances			
Antarctic area	30 Oct 1992	1 Jul 1994	1 Jul 1994
Annex IV: Sewage			
Baltic Sea	15 Jul 2011	1 Jan 2013	
Annex V: Garbage			
Mediterranean Sea	2 Nov 1973	31 Dec 1988	1 May 2009
Baltic Sea	2 Nov 1973	31 Dec 1988	1 Oct 1989
Black Sea	2 Nov 1973	31 Dec 1988	Not yet
Red Sea	2 Nov 1973	31 Dec 1988	Not yet

"Gulfs" area	2 Nov 1973	31 Dec 1988	1 Aug 2008
North Sea	17 Oct 1989	18 Feb 1991	18 Feb 1991
Antarctic area (south of latitude 60 degrees south)	16 Nov 1990	17 Mar 1992	17 Mar 1992
Wider Caribbean region including the Gulf of Mexico and the Caribbean Sea	4 Jul 1991	4 Apr 1993	1 May 2011
Annex VI: Prevention of air pollution by ships (Emission Control Areas)			
Baltic Sea (SO _x)	26 Sept 1997	19 May 2005	19 May 2006
(NO _x)	7 July 2017	1 Jan 2019	1 Jan 2021
North Sea (SO _x)	22 Jul 2005	22 Nov 2006	22 Nov 2007
(NO _x)	7 July 2017	1 Jan 2019	1 Jan 2021
North American ECA (SO _x and PM)	26 Mar 2010	1 Aug 2011	1 Aug 2012
(NO _x)			1 Jan 2016
United States Caribbean Sea ECA (SO _x and PM)			
(NO _x)	26 Jul 2011	1 Jan 2013	1 Jan 2014
			1 Jan 2016

The following picture shows the distribution of MARPOL Special Areas for the prevention of air pollution by ships (Emission Control Areas, Annex VI in Table 1).

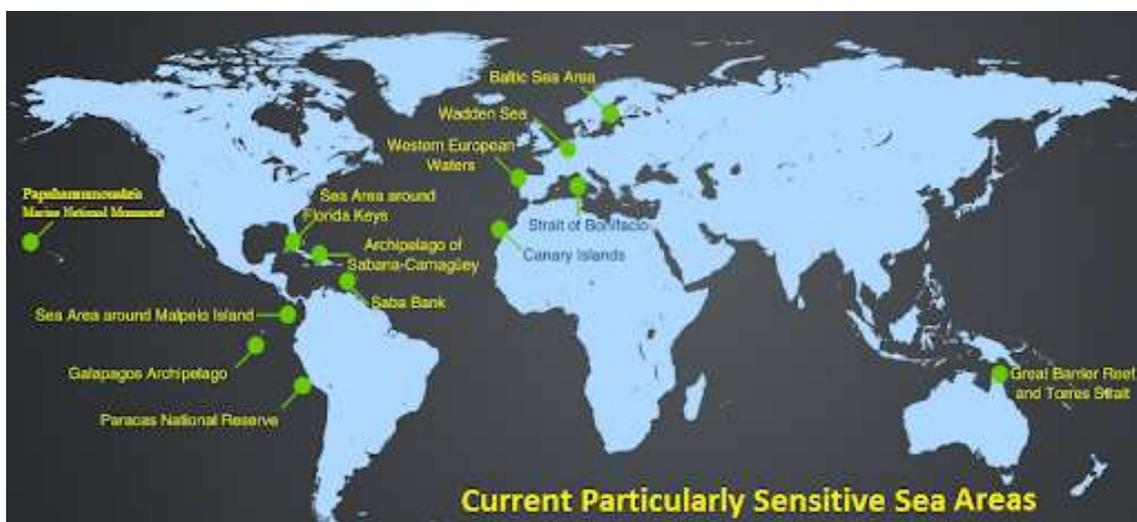


Figure 2. Example of MARPOL Special Areas (Sox Emission Control Areas from ships)

5.2. Particularly Sensitive Sea Areas (PSSA) established under IMO

A Particularly Sensitive Sea Area (PSSA) is an area that needs special protection through action by IMO because of its significance for recognised ecological or socio-economic or scientific reasons, and which may be vulnerable to damage by international maritime activities. The criteria for the identification of PSSAs and the criteria for the designation of Special Areas (see previous section 5.1) are not mutually exclusive. In many cases, a PSSA may be identified within a Special Area and vice versa.

In the Mediterranean, the IMO designated a particularly sensitive sea area (PSSA) in the Strait of Bonifacio covering the strait and adjacent areas. During the ACCOBAMS MOP7 France, Spain, Italy and Monaco agreed to start discussing possible mitigation measures including a Particularly Sensitive Sea Area (PSSA) designation for the multiple anthropogenic impacts on marine mammals in their relevant marine waters (north-western Mediterranean sub-region)



5.3. Measures defined under ACCOBAMS with regards to Underwater Noise

The ACCOBAMS Agreement has addressed the impact of underwater noise on cetacean species through a varied range of actions:

- Resolution 2.16 (2004), Assessment and impact assessment of man-made noise.
- 3.10 (2007), Guidelines to address the impact of anthropogenic noise on marine mammals in the ACCOBAMS area.
- 4.17 (2010), Guidelines to address the impact of anthropogenic noise on cetaceans in the ACCOBAMS area. Repealed by Resolution 7.13
- 5.15 (2013), Addressing the impact of anthropogenic noise.
- 6.17 (2016) Anthropogenic noise.
- 7.13 (2019) Anthropogenic noise.

Despite their similar title, such Resolutions address different aspects of the noise issue. Several recommendations for coordinated measures, expressed by the Scientific Committee and the Noise Working group, are contained in such Resolutions, and are therefore adopted by Parties to the ACCOBAMS . However, not all provisions contained in the Resolutions are implemented in the three years between subsequent Meeting of the Parties, and each new Resolution usually recalls the provisions which are not yet implemented in a satisfactory manner.

For this reason, provisions contained in ACCOBAMS Res 7.13 are reviewed hereafter. They represent an opportunity for the development of regionally coordinated measures. Parties to ACCOBAMS are indeed requested to:

- Use a common Methodological Guide for noise mitigation guidelines applied to specific noise-generating activities, “Guidance on underwater noise mitigation measures” (MOP7/2019/Doc31), in their future work in the ACCOBAMS Area.
- Use common guidelines for all the area under competence of ACCOBAMS (annexed to Res. 7.13).
- Implementing the Action Plan resulting from the ACCOBAMS Workshop on "Sonars and Cetacean Interactions" (Annex 1) and reporting on this issue during the Eighth Meeting of the ACCOBAMS Parties.
- Supporting the management of the ACCOBAMS Regional Register (INR-MED) and contributing to it, especially by sharing their data.
- Developing a cooperation mechanism to identify the source of long-distance underwater noise.
- Developing, together with the Joint CMS/ACCOBAMS/ASCOBANS Working Group on Noise (JNWG), the concept of “quiet zones” (Fig 3), as outlined in Recommendation 10.5 of the ACCOBAMS Scientific Committee, focusing on a quantitative elaboration and evaluation of the scientific evidence for establishing such areas both in space and time.
- Using the ACCOBAMS standard for Highly Qualified MMOs and PAM, developed in the 2016-2019 triennium, for the improvement of noise mitigation frameworks during the execution of activities generating noise.
- Integrate the issue of anthropogenic noise in management plans for MPAs.

Further, the 7th Meeting of the Parties (Istanbul, Turkey, November 2019) requested the ACCOBAMS Secretariat to:

- Develop, together with the Scientific Committee, a project that overlays continuous noise mapping (including main shipping lanes and areas close to ports) and cetacean density mapping, to identify priority areas for mitigation, including consideration of the ‘quiet zones’ concept.
- Promote the undertaking of a project aimed at building a central repository (such as NETCCOBAMS), at the regional scale, as a tool to have an overview of monitoring programs using PAM techniques in MPAs and other areas designated as important for cetaceans. The objective of this repository would be to monitor the number of PAM-based programs, the location and periods of execution, the objectives of the programs and target species and/or other environmental elements.
- Organise an expert workshop to examine the available PAM techniques and how they can be incorporated most effectively in the ACCOBAMS context with a view of fostering the implementation of PAM-based monitoring programs as a mean of contributing to the conservation of cetaceans.

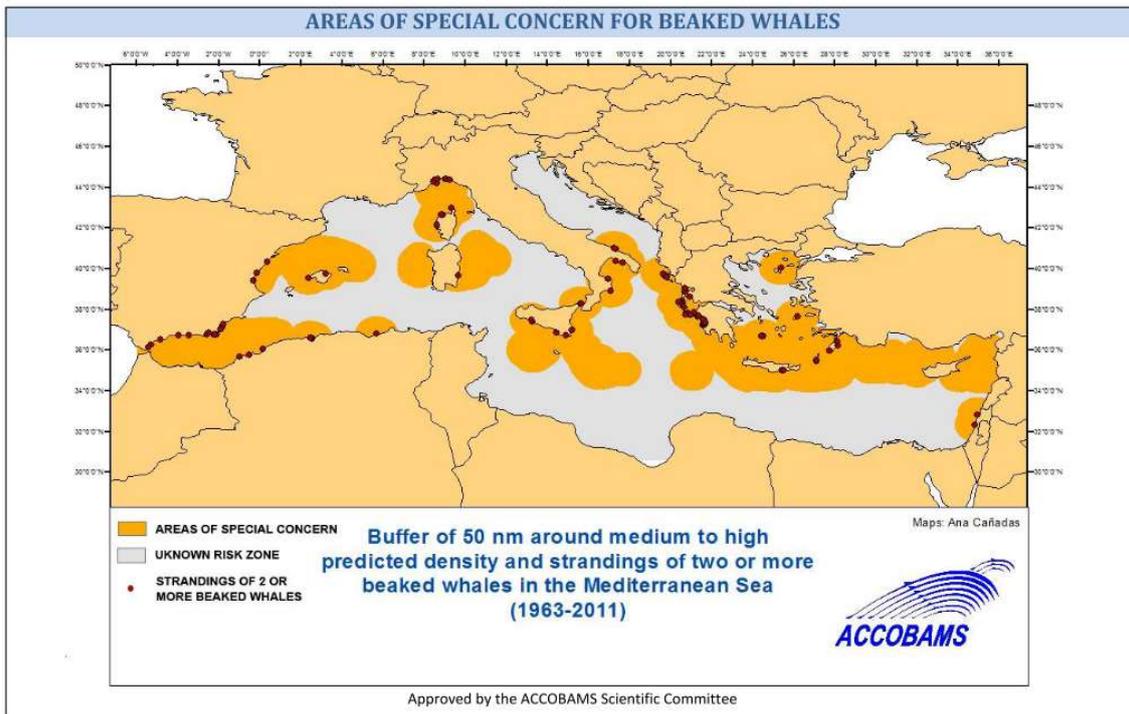


Figure 3. Example of setting up potential regionally coordinated measures to achieve and maintain GES: proposal for “quiet zones” contained in the Recommendation 10.5 of the Scientific Committee of ACCOBAMS.

6. Guidelines and Priority actions recommended to Member States by QUIETMED2

The guidelines and priorities with regards to mitigating impacts from underwater noise (D11C1), presented in Table 2, are derived based on the following elements:

- The conclusions from the EC Assessment on PoMs (issued in 2020).
- Provisions and initiatives from regional organisations with competence for the Mediterranean Sea, which might be considered as an opportunity for the establishment of coordinated measures.

Table 2. Guidelines and priority actions recommended to Member States by QUIETMED2 with regards to mitigating impacts from underwater noise (D11C1)

Guidelines	Remarks
Use common guidelines and common methodological guide on noise mitigation measures for all the area under competence of ACCOBAMS (annexed to Res. 7.13).	
Implementing the Action Plan resulting from the ACCOBAMS Workshop on "Sonars and Cetacean Interactions" (Annex 1) and to report on this issue during the Eighth Meeting of the ACCOBAMS Parties.	To increase chance to get sonar noise events
Developing with the Joint CMS/ACCOBAMS/ASCOBANS Working Group on Noise (JNWG) the concept of "quiet zones" as outlined in Recommendation 10.5 of the ACCOBAMS Scientific Committee with a focus on a quantitative elaboration and evaluation of the scientific evidence for establishing such areas both in space and time.	The discussion should be undertaken including relevant international fora, including at least IMO and MARPOL and REMPEC?
Using of the ACCOBAMS standard for Highly Qualified MMOs and PAM developed in the 2016-2019 triennium for the improvement of noise mitigation frameworks during the execution of activities generating noise.	
Integrate the issue of anthropogenic noise in management plans for MPAs.	
Define success indicators for the measures in the MED (i.e. indicators of effectiveness of measures).	
Provide timelines for the implementation of the proposed measures and match them with funding;	
Better link the measures with other parts of MS' strategy, such as target-setting and monitoring;	
Quantify the effects of the proposed measures for reducing pressures on the marine environment and their contribution to improving the state of the seas and oceans	

