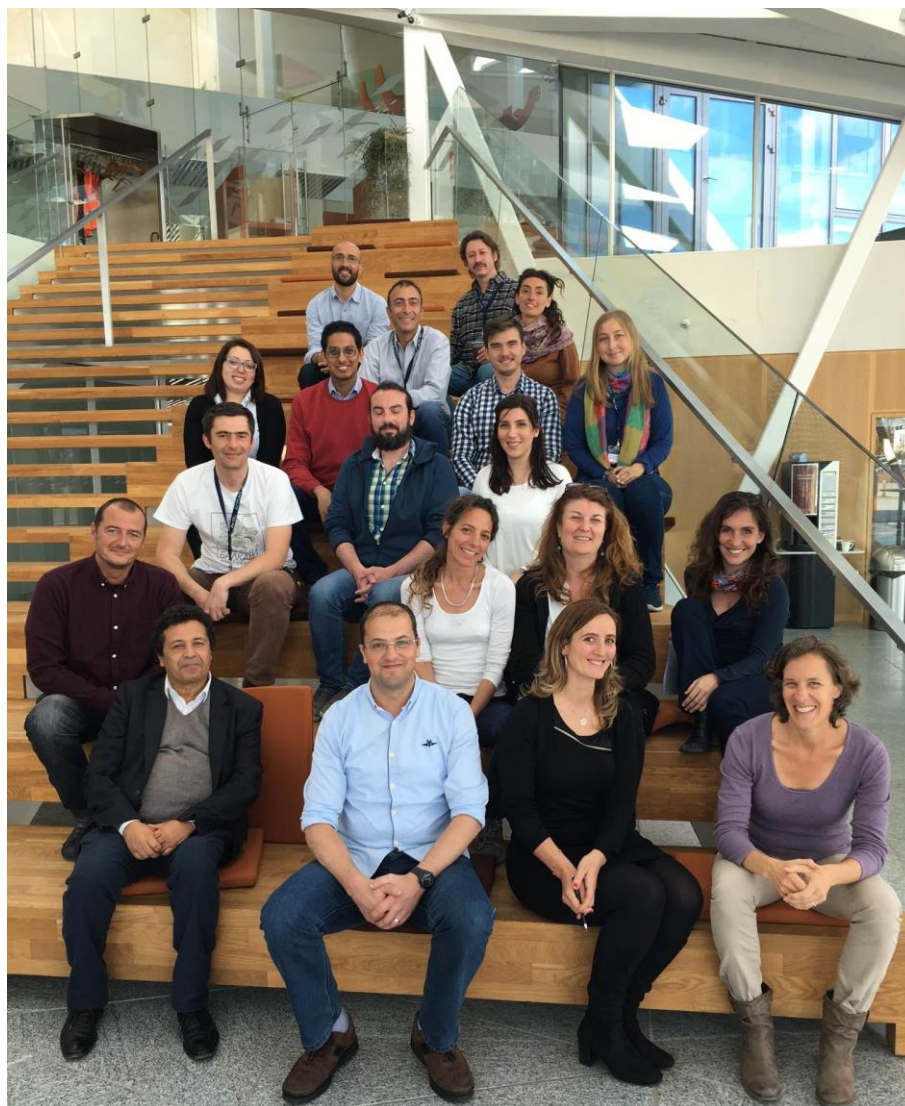


REPORT OF THE WORKSHOP

“INPUTS TO THE ACCOBAMS ONGOING EFFORT TO MAP HUMAN THREATS ON CETACEANS IN THE MEDITERRANEAN AND BLACK SEAS”



31st ECS Conference (30th April 2017, Middelfart, Denmark)



This document has been prepared thanks to a financial support from the Principality of Monaco and cannot, in any way, reflect the position of the Government.

Report of the workshop

“INPUTS TO THE ACCOBAMS ONGOING EFFORT TO MAP HUMAN THREATS ON CETACEANS IN THE MEDITERRANEAN AND BLACK SEAS”

31st ECS Conference (30th April 2017, Middelfart, Denmark)

I - BACKGROUND	3
II - INTRODUCTION	3
II-1 – ACCOBAMS AND THE CCH	3
II- 2 – IMPORTANT MARINE MAMMAL AREAS	4
II- 3 – THE ACCOBAMS SURVEY INITIATIVE.....	5
II- 4 – MEDTRENDS	5
III – PROCESS IN THE IDENTIFICATION OF HUMAN ACTIVITIES AND DIRECT THREATS.....	6
IV – OUTPUTS OF THE WORKSHOP / MAP FOR EACH THREAT	8
V – NEXT STEPS.....	10
ANNEX 1 – Agenda.....	11
ANNEX 2 – List of participants.....	12
ANNEX 3 – Presentation of the process, identification of human activities and direct threats, definition of the working groups, discussion	13

I - BACKGROUND

The ACCOBAMS (Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area) is a cooperative tool for the conservation of marine biodiversity in the Mediterranean and Black Seas. Its purpose is to reduce threats to cetaceans in Mediterranean and Black Sea waters and improve our knowledge of these animals.

According to the ACCOBAMS Conservation Plan (Annex 2 of the Agreement), Parties shall endeavour to establish and manage specially protected areas corresponding to the areas which serve as habitat of cetaceans.

II - INTRODUCTION

The workshop entitled “Inputs to the ACCOBAMS ongoing effort to map human threats on cetaceans in the Mediterranean and Black Seas” was held on Sunday 30th April 2017 in Middelfart, Denmark.

It was financially supported by ACCOBAMS through a Voluntary Contribution from the Principality of Monaco and by the Regional Activity Centre for Specially Protected Areas (RAC/SPA -MAP-UNEP).

The agenda of the workshop appears in [Annex 1](#) of the report.

Twenty-three attendees from 14 different Countries participated to the workshop. The workshop provided the opportunity to discuss on the relevancy of threat-based areas in the ACCOBAMS area and allow the **spatial mapping of direct threats to cetaceans**. It was led by Léa DAVID, ACCOBAMS Task Manager on Protected Areas for Cetaceans.

The list of participants can be found in [Annex 2](#) of the report.

II-1 - ACCOBAMS AND THE CCH

Maylis SALIVAS, Programmes Officer in the ACCOBAMS Permanent Secretariat, presented the concept of **Cetacean Critical Habitat (CCH)** in ACCOBAMS.

To assist in the meeting of ACCOBAMS objectives, Resolution 3.22 was passed on the need for criteria for the selection of protected areas in the region. The concept of: “Critical habitat” is commonly referred to in the context of MPAs, whereby there are numerous suggestions and definitions for this (e.g., breeding areas; feeding areas; migratory corridors, etc.). However, in the context of cetacean conservation and management in the Mediterranean, **it is important to incorporate the concept of Cetacean Critical Habitat (CCH), with actual and/or potential threats at the population level**, which may be appropriate for consideration as an MPA or network of MPAs. Thus, the definition of what comprises “critical habitat” and suitable candidates for MPAs can be best addressed on a case-by-case basis in the light of the available scientific knowledge. The spatial modelling approach is a powerful tool in this regard.

Criteria to identify sites containing ACCOBAMS CCH may include:

- Areas used by cetaceans for feeding, breeding, calving, nursing and social behaviour;
- Migration routes and corridors and related resting areas;
- Areas where there are seasonal concentrations of cetacean species;

- Areas of importance to cetacean prey;
- Natural processes that support continued productivity of cetacean foraging species (upwellings, fronts, etc.);
- Topographic structures favourable for enhancing foraging opportunities for cetacean species (canyons, seamounts).

These criteria can be applied for the identification of sites containing CCH, in need of protection due to the occurrence of significant interactions between cetaceans and human activities, where:

- **Conflicts between cetaceans and fishing activities** have been reported (mainly **depredation** when cetaceans are stealing preys in the fishing gear);
- Significant or frequent **bycatch** of cetaceans is reported;
- Intensive **whale watching** or other marine tourism activities occur (**harassment**);
- **Navigation** presents a potential threat to cetaceans (in terms of **ship strike**);
- **Military exercises** are known to routinely occur
- **Seismic activities** are known to occur

22 CCH were adopted in 2010 by ACCOBAMS Parties: 18 in the Mediterranean Sea and 4 in the Black Sea.

This ongoing threat based management approach will allow the identification of new CCH. This will help Parties in implementing relevant conservation measures such as:

- creation of new specific MPAs
- extension of existing neighboring MPAs
- implementation of other conservation tools through the following:
 - if areas containing cetacean critical habitats are connected in a coherent regional network, it might be useful to create appropriate management tools such as corridors;
 - if cetacean species are present only seasonally, specific seasonal measures could be implemented;
 - considering the species present and the type of anthropogenic activities implemented in some CCH, specific management tools could be implemented such as IMO recommendations, Particularly Sensitive Sea Areas (PSSA) in areas with an important maritime traffic; Fisheries Restrictive Areas in areas with important interaction with fisheries,...

II- 2 – IMPORTANT MARINE MAMMAL AREAS

The Chair of the ACCOBAMS Scientific Committee, Simone PANIGADA, presented the current work on the **Important Marine Mammal Areas (IMMAs) and reported on the 1st Regional workshop for the identification of IMMAs in the Mediterranean Sea.**

The **joint workshop on the Identification of IMMAs in the Mediterranean Sea**, organized by the IUCN Marine Mammal Protected Areas Task Force (MMPATF), in collaboration with ACCOBAMS and the Tethys Research Institute, was held in Chania, Greece, 24-28 October 2016.

IMMAs are a place-based conservation tool identifying discrete portions of habitat, important to marine mammal species that have the potential to be delineated and managed for conservation. During the workshop, experts work in sub-groups per species and after that per region, to discuss and delineated the 72 Areas of Interest (Aoi) for consideration as candidate IMMAs, with associated polygons (GIS) and argumentation (species, numbers, Mediterranean importance of the area, etc). The workshop participants identified and presented to an external review panel 41 candidate IMMAs throughout the region for ten species of marine mammal (including *Physeter macrocephalus*, *Delphinus delphis*, *Tursiops truncatus*, *Ziphius cavirostris*, *Balaenoptera physalus*, *Monachus*

monachus, *Grampus griseus*, *Orcinus orca*, *Globicephala melas* and *Phocoena phocoena*). Additionally, experts identified a new list of 35 AoI in the region which will form the basis of new recommendations for monitoring and future assessments of IMMA status. .

After consulting the IMMA selection criteria, the review panel confirmed a list of 26 IMMAs, 5 cIMMAs and 36 AoI, for a total of 67 areas for marine mammals within the Mediterranean Sea; this list will be available on a GIS platform on the dedicated web page: <https://www.marinemammalhabitat.org/>

These IMMAs and AoI, designated by experts working in the ACCOBAMS area, will be the base for the new identification of the ACCOBAMS CCH.

II- 3 – THE ACCOBAMS SURVEY INITIATIVE

A presentation on the ACCOBAMS Survey Initiative (ASI) was given by Julie BELMONT, the ASI project Officer, with complementary information provided by the ASI Scientific Coordinator on the scientific aspects.

This macro regional survey project is conducted in coordination and with the support of ACCOBAMS riparian countries, and will lead to the establishment of an integrated, collaborative and coordinated surveillance system regarding the status of cetacean populations in the ACCOBAMS Agreement area. Such a tool is crucial in assessing the effectiveness of conservation efforts of local actors, and it will support national efforts to meet their commitments under the EU Marine Strategy Framework Directive and the ecosystem approach implemented by the Barcelona Convention (UNEP/MAP). The collaborative and scientifically harmonized approach of this project will lead to the strengthening of a regional network of experts, through the mobilization of an international task force starting in 2018 with the Mediterranean Summer Survey campaign, and numerous capacity building actions for national actors and authorities involved in the cetacean's surveillance of their waters. Results of the survey will be cross-referenced with existing data on relevant indicators and will lead to: confirm existing areas of interest and potentially identify new ones (Cetacean Critical Habitats, Important Marine Mammals Areas); promote and support national or transnational systems and procedures for the conservation of cetaceans, including MPAs.

II- 4 – MEDTRENDS

MEDTRENDS illustrates and maps the main scenarios of marine economic Med-EU countries for the next 20 years. Explore the impacts of human activities, the social and economic trends and the keys to reach a joined sustainable growth in the region

The Mediterranean Sea is increasingly exploited by a range of maritime activities, all of which are predicted **to expand substantially over the next 20 years**: wind farms, [oil extraction](#), cables, [shipping routes](#), [fisheries](#) and other human activities including [tourism](#).

There is:

- Increased demand for the limited space and marine resources.
- Increased conflict between maritime sectors.
- Increased conflict between human use and nature.

The MEDTRENDS project combines the collection and analysis of geo-localised socio-economic and environmental information on 10 key maritime sectors with a wider spatial analysis that helps identify interactions and conflicts between sector development and the protection of marine ecosystems. It investigates these interactions at the Mediterranean regional or sub-regional scales and more specifically at the level of the 8 EU Mediterranean countries (Croatia, Cyprus, Spain, France, Greece, Italy, Malta and Slovenia). Furthermore, it looks into today's situation along with future developments up to 2030.

III – PROCESS IN THE IDENTIFICATION OF HUMAN ACTIVITIES AND DIRECT THREATS

The presentation made under this agenda item is provided in [Annex 3](#).

To identify the Cetacean Critical Habitat, the following is required:

1) Important areas for cetaceans : results on studies on cetaceans (distribution, abundance, behaviour) and expert’s knowledge (workshop)
=> **Based on cIMMA and Area of Interest (Aoi)**

2) Environmental rich places for these predators : data on the marine environment (underwater canyons, underwater seamounts and geostrophic currents, all of which generate natural food enrichment processes)
=> **Based on global program downloadable data**

To identify the threats to cetaceans, the following is required:

3) Areas with high human activities : data on human activities
=> **Based on existing programs (collaborations)**

4) Areas where threats impact cetaceans : data on sectors where threats are identified
=> **Based on studies, expert’s knowledge and link with specific working groups (noise, ship strike, interaction with fisheries...)**

=> Delimitation of CCH

Workshop participants and ACCOBAMS Partners were invited to take part to the effort of mapping threats and address the following issues in the existing IMMAs in the Mediterranean Sea and in other areas:

- describe direct threats on cetacean species in specific areas;
- draw areas (in GIS format) where direct threats occur

This work will allow to have an idea of what happen in the ACCOBAMS area at a glance, and will allow the identification of similar problems in different countries.

This should lead to assist national organizations in joining effort and applying relevant sustainable conservation actions **at the regional level**.

A guidance document has been sent to all participants and to other contributors who could not attend the workshop. Experts were requested to prepare and eventually send in advance a questionnaire and GIS areas with the following attribute table for each area.

Name of the “threat area”	Threat	Species impacted	Intensity

A word document shall also be filled with the requested information for each threat:

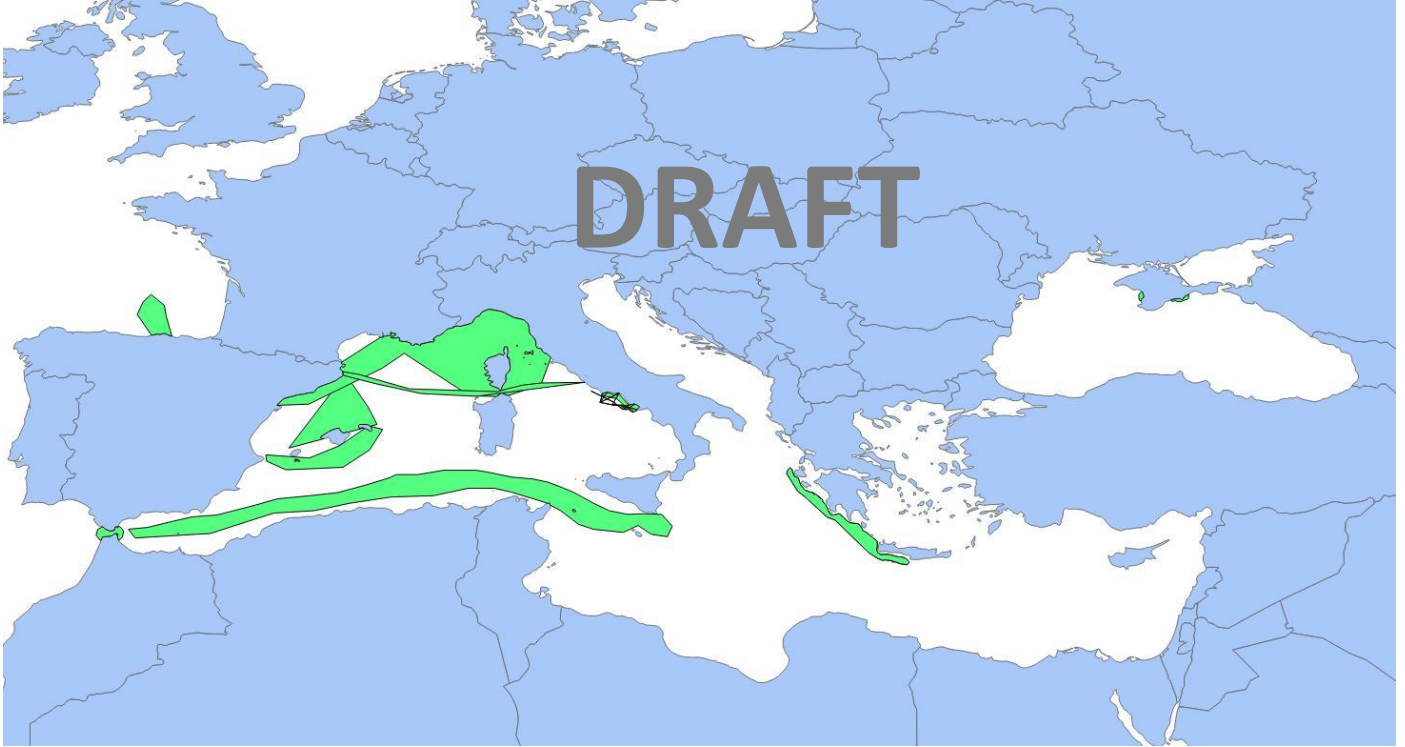
Existing threat	what we need	Type of threat
Species of cetacean impacted	<i>Name(s) and precise if impact is different for each species</i>	
Map of area where this threat occurs	<i>See table below for the information in the drawing or shape</i>	
Temporality of this threat	<i>all year long, only in summer, mainly in the morning,...</i>	
Number of cetaceans impacted	<i>dead or injured, per year or since...</i>	
Intensity of the threat	<i>Important, medium, low, potential</i>	
Data existing on that threat	<i>(strandings, pictures, ...)</i>	
Scientific references (published and grey literature) / experts knowledge	<i>references</i>	
Other elements		

After that participants were split in 2 groups to draft the said areas, discuss the intensity, etc.:

- **Group 1 regarding By Catch and Depredation** – Lead by Léa DAVID
- **Group 2 regarding Ship Strikes and Harassment** – Lead by Maylis SALIVAS

IV – OUTPUTS OF THE WORKSHOP / MAP FOR EACH THREAT

The outputs at the end of the workshop were maps for each threat, as shown below, and should be considered as **DRAFT**.

Map for ship strikes**Map for bycatch**

Map for depredation



Map for harassment



V – NEXT STEPS

The next steps expected are as following:

- 1) **Improve and complete the threats areas by all relevant experts**
- 2) Overlap of GIS layer IMMA and threats in order to highlight CCH. These are the ones where we know what happen
- 3) Discuss and decide altogether the best conservation measure or action to implement: which management approach?
- 4) Validate by the Scientific Committee of ACCOBAMS the area and the conservation measures for each CCH
- 5) Validate by the Parties of ACCOBAMS
- 6) Inform all relevant international organizations
- 7) Encourage Countries to implement relevant actions for each threat/CCH

And also :

- 1) Overlap IMMA and Aol layer with human activity layer, to highlight potential CCHs
- 2) Discuss and decide if there is a need for further work on that potential areas.

ANNEX 1 – AGENDA

Inputs to the ACCOBAMS ongoing effort to map human threats for cetaceans in the Mediterranean and Black Seas

Date: Sunday 30th April 2017

Venue: Middelfart Sparekasse, Havnegade 21, 5500 Middelfart

Welcome / Registration: 9h00

Opening: 9h30

- 1) Introductory presentations - Round table 10'
 - a. ACCOBAMS and the CCH (*M. Salivas*, 10')
 - b. IMMA (*S. Panigada*, 10')
 - c. ACCOBAMS Survey Initiative (*J. Belmont*, 10')
 - d. Medtrends (*L. David*, 10')
- 2) Description of the process, identification of human activities and direct threats, definition of the working groups, discussion

Coffee Break: 11h00-11h30

- 3) Working group per direct threats
 - a. By-catch
 - b. Ship strike
 - c. Harassment (whale-watching)
 - d. Impulsive noise (Seismic and oil and gas platform, military exercises, windfarm...)
 - e. Depredation
 - f. Other...

Lunch break: 13h00-14h30

- 4) Working group per direct threats continuing

Coffee break: 16h00-16h30

- 5) Conclusion, synthesis of the areas defined (*talk, chair, L. David*)

Closure: 17h30

ANNEX 2 – LIST OF PARTICIPANTS

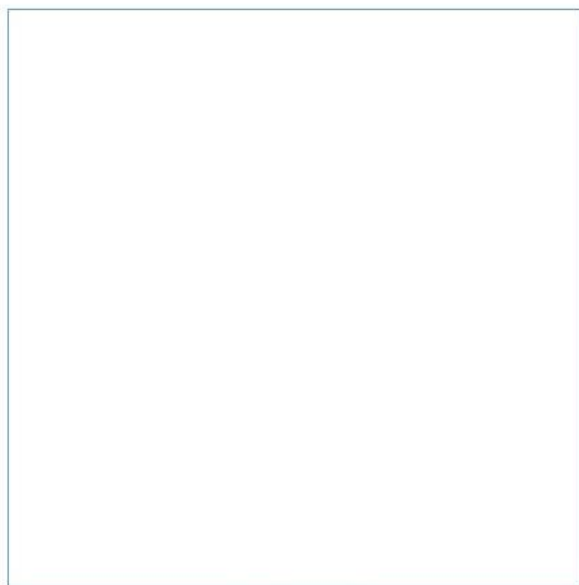
Name	Surname	Country / Organization	Email
AYTEMIZ	Isil	Turkey	isilaytemiz@yahoo.com
AZZOLIN	Marta	Italy / Gaia Research Institute / University of Turin	Tursiope.ve@libero.it
BEGÜM	Uzun	Turkey	begum.uzun@gmail.com
BELMONT	Julie	ACCOBAMS Permanent Secretariat	jbelmont@accobams.net
BENAMER	Ibrahim	Libya	benamer.ly@gmail.com
BENMESSAOUD	Rimel	Tunisia	benmessaoud_rimel@yahoo.fr
DANYER	Erdem	Turkey	erdemdanyer@gmail.com
DAVID	Léa	France / EcoOcean Institute	lea.david2@wanadoo.fr
DI-MEGLIO	Nathalie	France / EcoOcean Institute	nathalie.di-meglio@wanadoo.fr
FOUAD	Mahmoud	Egypt	mahmoud_ncs@yahoo.com
GOL'DIN	Pavel	Ukraine	Pavelgoldin412@gmail.com
GONZALVO	Joan	Italy / Tethys Research Institute	Joan.gonzalvo@gmail.com
HAMILTON	Sally	ORCA	Sally.hamilton@orcaweb.org.uk
LE COURTOIS	Florent	France / SHOM	Florent.le.courtois@shom.fr
MAHFOUZ	Céline	Lebanon	celine.mahfouz@hotmail.com
NIBANI	Houssine	Morocco	agirnibani@gmail.com
PAIU	Marian	Romania	marian_paiu@marenostrium.ro
PANIGADA	Simone	Italy / Tethys Research Institute	panigada69@gmail.com
PIERANTONIO	Nino	Italy / Tethys Research Institute	nino.pierantonio@protonmail.com
POPOV	Dimitar	Bulgaria	dpopov@greenbalkans.org
SALIVAS	Maylis	ACCOBAMS Permanent Secretariat	msalivas@accobams.net
SAVENKO	Oksana	Ukraine	o.v.savenko@gmail.com
SCUDERI	Alessia	Italy & University of Cadiz, SPAIN	Alessia.scuder1@gmail.com

ANNEX 3 – PRESENTATION OF THE PROCESS, IDENTIFICATION OF HUMAN ACTIVITIES AND DIRECT THREATS, DEFINITION OF THE WORKING GROUPS, DISCUSSION



Illustration of the process and its aim

Home range of a cetacean species

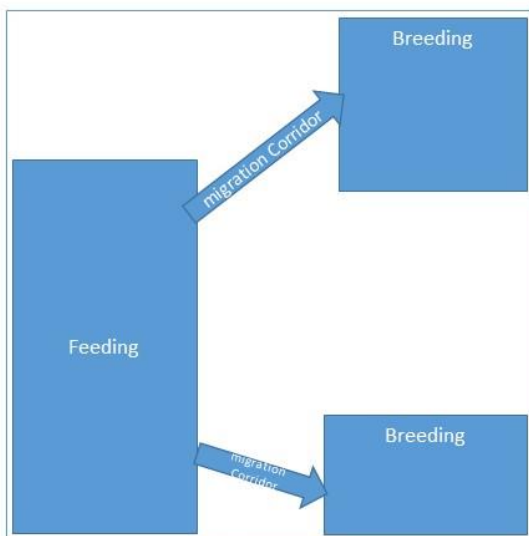


Home range

- Legend
- Home range (occurrence)



Home range of a cetacean species, and « vital » areas

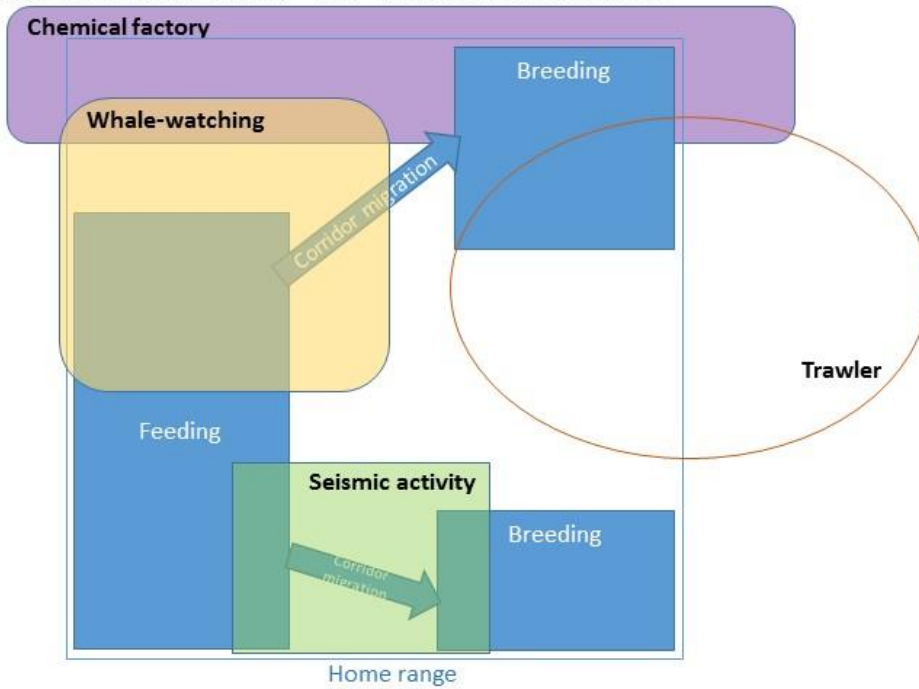


Home range

- Legend
- Home range (occurrence)
 - Important area for cetaceans : Feeding, breeding, corridor, etc



Home range of a cetacean species, « vital » areas and human activities

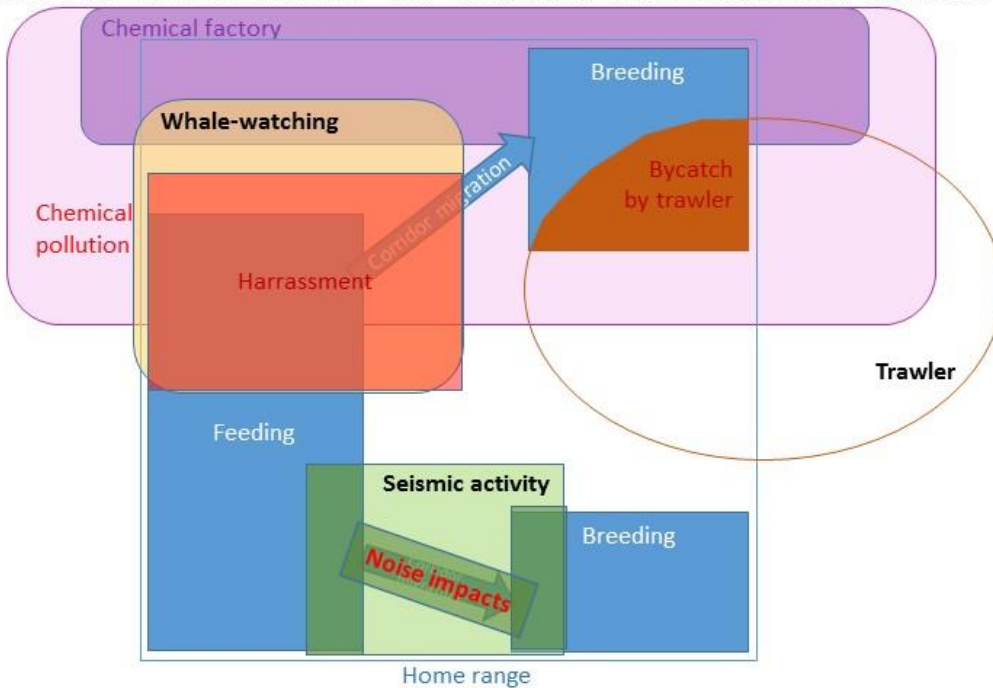


Legend

- **Important area for cetaceans :** Feeding, breeding, corridor, etc
- **Human activities :** Trawler, whale-watching, seismic activity...



Home range of a cetacean species, « vital » areas, human activities and threats to that species

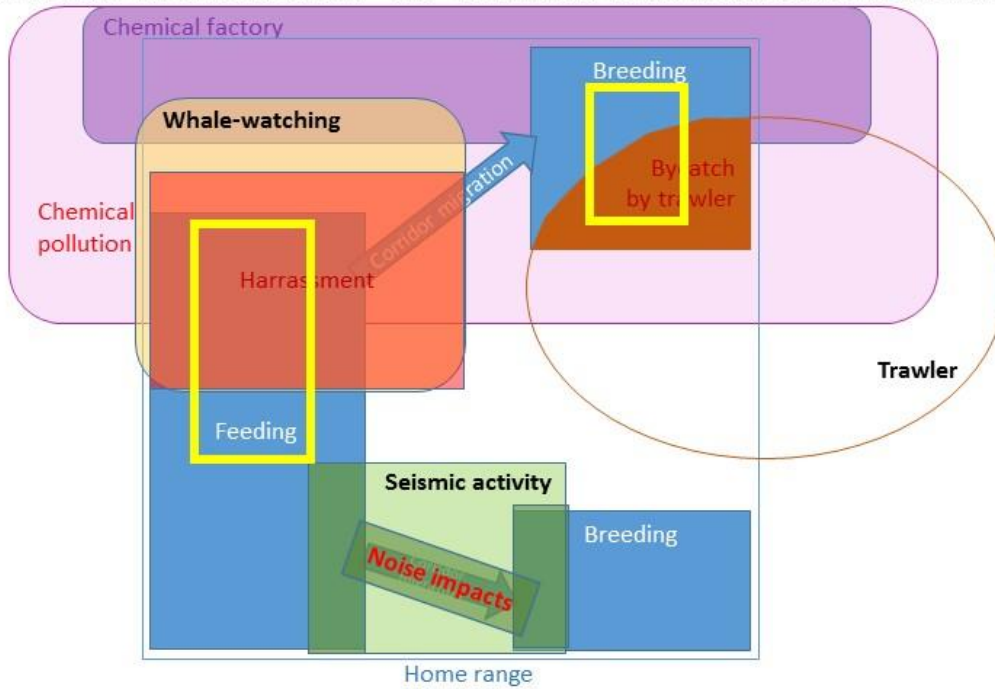


Legend

- Home range
- **Important area for cetaceans :** Feeding, breeding, corridor, etc
- **Human activities :** Trawler, whale-watching, seismic activity
- **Threats :** bycatch, harrassment, chemical pollution, noise pollution or injuries, etc



Home range of a cetacean species, « vital » areas, human activities, threats and conservation measures

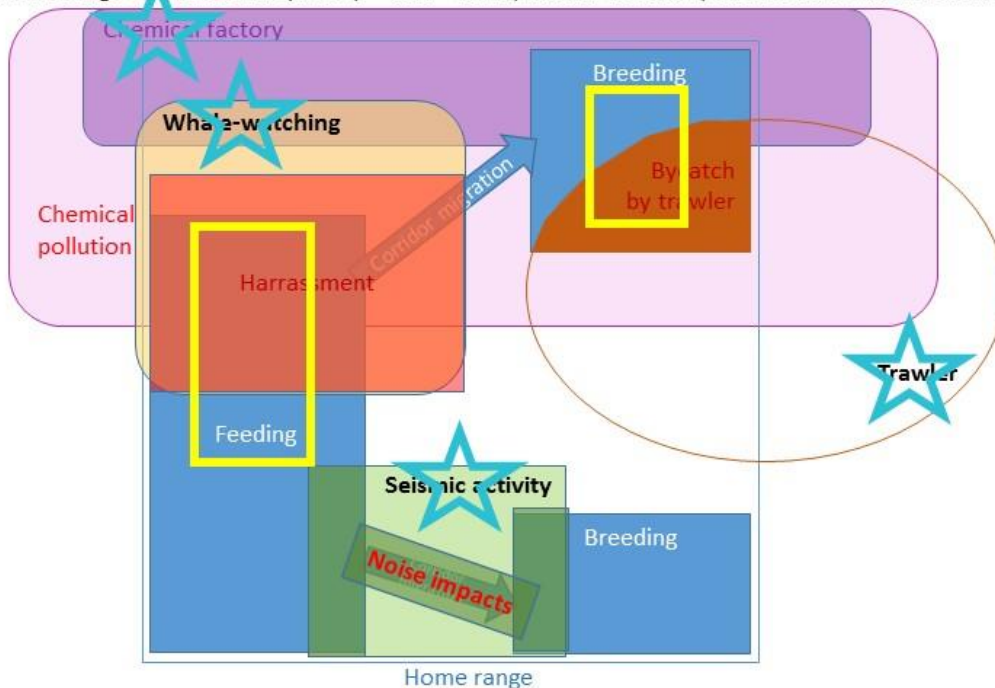


Legend

- Home range
- **Important area for cetaceans** : Feeding, breeding, corridor, etc
- **Human activities** : Trawler, whale-watching, seismic activity
- **Threats** : bycatch, harrassment, chemical pollution, noise pollution or injuries, etc
- **Marine Protected Area (place-based management approach)**



Home range of a cetacean species, « vital » areas, human activities, threats and conservation measures



Legend

- Home range
- **Important area for cetaceans** : Feeding, breeding, corridor, etc
- **Human activities** : Trawler, whale-watching, seismic activity
- **Threats** : bycatch, harrassment, chemical pollution, noise pollution or injuries, etc
- **Marine Protected Area (place-based management approach)**
- **Threat-based management approach**



The direct threats

Only direct threats because they can often be more easily defined geographically :

- **By-catch**
- **Ship strike**
- **Harassment (whale-watching/pleasure boating)**
- **Impulsive noise (Seismic and oil and gas platform, military exercises, windfarm...)**
- **Depredation**
- **Other...**

*More indirect, diffuse and long term threats, as **Pollution** (runoff, outflow or other marine dumping) and **Noise** (marine traffic, coastal works, etc), will be treated in a separate and specific way.*



Working groups

Working groups per direct threats :

- By-catch
- Ship strike
- Harassment (whale-watching)
- Impulsive noise (Seismic and oil and gas platform, military exercises, windfarm...)
- Depredation
- Other...

⇒ *Work at a regional level, find a common way to attribute the intensity*

Working groups per sub-regions :

- Occidental basin
- Central Mediterranean Sea
- Oriental basin
- Black Sea

⇒ *Work at a regional level, get a global vision of the different threats and intensities cetaceans have to face*

This is your/our workshop, so it is evolutive with exchange of ideas





Documents expected

A description of the threat on cetacean species

For each specific area and threat

Informations	what we need	type of direct threat :
Species of cetacean impacted	Name(s) and precise if impact is different for each species	description...
Name of the GIS file and description of the area where this threat occurs		description...
Temporality of this threat	all year long, only in summer, mainly in the morning,...	description...
Number of cetaceans impacted	dead or injured, per year or since...	description...
Intensity of the threat	Important, medium, low, potential	description...
Data existing on that threat	(strandings, pictures, ...)	description...
Scientific references (published and grey literature) / experts knowledge	references	description...
Other elements		

- 1) If threat occurs in the same area for all species, create only one area and several entities per species if the intensity is different
- 2) If the threat occurs in different areas for different species, create different areas





Documents expected

example

An associated GIS file, including those informations

Name of the "threat area"	Threat	Species impacted	Intensity
Harrassment_wv_France Tt	harrassment watching	whale- Tt Coastal area	high
Harrassment_pb_France	Harassment boating	pleasure Tt	medium

Name of the "threat area"	Threat	Species impacted	Intensity
Harrassment_wv_France otherspecies	harrassment watching	whale- Sc, Bp, Pm Offshore area	medium
Harrassment_pb_France	harrassment boating	pleasure Sc, Bp, Pm, Gg, Gm	low

Feel free to create as many different areas as your knowledge allow it if areas, species or intensity is different!





Definition of the intensity of the threat

- **IMPORTANT** : A large proportion of the population is impacted, *or* the impact is frequent and often *or* it occurs in a broad part of the home range. Measurable impacts to cetaceans from anthropogenic sources which currently cause a concern to the long-term survival of a species or population
- **MEDIUM** : Measurable threat to cetaceans from anthropogenic sources but these are not enough to cause concern for the long-term survival of a species or population at this time, but still impact the population
- **LOW** : A small proportion of the population is impacted, *or* the impact is only ponctual or occur only in a small part of the home range. No concern for the long-term survival of a species or population at this time.
- **POTENTIAL** : 1) some evidence is present but is only anecdotal or from un-quantified local knowledge or 2) considering the human activities and the cetaceans present in the same area, an impact could occur, but there is no study/knowledge for this area

Be aware the intensity for each area is define **at a regional level**, not a local one !!
 For example we need to know where the ship strikes risk areas are located in the whole Mediterranean and Black Seas, and where the risks are the highest for each species ! You must think global when assigning an intensity

=> **role of the working groups**

