



Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area, concluded under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals (CMS)

Accord sur la Conservation des Cétacés de la Mer Noire, de la Méditerranée et de la zone Atlantique adjacente, conclu sous l'égide de la Convention sur la Conservation des Espèces Migratrices appartenant à la Faune Sauvage (CMS)



Seventh Meeting of the Parties to ACCOBAMS

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ACCOBAMS PARTNERS REPORTS

*Delegates are kindly invited to bring their own documents to the Meeting.
This document will be available only in electronic format during the Meeting.*

ACCOBAMS PARTNERS REPORTS

The status of ACCOBAMS Partner had been created by the First Meeting of the Parties in its Resolution 1.13. There are now 54 Partners and the Secretariat keeps receiving numbers of applications for the Partner status (Figure 1). The official list of ACCOBAMS Partners is available in ACCOBAMS-MOP7/2019/Inf35.

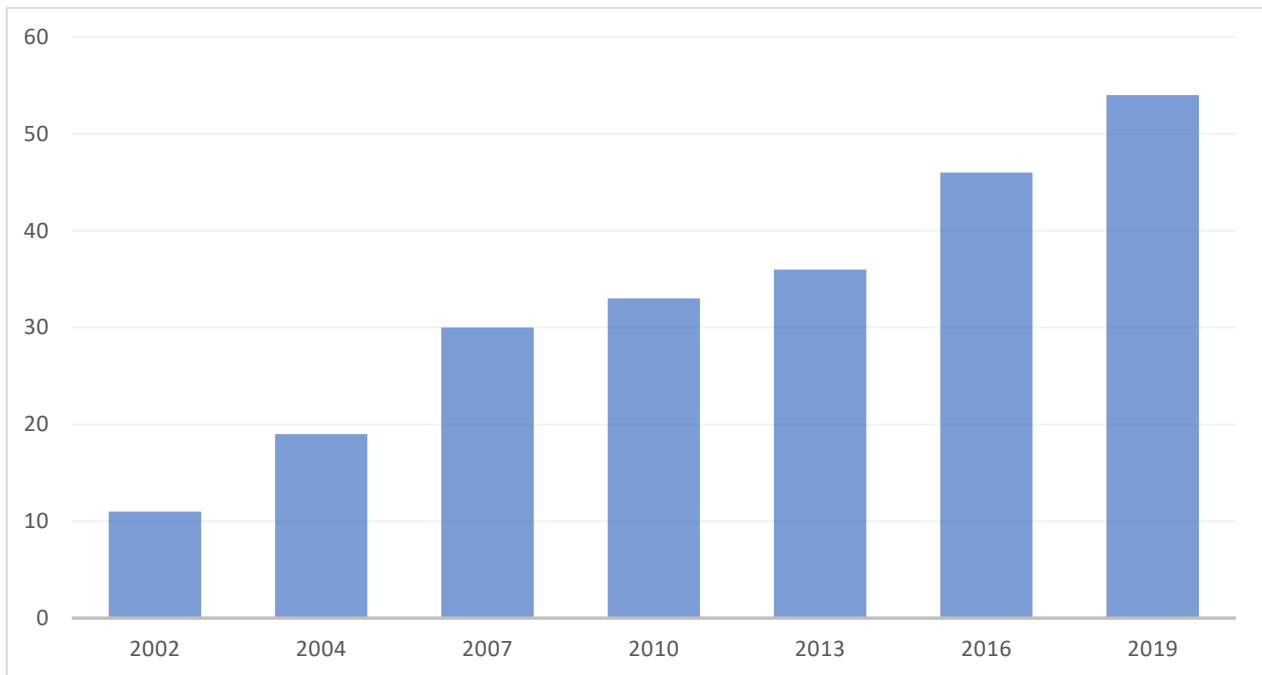


Figure 1: Evolution of the number of ACCOBAMS Partners since 2002

During the triennium, many NGOs collaborated with the ACCOBAMS Permanent Secretariat in undertaking activities for the implementation of the Agreement, with special focus on the implementation of the ACCOBAMS Survey Initiative and public awareness.

Pursuant with the "Rules and criteria for the status of ACCOBAMS Partner" adopted with Resolution 4.20:

"At each Meeting of the Parties, the ACCOBAMS Partners shall report on implementation of their collaborative programme with ACCOBAMS and on use of the ACCOBAMS Partner logo. To this end, their reports shall reach the Secretariat at least 2 months before the Bureau meeting held to prepare the Meeting of the Parties."

➔ 20 Organisations reported on the implementation of their collaborative programme with ACCOBAMS (Table I).

Table I: Overview of participation of ACCOBAMS Partners in reporting their collaborative programme with ACCOBAMS

ORGANISATION	Report on implementation programme with ACCOBAMS for the MOP7
AGIR	
ALNILAM	
ALNITAK	<u>X</u>
ARCHIPELAGOS INSTITUTE OF MARINE CONSERVATION	<u>X</u>
ASSOCIATION ECOLOGIQUE MARINE BARBAROUS	
ASSOCIATION MONEGASQUE POUR LA PROTECTION DE LA NATURE (AMPN)	
ASSOCIATION PROTECTION DES CETACES ET DE L'ENVIRONNEMENT MARIN	
ATUTAX	
BIOLOGICAL CONSERVATION RESEARCH FOUNDATION (BICREF)	
BLUE WORLD INSTITUTE OF MARINE RESEARCH AND CONSERVATION	
BREMA LABORATORY	
CAPO CARBONARA - MPA	
CENTRE NATIONAL DE RECHERCHE ET DE DEVELOPPEMENT DE LA PECHE ET DE L'AQUACULTURE	
CIMA Research Foundation	<u>X</u>
CONSERVATION BIOLOGY RESEARCH GROUP UNIVERSITY OF MALTA	
CONSERVATION INFORMATION AND RESEARCH ON CETACEANS (CIRCE)	
CORSICA MARE OSSERVAZIONE	
CRAM Fundación	
CYBELLE Planète	
DIPARTIMENTO DI SCIENZE DELLA TERRA DELL'AMBIENTE E DELLA VITA (DISTAV)	
EcoOcéan INSTITUT	<u>X</u>
EDMAKTUB	
EQUINAC	
EUROPEAN CETACEAN SOCIETY (ECS)	
GREEN BALKANS	<u>X</u>
GROUPE D'ETUDE DES CETACES DE MEDITERRANEE (GECEM)	
GROUPE DE RECHERCHE SUR LES CETACES (GREC)	
GROUPEMENT D'INTERET SCIENTIFIQUE POUR LES MAMMIFERES MARINS ET LEUR ENVIRONNEMENT (GIS3M)	<u>X</u>

INTERNATIONAL FUND FOR ANIMAL WELFARE (IFAW)	
INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE (IUCN)	
ISRAEL MARINE MAMMAL RESEARCH & ASSISTANT CENTER (IMMRAC)	<u>X</u>
MARE NOSTRUM	<u>X</u>
MARECAMP ONLUS ASSOCIATION	<u>X</u>
MARINE MAMMALS RESEARCH INSTITUTE (DMAD)	<u>X</u>
MENKAB, IL RESPIRO DEL MARE	<u>X</u>
MORIGENOS SLOVENIAN MARINE MAMMAL SOCIETY	
NATIONAL INSTITUTE FOR MARINE RESEARCH AND DEVELOPMENT « GRIGORE ANTIPA »	<u>X</u>
NATURE TRUST	
OCEAN CARE	<u>X</u>
OCEANA FOUNDATION	
OCEANOGRAPHIC MUSEUM OF MONACO	
OCEANOMARE DELPHIS ONLUS	<u>X</u>
ORCA	
PELAGOS CETACEAN RESEARCH INSTITUTE	<u>X</u>
PORTUGUESE WILDLIFE SOCIETY (SPVS)	
PROJETE NINAM	
SOUFFLEURS D'ECUME	<u>X</u>
SYRIAN SOCIETY FOR THE CONSERVATION OF WILDLIFE (SSCW)	<u>X</u>
SWISS CETACEAN SOCIETY	<u>X</u>
TETHYS RESEARCH INSTITUTE	<u>X</u>
TURKISH MARINE RESEARCH FOUNDATION (TUDAV)	
UNIVERSITY OF VALENCIA	<u>X</u>
WHALE AND DOLPHIN CONSERVATION (WDC)	
WWF Mediterranean Programme Office	

ALNITAK

Name of the Representative: Ricardo Sagarminaga Van Buiten – Brad Robertson

Capacity building activities:

In 2019 Alnitak / Save the Med Foundation developed two capacity development projects:

- Capacity development of fishers in the SW Mediterranean for the adoption of technological measures to mitigate bycatch and depredation interactions with cetaceans, sea turtles and elasmobranchs in longlining, anchored FAD mahi mahi fishery and trammel nets.
- Capacity development of the nautical sports sector for participating in the mapping and retrieving of marine litter and ghost fishing artefacts.

Public awareness activities:

In 2019 Alnitak / Save the Med Foundation developed four complementary activities for raising awareness:

- With the collaboration of OCEANCARE, the research vessel Toftevaag conducted its 30th season of research expeditions incorporating its volunteering / citizen science programme. A total of 64 volunteers participated in 23 one-week expeditions, assisting the scientific team conduct; a) the visual and acoustic survey, b) the point sampling of marine litter and human activities, c) the filtering of microplastics, d) the retrieval of marine litter and ghost fishing artefacts, and e) the satellite tracking of giant devil rays and loggerhead turtles.
- In collaboration with Asociación ONDINE's (now SAVE THE MED Foundation) "Dos Manos" school programme (A programme that in 2019 involved 3188 students of 34 schools), we ran the second edition of the "Changemakers" contest in which over 100 teenagers from 15 schools participated. The student team of the winning project and their teacher were awarded with a one-week research expedition onboard Toftevaag.
- The Toftevaag hosted its itinerant "TODOS POR LA MAR" exhibition on marine litter, in ports and anchorages of the Balearic Islands. Over 5.000 people visited the shipboard exhibition.
- In 2019, with the collaboration of LIBERA (Marine litter project) we have worked with diverse media to raise awareness on marine litter.

Research activities:

In 2019 Alnitak / Save the Med Foundation developed three lines of research:

- "Monitoring of top pelagics in the SW Mediterranean" – The visual and acoustic line transect survey, together with point samplings of human activities conducted in the 2019 survey of Toftevaag have ensured the continuity of Alnitak's 30-years monitoring programme.
- "MEDTOP – Animal Oceanographers – In collaboration with the Integrated Ocean Observation Systems of NOAA and ICTS SOCIB, USFWS, OCEANCARE and LIBERA – Fundación Reina Sofía, 2019 has been the 6th season of this project that uses satellite telemetry of sea turtles, bluefin tuna and giant devil rays to integrate biological data in modelling of oceanographic data. The end result of this project is the development of technological measures to mitigate risks of bycatch, vessel strikes, noise pollution and entanglement in ghost fishing.
- Developing Electronic Monitoring Systems for marine conservation – In 2019 we have launched a new EMS buoy for the monitoring of MPA's and Fish Aggregating Devices (FADs), the "OASIS II".

Others:

With the support of the ASHOKA foundation and the UNDP we have taken the lessons learned in the SW Mediterranean to community based MPA projects in Africa, the Caribbean and Latin America. In 2019 this work has focused mainly on the MPAs in Djibouti.

ARCHIPELAGOS INSTITUTE OF MARINE CONSERVATION

Name of the Representative: Anastasia Miliou

Capacity building activities:

In parallel to research and conservation work by Archipelagos Institute of Marine Conservation capacity building is a priority accomplished through the following activities:

- Archipelagos hosted 9 field courses on our research boats and bases attended by marine science students, as part of their university curriculum. These courses provided among other, training on data collection methods and analysis for cetaceans.
- In 2017, Archipelagos supported RAC/SPA in the organisation of the SEcAp Training Monitoring techniques of the common indicators related to biodiversity and non-indigenous species in Samos Island.
- During the triennium 2017-2019 Archipelagos hosted year-round more than 2100 students (BSc, MSc, PhD) and interns from 57 different countries, who received among other, training on data collection methods and analysis for cetaceans.
- From 2018 to 2019, Archipelagos received the EcAp MED II RAC/SPA_2017 to conduct surveys for the implementation of the integrated monitoring and assessment programme of the RAC/SPA.
- In 2018, Archipelagos cooperated with ACCOBAMS to conduct the vessel-based survey in the blocks 25 and 26 of the ACCOBAMS Survey Initiative (ASI) survey design with the Archipelagos' research vessel 'Naftilos' which was also a capacity building research survey for scientists from the middle east and north Africa.
- During the triennium, Archipelagos researchers attended numerous scientific conferences, workshops, symposia, congresses about marine mammals, sea turtles, marine conservation, fisheries and anthropogenic impacts presenting many scientific contributions.

Public awareness activities:

Public awareness and community engagement are a priority of Archipelagos' conservation efforts, accomplished through the following activities:

- Regular year – round activities, addressed to the local communities of the 21 Greek islands. Target groups include students, teachers, fishermen, sailing and diving clubs, local NGOs, port authorities, prefectural and municipal authorities, as well as tourists. Activities include:
 - Lectures and interactive educational activities about anthropogenic impacts on marine fauna and ecosystems.
 - Open days of the Archipelagos bases and boats for the visit of student groups and other members of the local communities to engage them in Archipelagos conservation goals.
 - Coastal and floating marine litter monitoring programmes.
 - Beach and boat-based clean-ups of marine debris that has aggregated due to anthropogenic littering and the refugee crisis.
- Social Media campaigns targeting a global audience regarding the local issue of anthropogenic threats on the resident and migratory marine mammals (cetaceans and monk seals).
- Distribution of media awareness and education materials to locals and tourists about stranding, bycatch and entanglement of marine fauna, monk seal breeding season and other codes of conduct to protect marine fauna from anthropic disturbance.
- Production of documentaries about Archipelagos research by Green National TV ERT, Vice TV (Greek), Energy Observer (France), ITV (UK), ARTE (French/German)
- Promotion of the « Eco-Navigation » initiative, a citizen-science platform to gather data about marine fauna sightings and dangerous events (e.g. oil spill, jellyfish blooming, etc.) from sea enthusiasts from all over the world visiting the Greek seas.

Research activities:

A total of 115 boat-based surveys were conducted on the 6 research vessels of Archipelagos Institute with the main aim to monitor the cetacean presence, abundance and distribution. Surveys focused in the region of the Aegean Sea, Greece. During each survey, environmental, acoustics and behavioural data were recorded. Acoustics data were collected using a towed hydrophone array or a stationary hydrophone (Aquarian h2a). Dolphin vocalizations and anthropogenic noise were analysed using Raven Pro 1.5 (Cornell Laboratory of Ornithology, New York) and PAMGuard Software. Behavioural data were collected following a designed ethogram and data were analysed with the BORIS Software. Photo-identification techniques were applied to assess the population dynamics of the resident sub-populations of *D. delphis* and *T. truncatus*. Complementary data such as group size; movement formation; age class of the individuals; reaction to our research vessel were collected. During these expeditions, the following six species of cetaceans were sighted on 157 occasions: *D. delphis*, *T. truncatus*, *Stenella coeruleoalba*, *Grampus griseus*, *Physeter macrocephalus*, and *Ziphius cavirostris*. The presence of *D. delphis* and *T. truncatus* were mainly recorded in shallow water basin between the south of Samos Island and the region of the north Dodecanese, while *S. coeruleoalba*, *G. griseus*, *P. macrocephalus* and *Z. cavirostris* were recorded over deep canyon waters.

Others:

During the boat-based surveys, marine litter and seabird data were collected alongside marine mammal monitoring. Marine litter data focused on the type and size of every item. Of the 1193 identified items, the most common category was artificial polymers (89.94%), whilst the most common size found was 11-30cm (35.22%). Sea bird survey data focused on abundance and behaviour. Of the 736 recorded seabirds during 23 surveys, the most sighted species was the *Puffinus yelkouan* (41.85%) while the most common behaviour identified was "Flying" (57.26%).

Marine mammal and sea turtle stranding data was collected during strandings recorded by Archipelagos during surveys within the study area, or stranding events reported by the public. Between 2017 and 2019, 51 stranded animals were recorded in the study area. 29 sea turtles (17 *Caretta caretta*; 12 *Chelonia mydas*), 7 Mediterranean Monk seal (*Monachus monachus*), 20 dolphins (6 *D. delphis*; 9 *S. coeruleoalba*; 4 *T. truncatus* ; 1 *Phocoena phocoena*). First aid was provided to 2 *S. coeruleoalba* without any success, 1 *M. monachus* pup and 6 sea turtles: 4 *C. caretta* and 2 *C. mydas*, out of which 2 *C. caretta* and 2 *C. mydas* were successfully rehabilitated and released.

During first aid and necropsy response to stranded animals, data collection included marine litter analysis (macro and microplastic).

The Aegean Marine Life Sanctuary, currently under construction by Archipelagos in Lipsi island, will operate as a first-of-its-kind rehabilitation centre where marine mammals and turtles, but also former captive dolphins can be rehabilitated in a natural environment.

CIMA RESEARCH FOUNDATION

(afterwards quoted as CIMA)

Name of the Representatives: Aurelie MOULINS & Massimiliano ROSSO

Capacity building activities:

CETASMUS program¹, a training experience of 3-6 months on methodologies for cetacean monitoring offered by CIMA. The program includes both theoretical, technical and practical aspects on cetacean data collection and analysis. The thematics regard distribution, abundance and biology of cetacean populations. During the triennial, 39 students and researchers coming from 17 countries have participated. [2017, 2019, 2019].

Training of experts from FABRAS Foundation during 4 weeks on methodologies for cetacean monitoring. This training is divided into theoretical modules, collect of data at sea and modules of post-processing of data collected at sea. FABRAS Foundation from Basilicata Region is funding this training with the aim of creating a marine protected site in the Gulf of Taranto to limit marine oil exploitation. [August 2019 and October 2019].

Training of experts from during 3 weeks on methodologies for cetacean monitoring. This training is divided into theoretical modules, collect of data at sea and modules of post-processing of data collected at sea. Financed by National Natural Science Foundation of China, Chinese Academy of Sciences, Ocean Park Conservation Foundation Hong Kong, Ministry of Science and Technology, Chinese White Dolphin Conservation Action Plan of Ministry of Agriculture and Rural Affairs, P.R.C., Department of Science and Technology in Hainan Province, the training aimed to conduct the first survey of the deep-diving cetaceans in the South China. [April 2019].

Courses *“Improve the commitment to responsible whale-watching operators according to High Quality Whale-watching certification”* in the framework of the EcoSTRIM project and specifically in collaboration with ACCOBAMS. CIMA organized a 3-days course aiming to give the knowledge for a responsible activity in the Pelagos Sanctuary. [March 2019].

Courses *“Joint workshop on Estimating Cetaceans Abundance”* organized by ACCOBAMS in collaboration with RAC/SPA. It aimed at reinforcing capacity on (i) photo-id techniques and analysis, (ii) abundance techniques and analysis for scientists from Algeria, Morocco and Tunisia. [February 2019].

Courses² *“Training on photo-identification and databases”* organized by ACCOBAMS in collaboration with SPA/RAC, IUCN Med, MedPAN. It aimed at reinforcing capacity on (i) the use of photo-id, (ii) the use of databases and (iii) the creation of catalogues with relevant data for cetacean conservation for scientists from 12 mediterranean countries. [October 2018].

Courses *“Training on the use of Seawetra for the Adriatic Sea monitoring”* in the framework of the CapRadNet project³ (2016-2018) co-financed by the IPA Adriatic Cross-Border Cooperation Program aimed to capitalize the results achieved with the previous ADRIARadNet. It aims to develop the SEAWETRA tool for the Adriatic Sea monitoring. [October 2017].

¹ <https://www.cimafoundation.org/cetasmus-programme/cetasmus.html>

² <http://www.accobams.org/accobams-training-course-on-photo-id-and-databases-for-experts/>

³ <http://cetemps.aquila.infnet.it/capradnet/>

Public awareness activities:

Swim the Island 2019⁴ event organized by TriO Eventi in collaboration with the Municipalities Bergeggi, Noli, and Spotorno. CIMA participated with the conference “*Cetacei a rischio: eco-gesti da adottare*”. Target: general public. [October 2019].

Mare Inquieto⁵ event organized by the Circolo degli Inquieti di Savona. CIMA participated with the conference “*Un mare da scoprire: il Santuario dei Cetacei*”, target: secondary schools; “*Cetacei a rischio: eco-gesti da adottare*”, target: general public; and the temporary exhibition “*Pinne in pillole*”. [September 2019].

Festival del Mare⁶, a yearly event organized by the University of Genova, since 2018 in Genoa (Italy). CIMA participated with two events. The laboratory “*Balene a rischio*”. Target: 4 classes of primary schools, 6 classes of secondary schools and general public. The photographic exhibition with multimedia technology “*Pinne in pillole: i cetacei si raccontano*”. Target: 4 classes of primary schools and general public. [May 2018, May 2019].

Festa degli Amici Cucciolotti. Incontriamo i Plastic Busters⁷ organized yearly by Pizzardi Editore (Italy), since 2017, in the marina of Loano (Italy) in collaboration with the University of Sienna (UNISI) and CIMA. The events “*Catamarano Salvadelfini*” and “*Acchiappa Plastica*” were the occasion to visit the research vessel and to discuss with researchers working on cetaceans. Target: general public. [June 2017, June 2018, June 2019].

Giornata nazionale del Mare e della cultura marinaresca⁸ organized yearly by the Marina of Loano (Italy). The laboratories “*Balena di Plastica*” and “*Cimitero degli Albatros*” are the occasion to raise awareness on the effects of waste on marine organisms. Target: 2 classes of primary schools. [June 2017, June 2018, June 2019].

In the framework of the **Partnership Charter for the Pelagos Sanctuary**, CIMA has participated to over 10 conferences organized by municipalities to promote the existence of the Sanctuary and the presence of cetaceans in the Sanctuary. The municipalities were Bergeggi, Finale Ligure, Noli, Loano, Savona, Spotorno. Target: general public. [Summer 2017, Summer 2018, Summer 2019].

In the framework of CIMA's activities dedicated for **Education Program**, CIMA was invited by 6 classes of primary schools and kindergarten of the Province of Savona to introduce marine environmental issues and present the cetacean populations of the Pelagos Sanctuary. CIMA host also students of secondary schools in the framework of the program **Alternanza scuola lavoro**. [2018, 2019].

Cetaceans Show Off at the Monaco Ocean Week 2018⁹ organized by the Permanent Secretariats of the Pelagos Agreement and the ACCOBAMS in collaboration with CIMA. The photographic exhibition, at the Galerie des pêcheurs (Monaco) was a communication activity about the project “Noise impact estimated from marine traffic on sperm whale (*Physeter macrocephalus*) and Cuvier’s beaked whale (*Ziphius cavirostris*)”. Target: general public. [April 2018].

Mare di Plastica¹⁰, project co-funded by the Agostino De Mari Foundation from Savona (Italy). The aim was to present biodiversity and richness of the sea affected by the ever-increasing problems related to plastic pollution. Target: 6 classes of primary schools. [2017].

A service of the TV show for kids **Tg dei ragazzi**¹¹ was realized aboard CIMA's catamaran on the research conducted on cetacean populations in the Pelagos Sanctuary. [10 September 2017].

⁴ <http://swimtheisland.com/programma/>

⁵ <http://www.circoloinquieti.it/un-mare-inquieto-20-21-22-settembre-2019/>

⁶ <http://www.festivaldelmare.unige.it/>

⁷ https://www.pizzardieditore.com/index.php?option=com_content&view=article&id=28&Itemid=148

⁸ <https://www.marinadiloano.it/1738/a-marina-di-loano-si-celebra-la-giornata-nazionale-del-mare/>

⁹ <https://www.sanctuaire-pelagos.org/en/news/all-news/619-cetaceans-show-off-during-the-monaco-ocean-week>

¹⁰ <https://www.cimafoundation.org/foundations/projects/a-plastic-sea.html>

¹¹ https://www.mediasetplay.mediaset.it/video/iltgdeiragazzi/puntata-del-10-settembre_F307974801253C01

Research activities:

SICOMARplus¹² is an EU INTERREG FR-IT funded project to improve the navigation safety in the Franco- Italian cross-border maritime space, which has been strongly threatened in recent years by the increase in freight traffic. CIMA will be in-charge of cetacean's hot spots mapping which will be integrated with data supplied by the Port Authority regarding the navigation routes. CIMA is partner of the project. [2019-2021].

EcoSTRIM¹³ is an EU INTERREG FR-IT funded project to promote Italy and France cross-border cooperation activities for the construction of a territorial strategy for the development and advancement of sustainable tourism and sporting activities dedicated to the marine and coastal environment. CIMA is the leader partner of the project. [2019-2021].

GIAS¹⁴ is an EU INTERREG FR-IT funded project which aims to improve navigation safety in the cross-border area by tracking the drift whale carcasses. CIMA is the partner of the project. [2019-2021].

Plastic Buster¹⁵ is an EU INTERREG Med funded project aiming to maintain biodiversity and preserve natural ecosystems in pelagic and coastal marine protected areas by consolidating Mediterranean efforts against marine litter. CIMA is a sub-contractor in charge of collecting marine litter data in the Pelagos Sanctuary during June and September. [2018-2021].

Project “Assessing resilience of beaked whale populations to human impacts: acoustical study” funded by Office of Naval Research of the Department of the Navy of the United States of America. CIMA was a subcontractor of the Duke University (USA) and University of St, Andrews (UK) in charge of deploying D-tags on Cuvier's beaked whales in the Ligurian Sea in order to improve the safety of diver exposure to ultrasonic imaging sonars. [2018-2019].

Mareinfo – MARCET is an EU INTERREG funded project. CIMA is a sub-contractor in charge of collecting biopsies from free-ranging toothed whales and deploying sat-tags on short-finned pilot whales and sperm whales in offshore waters of Madeira in order to gain knowledge on the studied species. [2018].

Project “Assessing resilience of beaked whale populations to human impacts: populations' structure and genetic diversity in impacted and semi-pristine areas” funded by Office of Naval Research of the Department of the Navy of the United States of America. CIMA was a sub-contractor of the University of La Laguna (ES) in charge of collecting biopsies from free-ranging Cuvier's beaked whales in the Western Ionian Sea in order to gain knowledge on the genetics of the species subpopulations. [2016-2017].

Since 2008, CIMA is partner of the project **FLT Mediterranean Network**¹⁶ coordinated by ISPRA dedicated to monitor cetacean presence during ferry trips in collaboration with Corsica Sardinia Ferries. During the triennial, the routes monitored were Nice-Bastia, Savona-Bastia and Nice-Ile Rousse, Savona-Ile Rousse. [2017-2019].

Since 2011, CIMA is conducting the **whale-watching project**¹⁷ dedicated to collaborate with whale-watching companies. During the triennial, CIMA conducted two studies: 1-measure expectation and satisfaction of whale tour; 2-assess whale-watching areas of impact. [2017-2019].

Since 2004, CIMA is conducting the **Ziphius project**¹⁸ aiming to describe the preferred habitat of the Cuvier's beaked whale and to estimate the subpopulation parameters in the Pelagos Sanctuary. During the triennial, biopsies from free-ranging toothed whales were collected off the ligurian coast. [2017-2019].

¹² <http://interreg-maritime.eu/web/sicomarplus>

¹³ <http://interreg-maritime.eu/web/ecostrim>

¹⁴ <http://interreg-maritime.eu/web/gias>

¹⁵ <https://plasticbustersmpas.interreg-med.eu/>

¹⁶ <http://www.isprambiente.gov.it/it/temi/biodiversita/lispra-e-la-biodiversita/attivita-e-progetti/flt-mediterranean-monitoring-network-marine-species-and-threats-en-en>

¹⁷ <https://www.cimafoundation.org/foundations/projects/whale-watching.html>

¹⁸ <https://www.cimafoundation.org/foundations/projects/ziphius.html>

Others:

The open-source platform **Seawetra**¹⁹ is an integrated web-GIS platform developed by CIMA fund by the EU IPA EUSAIR CapRadNet project. It operates both in real time and it is used for monitoring and conservation of Mediterranean marine ecosystems. On the platform, it is possible to consult marine environmental data produced in the Copernicus framework²⁰ and observed data collected at sea by various research organizations involved and by the active projects in CIMA (FLT Mediterranean Network, whale watching, ziphius,...). In 2019, Seawetra is capitalized by SICOMARplus for plotting marine traffic density maps produced from AIS data and maps of collision risk between large cetaceans and commercial vessels. All types of data can be used for decision-making processes in order to improve the management of resources, with particular regard to cetacean populations and their habitat.

Since 2009, CIMA is collaborating with the Italian Coast Guards and IZSTO as experts of the task force in case of **cetacean strandings** on the Province of Savona²¹.

¹⁹ <http://www.seawetra.org>

²⁰ <https://www.copernicus.eu/en/services/marine>

²¹ <https://www.cimafoundation.org/foundations/projects/stranding-network.html>

ECOOCÉAN INSTITUT

Name of the Representative: Nathalie Di-Méglio

Capacity building activities:

- teach students about the presence, the identification, the ecology, the threats and the status of conservation of cetaceans (French university, French maritime school)
- train personal from Marine Protected Areas to collect data
- train 15 eco-guides going aboard sailing vessel from 4 organisms, and framing eco-volunteers in their participation to collect data on cetaceans in the wild
- train of students, researchers and professors to the techniques of study of cetaceans in the wild in the English speaking countries of ACCOBAMS (Turkey)
- train the cetacean's experts of the Mediterranean and Black Sea on photo-identification data storage and preparation for analysis, and the basics for Geographic Information System
- train the leaders and observers for aerial data collection for the **CeNoBS survey** – Romania
- train the first Marine Mammal Observers and Passive Acoustic Operator (**MMO/PAM**), Sept 2018 - Romania

Public awareness activities:

1. In terms of environmental education:
 - the annual program "**Nouvel Horizon**" has been created to help children having cancer and to offer them a new horizon, beyond the disease for two weeks at sea.
 - Teenager public: conference and activities to sensitize teenagers to marine biodiversity and its protection.
2. Creation of an educational game "**CETAMER**" to be used by managers, teachers to sensitize the general public or the children at school on the different large habitat at sea, the cetaceans living in them and the threats.
3. Participation in several radio, TV programs, from local ones to international. Also, the local newspaper covers one or two of our activities. Our actions appear also in one tv documentary and two web documentaries.
4. Realization of public conferences during 2 public events.

Research activities:

We pursue our research activities in collaboration with several organisms, French or Italian ones, in the north-western Mediterranean Sea. The topics include:

- **Ship strike**, spatio-temporal distribution, movements of cetaceans, quantification of the Near Miss Event and identification of high-risk areas for Sperm whale and Fin whale (data collected from ferries with the Fix Line Transect Mediterranean network - **FLTMedMon**)
- Creation of **indicators** for cetaceans for the Marine Protected Areas, here the Marine Natural Park of the Gulf of Lion
- Scenarios for sustainable co-existence of human and dolphins on the French Mediterranean coast (**Interact**)
- partner of the European funded program "**Medsealitter**" designed to build protocols to quantify the marine litter at sea and its impact on bio fauna, including cetaceans.
- State of the art and impact assessment studies for noise activities

Others:

- Expert and advisor concerning cetaceans and also seabirds for:
 - the RAC/SPA,
 - the IUCN,
 - the French Agency for Biodiversity (AFB)

- the GIS3M
- Member of the ACCOBAMS Scientific Committee and in charge of the “Cetacean Critical Habitat” (**CCH**) process.

GREEN BALKANS NGO

Name of the Representative: Dimitar Popov

Capacity building activities:

1 expert attended cetacean necropsy workshop in Liege University in July 2017

1 expert attended ASI aerial survey training in Cuers in May 2018.

2 experts of GB attended the HQ MMO and PAM operators training in Constanta, Romania in September 2018 organized by ACCOBAMS Secretariat and Mare Nostrum NGO.

1 expert attended ACCOBAMS GIS and photo-ID training in Byblos, Lebanon in October 2018.

1 expert attended ACCOBAMS Training module in Istanbul, Turkey in March 2019.

2 experts attended CeNoBS aerial survey training in Tulcea, Romania in June 2019.

Lectures and practical training on coast-based methods for cetacean surveys were shown to students from Plovdiv University during summer practice at Tsarevo on Black Sea coast in June 2017 and 2018. Lectures on cetaceans were read at students in Plovdiv University in April 2019 based on ACCOBAMS Training module.

Public awareness activities:

Within LIFE17 GIE/BG/000371 'Natura 2000 in Bulgaria – New Horizons' following events related to cetaceans have been organized in 2018-9:

- Presentation on cetaceans to students from Esetra club of Plovdiv University's Ecology department of Biology Faculty
- Black Sea Action Day with Prosveta Community centre at Pomorie in October 2018
- Dolphin afternoon at First progressive school – private primary school in Sofia in January 2019
- Eco-happening celebrating Earth Day at Ivan Vazov library in Plovdiv in April 2019
- Young Blue Earth Festival organized by Natural History Museum in Plovdiv in April 2019
- European Maritime Day 2019 with Trakiya – Plovdiv 2008 Community centre
- Natura 2000 Day in May 2019 with kids at Aleko Konstantinov primary school in Plovdiv
- Presentation at Endless story private kindergarten in Sofia in May 2019

Research activities:

Vessel surveys using distance sampling line transect method are regularly organized in Bulgarian territorial waters in the Black Sea with coverage of 7%. Surveys were made in June 2017 and 2018; October 2018 and May 2019. Abundance and density were estimated using Distance software.

Regular data on strandings is being collected – data for 2017 and 2018 was submitted to MEDACES.

In 2019 a pilot project on bycatch monitoring and mitigation was started. 200 pingers were purchased and installed on turbot bottom set gillnet on basis of agreements with 3 different fishermen. Monitoring of results was made in spring and summer. Bycatch rate in spring was low – 6 cetaceans (5 porpoises and 1 bottlenose dolphin) in 50 km of turbot nets. Though summer bycatch was extremely high – 99 porpoises in 45 km of monitored nets. Further discussion with modification of pingers and use of other types are under way aiming to continue the trials in 2020.

In June 2019 aerial survey of the Black Sea was made within CeNoBS project that involves 10 partners from the region and ACCOBAMS Secretariat. Green Balkans NGO provided one Team leader and one aerial observer for the survey.

Others:

In March 2019, Shell Oil company announced its plans to start drilling exploration well in the block 1-14 Khan Kubrat of Southern Bulgarian EEZ after obtaining results from the seismic survey made in October 2016 – January 2017. Regulator Ministry of Environment and Water has not prescribed use of MMO and PAM during the drilling and the period for execution was planned to be April-June.

Green Balkans NGO has prepared a position paper addressing authorities and Shell to do the drilling outside of sensitive season and use MMO and PAM during the drilling operation. Meeting was made with Shell but no change of initial plan was agreed since regulator has not interfered.

**GROUPEMENT D'INTÉRÊT SCIENTIFIQUE POUR LES MAMMIFÈRES MARINS ET LEUR ENVIRONNEMENT
(GIS3M)**

Nom du Représentant : Hélène Labach

Activités en lien avec l'accroissement des compétences :

- Contribution à la formation pour l'obtention du label High Quality Whale-Watching le 08/02/2018 à Bandol : enseignement du module « Cétacés : peuplement de Méditerranée, écologie et statut de conservation »
- Programme « TURSMED: gestion du Grand Dauphin au sein du réseau d'aires marines protégées de Méditerranée française »
 - Convention pluriannuelle d'objectif avec l'Agence Française pour la Biodiversité 2018-2020
 - Objectif: Favoriser la mise en œuvre d'une gestion intégrée et pérenne du Grand Dauphin sur la façade de Méditerranée française à travers la valorisation du réseau d'AMPs.
- Formation embarquée d'agents d'aires marines protégées sur le suivi et la photo-identification des cétacés en Corse du 1er au 15 juin

Activités de Sensibilisation du public :

- Animation de stand lors de 7 événements grand public
- Animation de 7 conférences grand public sur les cétacés en Méditerranée, les impacts des activités humaines et les enjeux d'une co-existence durable
- Intervention dans 3 classes de maternelle et primaire
- Organisation de 2 événements « Rencontres Humains & Cétacés » réunissant tous les acteurs concernés par la préservation des cétacés autour de conférences-débats, ateliers de travail, animations, expositions, etc. le 27 juin 2018 à Marseille et les 29 & 30 novembre à Nice

Activités de Recherche :

- INTERACT « Scénarios pour une coexistence durable entre humains et dauphins sur le littoral méditerranéen français »
 - 2017 - 2019
 - Financé par la Fondation de France
 - Partenaires: EcoOcéan Institut, GECEM, Souffleurs d'Ecume, WWF France, LIENS
 - Objectif: appréhender et caractériser la coexistence entre l'Homme et le Grand Dauphin le long du littoral du Golfe du Lion et de Provence
- « Biological and toxicological contamination of cetaceans in the Pelagos Sanctuary: assessment, origin, monitoring and mitigation”
 - 2018 - 2020
 - Financé par le Sanctuaire Pelagos
 - Partenaires: IZSPLV, LDV34, GECEM, VetAgro Sup, Monacology
 - Objectif: to contribute to assess and mitigate the impact of biological and chemical pollution on cetaceans in the Pelagos Sanctuary.
- Dolphin Without Borders
 - ✓ 2018-2019
 - ✓ Financé par le Sanctuaire Pelagos et la Fondation Prince Albert 2
 - ✓ Coordination: Tethys Research Institute
 - ✓ Partenaires: GIS3M, Fondation Aquarium de Gênes, CETUS et Université de Sassari.
 - ✓ Objectifs: Promouvoir la conservation du Grand Dauphin dans le Sanctuaire Pelagos

- « Evaluation de l'impact des activités de whale-watching sur les populations de cétacés en Méditerranée française et de la mise en œuvre du label High Quality Whale-Watching®
 - ✓ 2018-2020
 - ✓ Financé par le Parc national de Port-Cros pour le sanctuaire Pelagos
 - ✓ Partenaires: Souffleurs d'Ecume et Vertigo Lab
 - ✓ Objectifs: Evaluer l'impact des activités de whale-watching sur les populations de cétacés en Méditerranée française et de la mise en œuvre du label High Quality Whale-Watching®

- « Etude des populations de cétacés dans le sud-est de la Corse »
 - 2018-2020
 - Financé par le Parc national de Port-Cros pour le sanctuaire Pelagos
 - Partenaire: GECEM
 - Objectifs: évaluer le peuplement en cétacés de la zone

- Thèse de recherche au CEFÉ/CNRS de Montpellier
 - 2016-2020 : « Stratégie de conservation du grand dauphin en Méditerranée française »
 - 2017-2020 « Gestion adaptative du Grand dauphin au sein du réseau d'aires marines protégées de Méditerranée française »

Autre :

- Elaboration d'une stratégie de suivi du Grand Dauphin en Méditerranée dans le cadre de la DCSMM
- Organisation d'un workshop sur la contamination des cétacés dans le Sanctuaire Pelagos le 4/10/2019 à La Londe-les-maures
- Appui à la mise en des politiques publiques en faveur de la conservation des cétacés au sein des instances suivantes :
 - Conseil Maritime de Façade
 - Comité d'évaluation du label High Quality Whale-Watching®
 - Conférence des Parties de l'accord Pelagos
 - Conseil Scientifique et Technique du Sanctuaire Pelagos
 - Comité de pilotage du Réseau National Echouage
 - Comité de suivi de l'éolien flottant en Méditerranée
 - Comité scientifique du projet éolien Provence Grand Large
 - Groupe de travail du projet éolien EFGL
- Contribution à la mise à jour de l'évaluation nationale de la liste rouge de l'UICN pour les mammifères marins
- Contribution à l'élaboration des documents de cadrage de la mise en œuvre des directives européennes Stratégie pour le milieu marine et Planification de l'espace maritime.

ISRAEL MARINE MAMMAL RESEARCH & ASSISTANT CENTER (IMMRAC)
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Name of the Representative: Dani Kerem

Capacity building activities:

None.

Public awareness & educational activities: (max 250 words)

Alerting the Media to the presence of cetaceans in local waters and to anthropogenic stresses affecting them is ongoing. The weather forecast that concludes the main evening news edition of several channels opens up with video clips of dolphin groups sighted that day & provided by IMMRAC.

Sighting updates and other news are also uploaded into IMMRAC's facebook, currently with 5.300 followers and increasing by 2% per week. There were days when the facebook page was visited by 140.000 surfers. Other electronic channels (google plus, instagram, tweeter) have 1,000 more followers.

IMMRAC's new educational 'Dolphin & Sea Center' in the city of Ashdod opened to the public on October 2017, since then hosting 15,000 visitors. IMMRAC's educational program 'feeling the sea' is implemented in 25 kindergartens in the city and in 50 more in nearby settlements. The second & fifth grades of all 40 schools in Ashdod participate in various activities at the Center, as do special audiences such as physically and mentally handicapped.

Research activities:

Some ongoing research topics that have started during the reported period:

- Distribution and resource partitioning of common bottlenose dolphin and common dolphin along the southern Israeli Mediterranean coast
- Sex differentiation in common bottlenose and common dolphins through craniometry

Publications:

- Notarbartolo di Sciara, G., Kerem, D., Smeenk, C., Rudolph, P., Cesario, A., Costa, M., Elasar, M., Feingold, D., Fumagalli, M., Goffman, O., Hadar, N., Mebrathu, Y.T., Scheinin, A. 2017. Cetaceans of the Red Sea. CMS Technical Series 33, 86 pp.
- Mannocci, L, Roberts, JJ, Halpin, PN, Authier, M, Boisseau, O, Bradai, MN, Cañadas, A, Chicote, C, David, L, Di-Méglio, N, Fortuna, CM, Frantzis, A, Gazo, M, Genov, T, Hammond, PS, Holcer, D, Kaschner, K, Kerem, D, Lauriano, G, Lewis, T, Notarbartolo di Sciara, G, Panigada, S, Raga, JA, Scheinin, A, Ridoux, V, Vella, A & Vella, J 2018, 'Assessing cetacean surveys throughout the Mediterranean Sea: a gap analysis in environmental space' *Scientific Reports*, vol. 8, 3126. <https://doi.org/10.1038/s41598-018-19842-9>

- Brand, D., Edelist, D., Goffman, O., Hadar, N., Kerem, D., Scheinin, A. 2019. Common dolphins, common in neritic waters off southern Israel, demonstrate uncommon dietary habits. Aquatic Conservation: Marine and Freshwater Ecosystems. In Press.

Others:

- In 2017, based on data gained from IMMRAC's long term research, the Coastal Shelf Waters of the South East Levantine Sea were declared an Important Marine Mammal Area – IMMA for the common bottlenose and common dolphins.
- IMMRAC's staff and volunteers took part in both the vessel and the aerial facets of ACCOBAMS' Survey Initiative in the summer of 2018.
- IMMRAC was instrumental in the promotion of the recently declared "Avtach" MPA on the southern coast, with the common dolphin as its flagship species.
- During the triennium, IMMRAC attended to 41 stranded/bycaught cetaceans, details of which are being prepared for submission to MEDACES.
- IMMRAC is approached by the media to be interviewed on issues involving cetaceans in Israel and around the world and frequently on general topics of the marine environments. During the reported period, IMMRAC volunteers gave 105 interviews to the television, radio and newspapers.
- The successful advertising of several focused campaigns on the social media has greatly enhanced public awareness to IMMRAC's activities and to those of the Dolphin & Sea Center. During the triennium, some 250,000 unique users were exposed to the video contents uploaded to IMMRAC's Facebook site. In April 2019, IMMRAC launched its new Facebook homepage, causing an increase of 4,500 followers. On the Instagram and twitter platforms, IMMRAC's pages accumulated (with no financial promotion) close to 1000 followers.

MARE NOSTRUM NGO

Name of the Representative: Mihaela MIREA CANDEA, Executive Director
Marian PAIU, Head of the Biodiversity conservation department

Capacity building activities:

In order to grow and improve, over the last years, Mare Nostrum participated, organized and concluded different partnerships towards this matter. In 2015, with other Romanian partners such as National Institute for Marine Research and Development “Grigore Antipa”, Ovidius University, University of Agronomic Sciences and Veterinary Medicine of Bucharest and Cluj and, also, with the University of Veterinary and Pharmaceutical Sciences Brno has developed a scientific framework to identify the natural causes of death among cetaceans and the studies continued over 2017-2019 period.

In another area of study, such as cetacean distribution and abundance, was organized a workshop training which was conducted under the international project “Increase the regional capacity for developing cetacean distribution and abundance studies” co-financed by ACCOBAMS. On this training, 15 specialists have participated from 5 Black Sea riparian countries.

Last year, Mare Nostrum NGO together with ACCOBAMS organized the first international training for marine mammals observers and passive-acoustic operators (ACCOBAMS High Qualified MMO/PAM). Over 12 scientists from 5 Black Sea riparian countries have attended the training which was held for 5 days. The aim of this training was filling the gap for the ACCOBAMS area where was needed highly qualified scientists. Training conducted under the 6.18 resolution.

This year, under the CeNoBS project, which was co-financed by ACCOBAMS, to fulfill the ASI, the largest aerial survey in the Black Sea was organized the international training “Aerial Survey techniques for data collection on biodiversity and anthropogenic activities. There were invited 15 specialists from all Black Sea riparian countries and also 2 specialists from Italy and France.

Furthermore, under the project “Assessing the vulnerability of the Black Sea marine ecosystem to human pressures” (ANEMONE) it will be organized a workshop which will involve all the main actors from the Romanian coast and also representatives from Ministry of Environment. The workshop will aim to establish a better communication between administration, government and general public and to find solutions towards the conservation problems of cetaceans in Romanian’s territorial waters.

Public awareness activities:

In the last years, Mare Nostrum NGO has conducted sessions to inform people regarding the problems in the Black Sea. Over half a million of people were informed via different channels such as local and national mass-media, face to face informing sessions, flyers, training sessions and conferences. Here is to name also the public events that Mare Nostrum is conducting during the year, Earth hour, Green Week, ACCOBAMS Cetacean Day, Dolphin Day, Black Sea Day, which are the main ones and in which cetaceans awareness topics are included. In 2018 the Dolphin Day event took the form of a workshop with the authorities concerning cetacean conservation and legal framework. In 2019 the communication with the administration and governance continued with a special event dedicated to them – a round table on a yacht on which the main actors involved were invited, from administration, city and regional and fishing sector (fishing agency, fishing federation and food processors) and also an event on the peninsular area of Constanta which was dedicated for general public such as a treasure hunt.

Moreover, in 2019 the Ministry of Environment started a process for improving the conservation plan.

Not least, each year in autumn, the enrolling session for the new observers in the National Stranding Monitoring session is taking place which mean training for 600-1500 students and teachers which monitor the Romanian seashores for the next months till July when school ends. Also attending the network are also the entities established or working round the shore which employees are trained upon request by us.

Research activities:

In the last 9 years Mare Nostrum NGO coordinates the Stranding Monitoring Network which involves students, teachers, other parties such economic agents from the entire Black Sea coast, institutes and the Basinal Administration. The purpose of this network is to identify all the cases of stranded cetaceans which occur on Romanian coast. In the past 4 years, over 10 000 people have participated on trainings dedicated for this network.

Because the network only identifies the cases of dead cetaceans, it was needed periodical sea surveys to estimate the number of cetaceans. As a result of this, over 60 sea expeditions were conducted to establish the abundance and distribution of cetaceans in the Romanian territorial waters, with over 88 effective days at sea and more than 740 sightings of cetaceans recorded.

Under Anemone project, in 2019-2020, there are scheduled 3 surveys on the territorial waters, two of them were done in spring and summer 2019 and the third one it will be done in the spring of 2020.

Also, under our programme “Monitoring and conservation of the Black Sea cetaceans” it was conducted in the beginning of September a sea expedition, both in the territorial waters and exclusive economic zone. The main objective of these surveys is to establish the distribution and abundance of cetaceans.

In addition, another type of survey was done in mid-Summer 2019 on a beam trawler boat. The survey provided information about the main species which are caught in beam trawlers near the Marine Area of the Danube Delta and proved that dolphins are not caught in beam trawlers.

For the first time in the history of Black Sea, over half of it was surveyed with small planes. The surveys were conducted under the CeNoBS project which aimed to gather information about the abundance, distribution and relations between the cetacean species and also data collection on anthropogenic activities in Ukraine’s, Romanian’s, Bulgaria’s, Turkey’s and Georgia’s exclusive economic zones.

To have a better understanding which the main pathogenic actors are that causes mortalities among cetacean populations from Romanian’s territorial waters, in the past years researches were conducted towards this matter.

Others:

The main projects in which the activities were performed, under the Mare Nostrum program “Monitoring and Conservation of Black Sea Cetaceans” were:

Project	Financing
Increase the regional capacity for developing cetacean distribution and abundance studies	Supplementary Conservation Funds of ACCOBAMS
Assessing the vulnerability of the Black Sea marine ecosystem to human pressures (ANEMONE).	CBC JOP Black Sea Basin 2014-2020

CeNoBS - Support MSFD implementation in the Black Sea through establishing a regional monitoring system of cetaceans (D1) and noise monitoring (D11) for achieving GES	MSFD Second Cycle: Implementation of the new GES decision and programmes of measures, DG Environment
Adopt a dolphin campaign	Public campaign

MARECAMP ONLUS ASSOCIATION

Name of the Representative: Clara Monaco

Capacity building activities:

We have expanded the circle of volunteers and partner organizations with which we have initiated collaborations aimed at completing and improving the knowledge and skills of each.

We have strengthened our network of collaborations with universities, schools, and experts in the field of marine biology and conservation.

A specific team of marine biologists was trained for research, eco-tourism and dissemination activities.

We participated in the pitch session of the Enisie project aimed at enabling network based in innovation through services and institutional engagement.

We have promoted our projects with administrations at regional and international level.

Public awareness activities:

With the "Going to the sea", "We live the sea", "The sea we want: clean, biodiverse and protected" projects, Marecamp has been active in many secondary schools of Catania, Italy, about sea education.

We promoted and launched an online form permitting everyone to communicate sightings of cetaceans and sea turtles.

We have publicized how to conduct a sustainable lifestyle, how to respect the code of good conduct for observing dolphins, what to do in case of strandings, as well as all our activities via meetings, press releases, social networks, regional and national tv.

We have organized participative and citizen-science events as the European Maritime Day In My Country and the ACCOBAMS Cetaceans Day, including sea cleanup, collective monitoring of cetaceans and sea turtles, informative sessions about protected marine species.

Research activities:

We made studies about cetaceans' population dynamics in the Gulf of Catania, surveys are concentrated in spring-summer thanks to eco-tourism excursions. In particular, we have a catalog of 50 bottlenose dolphins which don't find matches with other Sicilian catalogs; we regularly sight inside the Gulf both bottlenose dolphins and very large pods of striped dolphins; until 2018 we sighted also big groups of common dolphins but this year, many times, we observed only one individual together with striped dolphins; until 2018 we sighted or had communications about the presence of Risso's dolphin but this year not yet; seasonally we sighted sperm whales and we had news about the passage of fin whales thanks to the idrophones of our partners.

Surveys were dedicated also to collect data on human threats like marine traffic and marine litter that are very strong in our study area.

We supported internships and university thesis about the distribution of cetaceans in Sicily, Photo-ID applied on bottlenose dolphin, interaction cetaceans-fisheries.

It is ongoing the project "Interaction between cetaceans and small-scale fisheries in Sicily" supported by the Low Impact Fishers of Europe (LIFE) platform with the aim of deepening the investigations about this phenomenon in eastern Sicily and sensitizing administrations on the problem in order to favor the development of new mitigation strategies.

We participated in sharing data for the annual reports of the International Whaling Commission.

Others:

Marecamp is a small entity, efforts of the volunteers as very high but we still struggle to sustain the association. With new projects, we hope to have the good resources to be able to increase our observation effort by expanding it constantly to all seasons and monitoring also areas adjacent to the Gulf of Catania.

We are worried about the state of the common dolphin and Risso's dolphin populations and we believe that dedicated monitoring could clarify the situation.

Northeastern Sicily is not well considered in the last maps of ACCOBAMS concerning CCH and IMMAs, we sincerely recommend including our study area considering the presence of such protected species in such a threatened environment.

Ongoing projects of the association are (see www.marecamp.com/en/formazione-e-ricerca):

- **Interaction between cetaceans and small-scale fisheries in Sicily.** Research project supported by the "Low Impact Fishers of Europe" PLATFORM (LIFE).
- **We live the Sea.** Training project for schools of all levels and degree.
- **Dolphin watching and conservation in the Gulf of Catania.** Project that integrates research, eco-tourism and dissemination.
- **Doing research on cetaceans.** Training offer.
- **Sicily Bottlenose dolphin Project.** Research project and data sharing.
- **The dolphins' house.** Education project for students of middle schools and their families.

MARINE MAMMALS RESEARCH ASSOCIATION (DMAD)

Name of the Representative: Tim Awbery

Capacity building activities:

Montenegro: Trained more than a hundred volunteers/interns (both Montenegrin and international) in survey planning and environmental data collection, land (theodolite) and boat based survey techniques, data analysis techniques (including training on geographical information systems (GIS), statistics and photo identification). Hosted lectures for university students at the Univerzitet Crne Gore (University of Montenegro). Organised an international conference from Rufford Small Grant Foundation, titled “ From Mountains to Deep Seas” and sponsored 20 researchers from the Balkans and Turkey to participate and present their research and conservation actions.

Albania: Trained two students undertaking their Master’s degree and one member of the public in land and boat survey techniques on a one week training course in Montenegro and trained a third student on land surveys in the field.

Turkey: Funded places for over twenty university students and early career researchers to join research expeditions on the “Giant Guardians of Deep Seas” and “Small Cetaceans of Antalya Bay”. These places involved full training on marine mammal observation, data recording and the use and analysis of passive acoustic monitoring systems. We have also hosted several workshops on basics of cetacean surveys, species identification, photo-identification, ArcGIS mapping and basics on habitat modelling.

Public awareness activities:

Montenegro: DMAD has hosted and collaborated with other NGOs in 10s of community beach cleans aimed at the idea that it is the responsibility of the community to keep their beaches and sea clean in order to save marine life. As well as talks at these events, arts and crafts activities (using recycled materials) and games were organised for children to engage the younger generations. DMAD also visited school’s to teach children about marine mammals in Montenegrin waters, the risks that they are facing and what individuals can do to mitigate these threats and get involved. Similarly community open days were hosted at our offices to teach other members of the community the same thing.

Turkey: DMAD has developed a mutually respectful relationship with the fishing communities of the Levantine coast and the Aegean Sea, and frequently receive sighting information with supplementary information, such as photos, videos and coordinates of sightings. Some of the fishermen in Antalya, continue to collect data on forms left at fishing cooperatives. Further, we have frequently organised school events together with municipalities to increase the knowledge of marine ecosystems for primary and high school students. We have also worked closely with disadvantaged children and organised dolphin watching tours for them to enhance their difficult life. Lastly, with WWF-Turkey, we have organised a day out on a dolphin watching tour to inform 30 teachers, from Hatay to Istanbul. The following week was dedicated to dolphins in schools and thus many more students were reached.

Research activities:

Montenegro: Since January 2017, 383 land based surveys (using theodolites) and 83 boat based surveys covering the coastal waters and partial offshore waters of Montenegro have been conducted with a combined survey time of 1669 hours.

Albania: Since the project was conceived in October 2018, 30 land based surveys (using theodolites) and one boat survey have been conducted.

Turkey: We have dedicated survey efforts in the Aegean and Levantine Sea. We have recently joined a survey under MAPCON “Mediterranean Apex Predators Conservation Network” in Gökçeada (Imroz), north Aegean Sea and “Cetaceans of the Dilek Peninsula” in the central Aegean Sea under WWF-Turkey. Both of these projects have run for two seasons in 2019. “Small Cetaceans of Antalya Bay” is an ongoing survey effort which has been running since 2015. “Giant Guardians of Deep Seas” started in 2018, focusing on deep diving species of the northwestern Levantine Sea and currently runs under the title of “From Small Cetaceans to the Great Whales of the East”.

Others:

DMAD also hosted ACCOBAMS Highly Qualified MMO/PAM operator course in Marmaris, Turkey which saw 18 new MMO and PAM operators qualified. To encourage capacity building in the host country, discounted places were offered to Turkish nationals.

DMAD also closely collaborate with WWF-Turkey and were aboard “Blue Panda” for 3 days to conduct a dolphin watching tour to better educate the public.

MENKAB, IL RESPIRO DEL MARE

Name of the Representative: Biagio Violi (Vice-president)

Capacity building activities:

Awareness raising on the importance of marine and coastal ecosystems protection, through the creation and dissemination of multimedia and information material, as video educational, infographics and others is the key point of all Menkab activities.

Citizens, student and new generations are our recipients firstly and the scientific community secondary. Our activities have been addressed to the public, from adults to children, increasing their awareness on anthropic impacts that are threatening marine ecosystems.

Our research activities on sperm whale of Mediterranean Sea has been able to link 12 different groups from eastern Mediterranean to Azores in Atlantic Ocean (8 different countries). Important results are coming out and new future projects are going to be started.

International cooperation for research and training.

Public awareness activities:

The Menkab association has developed different activities to evoke and raise public awareness (from children to adult) on the need to protect and preserve marine ecosystems, from costal area to open waters. Here summarized:

- SeaLab Project: exhibitions dedicated to the sea with conferences for students, tourists and citizens and educational workshops in schools.
- Whale experience project: surveys in open sea areas, looking for cetaceans, turtles and observe planktonic bloom, with lectures on board on how to identify and sight a cetacean.
- Costal surveys: educational activities with schools using remote operating vehicle (ROV) to observe *Posidonia oceanica* seagrass and learn the importance and the role of this plant in the marine ecosystems.
- Photographic exhibitions: to raise awareness about marine life (from invertebrates to cetaceans) of Ligurian Sea, with students from different schools and with citizens.

All the activities had the main goal of environmental sustainability, monitoring and protection of flora and fauna and the Marine Mammals of the Pelagos Sanctuary.

Research activities:

About 40 research surveys have been done in the three years. In each survey cetaceans have been spotted through visual and acoustic detection. GPS positions and photos have been recorded and collected for cetaceans and turtle species. All these data are used for our assessment on cetacean distribution and photo-ID studies. To date all 8 cetacean species considered regular in Accobams area, have been spotted in the Pelagos Sanctuary, plus a single

sighting of the rare minke whale. Our photo-ID catalogues of sperm whales and fin whales are going to be update with last sighting records.

In the while, Menkab through one of his members, a PhD student of Genoa University, is keeping the collaboration with Genoa University and with Durham University (UK). On this side, a new project on population genetics of Mediterranean sperm whale is ongoing and really important results are going to be published and shared with scientific community.

The next goal will be a project on the importance of sharing photo-ID catalogues of sperm whales with different teams of Mediterranean Sea, in order to address to many questions that are still open on this endangered species.

In the WMMC 2019, Menkab team will present two posters on sperm whale:

- Population dynamics and structure of sperm whales (*Physeter macrocephalus*) in the Mediterranean Sea.
- Evidence of sperm whale (*Physeter macrocephalus*) lactation in Ligurian sea: a breeding area in the North of Mediterranean Sea

Others:

All our research surveys and our activities are supported and run with precious help of documentarists of Artescienza team. Their help with photographic captures is important both for scientific purposes and for our documentary production projects. In this framework, we believe that researchers activity is a key point for marine mammal protection but wildlife filmmaker indirectly can play a fundamental role too. Through the evocative power of images, photos and videos, the diversity of our seas can be shown and reach the general public, from children to adult, and evoke in them key emotions towards the endangered species. These feelings are the basis to make the public change their behaviours, choices and attitudes towards conservation issues. For this reason, we are production several teasers to teach people why we do research, what we want to protect and who are the endangered species (see <https://vimeo.com/360664244>).

In July 2019 (22nd -28th), we run the first MMO/PAM High qualified course and certified 8 people. This course will be held again in spring and summer 2020.

NATIONAL INSTITUTE FOR MARINE RESEARCH AND DEVELOPMENT "GRIGORE ANTIPA"
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Name of the Representative: dr.eng. Simion NICOLAEV
General Director

Capacity building activities:

NIMRD "Grigore Antipa" as member of the Cetacean Black Sea Medicine Network (composed by University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Mare Nostrum, Ovidius University, Constanta Dolphinarium (Romania) and University of Veterinary and Pharmaceutical Sciences Brno, Czech Republic), aims to create a collaborative framework of the Black Sea cetacean diseases studies.

In this respect the NIMRD, in collaboration with NGO Mare Nostrum try to develop a specialized laboratory for dissection, collections of samples and analysis from stranded marine mammals. For cetacean necropsy, analyzing the samples, studies and reseach it hving in view to develop the collaboration with veterinary institutes, the University of Agronomic Sciences and Veterinary Medicine of Bucharest, the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca.

Public awareness activities:

Annually, during the summer season, were organized events to celebrate the Dolphin Day (at the initiative of NGO Mare Nostrum), events that have become tradition at the Romanian Black Sea littoral, for over 10 years.

These events are organized in collaboration with specialists from NIMRD "Grigore Antipa" and NGO Mare Nostrum and the representatives of the authorities responsible with the protection and conservation of cetaceans from the Romanian Black Sea waters, representatives of Ministry of Environment. Ministry of Waters and Forests, Agency of Environmental Protection, National Agency for Fishery and Aquaculture, Museum of Natural Science from Constanta, local authorities are invited.

Each public event includes info to support the cause of cetaceans from the Black Sea (Earth Hour, Green Week, Dolphin Week, Black Sea Day etc.)

Dolphin Week is the national emblematic event for awareness backed up by beach awareness campaigns all summer, social media post (Black Sea Dolphins Facebook page and www.delfini.ro) and development of informative materials (informative board for beaches, videos, leaflets etc.).

Research activities:

The experts from NIMRD have been managed the development of the Romanian cetacean monitoring and conservation program (basic), with land and sea monitoring of stranding, live individuals, photo-identification, by-catches, a monitoring network, educational and awareness campaigns etc.

The research projects related to cetaceans are as follows:

1. ANEMONE - *Assessing the vulnerability of the Black Sea marine ecosystem to human pressures* (2018-2020), coordinated by NIMRD, represents a cross border cooperation project under which in WP4- Enhance stakeholders participation and public awareness on environmental issues in order to support the activities there are data collection dedicated action on marine litter and cetaceans.

2. Under Large Infrastructure Operational Programme was developed the project : *Completion the level of of biodiversity knowledge by implementing the monitoring system of the state of conservation of species and habitats of community interest in Romania and reporting under Article 17 of the Habitats Directive 92/43 / EEC* (2019-2022) coordinated by Ministry of Environment. One of the objective of the project is to monitor the three species of dolphins from the Romanian waters in order to evaluate their conservation status, in accordance with the requirements of the Habitats Directive and is performed by experts from NIMRD. Also, a guide for monitoring of species of European conservative interest (including the 3 three species of dolphins) will be published by the end of 2019.

3. In 2019, was started the project *CeNoBS - Support MSFD implementation in the Black Sea through establishing a regional monitoring system of cetacean (D1) and noise monitoring (D11) for achieving GES* (2019 – 2020), (CE – DG Env: contract nr. 10661 / 2018 / 794677/SUB/ENV.C2), NIMRD being partner in the implementation of noise monitoring.

4. The current characterization of the state of fish and mammals populations on the Romanian continental shelf in relation to the environmental factors and the anthropogenic activities influence, funded through the National Program NUCLEU (2016-2017), coordinated by NIMRD.

Others:

The National Institute for Marine Research and Development “Grigore Antipa” (NIMRD) through its specialists and projects envisages the implementation of measures which are included in the National Conservation Plan for the Black Sea cetaceans, based on NIMRD proposal and established through the Ministry of Environment/ Order No. 374/2004.

In 2019, at the initiative of the Ministry of Environment, the process of elaborating of a new coherent and updated National Conservation Action Plan for the Black Sea cetaceans, with objectives and measures for the conservation and management of cetacean populations in the Black Sea, was started. The national relevant specialists from NIMRD were involved in this process.

In this regard, the Ministry of Environment organized a working group with the stakeholders for updating the existing National Action Plan in accordance with the current requirements and ACCOBAMS Resolutions. The draft of the updated National Action Plan was elaborated, and it will be approved by the Minister of Environment and the Minister of Research and Innovation.

OCEANCARE

Name of the Representative: Sigrid Lueber, Founder and President

Capacity building activities:

In November 2017, OceanCare organised a 2-day workshop in Split, Croatia, 65 participants from 15 countries discussed impacts of underwater noise on marine wildlife in south-eastern Mediterranean waters. Participants included representatives from governmental institutions, such as ministries, nature protection and energy agencies, to international organizations, including multilateral, regional, environmental agreements and regional fisheries bodies, the EU Commission, scientists, civil society organisations as well as tourism and fisheries interest groups. The [recommendations](#) are available in eight Mediterranean languages and English. Participants acted in their private or observer capacity. A set of 16 recommendations were developed and agreed. The information did also provide significant input towards the EIA-process within Montenegro.

Participating in the 19th UNICPOLOS meeting on Anthropogenic Underwater Noise as a panelist and officiating two side events: "The Role of Environmental Impact Assessment in Managing the Impacts of Noise on Marine Food Web and Higher Trophic Levels" and "Managing Ocean Noise Pollution through the new BBNJ Instrument under the UN Convention on the Law of the Sea".

At the FAO/GFCM Fish-Forum in December 2018 OceanCare jointly with UNEP/MAP held the workshop "Prevention and reduction of marine litter from fisheries and aquaculture and related impacts on marine ecosystems", highlighting initiatives underway in the region, and building on the best practice of the UN Environment/MAP Regional Plan on Marine Litter Management in the Mediterranean, as well as NGO initiatives, case studies and scientific findings, which included experiences from other relevant regions too. The participants developed recommendations for Policy, Science, Management and Awareness Raising.

In February 2019, OceanCare organised a joint workshop with the FAO/GFCM on "Anthropogenic Underwater Noise and impacts on fish, invertebrates and fish resources", which was attended by 23 participants, including experts and representatives from organisations and institutes of Mediterranean countries, including the Chairperson of the GFCM/SAC and representatives of the EU Commission/DG Mare, the FAO Secretariat and the GFCM Secretariat. The workshop resulted in a report, including a set of [recommendations](#), which was endorsed at by the GFCM SAC in June 2019.

OceanCare assisted in the finalisation of the development of the certification programme for highly qualified marine mammal observers (MMOs) by ACCOBAMS.

OceanCare contributed to the quietMED project for the implementation of the second cycle of the Marine Strategy Framework Directive (MSFD) in the Mediterranean Sea. Furthermore, OceanCare participated in the discussions about the implementation of measures to achieve Good Environmental Status within EU Member States waters, including the Mediterranean and Black Seas, as well as published the report "[Reduce the Noise](#)" within which the programmes of Measures by the individual states are assessed and commented on.

OceanCare contributed to the 5th International Conference of Marine Mammal Protected Areas, April 2019, with presentations addressing concerns about impacts of anthropogenic noise activities in the Mediterranean Sea and beaked whale conservation efforts.

Public awareness activities:

As an authority on the issue of ocean noise, OceanCare launched the [Silent Oceans](#) campaign to call for the protection of marine animals from ocean noise pollution, empowering civil society to respond to noise intensive activities and plans for such activities.

In 2017, OceanCare launched the [I-CARE](#) campaign aimed at empowering the public to reduce plastic consumption and waste and asks the public to pledge to reduce their disposable plastic consumption. A real time calculator measures the impact of such commitment in terms of the reduced yearly consumption of disposable plastics. The campaign focuses on social media with an integrated campaign song by an environmentally conscious rock band. Innovative campaigns like I-CARE will alter the public's attitude towards plastic use. Besides that we promote alternatives such as Veggiebags preventing disposable bags when shopping for fruit and vegetable and Guppy Friend Bags which prevent microfibers entering the waterways.

OceanCare's edutainment videos on [noise](#) and [plastic](#) are shown at various exhibitions, used at workshops and in schools and are available in nine languages across the Mediterranean region.

OceanCare has undertaken several beach cleaning activities in Spain and Italy as well as educational outreach projects with schools in Mallorca and Sicily.

OceanCare is holding and supporting educational school programs in Spain and Italy.

In October 2019, OceanCare is official Partner of the Rose of Charity event which takes place in the waters of Greece. The sailing event, which is going to last one week, is a high profile event supported by the private sector and in collaboration with German celebrities to raise awareness about conservation challenges in the Mediterranean Sea. One focus is the protection of marine mammals in Greek waters.

Research activities:

OceanCare invests €350,000 annually in research and conservation programs in the Mediterranean Sea.

Research, education and conservation projects on **sperm whale** social behaviour as well as spatial and temporal distribution in the Tyrrhenian Sea, the Hellenic Trench, the southern Menorca and southern France.

In July 2019, OceanCare announced the multinational interdisciplinary "SAvE Whales" project, which combines expertise from the fields of marine biology, underwater acoustics, applied mathematics, computer networking, informatics and real-time marine traffic data, with the objective to save endangered whales from being struck by (large) ships. "SAvE Whales" stands for "System for the Avoidance of ship-strikes with Endangered Whales".

Conservation project on **Cuvier's beaked whales**, a species highly sensitive to anthropogenic noise pollution in Greece. Research and conservation projects on **common dolphins**, focused on habitat use by the species, population size and development, and the impact of anthropogenic activities on the species. Projects focused on the Ionian Sea, Gulf of Corinth, Tyrrhenian Sea and the seas around Malta.

Study on the ecology, population size and development of **striped dolphins** in the semi-enclosed Gulf of Corinth.

Project on **bottlenose dolphins** within the semi-closed Gulf of Amvrakikos, including fisheries monitoring, education of fishers and the local public. The project has provided insight into the role of bottlenose dolphins in the food web. Monitoring project on bottlenose dolphins in the northern and southern Gulf of Evia. In the northern Gulf of Evia the species is threatened by industrial contaminants and intensive aquaculture farming.

Plastic debris sampling program in different areas in the Mediterranean Sea to assess the local extent of the plastic pollution at the water surface.

Small microplastic sampling to understand the contamination levels of microplastic in commercially used fish, crustaceans and squid.

Project Partners: Alnitak, Dolphin Biology and Conservation, Kai Marine Services, Oceanomare Delphis Onlus, Pelagos Cetacean Research Institute, Tethys Research Institute

Others:

OceanCare attended ACCOBAMS MOP6 in November 2016, 11th and 12th Scientific Committee Meetings of ACCOBAMS, Monaco, 2017, resp. 2018. Within this partnership we contributed our data to the central database OBIS/SEAMAP and provided educational material in all the languages of the Range states of the Mediterranean Sea.

Invested in advocacy to increase Mediterranean protection of Cuvier's beaked whales from habitat loss caused by anthropogenic marine noise, with the goal to establish Quiet Zones.

Invested in advocacy for the declaration of a Whale Migration Corridor (SPAMI) through the Barcelona Convention in December 2018, where for the next three years no prospection for Oil and Gas Reserves are permitted and a management plan is to be developed.

As a formal partner of the FAO/GFCM OceanCare participated at the GFCM Commission Meeting 40, 41 and 42, as well as SAC 20 and 21 and the FishForum2018. Among other issues we addressed the impacts of ocean noise, marine debris, bycatch and illegal fishing.

OceanCare has also provided funds to facilitate participation of young scientists at the various workshops and has funded the travel expenses of the ACCOBAMS representative at the joint OC/GFCM workshops in order to facilitate the ACCOBAMS/SINAY presentation on the noise hotspots and quietMED.

Formal roles served by Sigrid Lueber, Founder and President of OceanCare

- Co-Chair of the **Joint Noise Working Group** for ACCOBAMS and ASCOBANS and provides multi-lingual educational materials for the ACCOBAMS Range States
- Member of the Advisory board for **quietMED 1 and 2** / Deliverables review

OCEANOMARE DELPHIS ONLUS

Name of the Representative: Barbara Mussi

Capacity building activities:

- Through a collaboration with the NGO “The Conservation Project International”, we started to support a new generation of conservationists and future leaders, encompassing both the field research and more practical elements of conservation. As a research partner we involved young conservationists directly to our critical research projects in the field, helped students develop their own conservation project ideas and concepts offering direct networking and mentoring experiences.
- Through a collaboration with the University of Plymouth MSc Marine Conservation 2019-2020 we are accepting student interns to mentor them in skills related to research and communication projects.
- In the ACCOBAMS network (MMO/PAM WG) we worked to develop the MMO/PAM course and became a training organization.
- Through two different collaborations (ExpeditionMed and GreenPeace Italy) we expanded our knowledge on microplastic, trained the experts of the other organisations on cetaceans data collection and recognition in the wild. Moreover, In order to study the correlation between the concentrations of microplastics and whale and dolphin preys we have indicated the main cetaceans' feeding areas in our study area (off Ischia, in the D zone, the part of the Regno di Nettuno Marine Protected Area dedicated to cetaceans).
- As always, since 2016, every October we did our yearly one-month team building on our research vessel, to train the new members of the team and test new equipment.

Public awareness activities:

Our staff was involved in several conferences, lessons at schools, public and training events.

- Practical training and frontal lessons to the students of the Nautical Institute of Forio d'Ischia
- Ischia. Lessons at schools in the "Oceanomare Delphis Cetacean Section" of the Museum Villa Arbusto.
- Participation in the international workshop of Urban Sketchers in Ischia during which an installation of 13 meters to reproduce our sperm whale "Brunone" in life size was realised.
- Ischia. Presentation on the impact of fishing on cetaceans in the Mediterranean with a focus on the Gulf of Naples.
- Naples, Ocean Film Festival. Presentation on cetaceans and Info Point
- European Whale Day, conference and labs on cetaceans
- Perugia, Conservation status of Mediterranean cetaceans, conference in collaboration with Amici di Riccardo and Orsa Minore NGOs.
- Rome, Lega Navale, National Day of the Sea. Conference on cetaceans.
- Porto Cervo, Costa Smeralda Award. Presentation on cetaceans.
- Fiumicino (Rome), Coast Guard. Training day on cetaceans and techniques of sighting at sea.
- Drafting and dissemination of the "Voluntary Code of Ethics: rules of good conduct at sea for the observation of cetaceans" based on the ACCOBAMS guidelines. In collaboration with the Environmental Observatory, the Environment Commission of the X Town Hall and the Coast Guard of Rome

- In collaboration with Lega Navale and Yacht Vela Club, presentations on cetaceans and training day on the sighting techniques at the following races: Vesuvio Race, 100 miglia del medio Tirreno, RomaxTutti, RivaxTutti, Velalonga, 100 vele.
- Managing of our social media account (FB, Twitter, Instagram, YouTube).

Research activities:

- Regular developing and reporting of our ongoing monitoring projects: Dolphins of the Tiber Estuary (since 2011) and Ischia Dolphin Project (since 1991).
- In collaboration with CIBRA: the *ante operam* phase of the Northern Petroleum Marine Mammal Monitoring and Mitigation Plan in the waters off Brindisi was carried out and the final report was presented to the MATTM; a Marine Mammal Monitoring Plan for the *ante* and *post operam* monitoring phases related to the 3D seismic exploration in the Adriatic Montenegrin Coast was developed; the *ante operam* phase related to cetacean monitoring in the waters off Bar (Montenegro) was performed and the *post operam* is ongoing.
- 31st Annual European Cetacean Society Conference, Participation in the workshop "Inputs to the ACCOBAMS ongoing effort to map human threats on cetaceans in the Mediterranean and Black Seas" with a focus on threats to cetaceans in the Pontine and Campanian Archipelagos.
- 4th International Symposium on Acoustic Communication by Animals, Nebraska, U.S.A. Presentation on "Acoustic Repertoire of Sperm Whale (*Physeter macrocephalus*) Bachelor Groups in the Waters Surrounding Ischia island, Italy (Tyrrhenian Sea)".
- Publications of the scientific article "The challenge of habitat modelling for threatened low density species using heterogeneous data: The case of Cuvier's beaked whales in the Mediterranean". *Ecological Indicators* 85 (2018) 128–136
- Publications of the scientific article "Italy introduces pre and post operation monitoring phases for offshore seismic exploration activities". *Marine Pollution Bulletin* (2017)
- Naples. Museum of Physics. M'ammalia. The week of mammals. Presentation "Ischia Dolphin Project: cetaceans of the Gulf of Naples.

Others:

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- IUCN designation of our study area, [waters of Ischia and Ventotene](#) and the [Campanian and Pontino archipelagos](#) as Important Marine Mammals Areas (IMMAs).
- With the aim to assess the conservation status of the bottlenose dolphin in the Mediterranean Sea, ODO participated in the project TURSIOMED – coordinated by Fondazione Acquario di Genova and supported by ACCOBAMS. ODO submitted all data (routes, sighting coordinates, photographic material for phot-id analyses) gathered by Delfini Capitolini (2015-2016) and Ischia Dolphin Project (2004-2016) on the Intercet platform (www.intercet.it), available to all international scientific community.
- Our researchers were involved in two sperm whale's stranding events, the first in Ischia Island (Forio), the second in Ostia, Rome. In each occasion, we assisted the Coast Guards, the experts of the CERT (Cetaceans' standings Emergency Response Team) and the veterinarians of the Istituto Zooprofilattico Sperimentale of Lazio and Campania, who proceeded with the autopsies.

PELAGOS CETACEAN RESEARCH INSTITUTE (PCRI)-GREECE
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Name of the Representative: Dr Alexandros Frantzis

Public awareness activities:

1. Public awareness activities with press articles and interviews at international media and presentations in Greece on the subject of marine debris and macroplastic ingested by cetacean species, following our research results presented in the publication: Alexiadou P., Foskolos I., Frantzis A. **2019**. Ingestion of macroplastics by odontocetes of the Greek Seas, Eastern Mediterranean: Often deadly! *Marine Pollution Bulletin* 146: 67–75.

Research activities:

The research activities resulted in the following scientific publications:

1. Frantzis A., Leaper R., Alexiadou P., Prospathopoulos A., Lekkas D. **2019**. Shipping routes through core habitat of endangered sperm whales along the Hellenic Trench, Greece: can we reduce collision. risks? *PLoS ONE* 14(2): e0212016:1-21.
2. Alexiadou P., Foskolos I., Frantzis A. **2019**. Ingestion of macroplastics by odontocetes of the Greek Seas, Eastern Mediterranean: Often deadly! *Marine Pollution Bulletin* 146: 67–75.
3. Diogou, N., Klinck, H., Frantzis, A., Nystuen, J., Papathanassiou, E., Katsanevakis, S. **2019**. Year-round acoustic presence of sperm whales (*Physeter macrocephalus*) and baseline ambient ocean sound levels in the Greek Seas. *Mediterranean Marine Science* 20(1): 208-221.
4. Bernaldo de Quiros Y., Fernandez A., Baird R. W., Brownell Jr R. L., Aguilar de Soto N., Allen D., Arbelo M., Arregui M., Costidis A., Fahlman A., Frantzis A., Gulland F. M. D., Iñíguez M., Johnson M., Komnenou A., Koopman H., Pabst D. A., Roe W. D., Sierra E., Tejedor M. and Schorr G. **2019**. Advances in research on the impacts of anti-submarine sonar on beaked whales. *Proc. R. Soc. B* 286: 20182533.
5. Antoniou A., Frantzis A., Alexiadou P., Paschou N., Poulakakis N. **2018**. Witnessing the rise or fall of a species: introgressive hybridization of *Stenella coeruleoalba* and *Delphinus delphis* in Greece. *Molecular Phylogenetics and Evolution* 129: 325–337.
6. Skarsoulis E.K., Piperakis G., Kalogerakis M., Orfanakis E., Papadakis P., Dosso S.E., Frantzis A. **2018**. Underwater Acoustic Pulsed Source Localization with a Pair of Hydrophones. *Remote Sensing* 10(6):883, pp. 29.
7. Cañadas, Aguilar de Soto N., Aissi M., Arcangeli A., Azzolin M, B-Nagy A., Bearzi G., Campana I., Chicote C., Cotte C., Crosti R., David L., Di Natale A., Fortuna C., Frantzis A., Garcia P., Gazo M., Gutierrez-Xarxa R., Holcer D., Laran S., Lauriano G., Lewis T., Moulins A., Mussi B., Notarbartolo di Sciarra G., Panigada S., Pastor X., Politi E., Pulcini M., Raga J.A., Rendell L., Rosso M., Tepsich P., Tomas J., Tringali M., Roger Th. **2017**. The challenge of habitat modelling for threatened low density species using heterogeneous data: the case of Cuvier's beaked whales in the Mediterranean. *Ecological Indicators* 85: 128–36.
8. Sini M., Katsanevakis S., Koukouroufli N., Gerovasileiou V., Dailianis T., Buhl-Mortensen .L, Damalas D., Dendrinou P., Dimas X., Frantzis A., Gerakaris V., Giakoumi S., Gonzalez-Mirelis G., Hasiotis T., Issaris Y., Kavadas S.G., Koutsogiannopoulos D.D., Koutsoubas D., Manoutsoglou E., Markantonatou V., Mazaris A.D., Poursanidis D., Papatheodorou G., Salomidi M., Topouzelis K., Trygonis V., Vassilopoulou V., Zotou M. **2017**. Assembling Ecological Pieces to Reconstruct the Conservation Puzzle of the Aegean Sea. *Front. Mar. Sci* 4:347.
9. Foskolos, I., Tourgeli Provata, M., Frantzis, A. **2017**. First record of *Conchoderma auritum* (cirripedia: lepadidae) on *Ziphius cavirostris* (Cetacea: ziphiidae) in Greece. *Annales Ser. hist. nat.* 27(1): 29–34.

10. Milani, C., Vella, A., Vidoris, P., Christidis, A., Koutrakis, E., Frantzis, A., Miliou, A., Kallianiotis, A. **2017**. Cetacean stranding and diet analyses in the North Aegean Sea (Greece). *Journal of the Marine Biological Association of the United Kingdom* : 1–18. doi:10.1017/S0025315417000339
11. Giannoulaki, M., Markoglou, E., Valavanis, V.D., Alexiadou P., Cucknell, A.C., Frantzis, A. **2017**. Linking small pelagic fish and cetacean distribution to model suitable habitat for coastal dolphin species, *Delphinus delphis* and *Tursiops truncatus*, in the Greek Seas (Eastern Mediterranean). *Aquatic Conserv: Mar. Freshw. Ecosyst.* 27: 436–451.
12. Podestà, M., Azzellino, A., Cañadas, A., Frantzis, A., Moulins, A., Rosso, M., Tepsich, P., Lanfredi, C., **2016**. Cuvier's beaked whale (*Ziphius cavirostris*) presence and threats in the Mediterranean Sea. In: Notarbartolo di Sciara, G., Podestà, M., Curry, B.E. (Eds.), *Mediterranean Marine Mammals Ecology and Conservation*. *Adv. Mar. Biol.* 75, Elsevier, pp. 103–140.
13. Cucknell A-C., Frantzis A., Boisseau O., Romagosa M., Ryan C., Tonay A.M., Alexiadou P., Öztürk A.A., Moscrop A. **2016**. Harbour porpoises in the Aegean Sea, Eastern Mediterranean: the species' presence is confirmed. *Marine Biodiversity Records* 9:72, 13 p.
14. A taste for squid: the diet of sperm whales stranded in Greece, Eastern Mediterranean. Foskolos, I., Koutouzi, N., Polychronidis, L., Alexiadou, P., Frantzis, A. (submitted)

SOUFFLEURS D'ECUME

Nom du Représentant : Morgane Ratel

Activités en lien avec l'accroissement des compétences :

- **Programme collisions :**
 - Travail de plaidoyer afin d'accompagner les professionnels du trafic maritime dans la prise de conscience du problème des collisions et des mesures pour limiter les risques ;
 - Refonte du plan de formation « Navigation commerciale et cétacés » (2017-2018) destiné aux professionnels et futurs professionnels de la Marine Marchande ;
 - Formations des officiers à la reconnaissance des cétacés (25 embarquements) ;
 - Séminaires annuels « Navigation commerciale et cétacés » pour les élèves de 3^{ème} année de l'ENSM de Marseille ;

- **Programme whale-watching :**
 - Animation annuelle du label « High Quality Whale-Watching® » (formation des opérateurs, réalisation et mise à jour des outils de communication, lancement de la saison, suivi des opérateurs, comité d'évaluation, groupe de travail, révision du cahier des charges, communication, etc.) ;
 - Collaboration avec l'ACCOBAMS pour le développement de whale-watching responsable et de Pescatourisme en Tunisie et au Maroc (2017-2018) ;
 - Accompagnement du Sanctuaire Agoa et de la Direction de la Mer Martinique vers l'évolution de la charte et la mise en place des outils associés aux demandes d'autorisations de manifestations nautiques (Arrêté n° R-02-2017-03-15-003). Souffleurs d'Ecume a également coordonné les formations des opérateurs de whale-watching dans le cadre de cet Arrêté (2017-2018) ;
 - Partage d'expérience et accompagnement du Parc naturel marin de Mayotte, avec l'approbation de l'ACCOBAMS, pour l'expérimentation du label à Mayotte (2018) ;
 - Transmission de compétences aux gestionnaires de la région Occitanie pour le relai local de l'animation du label « High Quality Whale-Watching® » (2018) ;
 - Soumission d'un article pour une revue scientifique en collaboration avec des gestionnaires de La Réunion, de Mayotte, de Polynésie et de Méditerranée : « Toward a sustainable cetacean-based tourism in French territories: a review on management and recommendations » (2019) ;

Activités de Sensibilisation du public :

Entre 2017 et 2019 (jusqu'en date du 31/08/2019), Souffleurs d'Ecume a réalisé de nombreuses actions sur le terrain afin de sensibiliser le grand public : 31 journées de stands et/ou animations, 7 conférences. Grâce à ces manifestations, Souffleurs d'Ecume a pu toucher plus de 2 500 personnes de tous âges.

Ces actions tendent à sensibiliser les citoyens à la présence des cétacés en Méditerranée, aux pressions qui pèsent sur eux et aux moyens de limiter ces pressions (gestes du quotidien et mesures de gestion).

Lors de ces événements, le contenu du discours est principalement basé sur l'expertise de Souffleurs d'Ecume à savoir : les collisions entre les cétacés et les navires de la marine marchande (présentation de la mesure REPCET), et le whale-watching (présentation de la mesure High Quality Whale-Watching).

Pour capitaliser cette connaissance et aller plus loin dans la sensibilisation, un jeu éducatif a été créé afin de sensibiliser le plus grand nombre de personne de façon ludique : « Odycet : pars à la découverte du monde des cétacés ». Ce jeu présente les différentes espèces des Sanctuaires Pelagos et Agoa puis illustre, sur le thème d'une expéditions scientifiques, les différentes menaces qui pèsent sur les cétacés, et présente les mesures en place pour limiter ces impacts.

Au-delà de ces manifestations, Souffleurs d'Ecume est très présents sur les réseaux sociaux et sur internet pour sensibiliser les internautes (gestion du site web de REPCET® et de la marque High Quality Whale-Watching®, Newsletter, animation de pages Facebook, etc.)

Activités de Recherche :

- Mission en mer et mise à jour de l'étude ayant trait à l'amélioration des zones de risque du système REPCET : « **Etude des déplacements des grands cétacés dans le sanctuaire Pelagos afin de préciser les paramètres dynamiques des zones de risque dans REPCET** » (2017).
- Souffleurs d'Ecume prend part à une étude sur 3 ans (2017-2019) coordonnée par le Centre d'Ecologie Fonctionnelle et Evolutive de Montpellier et le GIS3M pour le compte de la Fondation de France : « **INTERACT : Scénarios pour une coexistence durable entre hommes et dauphins sur le littoral méditerranéen français** » ;
- Souffleurs d'Ecume prend part à une étude sur 2 ans (2017-2019) coordonnée par le GIS3M pour le compte du Parc national de Port-Cros au titre d'animateur de la Partie française du Sanctuaire Pelagos : « **Evaluation de l'impact des activités de whale-watching sur les populations de cétacés en Méditerranée française et de la mise en oeuvre du label High Quality Whale-Watching®** » ;
- Souffleurs d'Ecume prend part à une étude sur 2 ans (2018-2020) coordonnée par Tethys Research Institute (Italie) pour le compte du Secrétariat Permanent du Sanctuaire Pelagos sur la thématique des collisions : « **Proposal to develop and evaluate mitigation strategies to reduce the risk of ship strikes to fin and sperm whales in the Pelagos Sanctuary** ». Dans ce projet, Souffleurs d'Ecume est principalement en charge de l'action sur le Réseau Collision ;

Autre :

- Participation au 10^{ème} Comité Scientifique et Technique de l'Accord Pelagos (2017) ;
- Participation à la 7^{ème} Conférence des Parties de l'Accord Pelagos (2017) ;
- Participation au Conseil National Scientifique du Sanctuaire Pelagos (2018) ;
- Participation à la conférence de l'European Cetacean Society 2018 et aux workshops de l'ACCOBAMS en marge de l'événement.
- Participation au workshop « Tech4Whale » à l'Université de Bretagne Occidentale en présence d'autres partenaires sur la thématique des collisions (2018).

SYRIAN SOCIETY FOR THE CONSERVATION OF WILDLIFE (SSCW)**Name of the Representative:**

Dr Nabegh Ghazal Asswad

Eng Imad Hassoun

Dr Mouina Badran

Capacity building activities:

SSCW in cooperation with Ministry of Local Administration and Environment and Ministry of Agriculture and Agrarian Reform held a consultation meeting at the coastal areas with relevant stakeholders to update the process of reporting data for areas of importance to birds including all other types and components of biodiversity and all established Protected Areas. The meeting discussed the importance to synchronise work for marine mammals. This was simultaneously presented with the ongoing ACCOBAMS Survey Initiative in the coastal area with a multi-stakeholder team to update data about this within the Syrian waters.

SSCW member has participated in the dedicated ASI/EcAp MEDII - Cetacean Monitoring workshop held in Lebanon in June 2019.

Public awareness activities:

SSCW was part of a meeting held by the higher Institute for Marine Research dedicated to discuss the current status of Marine Turtles and their conservation needs in the coastal areas in some beaches. On another aspect, SSCW also held an event for the World Migratory Bird Day which was under the theme of Combating Plastic Pollution and the event included the problems from plastic that are affecting marine birds and other marine creatures as of the larger scope and picture for the awareness against Plastic pollution in both land and water environments.

Research activities:

SSCW members were part of the ongoing ACCOBAMS Survey Initiative in the coastal area with a multi-stakeholder team to update data about this within the Syrian waters.

SSCW members also have supervised few postgraduate research projects for Syrian Students about Marine Biodiversity and about fisheries and their status in the country.

SSCW member participated in the Biannual Fourth Conference on Cetacean Conservation in South Mediterranean Countries that was held in Oran (Algeria) from 11 to 13 November 2017.

SWISS CETACEAN SOCIETY (SCS)

Nom du Représentant : Max-Olivier BOURCOUD

Activités en lien avec l'accroissement des compétences 2017-2019 :

- Active contribution de terrain à l'étude et à la protection des cétacés de Méditerranée nord-occidentale (depuis 1997 - Dr Beaubrun, Dr David, Dr Di Mèglio, Dr Brotons)
- Participation à la création du sanctuaire marin entre les côtes d'Espagne et des Baléares (2018 - Dr Brotons)
- Surveillance en mer du sanctuaire marin *Pelagos* et dénonciation des infractions rencontrées (depuis 2002)
- Plus de 115 journées de travail en mer pour l'étude des cétacés et de la diffusion des microplastiques au large de la Côte d'Azur et des Baléares (pour Dr David, Dr Di Mèglio, Dr Brotons et Dr Hagmann)
- Organisation de 17 expéditions scientifiques en mer au large de la Côte d'Azur et des Baléares
- 88 écovolontaires embarqués sur les expéditions scientifiques de la SCS (Côte d'Azur + Baléares)
- Elaboration et mise en place d'un écolabel pour la réglementation du whale-watching à Goa (2019)

Activités de sensibilisation du public 2017-2019 :

- Formation et encadrement de 2 nouveaux *Guides naturalistes SCS*
- Organisation de 20 conférences publiques en Suisse romande sur le monde marin (entrée libre)
- Création à Lausanne d'une médiathèque spécialisée sur la vie marine (2017 - classement CDU)
- Création d'une Appli SCS gratuite pour l'identification des cétacés en mer (2018 - *AppStore*)
- Mise sur pied de 4 cours de cétologie et de biologie marine
- Tenue de 8 stands d'information et de sensibilisation du grand public à la fragilité des océans
- Plus de 20 interventions dans les medias suisses (magazines, radio, télévision)

Activités de recherche 2017-2019 :

La SCS étant en Méditerranée une **plate-forme logistique au service des ses partenaires scientifiques** (Dr David, Dr Di Mèglio, Dr Brotons et Dr Hagmann), mandatée pour collecter leurs données sur les mammifères marins et la répartition des micro-plastiques, elle n'entreprend pas elle-même de travaux de recherche directement en son nom.

TETHYS RESEARCH INSTITUTE

Name of the Representative: Joan Gonzalvo

Capacity building activities: (max 250 words)

Capacity building and education activities including lectures and direct involvement in fieldwork and data analysis have benefited a large number of students, researchers and project participants from around the world participating in our research activities in Italy and Greece (see below).

In the context of the project Dolphins Without Borders DWB (funded by Prince Albert II of Monaco Foundation and Pelagos Sanctuary Agreement) with the aim of strengthening the links among Pelagos and MPAs and National Parks existing within the Sanctuary boundaries, three training sessions were organized in Sardinia, Elba and Liguria (Caprera, 28 February; Portoferraio, 5th March; and Genoa, 13th March 2019) in order to facilitate participation not only of MPAs personnel but also of most relevant stakeholders.

Public awareness activities: (max 250 words)

A fundamental aspect of Tethys' contribution to marine conservation is public awareness, achieved through the institute's presence on media as well as through the involvement, of thousands of project participants from across the world in its citizen science programmes: Cetacean Sanctuary Research (CSR) and Ionian Dolphin Project (IDP). Tethys manages a website (<http://tethys.org>) as well as a Facebook page (<https://www.facebook.com/baleneedelfini/>) to disseminate relevant information.

Since 2012 the IDP has a website (<http://ioniandolphinproject.org>) with basic information about the project activities, which was created with the aim of increasing interest about the conservation of cetaceans of the Ionian Sea, by encouraging people to report their sightings of cetaceans, through a user-friendly on-line form. So far, we have received 300+ reports. The BE DOLPHIN SMART initiative provides basic guidelines on how to behave when encountering cetaceans at sea. This website has been fully re-designed and updated in 2019. Significant information on the Mediterranean monk seal has also been added.

In 2018 and 2019 the CSR organized the half-marathon "Run for the whales" with over 1000 participants. In 2018 Tethys started the campaign "Cetacei, FAI attenzione!", by facilitating information on Mediterranean cetaceans among pleasure boaters and fishermen (2000 posters and 30.000 flyers were distributed in all the Italian ports and marinas), with the aim of collecting valuable data from Italian waters. So far, we received 1400+ reports through <http://cetaceifaiattenzione.it>

DWB has also its own website (<https://www.dolphinswithoutborders.net>) on-line in Italian and in French.

Research activities:

The CSR (since 1990) is a long-term project on the ecology of the cetacean species living in the Pelagos Sanctuary. The project focuses on fin whales, sperm whales, striped dolphins, pilot whales, Cuvier's beaked whales as well as Risso's dolphins and common bottlenose dolphins and the rare short-beaked common dolphins. Research methods used by CSR team are remote sensing telemetry, bioacoustic, photo-identification, photogrammetry, behavioural sampling, remote biopsy sampling and historical research. Research topics include spatial distribution, habitat preferences, ecology and abundance. This has led to one of the longest time series and largest data sets on marine mammals in the Mediterranean.

IDP (since 1991) research activities in western Greece focus on a population of endangered short-beaked common dolphins living in the Inner Ionian Archipelago and an increasingly fragile population of common bottlenose dolphins in the semi-enclosed waters of the Gulf of Ambracia. Our work allowed to document the almost total disappearance of short-beaked common dolphins from the area, attributed to overfishing of the dolphins' main prey, sardines and anchovies and the precarious state of conservation of the small, genetically distinct bottlenose dolphin population confined in the Gulf.

The one-year project, "Dolphins Without Borders", began in May 2018 and ended in April 2019, focused in supporting the conservation of common bottlenose dolphins within the Italian waters of the Pelagos Sanctuary (see above). The project was conducted in collaboration with Fondazione Acquario di Genova ONLUS, CE.TU.S. and Università di Sassari, and the French NGO GIS3M ("Group d'Intérêt Scientifique pour les Mammifères Marins de Méditerranée").

Others:

Tethys is coordinating a new project funded by the Pelagos Agreement to evaluate mitigation strategies to reduce the risk of ship strikes to fin and sperm whales in the Pelagos Sanctuary. This project aims to draw on the extensive experience of a number of groups in a collaboration to gather new data, provide a spatial analysis of ship strike risk - to define operational indicators and to quantitatively evaluate mitigation strategies. The project is using new satellite imaging technologies to remotely detect whales as a means of validating predictive models of whale habitat, as well as detailed examination of stranding and photographic records of injured animals to assess any eventual trend in collision rates. Outcomes of the project will be effectively communicated to relevant international bodies such as IMO, ACCOBAMS and IWC.

Tethys, together with Verdeacqua, have recently launched the "Digital Whales" project, funded by Fondazione Cariplo, at the Milan Aquarium. The project will run from October 2019 to August 2020, with the main goal to raise the general public's awareness of cetaceans and their vulnerability. This exhibition uses augmented-reality life-size models of six flagship cetacean species. Four of these are regular Mediterranean residents: sperm whale, fin whale, striped dolphin, long finned pilot whale, alongside two others visiting the area sporadically, such as the humpback whale and the killer whale.

UNIVERSITY OF VALENCIA

Name of the Representative: Juan Antonio Raga

Capacity building activities:

- Sociedad Española de Cetáceos. SEC. Congress and workshops. Valencia, october 2017.
- Reports of Cetacean Abundance, Distribution and Main Research reported to Local Government.
- Students training: Courses to all levels of education from High School to foreign students at University.

Public awareness activities:

- SIN AZUL NO HAY VERDE: Mediterráneo, Fauna y Medio Ambiente. Temporal Exhibition. Museo de Ciencias Naturales. Valencia. July-october 2019.
- EXPOCIENCIA: open day of the Parc Científic de la Universitat de Valencia - UV. The aim of Expociencia is to spread science among citizens and to report the daily work of scientists and entrepreneurs. Furthermore, the open day is a good occasion to introduce research projects UV is involved in, as MEDSEALITTER. May 2017, 2018 and 2019
- Workshops and talks in Primary and secondary schools: October- June 2017-2019

Research activities:

Aerial Surveys:

Seasonal aerial surveys are conducted in central Spanish Mediterranean water in 2017-2018 in order to know:

- Cetacean and turtle distribution and abundance in the study area
- Changes in distribution and abundance of these species in the last 10 years
- Transects cover the area representatively. For this purpose, a high-wing aircraft is used, flying at an altitude of 750 ft and at a groundspeed of approximately 166 km/h (90 knots)
-

Strandings:

The University of Valencia coordinates the stranding network in Valencian Community. The objectives are:

- Strandings Register information of the stranded species, numbers and trends
- Collect and conserve biological samples: tissues, teeth, parasites, and stomach content
- Analyse parasitological content, develop genetic studies and studies of feeding habits
- Studies of health status of cetaceans from western Mediterranean: CeMV on Mediterranean dolphin populations

Parasites: The University of Valencia collects micro and macro-parasites from stranded cetaceans aimed at:

- Gathering data of infections caused by parasites
- Increasing knowledge of parasite biodiversity
- Analysing temporal trends in parasites and commensals to monitor ecosystem changes
- Unveiling ecological and evolutionary interactions between hosts and parasites
- Assessing the impact of die-offs caused by
- Using parasites as biological tags of host's population structure, distribution, behaviour and disease

Diet: Stomach contents are collected in order to evaluate changes in diet in the most common cetacean species in the area

Others:

Projects:

- MEDSEALITTER - Developing Mediterranean-specific protocols to protect biodiversity from litter impact at basin and local MPAs scales. The project aims at networking representative MPAs, scientific organizations and environmental NGOs for developing, testing and applying efficient, easy to apply and cost-effective protocols to monitor and manage litter impact on biodiversity.
- MEDACES Mediterranean Database of Cetacean Strandings. This database has been set-up to co-ordinate all national and regional efforts for riparian countries. This project was created under the Barcelona Convention extended to the ACCOBAMS area. It is currently supported by the Spanish Ministry of the Environment, ACCOBAMS and the UNEP-MAP-SPA/RAC.
- ESTUDIO PARA LA CONSERVACIÓN DE LOS CETÁCEOS Y TORTUGAS MARINAS DE LAS COSTAS VALENCIANAS. Conselleria d'Agricultura, Desenvolupament Rural, Emergència Climàtica i Transició Ecològica funding
- Biología, amenazas y explotación sostenible de vertebrados marinos en el Mediterráneo español: un análisis multifactorial en el contexto del cambio global. PROJECTES D'I+D+i PER A GRUPS D'INVESTIGACIÓ D'EXCEL·LÈNCIA (PROMETEU 2019)