

REPORT ON THE CONSERVATION STATUS OF CETACEANS AND RELEVANT ACTIVITIES IN WESTERN MEDITERRANEAN AND CONTIGUOUS ATLANTIC AREA

Introduction: *The aim of this report is to give a global vision of what occurred in the Region, regarding cetacean conservation, since the previous report, and what is important to address for the next period/in a near future. So the regional representative will synthesize the main studies (species, topics) led in the region, concerning research, monitoring and conservation, also the main “hot” topics or threats that need to be addressed and what is awaited from the Scientific Committee (and ACCOBAMS) for the next triennium as recommendations.*

ACCOBAMS Parties of Western Mediterranean and contiguous Atlantic area region:

Algeria,
France,
Italy (western coast),
Monaco,
Morocco,
Portugal,
Spain,
Tunisia (northern coast)

In yellow the missing data

Overview of activities in the Region since the previous report:

Algeria	<p>National Action Plan A document of “National Action Plan along the Algerian coast”. detailing the different actions validated by the representatives of the national stakeholders would be ready by the end of 2024</p> <p>Legislation Progress in the preparation of a new regulatory framework for the protection and the preservation of marine biological resources including cetaceans.</p> <p>Stranding network The CNRDPA stranding database was containing national records from 1997 to 2023; but there were also previous and concomitant records from other scientists and institutions. Therefore, in the different databases some data were missed, duplicated or inaccurate. The available data were reviewed and compiled prior to the implementation of the project named: «Establishment of a new operational network for monitoring cetaceans stranding along the Algerian coastline». Having as objective setting up a new national stranding network, through enhancing collaboration by pooling national efforts, in order to create a single standardized database. By reviewing, compiling and crosschecking the data, the total number of stranded cetaceans during the last 50 years were estimated to more than 819. The data base has been updated till 588 records. The results were presented during the CMSC6.</p> <p>A technical data sheet for the planned training on the implementation of national stranding monitoring network and necropsy, has been updated.</p>
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Observation at sea

Since 2011 stock assessment surveys are conducted along the Algerian coast using the research vessel Belkacem Grine: ALPEL (pelagic) and ALDEM (demersal). Some observations are made during these surveys, particularly the pelagic ones, a protocol were developed to enhance the data collection and should be applied during ALPEL 2025. This protocol were presented during the last CMSC6

Interaction with fisheries

The CNRDPA plans to conduct a study using socioeconomic surveys in different ports covering all the Algerian shore to collect data on the type of depredation and her effects on fisheries. In 2023 a study have been conducted with the artisanal fishers targeting the small pelagics in Bouismail's bay. The results of this study were presented in the CMSC6

Meetings and communication

- Online attendance to the technical workshop EU ABIOMMED (ACCOBAMS ET UNEP/MAP-SPA/RAC) organised from 14-15 june 2023 in Roma (ISPRA).
- The following communication were presented during the Sixth Conference on Cetacean Conservation in South Mediterranean Countries (CSMC6)
 - LAMOUTI S., BOUHADJA M E A, ERROUKOURMA E H Contribution à la caractérisation du phénomène de déprédations dans la Baie de Bou Ismail (région centre)
 - LAMOUTI S., BOUHADJA M. E. A., BENNOUI A., AINOUCHE N., ROUIDI S. Proposition d'un protocole d'observation des cétacées lors des campagnes d'évaluation des ressources halieutiques en Algérie
 - LAMOUTI S., BOUHADJA M. E. A., KHOUAS B., BENSMAIL S., BENOUNAS K., GUECHAOUI M., ERROUKERMA E. H., BOUAICHA M., MENNAD M. Overview of cetaceans' stranding records along the Algerian coastline
- Online attendance to the meetings of the contact group for the preparation of the ASI2, January 29th 2024, 11 Marsh 11th 2024 and June18th2024.
- Online attendance to the "Workshop on ingested marine litter monitoring and entanglement evidences in the ACCOBAMS Area" 6 & 7 April 2024 in Catania, Italy
- Online attendance to the "Sixth Meeting of ACCOBAMS National Representatives: All ACCOBAMS region and the dedicated meeting for Western Mediterranean and contiguous Atlantic area' 24 june 2024
- A Scientific event on marine species strandings along the Algerian coast (were organized September 30th 2024 by the Commissariat National du Littoral (CNL) and The university of Mostaganem with the participation of the university of AinTemouchent, the institute of fisheries and aquaculture technology ITPA of Oran, the CNRDPA and other institutions.

Communications

	<ul style="list-style-type: none"> - SLIMANE TAMACHA F. Issues of marine species stranding - LARBI-DOUKARA Stranding of marines mammals along the Algerian coastline - MENHAOURA M. The role and contribution of the CNL in the management of strandings. - LARBI-DOUKARA K. Stranding monitoring and data collection - LAMOUTI S., Importance of pulling efforts between the different stakeholders and the creation national Database on stranding. <p>Workshop</p> <ul style="list-style-type: none"> - SLIMANE TAMACHA F. marine mammals rescue by fishermen using the FAO and ACCOBAMS good practice guide for the handling of cetaceans caught incidentally in Mediterranean fisheries <ul style="list-style-type: none"> • Attendance to the SMM2024 25th Biennial conference on the biology of marine mammal, Culture and conservation. Fishing for change , 11-15 November 2024 Perth Australia, the following communication were presented: <ul style="list-style-type: none"> - LAMOUTI S., ROUIDI S., BOUHADJA. M.E.A., MENNAD M., On the occurrence of a Greenland seal <i>Pagophilus groenlandicus</i> in the South western Mediterranean (Jijel-Algeria) <p>Trainings:</p> <ul style="list-style-type: none"> • Attendance to the training of teleneecropsy organized by the l'ACCOBAMS during the CMSC6 <p>Other</p> <ul style="list-style-type: none"> • In some universities, practical works are dedicated to cetaceans studies
France	
Italy (western coast)	<p>Research activities</p> <p>Completing the monitoring activities for the Marine Strategy Framework Directive (MSFD) by ISPRA: Line transect distance sampling from aerial platforms has been conducted in the Tyrrhenian and Ligurian Seas in summer and replicated in fall 2023. Research aimed at collecting data on deep diving odontocetes has been commissioned by ISPRA to CIMA Research Foundation. All the data will inform the third reporting cycle (2030).</p> <p>On October 2024, the report for the second cycle of the MSFD (2016-2021) was submitted by ISPRA on behalf of the Italian Ministry of Ecological Transition (formerly the Ministry of the Environment).</p> <p>Italy (ISPRA, April 2024) hosted a workshop on cetacean abundance estimation through distance sampling methods (WK CETAB) aimed to start a coordination among the experts from EU Regions on method to estimate cetacean abundance and distribution; this effort take place in consideration of the effort already in place by most EU Countries.</p> <p>In a similar context the aerial surveys data collected in the western Mediterranean area in the 2009-2023 period and related to the MSFD monitoring activities as well as to the ACCOBAMS and Pelagos implementation, have been provided for the "Spatial analyses</p>

to assess cetacean distribution and abundance in the PELAGOS Sanctuary and surrounding areas” initiative.

The ABIOMMED project aimed to investigate the available options to define threshold values for cetacean-related MSFD primary criteria was turn at the end in December 2023.

A Life Mare Natura Project has been started in the 2023: “*Conservation of priority species of marine megafauna in Italy and Greece and Italy*”. Coordinated by the Hellenic Center for Marine Research (HCMR), ISPRA is involved as leading the aerial survey and satellite telemetry activities aimed to investigate cetacean’s habitat use, abundance and distribution. The goal is to propose new Natura 2K area and update the boundary of the existing.

Progress of the Life Conceptu Maris Project coordinated by ISPRA. The project aims at collecting data on cetacean presence and distribution, also through innovative methods and technologies, and on main threats to map areas/seasons where conservation plans will be necessary.

Stranding

Guidelines and standard protocols of the national stranding networks are being updated on a basis of a collaborative effort between the Italian Ministry of Environment, Ministry of Health, the Experimental Institutes for Animal Health, the Regional Agencies for Environmental Protection, and ISPRA.

NOISE

Italy is part of TG Noise in the framework of MSFD, which is aimed to set threshold values for both continuous and impulsive noise at EU level. Italy is a Partner in the PIAQUO Project aimed at reducing the impact of maritime traffic noise on marine ecosystems. Moreover, ISPRA acts as focal point at national level and is responsible for specific training activities on noise monitoring for national entities.

Ship Strikes

Update of the IWC ship strikes global database with data from NW Mediterranean.

A PSSA has been designated in the western mediterranean sea in July 2023 at MEPC 80 IMO. This goal was achieved thanks the close collaboration among France, Monaco and Spain. The four countries are currently in the process of implementing the associated protective measures and data collection and technical working groups have been created. At Barcelona Convention COP23 (December 2023, Slovenia) a side event on the establishment of the PSSA and on the way forward for its implementation has been organised by the four countries.

Communication, raising awareness

IT participated in a training activity focused on environmental governance dedicated to young people organised by INFO RAC in the framework of PCTO activities – Pathways for transversal competences and orientation. Students from an Italian high school were

	<p>trained on the role and tasks of national and international institutions, and of international Agreements and Conventions in environmental matters. Among the Regional Agreements, ACCOBAMS was presented, and students were provided with information regarding its governance, objectives and its programme of work.</p> <p>The European Cetaceans Society (ECS) annual meeting was held in Catania (April 10-12, 2024) and was organised by <i>Marecamp Association</i></p> <p>Researchers from different public and private scientific organization are participating in the Pelagos working groups established in the framework of the 2022- 2027 management plan (Assessments, Impacts, SPAMIs-MPAs, Laws Governance, Communication)</p>
Monaco	
Morocco	<p>Stranding Monitoring</p> <p>The Stranding Monitoring Network (SMN) of the National Institute of Fisheries Research (INRH) oversees the tracking of marine mammal strandings along Morocco's Mediterranean and Atlantic coasts. The network is active across all regional centers of the INRH.</p> <p>In 2023, a total of 156 stranding cases were recorded, including 138 cetaceans and 18 marine turtles. In the first half of 2024, 97 cases were documented, consisting of 79 cetaceans and 18 marine turtles. This monitoring provides essential data for conservation efforts and the management of marine animal health.</p> <p>Projet Contribution to the understanding of the interaction phenomenon between the bottlenose dolphin (<i>Tursiops truncatus</i>) and purse seine fishing:</p> <ul style="list-style-type: none"> • Photo-ID Between January and October 2024, the photo-identification team conducted 30 outings in the M'diq-Oued Laou area, focusing on monitoring dolphin populations and using natural markings on dorsal fins. Regular outings continue to ensure continuous monitoring and data collection • Passive acoustics This action is scheduled to perform continuous monitoring of the dolphin population over extended periods in a non-intrusive manner. • Biopsy Biopsy outings for bottlenose dolphins are ongoing, with the team conducting these outings to ensure sample collection. • Interaction with fisheries Between 2023 and 2024 in Al Hoceima, the monitoring of interactions between the bottlenose dolphin and fishing revealed satisfactory catches with less damage to the nets compared to conventional seines. <p>Capacity building</p> <p>Between 2023 and 2024, a total of nine training sessions were organized, aimed at developing the capabilities of the scientific teams in various aspects of marine research. These sessions covered key topics such as photo-identification, necropsy, biopsy, data processing, imaging and passive acoustics.</p>

	<p>Meetings and scientific communication</p> <ul style="list-style-type: none"> • Participation of Moroccan team to the Sixth Conference on Cetacean Conservation in Southern Mediterranean Countries (CSMC6), 2023: <ul style="list-style-type: none"> - Evolution of Cetacean Strandings along the Moroccan Coastline from 1980 to 2022; - Monitoring of Marine Cetacean Strandings in the Fnidq-Jebha Region (Northwest Morocco) from 2015 to 2022; - Strandings in the Moroccan Mediterranean and Adjacent Atlantic Waters during the Period 2015-2022; - Strandings of Small Cetaceans along the Moroccan Coastline from 2015 to 2022; - The Bottlenose Dolphins (<i>Tursiops truncatus</i>) along the Moroccan Coastline (2017-2022); - Summary of Cetacean Strandings on the Central-Eastern Mediterranean Coast of Morocco (Jebha-Saïdia) from 2015 to 2022.
Portugal	<p>ICNF – Institute for Nature Conservation and Forests</p> <p>National stranding network fully implemented and operational along the entire coastline (4 regional networks composed of biologists and veterinarians attend any stranding event: biological samples are collected and stored The working group tasked with the elaboration of the National Plan to reduce Bycatch established in December 2023 continues its work. The full National Plan is expected to be published during the 1st semester of 2025</p> <p>AIMM- Marine Environment Research Association</p> <ul style="list-style-type: none"> • Bioacoustics repertoires of <i>Delphinus delphis</i> and <i>Tursiops truncatus</i> in the Algarve region: acoustic behaviour and impacts of dolphin watching tourism (2022 – 2025) Main objectives: investigate the contextual use of acoustic signalling, but also to assess interspecific acoustic divergence/convergence in the repertoires of sympatric delphinid species, and possible, intraspecific regional variations for distinct bottlenose dolphins' populations. <p>(Projects covering other areas of the Portuguese coast, outside the ACCOBAMS area) European College of Zoological Medicine Specialist “in-training” Research Grant 2024 - Establishing tissue and preservation methods guidelines for genetic analysis in stranded cetaceans <u>University of Porto / Interdisciplinary Centre of Marine and Environmental Research</u></p> <ul style="list-style-type: none"> • CETUS Project - Cetaceans Monitoring Programme in the Northeast Atlantic - started in 2012 with the aim of collecting cetacean occurrence data in the Eastern North Atlantic to study their distribution and habitat. Within CETUS, the following monitoring activities are ongoing: <ul style="list-style-type: none"> - Visual monitoring, along long-transect routes, on-board large vessels used as platforms of opportunity. This is possible thanks to CETUS collaborations with Transinsular (a Portuguese shipping company), the Hydrographic Institute of the Portuguese Navy, and the Portuguese Institute for Sea and Atmosphere – IPMA. These collaborations allow the

	<p>collection of cetacean occurrence data in a wide range area, between Mainland Portugal and the Macaronesian archipelagos, covering offshore waters.</p> <ul style="list-style-type: none"> - “Botos da Foz”: a visual land-based monitoring programme at the mouth of Douro River (Porto, Portugal), in which the focus species is the endangered harbour porpoise (<i>Phocoena phocoena</i>). • Soundscaping cetacean occupancy and behaviour: assessing impacts and defining evolutionary units. (PhD Programme) • The Way of Water: Environmental DNA as a multi-utility tool for cetacean conservation. (PhD Programme) • Atlantic Whale Deal – Mitigating Ship Strikes and Enhancing Carbon Sequestration in the Atlantic. INTERREG Atlantic programme (CIIMAR is partner) • REDUCE - Reducing Bycatch of Threatened Megafauna in the East Central Atlantic (HORIZON EU Project) (CIIMAR is partner) • EMPHATIC - E-DNA, Microbiomes, Photogrammetry and Hormones - Assessment Techniques in Cetaceans (CIIMAR is partner) • Whales and polar bear in a petri dish: decoding marine mammal toxicology through in vitro and in silico approaches – Marma-detox (CIIMAR is partner)
Spain	<ul style="list-style-type: none"> • As in previous years the Spanish Institute of Oceanography has carried out in February-March and July-August 2023-2024 the PELAGO and MEDIAS ship surveys covering the Spanish Mediterranean continental platform of Spain and Portugal. Besides, as planed in the national monitoring programs, Spain, through the Ministry for the Ecological Transition and the Demographic Challenge, has carried out two aerial surveys between June and August 2023 in the Spanish Mediterranean waters covering the limits of the national demarcations designed in the MSFD, and is carrying out two photo-identification programs (2022-2024) in the Balearic Islands, for bottlenose dolphins and sperm whales, and in the Strait of Gibraltar for bottlenose dolphins, pilot whales and killer whales. These two photo-identification programs are planned to extent up to summer 2026. The data collected during these surveys is being used for the reporting of Marine Strategy Framework Directive and Habitat Directive. Spain is being participating in the “Spatial analyses to assess cetacean distribution and abundance in the PELAGOS Sanctuary and surrounding areas” initiative, by mean of providing the cetacean data collected during the 2009-2023 period in their Mediterranean waters. Lastly, Spain has been participated in the Workshop on cetacean abundance estimation through distance sampling methods (WKCETAB) that took place in April 2024 at the ISPRA headquarters in Rome, with the aim to create a forum favouring the coordination of European experts from all EU marine regions on monitoring and estimation methods for cetacean abundance and distribution with a long-term objective to adopt a common methodology fit for the purpose of regionally coherent reporting with respect to MSFD and/or similar frame-works. <p>Furthermore, within the Intemares LIFE Project, four ship surveys have been carried out in 2022 and 2023 in the Ibiza Channel and in the Mallorca Channel to improve about</p>

	<p>the distribution and use of habitat of the sperm whale. A study of maritime traffic in both areas has been commissioned, which will be cross-referenced with the study of the distribution and use of the habitat to know about the areas with the highest risk of collision by season.</p> <p>Too, within Intemares LIFE project, the satellite tagging to improve about the distribution and the use of the habitat of several species of cetaceans in Mediterranean waters has been contracted, specifically for fin whale, pilot whale and sperm whale. In 2022 it was contracted a pilot project to try to minimize interactions between orcas and sailboats in the Strait of Gibraltar and study of the carrying capacity of whale watching activity in the Strait of Gibraltar.</p> <p>The Ministry contracted in 2022 the satellite tagging of killer whales in the Strait of Gibraltar to know the use of habitat and its distribution.</p>
Tunisia (northern coast)	<p>Interaction with fisheries and aquaculture</p> <ul style="list-style-type: none"> • Monitoring of bottlenose dolphin population along the northeastern coast and around a fish farm located along the eastern coast; • Passive acoustic monitoring of the bottlenose dolphin population around a fish farm along the eastern coast; • Assessment of bottlenose dolphin depredation in fishing nets targeting small pelagic species (purse seine) in the north-east; • Ongoing assessment of the effectiveness of bottlenose dolphin depredation mitigation measures (DiD-01; Licado system; reinforced seine nets). <p>Stranding monitoring</p> <ul style="list-style-type: none"> • Dietary study of 11 bottlenose dolphins stranded along the Tunisian coast (2019-2022) • The monitoring of stranded cetaceans revealed the detection of 20 individuals stranded in the Tunisian northern coasts, composed mainly of bottlenose dolphins. The national stranding network is actively involved in fostering collaboration with all stakeholders to collect accurate data and to provide urgent response to alerts. • Stranding results were presented at the Sixth Conference on Cetacean Conservation in South Mediterranean Countries (CSMC6), (November 2023). <p>Marine debris</p> <ul style="list-style-type: none"> • Results on the Interaction of cetaceans with marine debris in Tunisia were presented and discussed during the Marine Debris Workshop organized by ACCOBAMS in Catania in April 2024. A study is presently being conducted by INSTM researchers.

Capacity building

- A tele necropsy training workshop on a scientific photography protocol was organized by ACCOBMAS in collaboration with SPA/RAC and INSTM, at INSTM Monastir Tunisia, in November 2023.

Meetings and scientific communication

- The following communications were presented during the Sixth Conference on Cetacean Conservation in South Mediterranean Countries (CSMC6) 13 - 15 November 2023, Monastir, Tunisia
 - ATTIA EL HILI H., MAATOUK K. Appréciation du risque sanitaire des espèces de *Brucella* des mammifères marins
 - BEJAOUI N., LÓPEZ-MARULANDA J., BENMESSAOUD R., KOUCHEW. and ADAM O. Using acoustics to study dolphin behavior: experience acquired and proposed studies on the resident population of *Tursiops truncatus* in the Monastir region (Tunisia)
 - BEN AMER I, AISSI M., The Tunisian Dolphin Project, from a small initiative into a long-term monitoring programme in Tunisia
 - BENMESSAOUD R. , CHAIEB O., CHERIF M., KOUCHEW., BEJAOUI N, MISSAOUI H., Diet of Bottlenose dolphins (*Tursiops truncatus*) from the Tunisian coasts: Insights from stomach content analyses
 - BENMESSAOUD R., CHERIF M., BEN ROMDHANE A. and KOUCHEW. Passive acoustic monitoring of the bottlenose dolphin *Tursiops truncatus* to determine continuous presence around a Tunisian eastern fish farm
 - CHAIEB O, ELHILI H., BRADAI M.N., Cetacean stranding monitoring in Tunisia: main results from 2019 to 2022
 - CHAIEB O., MAATOUK K., BEN HADJ HAMIDA N., Bradai M.N. , Rare stranding events of a Cuvier's beaked whale (*Ziphius cavirostris*) and a minke whale (*Balaenoptera acutorostrata*) in Tunisia
 - CHERIF M., BENMESSAOUD R., KOUCHEW. and BEN ROMDHANE A. Dolphin Deterrent Device-03-H two-year trial: Repeller or attractor?
 - FRAD R. Development of a Photo-Identification Catalogue for the Common Bottlenose Dolphin (*Tursiops truncatus*) population in the Eastern Part of Tunisia, primarily in the Bay of Monastir
 - KARAA S., ATTIA EL HILI H., JERBI H., BRADAI M.N., Importance des examens post-mortem dans la biologie des cétacés : rapport de nécropsie de deux delphinidae *Stenella coeruleoalba* (Meyen, 1833) et *Grampus griseus* (G. Cuvier, 1812) des côtes nord de la Tunisie
 - KARAA S., JERBI H. Apport des sciences participatives dans le recensement des échouages des cétacés des côtes Nord de Tunisie
 - MALLAT H., DEROUCHE E., SGHAIER Y.R., BENMESSAOUD R., Stranded cetaceans in Tunisian waters recorded via citizen science /social media platform ACCOBAMS-CSMC6/2023/Doc04
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	<ul style="list-style-type: none"> • The following communication were presented during the GFCM Fish Forum Antalya-Turkiye 19-24 February 2024 <ul style="list-style-type: none"> - Benmessaoud, R., Cherif, M., Ben Arfa, Y., Benromdhane, A., Zaara, K. & Ben Moumene, Y (2024): Mitigation of Bottlenose dolphins depredation : <i>Tunisian experience & lessons learned</i>. <u>Oral presentation</u>. - Benmessaoud R., Cherif, M., Benromdhane, A., Zaara, K. and Ben Moumene, Y (2024): Can purse seine strengthening be a mitigation measure to dolphin depredation (N-E Tunisia)? <u>Poster</u>. Fish Forum Antalya 2024 - CHERIF, M., BENMESSAOUD R., BENROMDHANE, A, ZAARA, K. AND BEN MOUMENE, Y (2024): Does the Licado system the most efficient dolphin depredation mitigation measure in Tunisian North-eastern purse seines? <u>Poster</u>. Fish Forum Antalya 2024
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Major issue(s) or main threats or “hot” topics that have emerged during the said period for the Region:

Algeria	<ul style="list-style-type: none"> • The lack of data and scientific works on cetacean (publications)
France	<ul style="list-style-type: none"> •
Italy (western coast)	<ul style="list-style-type: none"> • Since 2009, continuous monitoring efforts in Italian seas have generated time-series data on cetacean abundance estimates and distribution patterns. These data will help inform about changes in both aspects over time. Additionally, data from both private and public research organizations are providing insights into local-scale studies and/or on elusive species (deep-diving cetaceans).
Monaco	
Morocco	<ul style="list-style-type: none"> • Improve the maintenance and upkeep of our tissue bank in INRH to address current conservation issues related to infrastructure, which are causing the loss of cetacean tissue samples.
Portugal	<ul style="list-style-type: none"> • The study of the carrying capacity for whale watching operations in southern • Portugal was postponed due to the lack of available funds. It is expected to be implemented during 2025
Spain	<ul style="list-style-type: none"> • Collision of Sperm Whale in the Strait of Gibraltar and Balearic Islands • Increase of the water temperature including marine heat waves
Tunisia (northern coast)	<ul style="list-style-type: none"> • Overlapping of fishing areas with cetaceans habitats in some areas : (i) destabilization of populations, (ii) chasing of preferred habitats, (iii) depletion of prey --> interaction with fishing gear (economic losses for fishermen and risk of bycatch)

Recommendations / suggestions for Improvement of the conservation:

Algeria	<ul style="list-style-type: none"> • Dedicated training for capacity Building (necropsy and post mortem investigations, Observation at sea) • Implementation of the PAN • Identification of funding's to conduct studies • Enhancing citizen science activities • Strengthening cooperation between Mediterranean research centers
France	

Italy (western coast)	<ul style="list-style-type: none"> • A strong and effective synergy is required among the various research and monitoring programs conducted at a national level within the framework of European conventions such as the Habitats Directive and MSFD, both in the definition of methodologies and in the subsequent data analysis phase. To date, monitoring activities have lacked coherence in terms of timing, seasons, and area, primarily due to administrative workflows. While researchers often collaborate, challenges arise when political factors are involved. In this regard a considerably effort should be put in place to ensure that the next ASI will take advantage of the planned national activities in the framework of both the MSFD and HD directives, hence incorporate them to benefit from.
Monaco	
Morocco	<ul style="list-style-type: none"> ▪ Continuous training in necropsy: Strengthen the capacities of the INRH team, students, and collaborators to better analyze the causes of cetacean mortality. ▪ Observation at sea: Support INRH teams in identifying and monitoring cetaceans in their natural habitat. ▪ Passive acoustics: Provide technical and scientific support to the INRH team to enhance monitoring efforts. <p>Photographic documentation: Raise awareness of its importance for scientific analysis and conservation, and motivate teams to rigorously apply standardized methods.</p>
Portugal	
Spain	Coordination to perform ASI II
Tunisia (northern coast)	<ul style="list-style-type: none"> • Continuous training in necropsy for the national standing network teams; • Further evaluate the functioning of the national stranding network; • Dedicated training for capacity building (PAM, stable isotopes); • Support the cetaceans campaigns along the tunisian coasts; • Identification of IMMA & CCH areas; • Identification of funding's to conduct studies;

Relevant published papers in 2023-2024 covering the ACCOBAMS area

Italy

- Arcangeli, A., Atzori, F., Azzolin, M., Babey, L., Campana, I., Carosso, L., ... & David, L. (2023). Testing indicators for trend assessment of range and habitat of low-density cetacean species in the Mediterranean Sea. *Frontiers in Marine Science*, 10, 1116829.
- Arcangeli, A., Azzolin, M., Babey, L., David, L., Garcia-Garin, O., Moulins, A., ... & Orasi, A. (2024). Looking for reliable species distribution models for low-density cetacean species: Compared effectiveness of SDMs for *G. griseus*, *G. melas*, *Z. cavirostris* in the Mediterranean Sea based on long-term fixed-transect data. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 34(3), e4115.
- Boisseau O, Reid J, Ryan C, Moscrop A, McLanaghan R and Panigada S (2024) Acoustic estimates of sperm whale abundance in the Mediterranean Sea as part of the ACCOBAMS Survey Initiative. *Front. Mar. Sci.* 11:1164026. doi: 10.3389/fmars.2024.1164026
- Bonizzoni, S., Gramolini, R., Furey, N. B., & Bearzi, G. (2023). Bottlenose dolphin distribution in a Mediterranean area exposed to intensive trawling. *Marine Environmental Research*, 188, 105993.
- Bonizzoni, S., Santostasi, N. L., Eddy, L., Riley, M. A., Ferreira da Silveira, M., Würsig, B., & Bearzi, G. (2024). Social and community structure of striped dolphins in a semienclosed Mediterranean embayment. *Marine Mammal Science*, 40(1), 143-163.

- Bonizzoni, S., Genov, T., & Bearzi, G. (2023). Bottlenose dolphins share fish farm areas while maintaining sexual segregation: Investigating group memberships through spatially and temporally explicit parameters. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 33(1), 70-88.
- Campana, I., Farace, I., Paraboschi, M., & Arcangeli, A. (2023). Analysis of environmental, social, and anthropogenic factors as potential drivers of breaching behavior in the Mediterranean fin whale. *Marine Mammal Science*, 39(3), 740-756.
- Cañadas, A., Pierantonio, N., Araujo, H., David, L., Di Meglio, N., Doremus, G., ... & Panigada, S. (2023). Distribution patterns of marine megafauna density in the Mediterranean Sea assessed through the ACCOBAMS Survey Initiative (ASI). *Frontiers in Marine Science*, 10, 1270917.
- Corrias, V., Moulins, A., Filiciotto, F., & Giardina, F. (2024). The social behaviour of the common bottlenose dolphin *Tursiops truncatus* (Montagu, 1821) in the coastal waters of Lampedusa Island (Strait of Sicily, Italy). *Aquatic Conservation: Marine and Freshwater Ecosystems*, 34(1), e4034.
- D'Amen, M., Fortuna, C. M., Holcer, D., Panigada, S., Bonora, N., & G. Lauriano (2024). Climate change and cetacean habitat suitability in the Mediterranean Sea: a challenge for Marine Strategy Framework Directive D1C4, D1C5 criteria. *Animal Conservation* doi:10.1111/acv.13002
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