



Vol.6, N°2, 2015

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NEWS FROM THE ACCOBAMS PERMANENT SECRETARIAT

NETCCOBAMS

In 2015, the ACCOBAMS communication database was integrated in a more global tool: the Network on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (NETCCOBAMS: <http://www.netccobams.com>). The network was developed in collaboration with WWF France and GIS 3M.

It is devoted to all experts working on the cetacean conservation (the scientific community, managers, members of NGOs, members of IGOs, relevant national and regional administrations, students...).

The aim of NETCCOBAMS is to facilitate and reinforce exchanges and collaboration of all actors in cetacean conservation, especially between experts from North Countries and experts from Southern Mediterranean Countries, but also between experts within a same sub-region. NETCCOBAMS will give the opportunity to relevant experts to discuss the best approaches and priority actions for a better knowledge of cetacean populations in sub regions of the ACCOBAMS area and to exchange their experience and their data. Through a dedicated website, which include a communication database, a geoportal and a forum, experts will be able to:

- ◆ Consult and find projects carried out in the ACCOBAMS area,
- ◆ Meet and chat with other colleagues,
- ◆ Share files and experiences,
- ◆ Keep updated.

Moreover, thanks to a “Member area”, members of NETCCOBAMS will be invited to add information regarding their projects, to launch specific discussion, to add documents and adverts.

A workshop on this issue was organized during the 2015 ECS Conference (21 March 2015, Malta). This workshop was very participative and constructive. Participants highlighted four main recommendations for the implementation of a network in the ACCOBAMS area:

- Importance of the participation of all experts working on the cetacean conservation (the scientific community, managers, members of NGOs, members of IGOs, relevant national and regional administrations, students...).
- Importance of the involvement of NGOs, especially of all the ACCOBAMS Partners in the implementation of a global network for ACCOBAMS.
- Importance of capacity building activities, such as trainings, workshops, transboundary initiatives between ACCOBAMS Partners, etc., to involve a maximum of people in long term community based initiative. Intercet platform is a good example of common tool that could be used easily in the entire ACCOBAMS Area
- Importance of opportunistic cetaceans’ research activities for the improvement of knowledge regarding cetacean distribution. It is also important to report and disseminate the results of such opportunistic surveys.



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The Secretariat organized a **Photo exhibition** in Monaco (20 April-8 June 2015), with the support of the Government of the Principality of Monaco, to promote ACCOBAMS activities and the collaboration with its Partners and with the Government hosting the Secretariat. The Photo exhibition was opened by H.S.H. Prince Albert II of Monaco in presence of the ACCOBAMS National Focal Point and the Executive Secretary.

During this event, the ACCOBAMS Secretariat launched the first **ACCOBAMS Cetaceans Day** in Monaco at the occasion of the World Day for environment (5 June 2015).

MEETINGS AND CONFERENCES

The **10th Meeting of the ACCOBAMS Scientific Committee (SC10)** was convened in Nice, France, from the 20th to the 22nd October 2015. It was attended by the Members of the Scientific Committee, Representatives from International Organizations and Observers including the ACCOBAMS Partners.

The SC10 is the last meeting before the upcoming Sixth Meeting of the Parties (MOP6), where customarily draft recommendations, to be turned into draft resolutions and presented to the MOP6, are discussed. In addition, during the SC10 the draft ACCOBAMS scientific work-plan for the next triennium (2017-2019) was presented and discussed.

- One of the ACCOBAMS priority is the so called “**ACCOBAMS Survey Initiative**”, which implies a basin-wide survey to estimate cetaceans’ density and abundance. An update on the current status of the initiative was presented, both in terms of logistic and scientific aspects.
- The need to further elucidate **Cetacean Population Structure** within the ACCOBAMS area was also stressed, as well to focus on the reassessment, under the IUCN Red List criteria, of those species which are currently listed as Data Deficient and those which has not been assessed yet.
- The need to write **Basin-wide Conservation Plans** for selected species was also discussed and the SC10 agreed to follow the template, developed and adopted by the International Whaling Commission, of Conservation management Plans (CMP). These are plans which involve different stakeholders since the beginning and integrate and implement existing regional or national plans.
- The issue of **Anthropogenic Noise** was thoroughly discussed, in order to make sure that adequate attention is given when organizing seismic or military activities. The importance of conducting dedicated and rigorous Environmental Impact Assessments was reiterated.
- **Ship Strikes** have been discussed and mitigation measures suggested. The SC10 decided to make a recommendation to the MOP6 to focus on mitigation measures suggested by the International Maritime Organization.
- **Chemical Pollution** still represents a main source of concern for cetaceans in the Agreement area and **Marine Litter**, including micro-plastics are now very high on the international agenda. A project proposal was presented and discussed, the SC10 recommended to evaluate ways to remove plastics from the sea, together with a significant reduction of plastics coming from land.



The **10th Meeting of the ACCOBAMS Bureau** was held in Casablanca, Morocco, on 24th and 25th of November 2015.

Among the items discussed, the BU10 approved the list of activities for the Permanent Secretariat for 2016 and the list of the Draft Resolutions to be submitted to the MOP6. An emphasis was made on the upcoming 20th Anniversary of the Agreement with a description of the activities to be undertaken to celebrate this important event all year long.

Implementation of the Ecosystem Approach in the Mediterranean

The Ecosystem Approach (EcAp) is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Contracting Parties to the Barcelona Convention have been engaged into the implementation of this strategy with the ultimate objective of achieving the Good Environmental Status (GES) of the Mediterranean Sea.

In fact, through Decision IG.17/6 the contracting Parties have committed to progressively apply EcAp to the management of human activities with the goal of effecting real change in the Mediterranean marines and coastal environment.

Decision IG.20/4 on “implementing the Ecosystem Approach Roadmap” validated the work done regarding the 11 Ecological objectives, operational objectives and indicators for the Mediterranean.

The Decision IG.21/3 on “The Ecosystem Approach including adopting definitions of Good Environmental Status (GES) and targets” expresses the agreement on regionally common targets, lists of indicators to achieve GES in the Mediterranean, and an integrated list of Mediterranean GES, targets and indicators.

A specific timeline was adopted in this EcAp decision on how to develop and implement an integrated Mediterranean Monitoring and assessment Programme by the 19th Meeting. It was also agreed, that after the initial phase of implementation of the integrated Monitoring Assessment Programme (2016-2019), the draft integrated Mediterranean monitoring and Assessment Programme will be reviewed and in case necessary amended, in light of lessons learnt during the first years of its implementation.

Mainstreaming EcAp into the work of UNEP/MAP Barcelona Convention and achieving the GES of the Mediterranean Sea and Coast through the EcAp process have been supported by an EU-funded project (2012-2015).

After the end of the EcAp-MED 2012-2015 project, the RAC/SPA and the other RACs have initiated the second phase of the EcAp project, the EcAp-MED II, in June 2015. This second phase covers the period of six semesters from June 2015 to May 2018; with a co-financing of the Mediterranean Trust Fund and other resources.

Countries involved in this second phase of the EcAp project are Southern Mediterranean Contracting Parties (*Algeria, Egypt, Israel, Libya, Lebanon, Morocco and Tunisia*). The project will ensure:

- Strengthening capacities in new monitoring areas,
- Strengthening science policy interface,
- Responding to data management challenges,
- Establishment of sub-regional cooperation for better implementation of the EcAp in the Mediterranean region.

Within the framework of this project, the RAC/SPA will carry out activities related to Country-specific EcAp monitoring implementation plans for biodiversity and non-indigenous species and will organize monitoring and assessment trainings related to different species (*mammals, turtles, Seabirds, monk seal.*) and habitats based on country capacity needs. RAC/SPA will also develop data-management and information system in cooperation with the other RACs and regional partners (ex ACCOBAMS and GFCM).

Article by Lobna BEN NAKHLA

NEWS FROM THE BLACK SEA COMMISSION

In accordance with the provisions of the relevant Memorandum of Understanding between the Black Sea Commission and ACCOBAMS, the Permanent Secretariat of the Black Sea Commission (BSC) exercises its role of the Black Sea Sub Regional Coordination Unit for ACCOBAMS in regards to the conservation of the cetaceans of the Black Sea. The Work Plan with the detailed list of activities was annexed and the parties currently revise the activities for 2016/2017 to be adopted during upcoming 31st BSC Regular Meeting in October, 2015.

Conservation of cetaceans is one of the issues of concern in Black Sea Strategic Action Plan (BS SAP 2009) and a Black Sea CBD Protocol. Currently the BSC PS is working on drafting the First Report on the Implementation of the BS SAP (2009) and State of the Black Sea Environment (SoE) to be produced every five years, where the relevant information on the conservation of cetaceans will be presented. Reports would produce the Recommendations for decision-makers, including amendments to the existing BS SAP and will take on board the recent activities and trends regarding cetaceans conservation.

One of six Advisory Groups of the Black Sea Commission (BSC), namely the Advisory Group on the Environmental Aspects of the Management of Fisheries and other Marine Living Resources (FOMLR), deals with cetaceans' conservation. At its last 18th Meeting (31st March-1st April, 2015 in Istanbul, Turkey), the representatives of the countries reported on the activities implemented during the previous year for cetaceans' protection and considered the following issues:

1. Amendments to the fisheries component of the Black Sea Integrated Monitoring and Assessment Program (BSIMAP) for years 2015-2020 to be adopted by the BSC at upcoming 31st BSC Regular Meeting. The FOMLR Advisory Group proposed to the BSC to introduce into the draft BSIMAP the item "Specimens of Black Sea bottlenose dolphins kept in the captivity" in line with «Draft roadmap for the assessment and inventory of specimens of Black Sea bottlenose dolphins kept in the captivity» elaborated between the BSC and ACCOBAMS Secretariats;
2. Revision of Conservation Plan for Black Sea Cetaceans for 2015-2020 (based on the existing Conservation plan developed for 2006-2010) and Draft Road Map for assessment of bottlenosed dolphins. The FOMLR considered the draft Conservation Plan for Black Sea Cetaceans for 2015-2020 and recommended it for the adoption of the BSC;
3. FOMLR Advisory Group agreed on a short format of reporting to the BSC, which took on board the indicators compatible with EU MSFD provisions, as well as GFCM, ACCOBAMS and IMO requirements.

In June, 2015 the BSC PS joined ACCOBAMS and GFCM in their efforts to improve the MPAs designation and management, sustainable fisheries and cetaceans conservation in the Black Sea area. The BSC Working Program also foresees the facilitation of the designation of MPAs in the region, related pilot projects, elaboration of Regional MPA Guidelines, List of recommended Coastal/Marine Protected Areas, Networking etc. Cooperation with CBD Convention Secretariat (Montreal) and relevant projects promoting the designation of MPAs, such as COCONET and MISIS is ongoing. Amendments to CBD Protocol' Annex II "List of Species of Black Sea Importance" and Annex IV "List of Species Whose Exploitation Should be Regulated by the Black Sea Biodiversity and Landscape Conservation Protocol" are in progress. The BSC stands ready to collaborate with ACCOBAMS and other relevant partners to contribute to the initiatives aimed at updating the mapping of habitats, at elaborating the list of specific zones and areas of importance, FRAs, and in relevant cetaceans studies etc.

Article by Irina MAKARENKO



NEWS FROM THE PELAGOS SANCTUARY

A call for proposal to deepen research and enhance international cooperation

December 1st 2013, the Pelagos Agreement for the creation of a marine mammals Sanctuary in the Mediterranean Sea, exceptionally published a call for proposal for scientific studies in the Sanctuary.

In totality, fourteen proposals had been received and submitted to the Technical and Scientific Committee and then to the Parties, according to the rules of procedure. The success of this call for proposal, the quality of the projects and their interest for the realization of the objectives of the Pelagos Agreement, stress the real involvement of the French, Italian and Monegasque organizations and their hard cooperation for the marine mammals conservation. Two projects have been selected and are currently on-going.

1. Impact of estimated noise from marine traffic on sperm whales and Cuvier's beaked whales, carried out by CIMA Research Foundation, in collaboration with EcoOcean Institute and CHRISAR Software Technologies Society, throughout the GIS3M (Group of Scientific Interest for the Marine Mammals in Mediterranean Sea and their Environment) and Polytechnic University of Milan. Recently, the marine environment stakeholders became aware about the danger of the under water noise. It is caused principally by the marine traffic and has serious consequences on marine mammals: lose of habitat, temporary or permanent deafness, mass stranding, etc. In particular, some risk maps for the Sperm Whale and the Cuvier's beaked whale in the Pelagos Sanctuary will be realized.
2. Estimated absolute abundance of Risso's dolphin in the North-Western part of the Pelagos Sanctuary, carried out by Tethys Research Institute, in collaboration with GIS3M and CIMA Foundation. Few data is available for estimating the abundance of the Risso's dolphin in the Pelagos Sanctuary, even if it that species is considered as regular in the Mediterranean Sea. In particular, the project will include a photo-identification catalogue* for the North-Western portion of the Pelagos Sanctuary.

** Method consisting in taking photos of some unique physical characters for each animal met (scars, parasites, special staining, etc.)*

First international meeting of the partner municipalities, local political actions for a global and common goal

On June 12th 2015, the first international meeting of the partner municipalities of the Pelagos Sanctuary was held in Livorno, at the Mediterranean Natural History Museum. The meeting was introduced by the Chairman of the Pelagos Agreement, Dr. Maria Carmela Giarratano (Italian Ministry of Environment, Land and Sea), to the representatives of Italy, France and Monaco, the Permanent Secretariat of the Pelagos Agreement and the Secretary of State for the Environment of the Italian Government, Mrs Silvia Velo.

Partner municipalities take the commitment to adopt political decision for the marine mammals' protection, to conduct awareness activities on marine mammals and Pelagos activities and to inform authorities in case of stranding event in their coast. The Pelagos Charter is a good tool to enhance the natural heritage of the municipalities of the Sanctuary that become "the Doors of the Sanctuary".

Creating new cross-border synergies, assessing the implementation of the Charter and enhancing the actions carried out by municipalities in the framework of the partnership, are the main objectives of the meeting.

Currently, 85 municipalities have signed the Pelagos Charter of the Pelagos Sanctuary, which 56 Italian municipalities and 29 French municipalities. National and international twinning between partner municipalities is a project that will be submitted to the Parties to the Agreement.

Certification "High Quality Whale Watching" ®

ACCOBAMS trademark developed jointly with the Pelagos Sanctuary
For the first time in the Mediterranean Sea, the HQWW® certificate of ACCOBAMS, developed in cooperation with Pelagos, was implemented in France with the support of Souffleurs d'Ecume and in the Principality of Monaco with the support of the AMPN. Training for French operators has been organized in particular with the support of Souffleurs d'Ecume and National Park of Port-Cros. Pelagos Agreement works on the terms of reference to establish the list of the *whale watching* operators that could carry out their activities in the Pelagos Sanctuary.

Institutional meetings of the Pelagos Agreement

The 8th Scientific and Technical Committee was held in Genoa (Italy) on October 14th 2015, in order to prepare the 6th Conference of the Parties planned for the 15th to the 16th of December in Hyères, France. The reinforcement of the Agreement governance and the revision of the management plan would be the main topics of the agenda.

Article by Fannie Dubois

Executive Secretary of the pelagos Sanctuary

RESULTS FROM AERIAL AND SHIP BASED SURVEY IN THE BLACK SEA

In response to DG Mare's 2011 call for tenders to study the Adverse fisheries effects upon Black Sea cetacean populations, MacAlister Elliott and Partners assembled a team led by Dr Alexei Birkun of Brema Laboratory in Ukraine and Dr Simon Northridge from the Sea Mammals Research Unit at St Andrews University.

Teams of local experts were recruited led by Dr Sergey Kryvokhizhin in Ukraine, Dr Simion Nicolaev in Romania, Dr Violin Raykov and Dr Konstantin Mikhaylov in Bulgaria and Dr Bayram Ozturk in Turkey.

The first element of the study was to examine the existing legal protection afforded to cetaceans by the national laws of all six riparian countries and by international law, to carry out a gap analysis and make recommendations for the best coordination.

The fishing industry was studied and characterised in Ukraine, Romania, Bulgaria and Turkey. Existing knowledge of cetacean bycatch was examined. Surveys were carried out to discover fishers interactions with cetaceans, their experience of bycatch and their knowledge of their obligations and the legal protection given to cetaceans.

A combined aerial and vessel survey was carried out in July 2013 covering approx. 25% of the surface area of the Black Sea from the Bulgaria/Turkey Border to the southern tip of the Crimea peninsular. Results were analysed and abundance estimates produced.

At a 2 days workshop in Istanbul, in June 2014, local and international experts met to discuss the findings and to formulate recommendations for mitigation measures.

Summary of Conclusions

Review of current legislation

Regardless of these shortcomings or weaknesses, the review of legislation indicates that there is sufficient legislation in place, particularly within Member State jurisdictions, to research, assess and manage pressures and threats to cetacean species, and to designate SACs. Strengthening the capacity of the Member States and the coordination and capacity of regional bodies to implement legislation and to conduct the required research would appear to be more appropriate than the determination and enactment of additional legislative instruments.

Implementation of existing legislation is hampered by insufficient collective political will to shore up implementation and enforcement efforts, both in terms of the conservation of marine biodiversity and fisheries management, and this remains the region's greatest challenge.

Review of existing information on interactions between Black Sea cetacean populations and fisheries

For most of the 20th century, mass commercial killing remained the principal human activity affecting Black Sea cetaceans. Another reason for the direct killing of cetaceans was their piscivorous nature, in some areas they were considered as undesirable rivals of pelagic and coastal fisheries. Pseudoscientific estimations of enormous fish volumes allegedly consumed by Black Sea cetaceans were used in the USSR as a justification for mass dolphin killing.

Eventually, governments and intergovernmental organizations began to notice the effects of over-exploitation and legal killing was stopped in April 1983. However, cetacean populations were still affected by poaching and capture of wild animals for dolphinarium.

Poaching (illegal, unreported or unregulated – IUU – fishing) is one of the major environmental, economic and social problems concerning the entire Black Sea region. Unlawful direct take of cetaceans seems to be limited by the lack of adequate markets in the riparian countries. By contrast, cetacean by-catches due to the illegal Black Sea turbot (*Psetta*

maeotica) and sturgeon (*Acipenser spp.*) gill-net fishery may have considerable magnitude. By-catches in fishing gear constitute the major source of human-induced mortality of Black Sea cetaceans. With regards to fishing gear type, bottom set gillnets for turbot are always recorded as the greatest threat to cetaceans although spiny dogfish set nets are also reported to be a problem.

Review of existing information on Black Sea cetacean populations

The three cetacean species are recognised as endemic to the Black Sea and exhibit genetic differences to the Mediterranean populations of harbour porpoises, common dolphins and bottlenose dolphins. The habitats of all three species overlap, but the principle habitats differ, for example harbour porpoises and bottlenose dolphins are principally associated with the circumlittoral area over the continental shelf, whereas the common dolphin is principally associated with the open sea and is present in the circumlittoral areas as a secondary habitat.

The population sizes and trends of the three species are not clear but the numbers of incidentally caught animals recorded by observers of fishing activity strongly suggests that the population has further declined as a result of interactions with fishing gear. Direct hunting of common dolphins and bottlenose dolphins also continued until 1983 and, as with harbour porpoises, it is assumed that the population trend for these species was decreasing until this point. Subsequently it is unclear what the population trend is: mass mortality events and concerns relating to the depletion of stocks of prey species may have prevented a recovery in the populations since 1983. Incidental catches in fishing gear may also play a role in the current population trend, but without accepted estimates of abundance and of by-catch rates, it is not possible to determine the current conservation status of any of the Black Sea cetacean species.

Summary of Conclusions

Review of the fishing fleet and fishing gears active in the Black Sea

Turkey has the largest fishing fleet (5113 vessels), followed by Bulgaria (2030), Ukraine (766) and Romania (194). Most fleets appeared to be dominated by small vessels (5-9.9m in length) and by vessels operating set gillnets.

For the fishermen's survey, data collection forms were designed and distributed to data collectors, who interviewed fishermen from various sectors of the four national fishing fleets. To quantify fishing effort in the four countries, maximum dimensions and quantities of fishing gear, and soak times, and the number of annual days spent fishing were calculated and analysed by fleet segment. The values obtained from the fishermen's survey were then extrapolated using national statistics to give total fishing capacity and fishing effort. Fishing effort was also analysed spatially to identify fishing hotspots along the coasts of the Black Sea.

The data obtained from the fishermen's survey has provided, for the first time, a detailed picture of the various fisheries operating within the Black Sea but due to the lack of robust quantitative data on the numbers of vessels fishing, days absent and net quantities used, it is suggested that this study should be extended.

Cetacean abundance and distribution in the Black Sea

The survey completed for the study represents the first dedicated line transect cetacean survey in the inshore and offshore waters of the western Black Sea.

Over the course of 24 days, the vessel traversed the territorial sea and internal maritime areas of Bulgaria and Romania and, partially, of Ukraine. 573 sightings of cetaceans of all three species were recorded and analysed from a surveyed area of 31,781km². Sightings of all species were fairly irregular and occasional clusters were recorded.

The aerial survey covered the Exclusive Economic Waters of Bulgaria, Romania and Ukraine using a modified Partenavia P68 aircraft. A total of 512 sightings of cetaceans of all three species were recorded and analysed from a surveyed area of 88,015km². As might be expected, the number of observed common dolphins was significantly higher than of the other two species. Sightings were scattered and clusters of animals of all species observed.

Estimates of total population abundance using historical and project survey data are subject to significant caveats about their accuracy and caution is advised when referring to the numbers presented until the southern borders of the geographic range of each species is known and until a basin-wide cetacean survey is completed.

Adverse fisheries impacts on cetacean population in the Black Sea: current estimates

Strikingly, the observer data reveals that from all four countries, relatively high rates of by-catch were observed, some data revealing up to 10 harbour porpoises being observed per haul.

These values are much higher than those observed in many other studies of by-catch of this species.

Interview data were examined to identify fleet segments that reported cetacean by-catch, and then focusing on the highest risk fishery to cetaceans (assumed to be turbot gillnet fisheries), rough estimates of by-catch rates were evaluated. It is of note that other gillnets, purse seines, pound nets and mid-water trawls are also associated with cetacean by-catch. Stated by-catch rates of porpoises in gillnets were generally highest in turbot gillnet fisheries and were nearly 1.5x higher in turbot nets than other gillnets.

The most conservative sustainable limits for Black Sea harbour porpoise are: 247 per year, 225 bottlenose per year and 513 common dolphin per year. These estimates represent the western Black Sea only as abundance surveys only covered this area in detail. The most liberal sustainable take limits, based on crude estimates of Black Sea abundance, may be around 1300, 1700 and 5800 animals, respectively.

The fishermen's survey yielded much lower estimates of cetacean by-catch rates when compared to the observer data, with overall mean stated rates of around 4 animals per vessel, per year in the turbot gillnet fishery and expected totals in the region of around 11,000 porpoises and 7000 dolphins per year in this fishery alone. This is not consistent with a sustainable catch based on our abundance estimates. Abundance estimates are consistent with expectations of animal density from other regions for these species. These results raise a general concern that by-catch rates are likely exceeding conservation limits and further work is required to quantify cetacean by-catch, cetacean abundance and fishing fleet structure in the Black Sea.

Strategy for improving cetacean conservation in the Black Sea

Experts from the national teams have collectively proposed by-catch and general management measures for the Black Sea which were used in developing a Conservation Action Plan for Black Sea cetaceans. The Conservation Plan also draws on various recommendations from regional forums. Generally, five broad approaches are required, in parallel which encompass specific conservation actions. These approaches include: 1) Refinement of information on spatial, temporal and metier specific by-catch rates to further identify areas, seasons and fishery types for focused by-catch mitigation, including a better understanding of the rates at which each species is taken by each fishery. 2) Improved information of fleet dynamics and effort. 3) Implementation of by-catch mitigation strategies where there are already obvious requirements. 4) Further investigation of the population dynamics, distribution, density and migration patterns of the three species of concern. 5) The building or improvement of a management organisation to deliver on conservation goals, shared management, fleet documentation, training and outreach. The most urgent action was identified as eliminating illegal fishing for turbot with gillnets.

The final report of this study has now been published by the European Commission:

http://ec.europa.eu/fisheries/documentation/studies/cetaceans-in-the-black-sea_en.pdf

Annexes to the report containing the data gathered are also available:

http://ec.europa.eu/fisheries/documentation/studies/cetaceans-black-sea/index_en.htm

PLASTIC AND MEDITERRANEAN BIODIVERSITY

Nowadays, with some of the most important amounts of solid waste generated annually per person (208-760 kg/year), the Mediterranean Sea is one of the most affected areas by litter in the world (Eriksen et al., 2014 PLoSOne; C  zar et al., 2015 PLoSOne). It has been estimated that 62 million items of macro-litter are floating on the surface of the Mediterranean basin (Suaria and Aliani, 2014 MPB), affecting economically fishery resources and tourism activities. Litter enters the sea from land-based sources, ships and other infrastructures at sea and can travel long distances. On a global scale, the highest percentage (~80%) of marine litter consists of plastic (Thompson et al., 2009 PhilTransRSoc-Biol Sci). Due to the fragmentation into smaller pieces, the abundance of plastic fragments smaller than 5 mm (defined as microplastics) (Thompson et al., 2004 Science) in marine habitats has increased and outnumbers larger debris. Mean densities of floating microplastics in the Mediterranean Sea (more than 100,000 items/km²) indicate the importance of this threat for the basin (Collignon et al., 2012 MPB).

Despite the ratification of the Marine Litter Action Plan by the Barcelona Convention in COP 2013, production trends, improper waste management, the lack of mitigation actions and governance on the basin scale, may lead to greater



Microplastics collected in the Mediterranean

hazards for Mediterranean marine wildlife. In particular, while evidence on macro and microplastics negative effects on marine organisms is growing, little scientific investigation has gone into the problem in the Mediterranean Sea. More information are urgently needed about plastic and microplastic inputs, spatial and temporal distributions, including transport dynamics and identification of accumulation areas, and particularly on the interaction of biota in their habitat in the plastic accumulation areas. Very few data are currently available on the impact of plastic debris on endangered Mediterranean cetaceans and turtles. Recent studies indicate the occurrence of its ingestion in sea turtles (Campani et al 2013, MPB), beaked whales (Lusher et al, 2015 EP) and sperm whales (de Stephanis et al, 2013 MPB). Although, the impact of microplastics on baleen whales is poorly understood, and very few data are available on the ecotoxicological consequences related to the

plastic additives and persistent organic pollutants absorbed to large plastic debris and microplastics (Fossi et al 2012, 2014 MPB, MERE) that can be accumulated in the organisms tissues, affecting their health, reproduction and fitness.

On the 10th and 11th March 2015 in Monaco, the Prince Albert II of Monaco Foundation, MAVA Foundation, Surfrider Foundation Europe and Tara Expeditions, **with the support of ACCOBAMS**, have organized a conference on this topic: **PLASTIC IN THE MEDITERRANEAN: BEYOND OBSERVATIONS, WHAT ARE THE SOLUTIONS ?** Given the long-standing lack of exchanges between stakeholders in the plastics industry, the four organisations have decided to pool their expertise, networks and resources under the banner of Beyond Plastic Med, to hold a conference devoted to the problem of plastic in the Mediterranean Sea. Its aim was to establish a lasting dialogue between “plastic stakeholders” and to suggest corrective and innovative solutions on the matter. **The Monaco Declaration, making reference to ACCOBAMS, was issued to call all concerned stakeholders to join the Task Force Beyond Plastic Med** (See http://www.beyondplasticmed.org/wp-content/uploads/2015/03/Declaration_de_Monaco_fraeng.pdf).

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WORKSHOP ON EFFECTIVENESS OF MARINE PROTECTED AREAS CONTAINING CRITICAL HABITATS FOR CETACEANS

In Gammarth, Tunisia, on the 9th-12th of June 2015 was held the « joint GFCM, RAC/SPA and ACCOBAMS meeting on protection of marine areas in the Mediterranean and Black Sea.

This meeting was a joint initiative of three organizations (RAC/SPA, GFCM and ACCOBAMS) for a question of shared interest for the protection of the marine environment. This meeting included the RAC/SPA SPAMI Conference; the second meeting of the GFCM Working group on MPAs and the ACCOBAMS workshop on the effectiveness of marine protected areas (MPAs) containing critical habitats of cetaceans. This joint initiative allowed to bring together 59 experts (including scientists, representatives of NGOs and national administrations) to discuss on actions and tools, mainly area based management measures, for the protection of the marine environment in general. Each organisation presented its tool (SPAMI for RAC/SPA, FRA for CGPM, Critical Cetacean Habitats for ACCOBAMS, etc). Discussions were not limited to the classical concept of MPA; but to a wider vision of area based protection against multiple threats. The meeting agreed to promote fisheries restricted areas (FRAs) at national and international level as one of the most appropriate tools, especially for the high seas, where to anchor additional protection layers such as MPAs or international recognized labelling such as SPAMIs (Special Protected Area of Mediterranean Importance).

Concerning cetaceans, the most important points were that everything should be done to push forward the final steps where MPAs declaration process is already ongoing, and implement appropriate conservation measures where need was identified. It has been considered adopting the IMMA (Important Marine Mammal Area) denomination proposed by the IUCN Marine Mammal Protected Areas Task Force (MMPA TF), when it will be finalized by IUCN, in order to designate areas important for cetaceans in the ACCOBAMS Area.

Considering the support of the other organizations, it has been underlined that the FRA, under GFCM, can greatly help in protecting cetaceans against some fishing practices that threaten them and, indirectly, FRA can protect some of their preys and the areas where these preys spawn. Also, given that a SPAMI has to be designated as an additional layer to an area whereby some type of spatial based management measure already existed, the group agreed that FRAs can be used as anchoring point where a SPAMI overlapping the same area could be proposed.

Participants discussed about the fact that area based tools can sometimes not mitigate efficiently some threats for cetaceans and that another approach could be develop in parallel: the threat based management approach. So it has been decided to initiate a reviewing and spatial mapping of threats to cetaceans in order to have a synoptic view of what happen where, and the similarities of problem that different countries have to faced (for example ship strikes between large vessel and large whales occur similarly in different portion of the Mediterranean Sea). The idea is also that these countries or organizations could join efforts to find solution at the Mediterranean level. So it has been decided that the ACCOBAMS Scientific Committee Task Manager on “conservation of cetacean critical habitats” will engage in an effort for the identification of threats to cetaceans. For that purpose, experts identified by the ACCOBAMS Scientific Committee will be invited to complete the templates with the relevant information including GIS data.

Finally, as it was clear that such meeting was helpful, it has been recommended that the collaboration with RAC/SPA, GFCM, IUCN, MedPAN and other relevant organizations on areas of protection for cetaceans is strengthened. The group welcome the proposal of the three organizations (GFCM, RAC/SPA and ACCOBAMS, in collaboration with IUCN-Med and MedPAN) for a joint strategy to find synergies, avoid duplications and assist their Members in a coordinated manner in adopting multiple designation of spatial based management measures in areas agreed by the concerned parties as deserving special protection.

**Article by Léa David
ACCOBAMS Scientific Committee Task Manager
on “Conservation of Cetacean Critical Habitats”**

COMMUNICATING THE *HIGH QUALITY WHALE-WATCHING*[®] CERTIFICATION TO THE GENERAL PUBLIC

In the framework of promoting the *High Quality Whale-Watching*[®] certification (ACCOBAMS trademark developed jointly with the Pelagos Sanctuary) in France, a leaflet for the general public was created by Souffleurs d'Écume, in charge of managing the certification in France. About 2,000 copies were freely distributed to tourism offices in the main French Mediterranean cities along the coast.



Copyright : Julien Veyssade, Office du Tourisme de Hyères

This leaflet briefly presents the stakes of a sustainable management of the whale-watching activity and the *High Quality Whale-Watching*[®] certification. The reader will find a short description of each certified operator with the type of boat, port of departure, period of activity, and contacts. The Code of Good Conduct for the observation of cetaceans enacted by the ACCOBAMS and the Pelagos Agreements is also highlighted. A quick description of the main species that can be encountered during a trip ends the leaflet. Only available in French for the 2015 edition, the next editions will also be available in English.

Since its creation in 2014, 14 operators out of 35 listed in the French Mediterranean Sea received

the *High Quality Whale-Watching*[®] certification, including 2 operators that gave up aerial detection to access the certification.

For more information on the *High Quality Whale-Watching*[®] certification, visit www.whale-watching-label.com/en



Copyright : Julien Veyssade, Office du Tourisme de Hyères

Article by Pascal Mayol
Souffleurs d'écume, ACCOBAMS Partner

TWO OIL COMPANIES STOP THEIR PLANS TO DRILL IN THE ADRIATIC SEA

At the end of July 2015 OMV and Marathon Oil announced to immediately withdraw from their plans to explore and exploit oil resources in the Croatian Adriatic Sea. OceanCare and other conservation organizations call it a victory while at the same time voicing critique towards the Croatian government which seems to continue ignoring public interests to allow the fossil fuel industry continue their risky plans.

In detail: Without a doubt it can be called an interim success for conservation efforts that Austrian based OMV and US based Marathon Oil have announced end of July not to engage in exploration and exploitation activities of potential oil resources in the Croatian part of the Adriatic Sea. The two business partners return 7 licenses. While OMV and Marathon Oil refer to decreasing oil prices, forcing the company to cut investments, and legal uncertainties regarding the border region between Croatia and Montenegro as reason for their decision, media quote the Croatian Economy Minister Ivan Vrdoljak who claims "Considering all the risks and the interest in the exploration blocks in question, we could not agree to the conditions set by the other party because we estimated that the state will benefit more if the exploration blocks are offered in a second public bid."

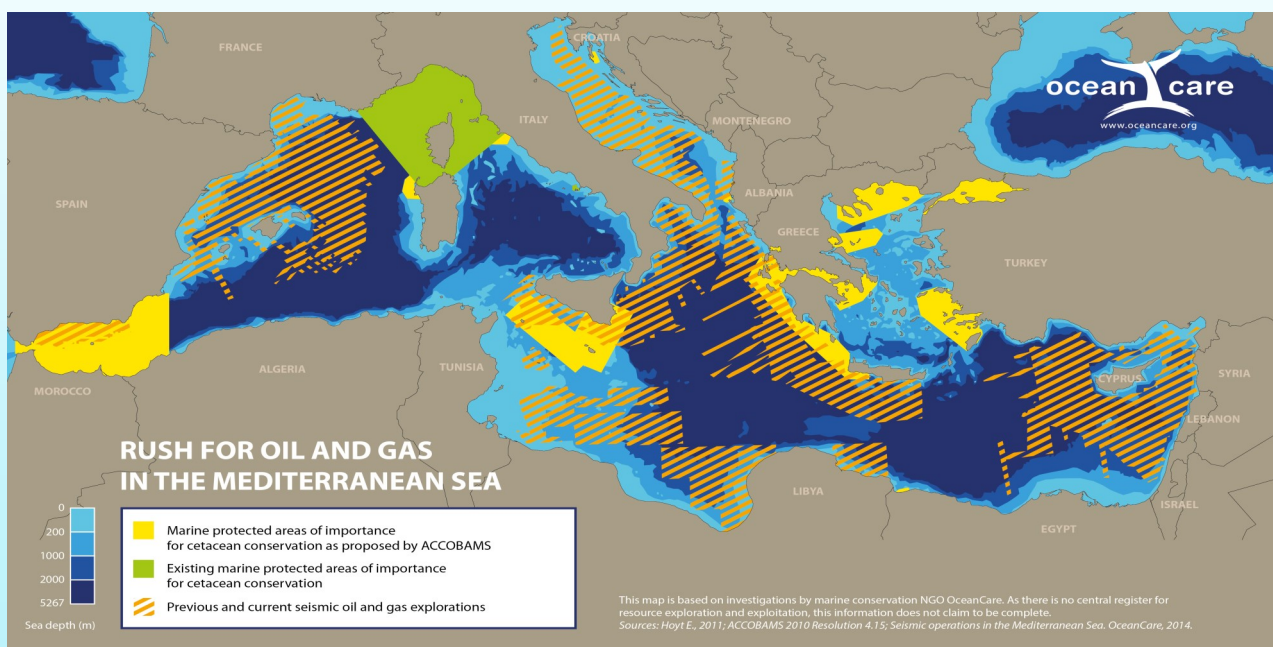
OceanCare welcomes the decision but stresses concerns over the unwillingness by the Croatian government to put a general halt on selling licenses for oil exploration activities by accepting that the process has been flawed from the beginning. Together with our partner organization NRDC and the Silent Oceans Coalition, OceanCare voiced critique since seismic activities were announced in summer 2013 to take place in Croatian waters. There were NO Environmental Impact Assessments undertaken prior to seismic activities where air guns direct intense explosions with up to 260 dB to the seabed searching for potential oil sources. Such

explosions which pose a serious risk to marine species and marine ecosystems were emitted almost any 12 to 15 seconds for several weeks and months covering a research area of 12,000 km². Complaints were submitted to governmental agencies as well as international fora, resulting in various investigations and protests launched.

Supported by increasing critique by coastal communities, national NGOs and the tourism industry, pressure increased significantly, but the Croatian government continued to stick to its plans and instructed a Strategic Impact Assessment to be undertaken but – without awaiting the results – assigned blocks for exploration activities to various bidding oil companies. Two of those companies being the OMV and Marathon Oil planning to consider drilling in several sectors, including deeper waters in the south which are habitat for the threatened beaked whales which are extremely vulnerable to underwater noise pollution. This move caused significant reactions by key Austrian conservation organizations, such as Greenpeace and Global 2000, as well as the Green Party calling on the OMV to immediately stop their engagement as it not only puts the environment, but also local tourism at risk. Campaigning activities, including public protests in Austria and Croatia increased constantly until this week's decision.

With the two companies stepping back from their original plans, but the Croatian government failing to ensure a process in line with international conservation provisions, the controversy will continue. Similar controversies take place in the Mediterranean Sea in almost all countries. Meanwhile governments prepare for the Climate change conference in Paris discussing measures to address global warming. How serious can such negotiations be taken when governments, and Croatia is just one of dozens, continue to focus on fossil fuel exploration and exploitation?

Article by Sigrid Lueber
OceanCare, ACCOBAMS Partner



"CITIZEN SCIENCE" PROJECT ON CETACEANS IN BULGARIA

Cetacean research in Bulgaria is not well developed. That is the main reason why data on cetaceans' abundance, distribution and preferred sites along Bulgarian coast is very scarce. Scientific papers on cetaceans published in Bulgaria in past 50 years are not more than 10-15. Collection of data on state of cetacean populations in the Black Sea is complex and expensive process (mainly due to high cost of vessel charter) that requires involvement of wide circle of stakeholders related to the sea. Contribution of volunteers could be substantial source for gathering baseline information.

Since beginning of June 2015, Green Balkans NGO has started implementation of project "Citizens' support for study of Black Sea cetaceans along Bulgarian coast". The project is part of national campaign for involvement of volunteers in National System for Monitoring Biodiversity coordinated by Environmental Executive Agency. The output of the campaign is attraction of volunteers to contribute to monitoring biodiversity thus expanding the national biodiversity database. Green Balkans NGO developed successful proposal dedicated to involvement of volunteers in study of cetaceans at Bulgarian Black Sea.



As a first step identification of interested volunteers from different stakeholder groups is made - students in natural sciences; yachtsmen; holiday boats operators; citizens living along the coast, and people interested in nature studies. Meetings and presentations are organized as well and online application form is developed and published. Poster and leaflet promoting the project and helping volunteers to identify three Black Sea species have been published and are being disseminated. For those expressing interest trainings are organized covering theoretical and practical aspects like species identification and study techniques most appropriate for volunteers:

collection of data on stranded cetaceans (species, sex, age identification, measurements); observation from coast; non-systematic vessel-based sightings recording and photo-identification of dolphins. Trainings are based on "Teaching module for conservation of cetaceans" developed by ACCOBAMS Secretariat. First trainings for volunteers have been made in the beginning of August including 15 volunteers. Positive sign for the outcome of the project is that first volunteer monitoring sessions are already a fact! Successful partnership has been forged with Save Koral beach NGO as a response to mass stranding of juvenile Black sea porpoises along Bulgarian coast reported by their volunteers in July and August that stirred public opinion. Position of official authorities was denial.

Other key element of the project is raising public awareness. Information campaign was conducted in the last week of August in cities Burgas and Varna and town of Sozopol (hosting largest yacht marina in Bulgaria). The program of the events was targeting wide audience with special emphasis on children. Bulgarian version of the children book "Our friends the Dolphins" by G. Bearzi kindly provided by ACCOBAMS Secretariat was printed and disseminated during the events. The most active children and their parents had the chance to become "scientists for a day" aboard yacht used by researcher of Green Balkans and to learn how to fill data forms, use GPS and observe cetaceans at sea.



ACCOBAMS CETACEANS DAY AT POMORIE

On Friday, 5 June Pomorie Lake visitor centre has hosted an event for celebrating the first edition of the ACCOBAMS Cetacean Day. The visitors had the chance to see the permanent exhibition "Cetaceans in the Black Sea" kept in the visitor centre. Special thematic presentation informed the participants with number of facts on the life of cetaceans with special emphasis was on the species found in the Black Sea. Further information on biology, threats and study techniques of these interesting marine mammals complemented the contents of the lecture.



Luigi Cagnolaro, Bruno Cozzi, Giuseppe Notarbartolo di Sciara, Michela Podestà "Fauna d'Italia. Mammalia IV - Cetacea". Calderini Editore, Bologna, 2015, pp. 376 with 105 illustrations (mostly in color) by Massimo Demma in the text. € 40-45.

After more than 8 years of continuous work, this long-awaited book on the cetaceans of the Mediterranean waters is finally out. The "Fauna d'Italia" series has the ambition to include all animal taxa of the Country, and the volume dedicated to whales and dolphins took the Authors some serious thinking, thorough documentation, and several subsequent versions of the text. Since the sea has no doors, defining an "Italian" Mediterranean area is impossible in biology. Therefore the book considered the whole Mediterranean basin as a potential area of interest. The language is Italian since the series, sponsored by the Italian Ministry of the Environment, is directed to the internal scientific and lay public.

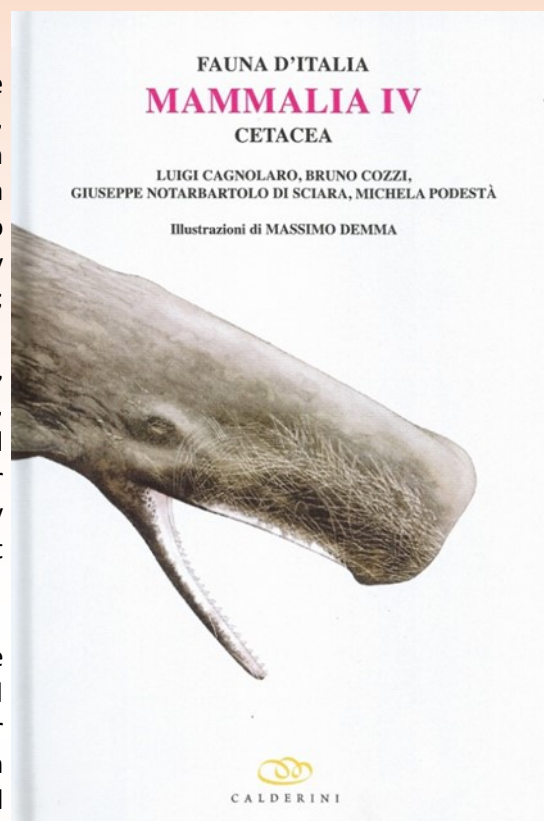
The book, with several beautiful illustrations, includes Chapters on the paleontological origin of cetaceans, and on their anatomy, physiology, parasitology, toxicology, pathology. A part is dedicated to the Italian collections and their relevance. The central part of the text contains a detailed description of the cetacean species of the basin, subdivided into species regularly encountered along the Italian coastlines; species regularly encountered in the Mediterranean but seldom found in Italian waters; species relatively rare in the Mediterranean waters.

The book is in fact a complete field-guide, with details on systematic, morphology, identification under field conditions, biology, feeding habits, ethology, acoustic, population structure, specific species pathology and threats, geographical distribution, conservation issues and other minor subdivision. The final 68 pages contain a vast bibliography, particularly precious for the many rather obscure national contributions of the past centuries.

The four curators of the volume¹ based their editorial efforts on the combined work of 21 Italian scientists active in the field, who contributed each according to his/her own specialty. The final outcome is a rather balanced and comprehensive book that will be important for specialists in the field. Of course the language is a limitation for non-Italians, and perhaps this book would encounter a larger success if it had been written in English. However fruition of the content is indeed not hard even for those not familiar with the language, given the many references to systematic Latin nomenclature, metrical values, and splendid illustrations.

The book is available through the major on-line distributors or directly from the Publisher. Prices vary slightly.

¹Unfortunately the first Author, Luigi Cagnolaro, father of modern Italian cetacean research, passed away a few months before the book was out.



UPCOMING CONFERENCES AND MEETINGS

30th ECS Conference, Madeira, 14-16 March 2016

1st International Workshop on "Conservation and research networking for the common dolphin (*Delphinus Delphis*) in the Mediterranean Sea" Ischia Island, Italy, 13-15 April 2016

8th Meeting of the Parties to ASCOBANS, Helsinki, Finland, 30 August-1 September 2016

6th Meeting of the Parties to ACCOBAMS, Monaco, 22-25 November 2016
(20th anniversary of the signature of the Agreement)



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FINS is published twice a year by the ACCOBAMS Permanent Secretariat.

The contents have been written by the FINS Editorial staff unless otherwise noted.

The views and opinions expressed herein are those of the authors and don't necessarily reflect those of the ACCOBAMS Permanent Secretariat.

The FINS logo was donated by Massimo Demma.

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