FINS

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on the move to 2010

All sectors of society must cooperate to conserve the marine environment

Threats to the conservation of wild species and natural habitats derive entirely from human action; therefore, if natural conservation is to be achieved, there is no alternative to modifying human activities so that their effects on the environment are sustainable. Success can be obtained only if the use of space and resources by humans is reined in within limits that allow the environment to steadily sustain such impacts in a healthy state. Since ecosystem needs are not negotiable, the only option available is to modify the human part of the equation. The good news is that not only environmental conservation *must* be assured, as prescribed by scores of universally accepted international and national legal instruments; it also *can* be assured. Political action is capable of shaping the habits of societies to ensure that at least portions of the planet manage to sustain human assaults without irreparable loss of species and habitats.

The sea, just like the land, needs all the protection from human encroachment it can get, and ACCOBAMS has an important role to play in this effort. The Mediterranean and Black seas are semi-enclosed basins subject to particularly intense human pressures, and yet they still host sizeable populations of several cetacean species. Protecting cetaceans carries a

Two juvenile bottlenose dolphins frolic in the waters of Lampedusa, in the Strait of Sicily. Fast economic growth on the island, mainly due to tourism, is a source of concern for the conservation of the resident dolphin community (photograph taken on 16 Jan. 2007 by Gabriella La Manna/CTS).

significance that goes well beyond these mammals' intrinsic value, which is already high in its own right. As umbrella species, cetaceans help to protect other components of the ecosystem they live in; as flagship species, their conservation status has more leverage on the public opinion than that of less charismatic critters. Thus, cetacean survival can be taken as a symbol of the survival of the sea, and by consequence any effort to conserve cetaceans becomes a symbol of our commitment to conserve the sea. Quite tellingly, about ten years ago the countries bordering on the Mediterranean and Black seas (with few exceptions) have resolved to protect the region's cetaceans, and that is how ACCOBAMS came to life.

However, it would be naïve to think that cetacean conservation in the Mediterranean and Black seas is assured simply by having the relevant nations agreeing on the imperative to conserve these animals. Protecting the environment, and cetaceans in particular, often conflicts with well-established human activities – e.g., fisheries, shipping, military operations, mineral extraction – and the many users of the sea must be available to modify their ways somewhat if results are to be obtained. Unfortunately such availability is scarce if not absent, at least at the start, and needs to be induced gradually through a combination of political carrots and political sticks.

So far, political action was seen to be lacking the necessary boldness to effectively balance environmental values – to the immense benefit of communities at large – against conflicting private interests. Thus, damaging fishing activities go on unchallenged (even when blatantly illegal, as in the case of driftnets in Italy), harmful military exercises freely occur within the critical habitat of vulnerable species, and formally established protected areas are left without management. The crippling factor against what would seem the only logical course of action – protect the environment to the benefit of the wider community and future generations – is time. Our societies are trapped in a system in which political survival demands short-term rewards, which makes it nearly impossible if not suicidal for decision makers to favour distant conservation benefits – as fundamentally important as these may be – by imposing opportunity costs on a portion of society, such as industry or the military, smaller than the total but often quite vocal and politically influent.

Luckily, governmental and political institutions are not alone in the struggle to conserve the marine environment. In democratic nations civil society, while still delegating legislative and executive decisions to the appropriate institutional apparatus, retains significant power to affect and strengthen marine conservation by informing and influencing the public opinion, advancing relevant scientific knowledge, providing specialised services to the collectivity, and even acting as watchdogs when needed.

A measure of the potential of this "alternate" governance system – bottom-up, as opposed to top-down - for the conservation of the Mediterranean sea is provided by the extraordinary number and variety of NGOs active in the region (as an example, the "Megafauna Contingent" in www.mediterraneanconservation.org lists more than 50 bodies). These organisations are concerned with many different aspects of marine conservation: some, typically species-oriented, specialise in cetaceans; others deal with birds,

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turtles, sharks or other taxa. Many can be defined as advocacy-oriented NGOs, while others have been responsible for the collection and professional dissemination of the most authoritative scientific knowledge available today on the ecology and conservation status of many Mediterranean species. Such a wide variety of organisations obviously harbours a range of different souls and ideals, and disagreement can occasionally occur within their ranks, particularly over divisive ethical issues. Nevertheless, as a whole the NGO community can create a powerful force and provide significant support to governments in their conservation assignments, particularly when NGOs are driven by a genuine determination to protect the animals and the environment (as opposed to other interests).

This potential was clearly recognised by the national delegations that negotiated and formulated ACCOBAMS a decade ago, when they provided for the formal conferral of partnership status to relevant conservation and research organisations, most of which are NGOs. Today, ACCOBAMS avails itself of the cooperation of over 30 bodies active in regional conservation issues (listed in the Agreement's website under www.accobams.org/2006.php/pages/show/13).

On the whole, NGOs are a huge asset for conservation, and for ACCOBAMS in particular. Of course NGOs cannot substitute themselves to the actions of the governing institutions; however they can offer them a powerful boost. For this to happen, a cooperative approach between governments and NGOs must be favoured, while antagonism between them should be avoided at all costs. Marine conservation presents society with huge challenges, and only by joining all the available forces – top-down and bottom-up – we can have hope for success.

The Pelagian Islands bottlenose dolphin action plan

by Gabriella La Manna

In September 2008, after two years of hard bureaucratic work and involvement of Lampedusa's community and stakeholders, a Bottlenose Dolphin Action Plan (also known as APTt) was finally adopted by the Pelagie Islands Marine Protected Area, the main party responsible for monitoring its actual implementation.

The APTt is the result of a process which began in 2000 with the creation by the CTS-Nature Conservation Division of a "Lampedusa Dolphin Research Centre", and enables the implementation of a permanent monitoring programme of the bottlenose dolphins residing in the area. Monitoring was initially conducted in the framework of the LIFE Project "Reduction of the impact of human activities on the Loggerhead Sea Turtle and Bottlenose Dolphin and their conservation in Sicily" (NAT/IT/000163), carried out from 2003 to 2007. The long-term study promoted by the LIFE Project in Lampedusa aimed at identifying an appropriate bottlenose dolphin conservation policy, taking into account both the needs of the species and local economic and social issues. These involved the fishing community, whose activities are at times hampered by the presence of the dolphins, as well as a substantial portion of the island's community which derives its income solely from seasonal tourist activities.

Given the above, the APTt was based on the following assumptions:

a) recognising that our understanding of cetacean biology and population dynamics will remain very limited for a long time yet, management actions will have to be implemented immediately on the basis of the available knowledge as well as on precaution;

b) although bottlenose dolphin conservation activities are being discussed at the Mediterranean level, their implementation is still at the planning stage. The impetus for the preparation of this document has derived from the invitation to promote small-scale projects that can generate locally significant results in the short-term;

c) considering that the conservation of a species cannot be decoupled from the conservation of its

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habitat, the APTt contains actions strictly linked to bottlenose dolphin conservation as well as interventions aimed at safeguarding the marine ecosystem and its resources and services.

The main components of the APTt include: 1) an analysis of the available information on population biology, distribution and abundance of the local bottlenose dolphins; 2) an investigation of the concerned ecosystem properties and of the human contest; 3) the identification of the main threats to the conservation of the species; 4) the definition of the objectives for safeguarding the population, and the identification of the most effective actions to meet such objectives; 5) the elaboration of a monitoring plan to control management effectiveness.

The main intent of the APTt is to prevent the decline of bottlenose dolphins in the area, which are vulnerable due to intense competition with fisheries exploiting certain resources, and to limit disturbance from human activities to levels that will not compromise the dolphins' presence and distribution in the area, particularly in the zones identified as most critical.

The APTt was drafted with contributions from: the Department of Nature Protection of the Ministry for the Environment and Land and Sea Protection, the Pelagie Islands Marine Protected Area (Dr. Giuseppe Sorrentino), the Nature Conservation Division of the CTS – (Dr. Simona Clò and Dr. Irene Galante), the CTS Lampedusa Dolphin Research Centre (Dr. Gabriella La Manna and Dr. Federica Celoni), the Department of Animal and Human Biology of the University of Turin (Prof. Emilio Balletto, Prof. Cristina Giacoma and Dr. Marta Azzolin), Nauta – scientific research and consulting (Dr. Michele Manghi), Telespazio and AGCI Agrital – General association of Italian cooperatives, agro, food and fisheries sector (Dr. Giovanni Basciano).

Captive dolphins on the increase in Turkey

by Özgür Keşapli Didrickson

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Since 1995 she was involved in education, research and conservation work of NGOs.

In 2005 joined SAD-DEMAG to help raise public awareness on cetacean issues and help increase local capacity.

Since 2008 she coordinates efforts on cetacean conservation issues within the SAD community and among other national and international NGOs and the public.

As the need for greater efforts for cetacean conservation is increasingly highlighted in publications throughout the world, there seems to be a lack of such concerns about the cetaceans in the waters of Turkey and elsewhere. At the end of 2006, with permission from the Turkish Ministry of Agriculture, around 30 bottlenose dolphins were captured from the "vulnerable" Mediterranean population, in spite of the lack of sound scientific research needed to prove that captures would not be detrimental to the population(s) targeted. Later, in February 2008, twelve bottlenose dolphins captured in a Japanese "drive hunt" were exported to Turkey, again without proof of a non-detriment finding having been made. All these dolphins and around a dozen others from the pioneer dolphinaria in Turkey are used for shows, swim-with and DAT (Dolphin-Assisted Therapy) programmes. In the last few years there has been a very rapid increase in number of the facilities holding cetaceans in captivity in Turkey.

Underwater Research Society's Marine Mammal Research Group (SAD-DEMAG), a Turkish NGO, has been working to address the captivity of cetaceans in Turkey since 2005, but it wasn't before February 2007 that the group's first anti-captivity article was published. Before then, as a result of the way the captivity industry is often promoted in a positive light, it was difficult to speak out loud and strong about the threat to wild populations of an ever-increasing number of facilities. Editors of popular science magazines argued " Why are you so negative about such places? Perhaps dolphinaria are good opportunities to make our kids meet with wild dolphins". Another issue was the Turkish authorities' determination to justify captivity and captures for DAT, and it took a while for universities and wildlife conservation NGOs to come on board, as they perhaps considered the issues belonging to the agenda of animal welfare groups instead.

These different misconceptions about captivity issues actually unfold some core problems about cetacean conservation in Turkey. Turkish society in general is largely unaware of the richness of cetacean species inhabiting the nation's waters, their abundance and distribution, the many threats that they face and how such threats are linked together. For example, many parents naively want to take their kids to dolphinaria to meet these graceful animals. Perhaps a fast and

impatient modern life style makes even families in Istanbul think similarly and visit the city's facilities although dolphins are a common sight from a routine ferry ride in this city. As SAD-DEMAG, we acknowledge how a lack of awareness and naive love for these animals has led to the popularity of dolphinaria. Realising this, in turn, enabled us to place working against captures and captivity within our greater objective: to enhance the awareness of cetacean conservation in our waters. Therefore, SAD-DEMAG has placed the greatest emphasis in all its publications and work on including captivity as one of the many problems that cetaceans in our waters face.

Since 2005, we have been in close collaboration with the Whale and Dolphin Conservation Society (WDCS), whose Captivity Programme Manager, Cathy Williamson, has provided the guidance and support needed to continue working on severely overlooked captivity issues in Turkey. With support from WDCS we visited all facilities that were in operation at the end of 2006 and compiled a report, revealing the attitudes of the people visiting them and the problems associated with the lack of adequate regulations. However, our information soon became outdated, following wild captures and a rapid expansion in the number of facilities.

Interestingly, one good thing resulted from the wild capture of bottlenose dolphins in Turkish waters. It immediately unveiled the otherwise vague link between seeing dolphins in captivity and wild captures. Our concerns about the threat of the captivity industry on wild cetaceans were shared by Greenpeace's Mediterranean Office and we made a joint press release in March 2007, entitled "Wild dolphin captures in our waters! Can dolphins that are stolen from families and sea heal our kids?" during which we revealed violations of both the Bern and Barcelona Conventions. It the resulting coverage in many newspapers, invites from radio and TV media to talk about the issue and magazine articles throughout 2007, we argued that kids may be receiving the wrong message about dolphins and nature by visiting dolphinaria, and that both people and dolphins were being exploited by the questionable scientific claims associated with DAT (see FINS 2(2):3-4, 3(1):10, 3(2):22, 4(1):10).

In spite of this increasing interest in our concerns, we were shocked in February 2008 to learn about an import of bottlenose dolphins captured in a drive-hunt in Japan. We again made a press release in February entitled

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Mediterranean wild-caught bottlenose dolphin in a sea pen facility in Bodrum, south-western Turkey (SAD-DEMAG archive)

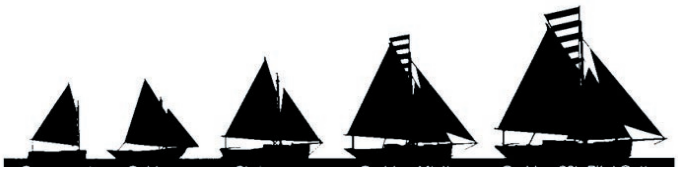
" Turkey supports Japanese bloody dolphin slaughter". Since Turkish society was already disturbed about drive hunts in Japan, media were again very interested in our press release. We also wrote letters and met with the authorities, to try to understand how permission for the import could have been given. The correspondence with the responsible Ministries exposed a worrying level of faith in Japan's making of a non-detriment finding, although we believe none was provided. DAT again was referred to as a justification.

With nearly all the facilities in Turkey offering DAT, this needs to be a focus for our conservation work. Some facilities offering DAT are bold enough to claim treatments for 30 or so sicknesses, a situation which should warrant inspection by the Health Ministry. As biologists, DAT is not an issue we can deal with alone. Over the years we have contacted several human health experts, including a published professor on autism. We found out that none of these scientists believes in DAT. We are now planning to further our efforts to unveil the true nature of facilities offering DAT.

One of SAD-DEMAG's achievements was the establishment of a Marine Mammal Conservation and Discussion Group, the first of its kind in Turkey. This email group counts 155 members to date, including university students with a keen interest in cetacean research and conservation, and engages in discussions about global cetacean issues, cetacean research and conservation. We have also held face-to-face meetings in Bodrum and İzmir, and in February 2008 organised a seminar in Dokuz Eylül University in İzmir, where Cathy Williamson from WDCS was the guest speaker. Talks were also given by Harun Güçlüsoy on cetaceans in Turkish waters and by myself on the objectives and activities of SAD-DEMAG. The seminar was well-attended and had a great interactive atmosphere. It showed once again the great potential in university students in Turkey. They are eagerly waiting to attend such activities and be involved in cetacean research and conservation.

SAD-DEMAG is still a volunteer group with limited manpower. Being fully engaged in increasing capacity of others and of ourselves in these circumstances, it was not possible to come as far as we could have wished for in our efforts towards cetacean conservation in Turkey. The fight against captivity was particularly difficult as a result of its rapid expansion in Turkey. Nevertheless we are eagerly discussing plans for the future, including activities to raise awareness among the general public (including fishermen) and support increasing the capacity of local scientists. Our collaboration with WDCS continues and we are currently planning for 2009 an educational project targeting school kids. We are also discussing possibilities to start conducting sound research in our waters to increase our knowledge of distribution and abundance of our cetaceans.

Despite calls from several institutions and NGOs, unfortunately Turkey is still not a Party to ACCOBAMS. Sadly, the wild captures that took place in Turkey, a country which has ratified the Bern Convention, showed that, in spite of it being a Party to a conservation agreement, this does not guarantee the conservation of dolphins. When we witness the ease with which such agreements seem to be violated, it seems all the more important to increase the number and strength of voluntary guardians for these special animals. SAD-DEMAG hopes that its increasing relationship with ACCOBAMS might increase our capacity to work towards our mutual goal for cetacean conservation in troubled waters.



News from the Secretariat

Accessions

As of 1 December 2007, following ratification by Algeria, the number of State Parties to the Agreement has risen to 21.

On 11 April 2008 the Secretariat was informed by the Minister of Tourism and Environment of Montenegro of the intention of that country to launch the preparatory activities for the ratification of the Agreement, arguing that the integration of the Agreement in Montenegro's national legal framework could significantly improve its environmental policy. At the same time, the implementation of the Agreement would provide support to national authorities in their efforts aimed at fulfilling the requirements stemming from the Process of Stabilization and Association with the European Union. As FINS goes to press, the news have arrived that Monenegro will be the 22nd Party on 1 August 2009. Senior Advisor Ms. Ana Pajevic was appointed by the Ministry to coordinate ACCOBAMS activities at the national level.

Cooperation with other organisations

IUCN. Considering that IUCN had expressed interest in being involved in the ship strikes issue, addressed at the moment by a common working group ACCOBAMS-Pelagos, it was agreed to invite IUCN to join the existing working group. A proposal based on the priorities described in the document SC5/Doc24 will be drafted by the ACCOBAMS Ship Strikes Steering Group and circulated to the Pelagos working group for comments. After comments are addressed and incorporated, the proposal will be circulated within ACCOBAMS, Pelagos and IUCN to look for potential funding sources.

Following the conclusions of the workshop organised in Tunis (6-8 December 2007) by the IUCN Centre for Mediterranean Cooperation, a second workshop was organised in Rabat in collaboration between ACCOBAMS, IUCN, RAC/SPA and the Mohammed V Souissi University. The main theme of this workshop was the amelioration of the governance in the Mediterranean. The need to reinforce the regional and sub-regional cooperation between the existing international organisations was underlined as well as the Mediterranean Action Plan and its regional activity centres, the GFCM, and the CMS/ACCOBAMS Agreement. A motion as resulted from this workshop was presented to the IUCN Forum in Barcelona.

Pelagos. The collaboration between ACCOBAMS and Pelagos addressed several matters. A) Ship strikes by large whales in the Agreement area (REPCET). The 5th Scientific Committee Meeting welcomed the REPCET initiative and encouraged its extension within Pelagos to Italy as well as beyond the Pelagos area. B) Commercial whale watching activities in the Agreement area. According to Resolution 3.23, relevant to the preparation of a booklet for whale-watching operators ("Livret à destination des opérateurs de whale-watching") also helping in the definition of an eco-label and an appropriate formation for operators, the collaboration between ACCOBAMS and the Pelagos Sanctuary is ongoing. A draft eco-label, based on the guidelines annexed to this resolution, will be presented at the next Meeting of the ACCOBAMS Parties (November 2010). C) ACCOBAMS-CIESM-Pelagos joint sighting cetacean database. According to Resolution 3.21, which recognised the importance of an ACCOBAMS–CIESM–Pelagos joint sighting database as a tool for cetacean conservation in the ACCOBAMS area, it was agreed on the following general aim: "supporting the conservation and scientific goals of the participating organisations by providing a readily accessible body of knowledge, collected across time (past, present and future), concerning the occurrence, distribution, abundance and habitat use of cetaceans in the Mediterranean, Black Seas and contiguous Atlantic".

Meeting of the Bureau

The 5th Meeting of the Bureau of ACCOBAMS was convened in Monaco on the premises of the Secretariat on 15-16 December 2008. The meeting was attended by the Chair, Ms Ana Strbenac (Croatia); Mr Abderraouf Ben Moussa (Morocco) (substitute for Mr Abdelouahed Benabbou); Mr. Volodymyr Domashlinets (Ukraine); Mr. Giuseppe Notarbartolo di Sciara, Chair of the Scientific Committee of ACCOBAMS; and the Secretariat. Items presented and discussed during the meeting included: a report by the Secretariat about the work since MoP3 and on progress in the new memberships to the Agreement; budgetary matters and status of contributions; projects submitted for funding; a progress report on the activities of the Scientific Committee presented by the Committee's Chair; new requests for ACCOBAMS' partnerships; follow-up actions from MoP3, and the promotion of the Agreement and collaboration with other organisations.

News from the Scientific Committee

The Scientific Committee of ACCOBAMS had its 5th Meeting in Castel Gandolfo (Rome), between 17 and 19 April 2008. The full report of the meeting can be found on the ACCOBAMS website:

www.accobams.org/2006.php/meetings/show/6

As usual, most of the discussion centred of the implementation of the work programme of the Committee. Topics discussed included: population and distribution studies relevant to conservation, species-specific conservation actions, captures of cetaceans in the Agreement area, marine protected areas, anthropogenic noise, stranding networks and tissue banks, interactions with fisheries, ship strikes, climate change, emergency task forces, solid debris, whale watching, the granting of exceptions, and amendments to cetacean conservation-related legal texts (e.g., CMS and the EU Habitats Directive).

Goal of the Scientific Committee work during the intersessional period is to make progress in the various items in preparation of its 6th Meeting, which is being planned for December 2009. That Meeting will then evaluate the progress made and formulate recommendations for the 4th Meeting of the Contracting Parties (Monaco, Dec. 2010).

Meetings relevant to cetacean conservation in the ACCOBAMS area

Workshop on the ACCOBAMS Survey Initiative

The Workshop was held at the *Centre de Congrès Auditorium Rainier III,* Monaco, from 15-17 May 2008. The origins of this initiative came in a recommendation made by the ACCOBAMS Scientific Committee in 2003 that complemented an earlier proposal for a basin-wide survey for sperm whales. Resolutions were then adopted by the ACCOBAMS Parties (cf. the most recent Resolution 3.15). It was agreed that amongst the highest priorities for research was to 'obtain baseline population estimates and distributional information of cetaceans within the ACCOBAMS area as soon as possible (including information on stock structure)'. Without such information, and a suitable monitoring programme, it is impossible to inter alia determine whether ACCOBAMS is meeting its conservation objectives. Such information is essential for the assessment of risk, the determination of appropriate mitigation measures and the associated determination of priority actions. A number of additional actions related to management tools, capacity building and public awareness have also been developed and incorporated into the draft specification document.

Following the discussions, a Steering Group nominated by the Scientific Committee will work on a final version of the specification document, taking account input from the Workshop and from the ACCOBAMS Survey Initiative National Information Form. The Steering Group also agreed to draft a short version of the proposal in booklet form (with an accompanying PowerPoint presentation) to present to policy makers and potential funders. All countries agreed that when the booklet is available (in English and French), they will translate it into their own language for internal distribution. Finally, the Workshop agreed that Letters of Endorsement from National Authorities would be valuable, as would indications of willingness to be a partner to the project.

International Workshop on bycatch in the ACCOBAMS Area (ByCBAMS)

Considering the interactions between the fishing sector and the conservation of cetaceans, and according to the recommendations of the Parties, the Secretariat established close coordination with the Secretariat of GFCM and developed a series of collaboration initiatives.

In 2008, the Secretariat attended the relevant meetings of GFCM and convened, jointly with the Secretariat of GFCM, two back-to-back workshops on the issue of bycatch. The work-

shops were organized in the premises of the FAO in Rome from 15 to 18 September 2008 and were attended by 29 Experts from 10 countries, as well as from the GFCM Secretariat, the ACCOBAMS Secretariat and NGOs.

During these workshops the experts assessed the status of bycatch based on national reports. The assessment included the evaluation of existing information on endangered species mortality induced by fishing. The efficiency of the existing techniques and devices for avoiding or reducing the incidental catches of endangered species was also discussed during the workshops.

During the workshops, the experts recommended to promote the collection of data about bycatch of endangered species using a standard methodology and format. They recommended using the format prepared within the framework of the BYCBAMS Project and adapting it to cover other threatened species. They also recommended to further develop the GFCM Information System to include detailed information on bycatch.

These recommendations will be submitted to the GFCM, following their review by the Scientific Advisory Committee.

Summit on the marine environment, Heraklion, Greece, 9-11 December 2009

Representatives of fisheries, local and regional authorities in Crete met conservation bodies in Greece to discuss measures to protect the marine environment. The Secretariat of the Convention on Migratory Species (CMS), which participated in the Conference together with the Secretariat of ACCOBAMS, had facilitated the meeting as a further and final step forward in the Year of the Dolphin. The summit was organised by *Essence Consulting* (a local company), the Ministry of Foreign Affairs as well as the Port and Municipality of Heraklion. WDCS, as found-

The Heraklion monument to the dolphins on the inauguration day

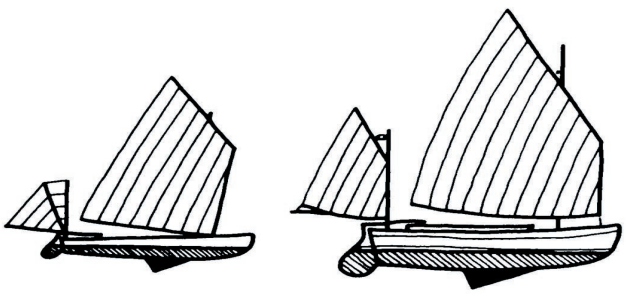
ing partner of the Year of the Dolphin, Ocean Care and the Chair of the ACCOBAMS Scientific Committee also participated in the summit.

In a welcome message sent to the meeting, CMS Executive Secretary Robert Hepworth wrote: "CMS supports the implementation of sustainable fisheries regulations that reconcile the protection of the marine ecosystems in Greece with the livelihoods of local communities. We need to halt the decline of these marine mammals so typical of Greece such as the common dolphin and the Mediterranean monk seal before they become extinct."

Greece with its valuable marine biodiversity can be considered as a very important habitat for marine mammals in the ACCOBAMS agreement area. ACCOBAMS Executive Secretary Marie-Christine Grillo Compulsione said: "Participation of local communities is essential to implement conservation measures. Their collaboration with ACCOBAMS will guarantee the achievement of our common objectives." However, the once abundant common dolphins have been driven to the brink of extinction by overfishing and the subsequent depletion of prey. Their numbers have severely decreased in the last ten years. Conference participants agreed on first steps to take urgent measures to stop the further degradation of marine ecosystems caused by overfishing in Greek waters. Draft recommendations to conserve marine biodiversity, in particular common dolphins and their habitat, maintain viable fish stocks and protect spawning grounds will be submitted to the Ministry of Foreign Affairs for implementation.

The president of the professional coastal fishermen's association called for a ban on unsustainable fishing practices such as trawlers and purse seiners. He emphasized that better legal enforcement of existing EU regulations could stop further damage. Juvenile fish are caught before they reach maturity. The current practice in Greece prevents the heavily depleted fish stocks from recovering. Industrial fisheries operate 290 trawlers and 300 purse seiners compared to 17000 boats belonging to artisanal fisheries. Small scale fisheries' contribution amount to 40 percent of the total fish production in Greece. Research is being undertaken to find the main causes of mortality among dolphins. In a scientific round table, ACCOBAMS provided advice regarding the establishment of a stranding network for whales and dolphins. Scientists and NGOs recommended that compliance with existing law such as the EU Habitats Directive could reverse the impact of unsustainable fisheries. Comprehensive research and monitoring to generate population estimates and extend the survey to the entire Mediterranean basin needs to be supported by authorities, ship owners, tourists and local communities. The fishermen's organisations present at the meeting and officials from the Port of Heraklion agreed to support this initiative by collecting data, whereas ACCOBAMS will provide the framework that is being supported by 21 states.

The Municipality of Heraklion inaugurated a fountain with a sculpture of three dolphins (see photo on previous page) as a permanent legacy of the Year of the Dolphin and as a symbol of its firm commitment towards protecting marine mammals and their fragile ecosystems.



Workshop "Promote and develop MPAs in the Mediterranean" Tunis 1-2 March 2008.

The workshop, organised by the RAC/SPA, aimed at defining the elements of a programme of work on marine and coastal protected areas in the Mediterranean region. Four elements were identified:

a) to assess the representativeness and effectiveness of the existing Mediterranean network of marine and coastal protected areas;

b) to make the Mediterranean network of marine and coastal protected areas more comprehensive and more representatives of the ecological features of the region;

c) to improve the management of the Mediterranean marine and coastal protected areas;

d) to strengthen the protected area governance systems and further adapt them to national and regional contexts.

The Secretariat presented the map of marine protected areas for cetaceans adopted by the ACCOBAMS Parties and proposed to collaborate with the main actors of the programme (IUCN, RAC/SPA, WWF, Medpo, France and MEDPAN).

Symposium "Strategies for Monitoring Marine Mammal Populations", La Rochelle, 21-23 November 2008.

In most European countries, marine mammals are protected under national, European and international legal mechanisms (including national environmental laws, Habitat Directive, Common Fishery Policy, regional agreements such as ASCOBANS and ACCOBAMS). However, indicators proposed to assess the state of marine mammal populations are only defined in very general terms, with essentially two criteria that are fairly easy to express but difficult to document: abundance and distribution. Approaches used by European countries to describe abundance and distribution include dedicated surveys, acoustic monitoring, use of platforms of opportunity and stranding schemes. Each of these approaches has a different usefulness in monitoring, but their values have rarely been assessed. As a consequence, in order to develop strategies for monitoring marine mammal populations in Europe, it is necessary to compare available methodologies and assess the performance of the many possible indicators both in terms of their capacity to detect changes in marine mammal populations sufficiently early and in terms of their cost-effectiveness.

The "state of a marine mammal populations" covers a number of concepts and is often used without a clear definition. Concepts include conservation, demographic and health statuses. Conservation status is usually based on comparisons of current abundance and distribution data with a supposedly undisturbed initial situation where populations were in equilibrium with their habitats and resources. This initial undisturbed situation is generally difficult to obtain in areas where there is a long history of interactions between anthropogenic activities and marine mammal populations. Assessing the demographic status aims to describe changes in vital rates, i.e. fecundity and mortality, which may lead to future changes in abundance and distribution. Assessing these parameters is essential to conduct modeling exercises of population trajectories under various management options. The health status describes the main pathologies and causes of death, including nutritional state and contamination by pollutants. These processes determine reproduction and survival of individuals and their proper understanding helps in identifying relevant mitigation or management actions.

Conservation status is the ultimate criteria allowing one to state that a population has changed. However, demographic and health statuses of a population are also of considerable use for management purposes as they permit on-going processes to be identified before they have fully expressed their effects on population abundance and distribution. This allows relevant management decisions to be taken earlier than if we had to demonstrate that population size or distribution have significantly changed prior to taking any decision. Early decision-making is particularly crucial for marine mammals since, because of their low fecundity, they recover slowly from adverse conditions.

Participants to the symposium included officers responsible for monitoring and conservation policies for marine mammal populations and habitats at national, European and international levels, research scientists in biology and conservation of marine mammals and field biologists who collect, compile or synthesize relevant monitoring data. Facilitating contacts between these different spheres was integral part of the goals of the symposium. The symposium was

organised in 4 distinct sessions and comprised a total of 35 oral presentations, 21 poster presentations and 2 workshops. The society demand for monitoring marine mammal population was examined through its expression in laws and regulations at national, EU and international levels (Session 1). Then, the variety of current practices used in the aim of assessing population status or detecting changes was explored (Session 2). Various attempts made to assess the performance of several monitoring practices were presented and discussed (Session 3). Finally, the two workshops concluded the symposium; one focused on management and quality control in field observer networks and the other concentrated on establishing general guidelines for establishing a strategy for monitoring marine mammal populations (Session 4).

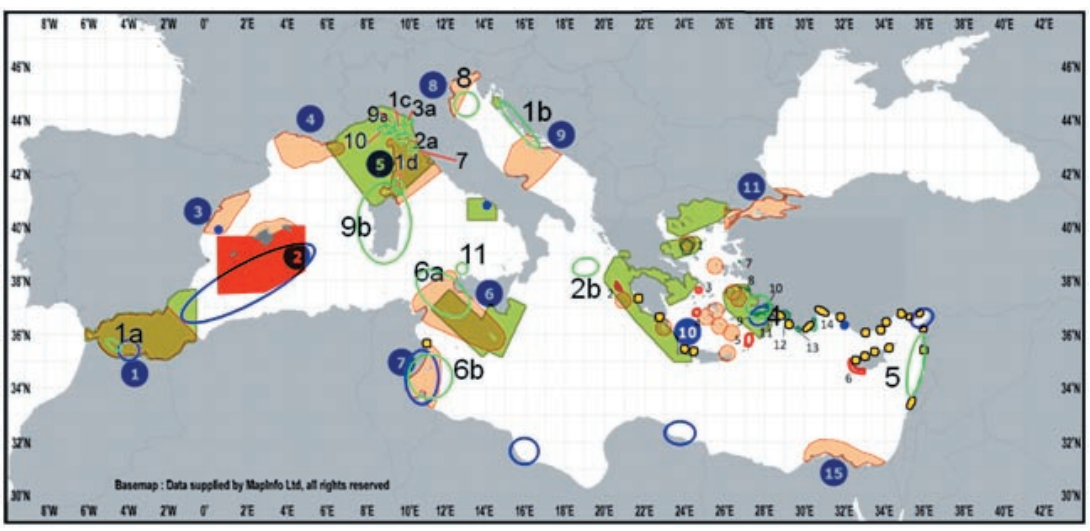
The symposium was hosted by Université de La Rochelle and co-hosted by Agence des Aires Marines Protégées and Ministère de l'Ecologie, l'Energie, le Développement Durable et l'Aménagement du Territoire. It was sponsored by Région Poitou-Charentes, Centre National de la Recherche Scientifique, Ministère de la Culture et de la Communication, Ville de La Rochelle, Conseil Général de la Charente Maritime. It was supported by ASCOBANS and ACCOBAMS, the two regional agreements of the Convention on Migratory Species dealing with European cetaceans. Simultaneous translation was offered throughout the meeting to facilitate communication of all participants.

Giuseppe Notarbartolo di Sciara, Chair of the Scientific Committee of ACCOBAMS, was invited to open the first session of the symposium presenting his views on "Society demands in monitoring marine mammal populations". He pointed out that societal demands concerning the conservation of the marine environment have emerged during the recent decades. In parallel there also was a substantive evolution of the correspondent legislative framework. In spite of clear societal demands and a wealth of legal instruments, serious conservation problems remain to be addressed (military sonars, driftnets, decline of common dolphins, difficulty in assuring the conservation of monk seals). It is difficult to address conflicts for several reasons: problems derive from human activities, involving economic production and social pressures; concern for nature has always mattered less, also within governments (e.g., fisheries vs. environment); environmental values are still outside of the equation: an immediate gain to limited interest groups usually matters more than a greater loss for society as a whole; lack of scientific certainties are still used as an excuse for inaction. The symposium was also an occasion for reviewing marine mammal monitoring activities within the ACCOBAMS framework.

Workshop: "Species information for designing and managing marine protected areas: improving access and integration" at the IUCN World Conservation Congress, Barcelona, 6-11 October 2008.

Erich Hoyt (WDCS and consultant to ACCOBAMS on MPA-related issues) and Giuseppe Notarbartolo di Sciara presented the distribution and overlap of critical habitats of Mediterranean top marine predators, based on contributions from the Scientific Committee and a number of experts of other taxa from the area (Carles Carboneras for birds; Spyros Kotomatas for monk seals; Paolo Casale for turtles; Fabrizio Serena for sharks; and Raul Garcia for bluefin tuna).

MPAs may be considered and designated to achieve a number of different conservation



Cetaceans, monk seal, seabirds, turtles, sharks and bluefin tuna critical habitats, as presented at IUCN World Conservation Congress, Barcelona.

Cetaceans: light green polygons;
monk seal: dark green small circles (established areas) and red small circles (areas to be established);
birds: pink areas;
turtles: yellow circles (nesting beaches) and blue circles (feeding areas);
sharks: light green circles (nursery areas of various species);
bluefin tuna: red polygon.

goals, and these include protecting biodiversity in ecosystems as well as protecting specific threatened species. However, it is impossible to establish MPAs to protect every single component of the biodiversity, and even protecting every single threatened species of a given ecosystem may be a very tough feat. Therefore, a selection of species (e.g., umbrella species) must be envisaged that will allow maximum conservation effectiveness. Ideally, criteria should be defined to show how the place-based protection of the critical habitat of selected species may best enhance the conservation status of a given area.

The Mediterranean Sea was selected as a case study to bring together specialists of apex marine species from sea birds to whales, and to examine overlapping critical habitat identification and MPA proposals. With this exercise a first attempt was made to facilitate the process whereby people from different groups talk to each other and work together towards the common goal of protecting an ecosystem containing different elements of its biodiversity, and to verify to what extent the place-based protection of different flagship- or umbrella-species groups may support the protection of other species groups, or of marine biodiversity in general.

As a side-event to the **9th Conference of Parties of the Convention on Migratory Species**, which took place in Rome in December 2008, ACCOBAMS presented a summary of activities related to the problem of by-catch of cetaceans in the Agreement area.

In the occasion of the last Annual Meeting of the European Cetacean Society (Istanbul, March 2009), a workshop was organised on **"Beaked whales and active sonar: transiting from research to mitigation"** by Sarah Dolman (WDCS and Aberdeen University, Scotland),

ECS RESOLUTION ON THE NEED TO REGULATE SONAR MITIGATION

Adopted in Istanbul, Turkey on 4th March 2009.

There is sufficient evidence that active sonar exposure even at relatively low levels can have significant impacts on some cetacean species.

Beaked whales in particular are vulnerable to serious impacts including mortality from exposure to mid-frequency active sonar (1-10 kHz). Here we reaffirm the ECS 2003 Statement of Concern on Marine Mammals and Sound.

The development of knowledge since this ECS 2003 resolution was adopted underscores the need for urgent action on sonar mitigation. Current mitigation efforts are generally untested and insufficient for beaked whales. Recently available data includes further evidence on the causal link between sonar and beaked whale mass-strandings. This includes spatio-temporal coincidence between naval exercises and mortalities and a consistent pathology on necropsied whales, pointing to an acoustic source as primary cause of death/stranding. In addition, abundance estimations of local populations of beaked whales indicate that populations are small and that the reproductive rate of some beaked whales may be low. Small, sometimes isolated, populations with reduced recruitment rate are vulnerable to human impacts as they may have a limited capability to recover after trauma.

This means that there is the potential for unsustainable impacts on beaked whales to occur in relatively short time periods. The advances in our understanding of behavioural reactions of beaked whales to sonar indicate that required mitigation ranges are larger than practical mitigation ranges in many cases.

In consequence, regulation of standardised mitigation protocols, including practical measures recently available, becomes a priority. Mitigation should be applied by all countries using military sonar in the three stages of sonar exercises: before (the planning phase), during and after sonar use. As sonar may have transboundary effects, mitigation procedures need regulatory support at both international and national levels.

Thus, the European Cetacean Society requests competent authorities to urgently adopt and enforce regulations for effective mitigation.

The Workshop organisers propose to set up a small Working Group of relevant experts to produce a technical document providing practical effective techniques to apply mitigation in order to reduce impact of active sonar on cetaceans.

Natacha Aguilar Soto (Laguna University, Canary Islands), and Giuseppe Notarbartolo di Sciara (Scientific Committee of ACCOBAMS).

The workshop aimed at providing a background to the current field research investigating mitigation techniques, as well as a legal and official perspective about the feasibility of promoting a standardised mitigation protocol concerning the transmission in the ocean of harmful high-intensity acoustic energy through military sonar.

The last ECS workshop on Active Sonar and Cetaceans (2004) helped to document the association between atypical mass strandings of beaked whales and naval sonar exercises. The exact mechanism by which sonar leads to the death of beaked whales remains unknown, but since the 2004 workshop there has been considerable progress on scientific knowledge on beaked whales and in mitigation techniques, including acoustic and visual detection, distribution mapping and modelling, discussed at a further ECS workshop on Beaked Whale Research (2007).

Ongoing research is mainly focused on the responses of individual beaked whales to naval active sonar, while a clear protocol on how to use these results for designing mitigation guidelines is currently lacking. Therefore an urgent requirement remains to design an effective monitoring and mitigation protocol to reduce the risks of intense sound sources damaging beaked whales. In addition to researchers, the workshop invited representatives from international organisms dealing with marine management and conservation, and using sonar, such as ACCOBAMS, ASCOBAMS, OSPAR, NGOs, NATO, etc, to participate in an open table dialogue with opportunity for questions and discussion.

As a product of the workshop a Resolution was drafted by participants (see box on previous page), and subsequently adopted by the ECS membership during its general meeting.

First International Conference on Marine Mammal Protected Areas (ICMMPA-1, Maui, Hawaii).

From March 30—April 3, 2009, more than 200 marine mammal protected area (MMPA) researchers, managers, and representatives from various government departments and conservation groups from 40 countries met in Maui, Hawaii, to explore how they might build networks of people, institutions and protected areas to further the conservation of marine mammals and their habitat. Although the initial stimulus for the conference had originated from NOAA, the event was co-sponsored by a number of other international organisation, including ACCOBAMS.

The overall conference theme of "networks: making connections" was explored in three conference threads focusing on (1) design, (2) management and (3) networking for the future of MMPAs and MMPA networks. These thematic strands were realized through a combination of talks and panels in a plenary symposium, followed by workshops, training sessions, posters and films. Training sessions covered marine mammal stranding, entanglement and health assessments, monitoring MMPAs (check-up and review), management planning, naturalist training and the role of education in the community and on the water.

Protecting marine mammals as umbrella species can result in conservation measures to protect whole communities and ecosystems, and as such can be seen as investments in maintaining marine biodiversity and ocean health, but this can only work if threats are adequately understood and if management is truly tailored to the threats. In the brave new world of ocean zoning, the focus should remain on threats, and not revert to cookie-cutter approaches to MPAs, in the hope that they will solve every conservation problem. This consideration of marine mammals leading to broad conservation measures provided an added-value to the ICMMPA which transcended the discussions of marine mammal protection alone.

The high seas were touched on in various presentations in terms of design, management, legal aspects and incorporation into networks. Representing about half of the world ocean, the high seas provide habitat for many marine mammal species, though this area, due to its distance from land is much less studied than coastal and nearshore areas. The legal framework for setting up MPAs on the high seas has a strong foundation and has advanced considerably but with only a few exceptions has yet to be tried and fully tested. Over the next 2 years, the IUCN WCPA High Seas Task Force, the RAC/SPA in the Mediterranean and other regional scientific and conservation bodies plan to propose MPA networks on the high seas, so marine mammal critical habitat research will be essential.

The ICMMPA will maintain a continuing presence on the www.icmmpa.org website and the steering committee will coordinate with the newly formed French Agence des Aires Marines Protégées regarding plans for the next ICMMPA, tentatively planned for 2011 in Martinique (French Antilles). The ICMMPA is considering to make the "High Seas" as the theme for the next conference.

Stranding of a rare beaked whale in Turkey

by Giuseppe Notarbartolo di Sciara

An adult female beaked whale of the genus *Mesoplodon*, unusual in the Mediterranean, stranded alive on 9 January 2009 in the port of Fethiye, south-western Turkey, where it was assisted by a group of volunteers who eventually floated her back and led her towards deeper waters. The whale swam away and was not seen again.

Certain species identification was not possible on the basis of the available documentation, because whales of the genus *Mesoplodon* are often difficult to classify. Beaked whale experts Colin D. MacLeod from Scotland and James Mead from the Smithsonian Institution were consulted, and both agreed that the Fethiye whale looked very much like a Gervais' beaked whale, *M. europaeus*. This tentative identification was based on the shape of the head: it lacked the arch in the lower jaw of *M. densirostris*, and the forehead was not as bulbous as in *M. mirus*. Of the remaining two options of *Mesoplodon* living in the North Atlantic region – *M. bidens* and *M. europaeus* – the shape of head fits more the latter, as in the former the beak appears longer and slender than what can be seen in the Fethiye specimen photographs. Unfortunately no tissue samples were collected (see box on next page), which could have aided in species determination through DNA analysis.

Known *Mesoplodon* occurrences are extremely rare in the Mediterranean; certain records exist only for six individuals, the Fethiye specimen included. A *Mesoplodon* stranded in Latium (Italy) in 1927 was not identified to species level. In 1980 a Blainville's beaked whale (*M. densirostris*) was found on a beach near Castellò de la Plana (Spain). In 1996 two juveniles stranded alive on the Lerins Islands (southern France) but were herded back to the open sea without collecting information useful for their identification. Finally, a specimen of *M. europaeus* was found dead on a beach in Tuscany (Italy) in 2001. It is still unclear whether these whales were vagrant in the Mediterranean, or part of very low-density populations that may regularly, albeit unobtrusively, occur in the region. The waters outside the bay of Fethiye are very deep just a few miles offshore, and with their rich cephalopod fauna would make a very good beaked whale habitat. Of the six *Mesoplodon* specimens recorded from the Mediterranean, all those that were sexed (four) were females.

Thanks are due to Harun Güçlüsoy and Özgür Keşapli Didrickson from SAD DEMAG for providing the information concerning the Fethiye stranding. Abundant photo and video documentation of the event was collected by SAD DEMAG.

A summary of findings of *Mesoplodon* in the Mediterranean can be found on:

Reeves R., Notarbartolo di Sciara G. (compilers and editors). 2006. The status and distribution of cetaceans in the Black Sea and Mediterranean Sea. IUCN Centre for Mediterranean Cooperation, Malaga, Spain. 137 pp.

Mesoplodon sp. cf. *M. europaeus*, stranded alive in Fethiye, Turkey in January 2009, is escorted to open waters by voluteers. From SAD DEMAG Archives.

Collecting tissue samples for genetic analyses from rare cetaceans is easy!

Knowing what species that animal was is important for conservation purposes. With some species (e.g., orcas, common dolphins) identification is easy, but with other species the support of genetics may be unavoidable, which makes it necessary to preserve tissue for subsequant analysis.

Luckily the operation is very easy, and anyone can do it. Importantly, it can be done quite painlessly for any live animal you may be handling prior to its release at sea. Here is how:

1) gently scrape the cetacean skin by sweeping it with a blunt knife or a glass surface, as in a microscope slide (be careful to sweep the knife perpendicular to the cutting edge, as you would do over the palm of your hand to clean it from a drop of wax; otherwise, you may cut the skin!).
2) you will see that tissue material from the skin will easily accumulate over the blade; this little mass is rich in DNA and will help to identify the species.
3) store the tissue material in a jar where you have saturated water with kitchen salt (sodium chloride). You can do this by butting lots of salt in the water, until you see that some salt will remain on the bottom of the jar, i.e., it will not dissolve into the water.
4) ideally, you will store the jar in the freezer, but if that is a problem don't worry; genetic material was preserved in saturated saline solution for weeks also at room temperature.
5) keep the sample available for further inquiry. Ideally, please contact the manager of the ACCOBAMS Tissue Bank, Prof. Bruno Cozzi (bruno.cozzi@unipd.it) and inform him about the existence of your sample.

Training activities in Lebanon and Syria

by Joan Gonzalvo

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Between the 29th of October and the 6th of November 2008, I visited Syria and Lebanon in the context of the preparation of national action plans for the conservation of cetaceans. The initiative was coordinated and funded by ACCOBAMS and the RAC/SPA. At the beginning of March I had already spent one week in Syria to gather the necessary information for the preparation of an action plan, which was handed-in last June. This document was co-authored by my colleague Giovanni Bearzi, President of the Tethys Research Institute.

In my most recent visit to Syria, I presented this Action Plan to Syrian authorities and stakeholders, during an event organized by the Syrian Society for the Conservation of Wildlife with the aim to explore the best ways of implementing the actions included in the plan. Then I moved to Lebanon to attend several meetings with personnel from The National Centre for Marine Sciences (NCMS) of the National Council for Scientific Research (CNRS), Lebanese Port Authorities, Lebanese Department of Marine Resources of the Ministry of Agriculture, the Navy, Lebanese NGOs, as well as with members of different Fishermen Cooperatives, with the aim of gathering information for the preparation of the action plan for cetaceans in Lebanon. In addition, a two-day workshop was held at the Ministry of Agriculture in Beirut, organized by CNRS and ACCOBAMS, dedicated to the implementation of the Agreement in Lebanon and to discussing the contents and actions to be included in the plan. The meetings and the two-day workshop were very successful and a first version of the plan was handed-in at the beginning of February 2009. The definitive plan will be completed once Lebanese researchers will have provided their feedback and their comments, and suggestions are incorporated in the submitted document.

Two bycaught rough-toothed dolphins and the fetus found in one of them. Photo courtesy of Dr. Jamal Younes (Lebanese Marine and Wildlife Museum).

In the occasion of the preparation of the National Action Plan and in the prospect of devel-

oping a campaign to assess cetacean populations along Lebanese coasts, the Principality of Monaco offered a cetacean observation equipment to CNRS.

Both action plans share the view expressed by the Parties to ACCOBAMS on diffusing research and monitoring abilities throughout the region being a timely challenge and one of the highest priorities as far as cetacean conservation is concerned. Accordingly, the actions outlined were grouped into four categories: education and awareness, capacity building, research, and management.

Information on the cetacean species occurring off Syria and Lebanon is extremely scarce and limited to a handful of stranding and sighting records. A preliminary review of the available information on species found stranded or bycaught along their coast was done in the context of these two plans.

The most remarkable of these events involved rough-toothed dolphins *Steno bredanensis* (see photographs on previous page). On 4 March 2008, two adult females were bycaught in a gill net; one was pregnant. This is of special interest as the species, regarded as 'visitor' in the Mediterranean, has also been reported on a number of occasions in neighbouring waters. This record in Lebanese waters further suggests that this part of the eastern Mediterranean may include critical habitat for this poorly known species.

The development of cetacean research and conservation actions in these two countries of the Middle East offers a unique opportunity to get insight on the situation of whales and dolphins in a region where almost no information on cetaceans is available.

Plastic waste cause fishing nets to kill more Black Sea marine mammals

by Alexei Birkun, Jr.

Accidental catch in fishing gear or, in short, bycatch was recognised as a major threat to Black Sea cetaceans about 10-15 years ago, in the 1990s. The bottom-set gill nets for turbot proved to be the most hazardous fishing gear, and the spring fishing period the most hazardous season, for bottlenose dolphins (*Tursiops truncatus ponticus*) and, especially, for harbour porpoises (*Phocoena phocoena relicta*), both endemic subspecies to the Black Sea. However, so far there was no reliable scientific evidence to demonstrate the actual magnitude of this detrimental phenomenon.

In 2008 the Joint Programme on Marine Mammals Conservation and Marine Litter in the Black Sea was jointly established by the Black Sea Convention and the ACCOBAMS Permanent Secretariats, in cooperation with the UNEP Regional Seas Office. The programme started with two pilot projects, and one of them was implemented in Ukraine by the Black Sea Council for Marine Mammals (an international NGO) and the Brema Laboratory (a research institution). Protocols for the direct synchronous monitoring of fish catches, cetacean by-catches and plastic wastes taken by nets were set up, to be carried on board of a vessel involved in regular turbot and spiny dogfish fisheries in the northwestern Black Sea, off the coast of Crimea.

A total of 1,073 bottom-set gill nets (for an overall length of 78 km) were examined from March to June. The by-caught cetaceans on record were represented by 118 harbour porpoises (98%) and two bottlenose dolphins. All cetaceans were found dead. The rate of harbour porpoise by-catch steadily increased during the study period, peaking in June with 2.3 individuals/km in turbot nets and 1.5 individuals/km in dogfish nets. In terms of fish catches, the levels of cetacean by-catch amounted to 42 harbour porpoises and one bottlenose dolphin per 1,000 turbots and to 43 harbour porpoises per 1,000 sharks.

At the same time, a total of 895 items of plastic debris (pieces of polyethylene film, plastic bags, bottles, cans, fragments of other solid packaging matter) were recorded, collected and delivered to shore. In general, turbot nets entrapped polymer litter twice as much (14.1 pieces/km) as dogfish nets (7.0 pieces/km). The greatest collection of plastics occurred in March in turbot nets (25.0 pieces/km). The level of marine litter found amounted to 345 items per 1,000 turbots and 259 items per 1,000 sharks caught, respectively.

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Quite surprisingly, the turbot nets contained by-caught cetaceans more often and on a larger scale if they also contained plastic waste. One km of turbot net contaminated by plastics caught 2.3 cetaceans whereas one km of the same net free from plastics caught 1.2 cetaceans. In other words, the risk of by-catch in turbot nets to cetaceans almost doubled when the net also contained plastic litter.

Many plastic items extracted from the fishing nets had the appearance of long-sunk objects encrusted with benthic invertebrates such as sponges, hydrozoans, sea mats, tube-building worms, bivalve molluscs, barnacles, holothurians, brittlestars and sea squirts. Those animals formed associations, they were attached to marine litter close with each other as well as with brown and green algae. Besides, some mobile demersal organisms were found in the nets along with target fishes, by-caught cetaceans, marine litter and settled representatives of benthic fauna and flora. In particular, two species of decapod crustaceans (shore crab and warty crab) and two species of small fishes (Black Sea whiting and flounder) were recorded.

The data obtained suggest that plastics lifted aboard from the sea floor in some way facilitated cetacean by-catch. It can be speculated that irregularly deposited, long-lived sunken plastic debris on the bottom of the Black Sea continental shelf may serve as an artificial substrate for the settlement of benthic and demersal organisms, thus creating "plastic litter biocenoses" which include harbour porpoises' prey. Whilst this may provide a mechanism for attracting the porpoises near the nets and making them more susceptible to entanglement, such hypothesis should be verified by subsequent research. At present, there can be no doubt that any plastic litter incidentally extracted from the sea during fishing operations must be removed from the marine environment and eliminated properly in line with the International Convention for the Prevention of Pollution from Ships (MARPOL), the Convention on the Protection of the Black Sea Against Pollution and the FAO Code of Conduct for Responsible Fisheries.

In order to enhance the awareness of Black Sea fishermen, a leaflet and two stickers calling against marine litter pollution were designed, published and disseminated. In addition, relevant guidelines were drafted and submitted to the BSC Secretariat for further consideration by the Advisory Group on Environmental Aspects of Management of Fisheries and Other Living Marine Resources.

A by-caught harbour porpoise is hoisted on board a fishing boat. It turned out that conventional turbot fishery becomes double dangerous to Black Sea cetaceans in those areas where the bottom-set nets catch the fish along with sunken plastic debris

Photograph by Sergey Krivokhizin, BREMA Laboratory, Simferopol

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Common dolphins frequently sighted off Israel

Good news from Israel. Short-beaked common dolphins, nowadays almost disappeared from most of their former range in the Mediterranean, seem to be still present in portions of the Levantine Sea, as attested by several recent sightings reported to FINS.

During May 2009 Aviad Scheinin (IMMRAC) reported an unusual number of sightings of endangered short-beaked common dolphins from the country's offshore waters near the border with Egypt, emphasizing the potential importance of Eastern Mediterranean habitats for this cetacean that is fast disappearing from most of the region's waters.

A large herd (40-50) of common dolphins, containing about 6 calves in various developmental stages, was seen on 8 May 2009 about 1.5 mile off the harbour of Ashdod.

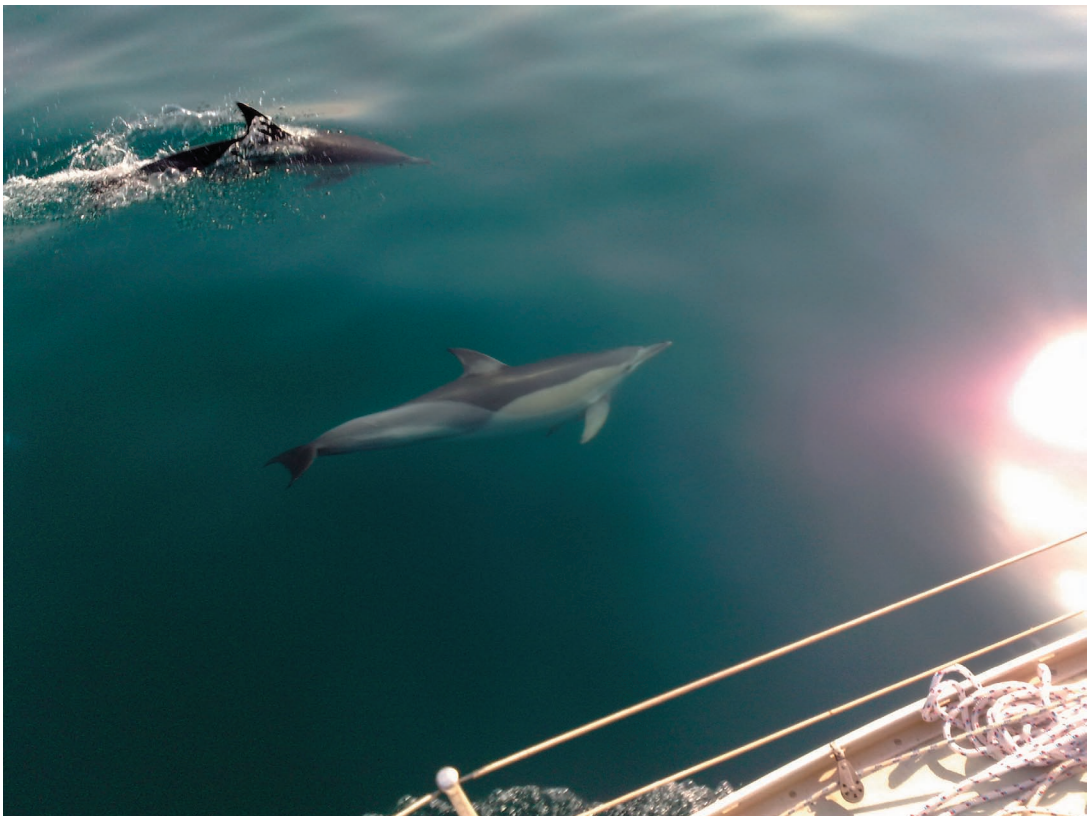
A second sighting of about 50 individuals was reported from the same area on 22 May.

Common dolphins were sighted again by other observers on that same day, as well as on 26 May, and later on 28 May off Tel-Aviv, as reported to IMMRAC by the Tel-Aviv Marine Police Patrol crew. Clips of these last two sightings, where the species is clearly identifiable on the basis of the flank colouration, can be viewed on YouTube at

www.youtube.com/watch?v=-xO8hqjnp0Y

and

www.youtube.com/watch?v=f8TuOLhD9-Q



Short-beaked common dolphins photographed off the South Israeli coast on 22 May 2009 by Reuven Bernstein

Book Review

By Gianni Pavan

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A pdf version of the booklet can be downladed from:

www.mmc.gov/reports/workshop

Underwater sound and the marine mammal acoustic environment: a guide to fundamental principles. D.L. Bradley and R. Stern. 2008. Prepared for the U. S. Marine Mammal Commission. 79 p.

The underwater environment has its own acoustic peculiarities and cetaceans are extraordinarily well adapted to them. In these mammals acoustic communication and perception has acquired a privileged role compared with other sensory modalities. Marine mammals live in a medium that poorly transmits light but through which sound propagates very well, even over long distances and especially when frequencies are low or the sound is channelled among pressure and thermal gradients. Marine mammals rely heavily on sound to communicate, to coordinate their movements, to navigate, to exploit and investigate the environment, to find prey and to avoid obstacles, predators, and other hazards. Sound is essential for their life. In this context, anthropogenic noise (generated by ships, boats, sonar activities, military exercises, seismic surveys, offshore and coastal construction works, oceanographic equipment) is a significant threat to marine mammals and other marine organisms (fishes, turtles and invertebrates).

Noise pollution can cause marine mammals to abandon their habitat and/or alter their behaviour by direct disturbance or by masking their acoustic signals over large areas; higher levels could directly affect their hearing capabilities by producing either temporary or permanent hearing losses. Some high energy sound sources can even trigger mortality events, as evidenced in the last decade by several dramatic and well documented mass strandings of beaked whales.

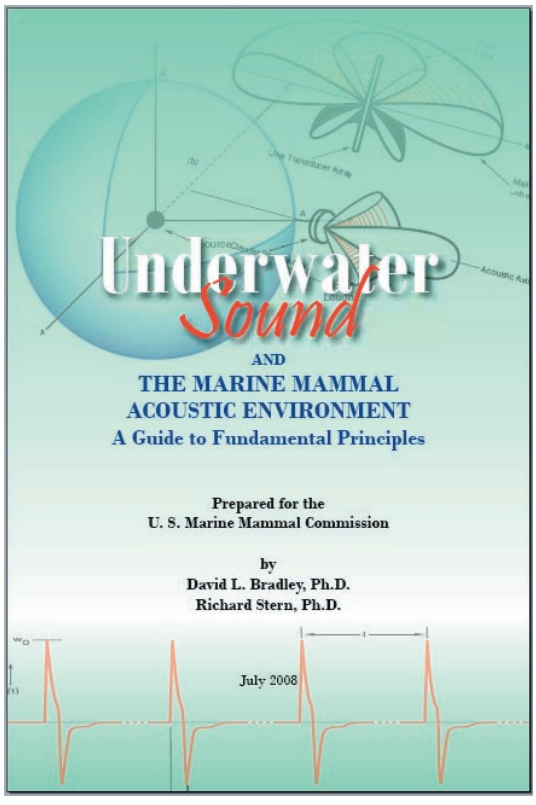
Considering all this, underwater noise should be regulated and reduced; it should be included in Environmental Assessments and underwater noise levels should be considered an important quality parameter when assessing habitats, MPAs and other issues related to marine life.

A correct understanding of the noise issue requires a basic knowledge of underwater acoustics; the numbers scientists use to define sound levels are different in air and in water, the energy associated to those levels are different too, and the consequences of the impact on an organism are different.

This booklet, recently published by the U.S. Marine Mammal Commission, greatly helps in understanding these issues. The booklet, 65 pages in a handy A5 format, is a really welcome concise guide to those basic concepts of underwater acoustics mostly related with marine mammals and the emerging issue of anthropogenic noise. It is not an exhaustive manual, rather a guide to understand the meaning of the many technical terms that occur in scientific literature, to avoid misunderstanding of values and measures, and to create a basic understanding of the problem.

The material in the book covers both basic and advanced acoustics at a conceptual level, rather than in a detailed mathematical manner. It introduces the reader to the nature of sound as we hear it in air, and then moves to the propagation of sound underwater, with a clear explanation of the sound units to be used for describing its characteristics. The second part of the book concerns the anthropogenic sounds that can affect the hearing of animals and how they propagate through the environment.

The potential effects of sound on marine life are complex and controversial because of the high level of uncertainty regarding how to make evident and measure the response of animals; the cause-effect relationships are often difficult to investigate and, in some cases of non scientific literature, these are also controversial because of the misunderstanding of basic properties of sound and of propagation rules. The book is a pleasant lecture that can solve many doubts and hopefully can address the reader to more advanced readings.



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