



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

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



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## REVIEW OF THE FUNCTIONING OF MEDACES



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

## REVIEW OF THE FUNCTIONNING OF MEDACES

### Note of the Secretariat:

In the Tenth Meeting of the Bureau, in 2015, on the base of an advice by the Scientific Committee of ACCOBAMS which inter alia recommends to “contact with the University of Valencia to determine the incidence of the use of the database by scientists and the nature of the analyses undertaken”, it was agreed by the Bureau that “ACCOBAMS will ensure MEDACES’s future operation by securing and allocating funds to the host institution (University of Valencia) at least until the next Meeting of Parties”. The Bureau invited the Secretariat “to undertake, before the next MOP, a review of the functioning of MEDACES taking into account the recommendations of the Scientific Committee. It stressed that the review should cover also the use of the financial support provided by ACCOBAMS and RAC/SPA, as well as the cost-effectiveness.”

This review was undertaken by an expert jointly agreed by the ACCOBAMS Secretariat and the RAC/SPA.

Translation **in French** of the conclusion and recommendations is also proposed at the end of the document (p 10 & 11).



**P. VAN KLAVEREN 23/09/2016**

### Background

The rationale of a databank related with Cetaceans strandings relies in the Agreement text and, more precisely, in the Conservation Plan which ask to:

- develop “systematic research programmes on dead, stranded, wounded or sick animals, to determine the main interactions with human activities and to identify present and potential threats”;
- “develop the systems for collecting data on observations, by-catches, strandings, epizootics and other phenomena related to cetaceans “ ;
- “establish, as appropriate, a sub-regional or regional data bank for the storage of information collected”.

According to the recommendations listed on Annex VII of the 11th Ordinary Meeting of the Contracting Parties of the Barcelona Convention and its Protocols of the Mediterranean Action Plan, UNEP (Malta, 27-30 October 1999), relating to the ulterior implementation of the Action Plan for Cetacean Conservation in the Mediterranean Sea and other initiatives, the co-ordination of the information of stranded cetaceans on the coast of the Mediterranean countries was required for a better knowledge of cetaceans and their eventual protection and conservation.

In November 2001, the 12th Ordinary Meeting of the Contracting Parties to the Barcelona Convention, approved the offer by Spain with regard to the establishment in Valencia of a Mediterranean database on cetacean strandings (MEDACES), within the “SPA/Biodiversity” Protocol. The Regional Activity Centre for Specially Protected Areas (RAC/SPA) is the depositary for the database, whose management is entrusted to the University of Valencia’s Cavanilles Biodiversity Institute (ICBIBE), with the financial support of the Spanish Ministry of Environment (MMA). The Mediterranean Database of Cetaceans Stranding has been expanded to cover regions adjacent to the Mediterranean (the Black Sea and the contiguous Atlantic waters) as defined in the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS).

This was done through ACCOBAMS Resolution. 1.10 concerning the cooperation between national networks of cetacean strandings and the creation of a database, as follows:

3. *Welcomes with pleasure* the Spanish offer, in collaboration with the University of Valencia, to increase coverage of the data base MEDACES, which should be develop in the interest and help of all the Riparian States, to the whole of the Mediterranean sub-region/Atlantic zone of the Agreement.
4. *Entrusts* the administration of MEDACES, as far as the Mediterranean sub-region/adjacent Atlantic zone is concerned, to the CAR/ASP as a Sub-regional Co-ordination Unit;
5. *Urges* the Secretariat to find the means to establish and manage the equivalent data base for the Black Sea and to connect it, as far as possible, with that of Mediterranean/Atlantic area of the Agreement;

This geographical extension was the former rationale for the contribution of ACCOBAMS to the MEDACES’ budget.

At each meeting of the ACCOBAMS Parties this topic was on the agenda in particular to encourage scientists to upload their data and to use MEDACES. MEDACES is also recommended in the “Guidelines for a coordinated cetacean stranding response” adopted in (Res 4.16).

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### **Budgetary matters**

Originally, the financial support was provided by the Spanish Ministry of the Environment, and Rural and Marine Affairs (MMA), the ICBIBE providing the human and material resources necessary to implementation and maintenance and functioning of MEDACES.

During the Fifth Meeting of Parties to ACCOBAMS (5-9 November 2013, Tangier) the representative from Spain informed the Meeting about the current financial situation of MEDACES. He indicated that Spain was willing to contribute with 9 000 € for 2014-2015 in order to continue the maintenance of MEDACES by the University of Valence, hoping that the remaining of the necessary budget will be provided by both the ACCOBAMS Secretariat and the RAC/SPA.

In December 2013, the RAC/SPA informed the ACCOBAMS Secretariat that an amount of 10 000 € was available as complement to the Spanish Government support to MEDACES functioning for 2014-2015. Therefore, the ACCOBAMS Secretariat considered that RAC-SPA and ACCOBAMS have fulfilled their joint financial commitment towards MEDACES for 2014-2015.

Nevertheless, the Spanish Focal Point informed the ACCOBAMS Secretariat that the actual total budget for the update and maintenance of MEDACES was 27 000 € and asked ACCOBAMS for financial support for 2015 and the possibility that ACCOBAMS or ACCOBAMS and RAC-SPA support this amount of 9.000 € per year for the period 2016-2019.

#### **Budget breakdown and proposal by Spain**

The Spanish Focal Point indicated that the total budget per year would be 27.000. The detailed breakdown provided by Spain for this budget per year, is the following:

Database manager (partial time: 18h/week).....	16.000 Euros
Computer maintenance.....	6.000 Euros
Software/server .....	5.000 Euros

Spain would be able to support 18.000 € per year<sup>1</sup> to meet the total annual budget of 27.000 €, during the next four years, so another contribution of 9.000 € per year would be necessary to reach the total amount.

ACCOBAMS and RAC/SPA agreed to share this contribution for 2016.

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<sup>1</sup> This Spanish contribution covers the management of the Spanish data (50% of the total data) and a participation of the whole MEDACES budget.

## **Current situation of MEDACES and stranding networks in the ACCOBAMS area**

### **Input of stranding data**

From the 27 Riparian States, 21 have once recorded data in MEDACES, but only 10 seems to be regular data providers.<sup>2</sup>

The existence of stranding networks could be assessed through the report from the *ad hoc* ACCOBAMS workshop or from ACCOBAMS Parties meeting or others ACCOBAMS documents.

17 countries somehow have stranding networks or rescue centers:

- Algeria
- Bulgaria
- Croatia
- Cyprus
- France
- Georgia
- Greece
- Israel
- Italy
- Monaco
- Morocco
- Portugal
- Romania
- Slovenia
- Spain
- Tunisia
- Ukraine

The data are uploaded in MEDACES by the RAC/SPA or ACCOBAMS National focal points or by scientific institutions. The MEDACES data bank is secured by regular backup.

The analysis of inputs in the MEDACES database is presented in the table below.

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<sup>2</sup> Having in mind 1) the current political situation and 2) the impact of the length of their coasts on stranding occurrence.

COUNTRY	YEAR BEGINING	YEAR END	NUMBER OF STRANDING in the data bank					NUMBER OF STRANDING added in the data bank			
			2008	2009	2010	2013	2015	2008-2009	2009-2010	2010-2013	2013-2015
Albania	2008	2009	1	2	2	2	2	1	0	0	0
Algeria	1975	2015			158	158	240	0	158	0	82
Bulgaria	2009	2014		4	29	46	1461	4	25	17	1415
Croatia	1990	2013		191	210	210	308	191	19	0	98
Cyprus	1999	2015			2	2	49	0	2	0	47
Egypt											0
France	1968	2015	1786	1876	1876	2175	2474	0	0	299	299
Georgia											
Greece	1944	2006	1175	1175	1175	1175	1175	0	0	0	0
Israel	1993	2015	138	147	527	224	264	9	380		40
Italy	1997	2008			147	1113	1113	0	147	966	0
Lebanon	2010	2013			1	3	3	0	1	2	0
Libya	2009	2013		1	2	5	5	1	1	3	0
Malta	2008	2015					8				8
Monaco	1989	2008		7	7	7	7	7	0	0	0
Montenegro											
Morocco	2005	2005	1	1	1	1	1	0	0	0	0
Portugal											
Romania	2002	2015	197	375	375	375	899	178	0	0	524
Slovenia	2005	2008		4	4	4	4	4	0	0	0
Spain	1960	2015	2883	3897	6086	7150	10430	1014	2189	1064	3280
Syria	2008	2008	1	1	1	1	1	0	0	0	0
Tunisia	1941	2015	48	110	111	111	194	62	1	0	83
Turkey	2000	2002	5	5	5	5	5	0	0	0	0
Ukraine	1980	2010			2	1251	1251	0	2	1249	0
<b>TOTAL</b>			<b>6235</b>	<b>7796</b>	<b>10721</b>	<b>14018</b>	<b>19894</b>				

## Output of the database

Downloading data from MEDACES follows a strict deontological code which guarantees the intellectual rights of their providers. The lasts are clearly identified and must be contacted to allow any use of their data in scientific publication.

From 2008, MEDACES has produced 5 reports which constitute a valuable tool for the analysis of stranding but the output of data directly from the databank by the ACCOBAMS area scientist is difficult to estimate as there is no register of MEDACES users (either through direct contact with the administrator or through internet).

MEDACES is very rarely directly quoted on internet (a list of recent publication mentioning MEDACES is annexed). The MEDACES team is frequently asked to provide geographical or thematically filtered data and to facilitate relations with the data providers, in line with the MEDACES deontological code. In addition to the direct visits to the web page, MEDACES database managers are often contacted to provide extra information. The most frequent requests for information are related to stranding coordinates from a species in a specific area (36% of the cases), the length or sex of a species in an area (18%), cause of death of a species in an area (18%), the availability of samples collected of one species in one area (10%), and the scientists contact information for a specific set of data (18%). On top of this, over the last years, some students have shown interest in the use of MEDACES database for their Master's thesis final projects. MEDACES data have been requested by scientists from countries like Spain, Italy, Greece, Israel, France and United Kingdom.

ACCOBAMS has received report on some Countries stranding networks with references to MEDACES but none indicated the use of the database or the MEDACES report, for their research institutes or for their conservation decision making processes.

## Other relevant databases

**GROMS or UNEP/WCMC.** GROMS is the Global Register of Migratory Species hosted by the Natural Science Museum of Bonn and is supported by the CMS.

It is quoted in ACCOBAMS Resolution 1.9 as follows: *“Recommends that the creation or extension of databases, for example under items 3, 11 and 16 of Annex of the present document, be co-ordinated to maximize synergies with existing databases such as the Global Register of Migratory Species (GROMS) of CMS and information held by the UNEP – World Conservation Monitoring Centre (UNEP-WCMC).”*

GROMS appears not being very active since CMS COP8 in 2005.

**OBIS/SEAMAP.** OBIS-SEAMAP, the Ocean Biogeographic Information System Spatial Ecological Analysis aims at mapping Megavertebrate Populations. It presents a spatially referenced online database, aggregating marine mammal, seabird, sea turtle, ray and shark observation data from across the globe.

Relations with ACCOBAMS appears in:

- Resolution 2,7 on work program :

“c) Sighting database: The ACCOBAMS effort may be made to cooperate with global (such as OBIS-SEAMAP or UNEP/MMAP)”

- Reiterated in Resolution 3.4

- Resolution 5.5 on the eligibility criteria for call for proposals:

“The data from the project will have to be public data and, if relevant, will have to be communicated to the OBIS-SEAMAP and MEDACES databases upon completion of the project. “

- An initiative organised by ACCOBAMS and Whale and Dolphin Conservation Society (WDCS) has facilitated the contribution to OBIS-SEAMAP.  
<http://seamap.env.duke.edu/partner/ACCOBAMS>

However, stranded animals are considered in OBIS/SEAMAP for the spatial occurrence of the individuals only. OBIS-SEAMAP team indicated that it is ready to receive data from MEDACES or from national stranding networks. Some of the Parties reporting on their stranding network indicated to input also their data in OBIS/SEAMAP.

**IWC.** The International whaling Commission has reports related to strandings in relation with the threats that could lead cetaceans to strand but not under the form of a consultable databank.

**ASCOBANS.** Although ASCOBANS has Resolutions on stranding response, the need for an ASCOBANS stranding database was planned some years ago but never implemented. Discussion with IWC on this topic is still ongoing.

**NETCET.** The Network for the Conservation of Cetaceans and Sea Turtles in the Adriatic hosts a database on Adriatic Cetaceans strandings that includes basic data from 2012 containing indication of the species and the localisation but no advanced data.

None of these databank is in a position to satisfy what is expected/requested from MEDACES.

### **CONCLUSION**

*(French version below)*

Let's first underline that being able to upload and download advanced data related to the causes of stranding is an utopia. Necropsy is a difficult task and not often possible even in country with high level of technicity. Therefore, it can merely be expected from MEDACES to host only basic stranding data, useful to retrieve information on the geolocalisation of these strandings and to know if some advanced data are available from the data provider. This information is already commonly recognized as very useful. Further use of advanced data needs direct relation with the data providers.

Regarding the ACCOBAMS added value in MEDACES, there are regular inputs of data from Countries of the Black Sea and Atlantic waters (Georgia only reported to ACCOBAMS on its stranding network). As such, we could consider satisfactory the use of MEDACES by the non-Mediterranean countries under the ACCOBAMS as complementing the use under the RAC/SPA for the Mediterranean.

However, this is not sufficient and a prerequisite for a satisfactory implementation of MEDACES is a regular uploading from the existing networks to expect a real appropriation of MEDACES by scientists. As such, efficient awareness campaigns, not only toward Focal Points but toward the scientific communities, need to be organised.

The co-management RAC/SPA–ACCOBAMS for the Mediterranean stranding data needs to be revisited as, *inter alia*, it requires actions from the national Focal Points of the two Organisations. ACCOBAMS Resolutions related to Stranding networking are directed toward ACCOBAMS Focal Points but RAC/SPA has its own Focal Points, this duality for a single issue is irrational. Although, this fact is linked to the history of the MEDACES and the fact that RAC/SPA is the sub regional coordinating unit for ACCOBAMS, the ACCOBAMS Focal Points should be the only ones to be involved in order to avoid national confusions and duplication of efforts. This is in line with the rationale of the UNEP/MAP Portoroz Decision (13<sup>th</sup> Ordinary Meeting of the Contracting Parties to the Barcelona Convention, II.B.1.3) related to the link between the implementation of its Cetaceans Action Plan and ACCOBAMS.



**RECOMENDATIONS**  
(French version below)

It is recommended:

- 1) From the Parties:  
The budgetary contribution from ACCOBAMS to MEDACES is maintained for the next triennium in coordination with the RAC/SPA.
- 2) From the ACCOBAMS focal points:
  - An evaluation of the real efficiency of their stranding network;
  - The transfer of data from their national stranding database to MEDACES;
  - To raise the awareness of their scientific communities toward MEDACES;
  - An identification of a MEDACES national coordinator in capacity to transmit directly data to the databank.
- 3) From the ACCOBAMS Secretariat in close relation with RAC/SPA:
  - A portal to access to MEDACES from the ACCOBAMS web-site;
  - An awareness action on MEDACES utility;
  - A revisit of the relations with RAC/SPA on MEDACES and the establishment of a trilateral MoU ACCOBAMS-RAC/SPA-MEDACES (or Spanish Ministry of Environment) formalizing the three years commitment;
  - An analysis of the potential or the complementarity of other regional or worldwide network/databanks/reporting system (like GROMS, OBIS/SEAMAP, IWC, GBIF, UNEP/WCMC ...);
  - A study of a citizen participation to the stranding networking and the feasibility of a smartphone application to this purpose (see: Whale reports application from the Vancouver aquarium) <http://www.vanaqua.org/act/direct-action/bc-cetaceans-sighting-network>.
- 4) From MEDACES:
  - A revision of the deontological code related to the inclusion of a requirement to a feedback from the users of data when publishing, through the acknowledgment of the data providers and explicit quotation in the publication;
  - The implementation of a follow-up mechanism of the interrogation of the databank by, *inter alia*, a counter or a registration of internet access to the databank, ...
  - The inclusion, in the MEDACES reports, of the relations between the MEDACES team and the scientific communities;
  - An assessment of the possibility of increasing the interactivity of the database as GIS formats and linking with NETCOBAMS;
  - An updating of the available in line documentation.

## **CONCLUSION (FR)**

Soulignons d'abord que pouvoir charger et télécharger des données suffisantes pour aborder les causes d'échouage des Cétacés est une utopie. La nécropsie est une tâche difficile et rarement possible même dans les pays avec un haut niveau de technicité. De ce fait, ne peut être attendu de MEDACES que l'accueil de données basiques suffisantes pour géolocaliser les échouages et la connaissance de la disponibilité d'informations avancées dans les réseaux nationaux ou chez les scientifiques. Ces informations de bases sont déjà généralement reconnues comme très utiles, une recherche de données plus avancées nécessite la relation directe avec les fournisseurs de données.

Pour ce qui concerne la valeur ajoutée d'ACCOBAMS dans MEDACES, il faut remarquer la régularité des apports de données des Pays de la Mer Noire et de la zone Atlantique (la Géorgie a rapporté à ACCOBAMS l'existence d'un réseau d'échouage). De ce fait, il peut être considéré que l'utilisation de MEDACES par les pays non Méditerranéens d'ACCOBAMS complète de manière satisfaisante son utilisation par les pays riverains de la Méditerranée placée sous la coordination du RAC/SPA.

Mais ce n'est pas suffisant et un des prérequis pour une mise en œuvre satisfaisante de cette base de données est son appropriation par davantage de scientifiques avec un apport plus régulier des données provenant des réseaux d'échouage. En tant que tel, des campagnes de sensibilisation efficaces, non seulement vers les points focaux mais vers les communautés scientifiques, doivent être organisées.

La cogestion RAC/SPA-ACCOBAMS pour les données d'échouages de la Méditerranée doit être revue car, entre autres, elle exige des actions des Points focaux nationaux des deux organisations. Les Résolutions d'ACCOBAMS liées aux échouages et à la gestion des réseaux impliquent les Points focaux d'ACCOBAMS, mais le RAC/SPA a ses propres points focaux, cette dualité est, pour ce qui concerne MEDACES, irrationnelle. Bien que ce fait soit dû à l'histoire de MEDACES et que RAC/SPA soit l'unité de coordination sous régionale pour ACCOBAMS, les Points focaux d'ACCOBAMS devraient être les seuls à être impliqués pour éviter les incoordinations nationales et la duplication des efforts. Cette remarque entre dans la logique de la décision l'UNEP/MAP (Portoroz, 13e Assemblée ordinaire des Parties contractantes à la Convention de Barcelone, II.B.1.3) relative à la mise en œuvre de son Plan action Cétacés en relation avec ACCOBAMS.

## **RECOMANDATIONS (FR)**

Il est recommandé :

1) Des parties contractantes :

Le maintien de la contribution budgétaire d'ACCOBAMS À MEDACES pour le prochain triennat en coordination avec le RAC/SPA.

2) Des Points focaux de l'ACCOBAMS :

- Une évaluation de l'efficacité réelle de leur réseau d'échouage ;
- Le transfert des données de leur base de données d'échouage nationales à MEDACES ;
- Un accroissement de la sensibilisation de leurs communautés scientifiques à MEDACES ;
- L'identification d'un coordinateur national MEDACES habilité à transmettre directement les données à MEDACES.

3) Du secrétariat d'ACCOBAMS en relation avec le RAC/SPA :

- Un portail d'accès à MEDACES depuis le site web d'ACCOBAMS ;
- Une action de sensibilisation sur l'utilité de MEDACES;
- Une révision des relations avec RAC/SPA relatives à MEDACES et l'établissement d'un MoU trilatéral ACCOBAMS-RAC/SPA-MEDACES (ou Ministère de l'environnement espagnol) formalisant un engagement triennal de participation budgétaire à MEDACES ;

- Une analyse du potentiel ou de la complémentarité d'autres systèmes de réseaux/banques de données/système de reporting régionaux ou mondiaux (comme GROMS, OBIS/SEAMAP, IWC, GBIF, UNEP/WCMC ...)
- Une étude d'une « participation citoyenne » aux réseaux d'échouage et la faisabilité d'une « application » pour smartphone. Voir par exemple : Whale reports application from the Vancouver aquarium. <http://www.vanaqua.org/act/direct-action/bc-cetaceans-sighting-network>

#### 4) De MEDACES :

- Une révision du code de déontologie lié à l'inclusion d'une exigence de retour d'information de la part des utilisateurs de données effectuant des publications, au travers de remerciements aux fournisseurs de données et de mention explicite dans la publication ;
- La mise en œuvre d'un mécanisme de suivi de l'interrogation de la banque de données par, entre autres, un compteur ou un enregistrement nominal d'accès internet à la banque de données, ...
- L'inclusion, dans les rapports de MEDACES, d'informations sur les relations entre l'équipe MEDACES et les communautés scientifiques ;
- Une étude sur l'amélioration de l'interactivité de la base de données sous un format GIS et sa liaison avec NETCOBAMS ;
- Une mise à jour de la documentation disponible en ligne.

## ANNEX

### Some references on MEDACES

- Cebrián-Menchero, D. & Weykam, S. (2005) The dynamic atlas on the Mediterranean marine and coastal protected areas. MedGIS - a GIS and Web Map Service Prototype. Seventh Meeting of National Focal Points for SPAs. UNEP(DEC)/MED WG. 268/Inf. 11. 9 pp.
- Kerem, D., Goffman, O., Scheinin, A., Elasar, M., Hadar, N., Edelist, D. & Sonin, O. (2014) Report on the status of small cetaceans in Israeli Mediterranean waters. Submitted to the Sub-Committee on Small Cetaceans, the Scientific Committee, International Whaling Commission, 18 pp.
- Lanciani, G., Celli, N., Dragani, L. Mariani, B., Verri, C., D’Orazio, A., Salvatore, L., Ingarao, C. & Pagliani, T. (2014) System for monitoring sea water quality using toxicology data on cetaceans. Act. 4.4 MSP Pilot Project - Abruzzo Region Final Report, 122 pp.
- Notarbartolo Di Sciarra G. & Fouad M. (2011) National Action Plan for the conservation of marine mammals. In the Egyptian Mediterranean Sea. 2012 To 2016. Contract RAC/SPA, 54 pp.
- Raga, J.A. & Fernandez, M. (2003) Mediterranean Database of Cetacean Strandings (MEDACES): a tool for conservation. In: Cetacean Strandings in the Mediterranean Sea. Mednature Vol 2. Ed. Regional Activity Centre for Specially Protected Areas (UNEP), Tunis, 60-66 pp.
- UNEP-MAP-RAC/SPA (2014) Status and conservation of cetaceans in the Sicily Channel/Tunisian Plateau. By M. Aissi. Draft internal report for the purposes of the Mediterranean Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas, Malaga, Spain, 35 pp.

### Recent scientific publications using data available in MEDACES:

- Arrigoni, M., Manfredi, P., Panigada, S., Bramanti, L. & Santangelo, G. (2011) Life-history tables of the Mediterranean fin whale from stranding data. *Marine Ecology*, 32 (Suppl. 1): 1–9.
- Bearzi, G., Reeves, R.R., Remonato E., Pierantonio, N. & Airoidi, S. (2011) Risso’s dolphin *Grampus griseus* in the Mediterranean Sea. *Mammalian Biology*, 76: 385–400.
- Gannier, A. (2011) Using existing data and focused surveys to highlight Cuvier’s beaked whale favourable areas: A case study in the central Tyrrhenian Sea. *Marine Pollution Bulletin*, 63: 10–17.
- Kerem, D., Hadar, N., Goffman O., Scheinin, A., Kent, R. Boisseau O. & Schattner., U. (2012) Update on the Cetacean Fauna of the Mediterranean Levantine Basin. *The Open Marine Biology Journal*, 6: 6-27.
- Nortarbartolo di Sciarra, G. & Birkun, A. Jr. (2010) *Conserving whales, dolphins and porpoises in the Mediterranean and Black Seas: an ACCOBAMS status report*. ACCOBAMS, Monaco, 212 pp.
- Sharir, Y., Kerem, D., Gol’din, P. & Spanier, E. (2011) Small size in the common bottlenose dolphin *Tursiops truncatus* in the eastern Mediterranean: a possible case of Levantine nanism. *Marine Ecology Progress Series*, 438: 241-251.