

Institutional research, monitoring and conservation activities of Italy on Cetaceans



MONITORING OF CETACEAN STRANDINGS ON ITALIAN COASTS

National Stranding Network

Operated under the guidance of the Ministry of the Environment and the Ministry of Public Health, the network is fully operative with

- Online Strandings Data Base based at the Univ. of Pavia,
- Cetacean Tissue Bank, based at the Univ. of Padova,
- Task force for mass stranding and large whales strandings,
- Task force for cetaceans stranded alive,
- Laboratories for necroscopies
- Laboratories for the analysis of chemical contaminants.

The Banks, operated within the ACCOBAMS agreement following its guidelines, are fully operational and are a reference within the Mediterranean basin.

Monitoring of cetacean populations

- A team for aerial surveys completed the aerial survey of Italian seas
- Advanced acoustic techniques have been developed and implemented to monitor deep divers and their critical habitats
- Techniques and operational protocols have been developed to conduct combined visual and acoustic surveys
- Dedicated fixed sensors, data networks and data management infrastructures are being developed through internationally funded programs under the ESONET framework to permanently monitor the underwater Mediterranean environment (ONDE, LIDO, EMSO)

The Habitats Directive, Article II, requires that Member States shall undertake surveillance of the conservation status of all species of cetaceans (and other protected species).

The Marine Strategy Directive goes beyond this, establishing 11 Descriptors of Environmental Status to be monitored and improved by Member States to guarantee the Good Environmental Status (GES) of their seas. At least four goals are directly related with marine mammals (maintain biodiversity, maintain food web, reduce chemical pollution, control underwater noise).

In 2008 the Italian Ministry for the Environment, Land and Sea, initiated a project with CIBRA (University of Pavia), Museum of Natural History of Milan (MSNM) and University of Padova to develop a research and conservation framework for the protection and management of marine mammals and their habitat.

This noteworthy effort has been promoted by Italy to put into operation the ACCOBAMS agreement.

The project is based on the coordinated scientific and technical efforts of a Board of National experts on cetacean research to establish and implement common research protocols based on state of the art technologies.

The project is based on three key areas:

- The marine mammals stranding network
- The monitoring of marine mammals populations
- The monitoring of underwater noise

Full implementation of the Marine Strategy is required starting with year 2012, however standards and technical directives for the implementation of the 11 descriptors are not ready yet.

Italy is rapidly advancing towards these goals with the implementation of a global strategy based on a synergistic approach developed with the program granted by the Ministry of the Environment within the framework of ACCOBAMS.

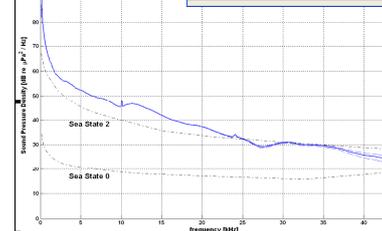
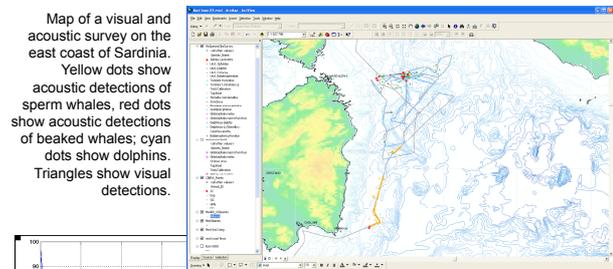
Development of equipment, protocols, guidelines, interdisciplinary approaches and capacity building have been pursued to provide Italy with a task force able to implement the Habitat Directive and to anticipate the implementation of the Marine Strategy.



The task force for strandings of large cetacean working on a sperm whale (12/2009).

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The blue solid line indicates the average sound pressure density of sea noise recorded with O_vDE 25km in front of Catania. The dashed blue lines indicate the systematic error on the average curve due to uncertainty of the electronic noise power spectrum. The black curves indicate respectively the expected SPD of the sea in conditions of Sea State 0 and Sea State 2.

Monitoring underwater noise

- Guidelines for mitigating the impact of underwater noise have been developed for ACCOBAMS
- Guidelines and instruments for monitoring underwater noise have been developed and are being tested with IT Navy
- Fixed platforms are being deployed for the long term monitoring of marine mammals and underwater noise
- Italy has a key role in EMSO, the European Multidisciplinary Seafloor Observatory that is a distributed marine research infrastructure with permanent, large-scale, deep-sea laboratories to address the key issues of monitoring Marine Ecosystems, including marine mammals and noise, Climate Changes and Geo-Hazards.