

4. Legislation³⁰

4.1. *Current regional and global legislation on conservation of cetaceans*

An obstacle to management of cetacean by-catch in EU waters is that there is little legislation dealing solely with marine mammals, as opposed to the situation in the USA, which has the MMPA. While several regulations and directives refer to marine mammals, it is usually in the context of other issues. Furthermore, details of implementation and enforcement remain to be worked out. Thus, for example, it is the responsibility of Member States to implement the Habitats Directive. However, although some species of marine mammals are specifically mentioned in the Directive, for most species the designation of protected areas is an inappropriate approach to conservation.

European legislation specific to marine mammals is urgently needed for a number of reasons. Most marine mammals range over wide areas, crossing national and international boundaries, with no clearly defined areas in which they carry out most of their activities. This makes them difficult to protect under such agreements/directives as the Habitats Directive. Furthermore, the main threat to marine mammals at present is not “direct take” (forbidden in the USA and in the EU) but the “incidental killing” in fisheries operations. At present this is not penalised in EU waters, although it is in the USA, which constitutes one of the major differences in policy.

Attempts to compensate for this lack of specific legislation for marine mammals in EU waters include ASCOBANS and the Agreement on the Conservation of the Cetaceans of the Black Sea, Mediterranean and Contiguous Atlantic area (ACCOBAMS), both adopted under the auspices of the 1979 Convention for the Conservation of Migratory Species of Wild Animals (the “Bonn Convention”). The Bonn Convention came into force in 1983 and seeks to ensure strict protection for migratory species in danger of extinction throughout all or a significant portion of their range. However, neither ASCOBANS nor ACCOBAMS has so far yielded any legally binding protection measures.

³⁰ See also Appendix X

4.1.1. Agreement on the Conservation of the Cetaceans of the Black Sea, Mediterranean and Contiguous Atlantic Area

ACCOBAMS, adopted on 24 November 1996, is still not in force. It will enter into force on the 1st day of the 3rd month after at least 7 coastal States or regional economic integration organisations (comprising at least two from the Black Sea and at least five from the Mediterranean Sea and contiguous Atlantic area) have ratified or acceded. So far (as of December 2000), ACCOBAMS has been signed by 14 Range States but only 6 (Monaco, Spain, Morocco, Bulgaria, Croatia and Rumania have ratified it). With the expected ratification of the agreement by Malta in February 2001, ACCOBAMS will reach the required number of ratifications and it is expected to enter into force during 2001.

The main objective of ACCOBAMS, described in article II, is “to take co-ordinated measures to achieve and maintain a favourable conservation status for cetaceans. To this end, Parties shall prohibit and take all necessary measures to eliminate, where this is not already done, any deliberate taking of cetaceans and shall co-operate to create and maintain a network of specially protected areas to conserve cetaceans”.

With respect to the interactions between marine mammals and fisheries, the Agreement states the need for the parties to “adopt the necessary legislative, regulatory or administrative measures to give full protection to cetaceans in waters under their sovereignty and/or jurisdiction and outside these waters in respect of any vessel under their flag or registered within their territory engaged in activities which may affect the conservation of cetaceans. To this end, Parties shall:

- a) Develop and implement measures to minimise adverse effects of fisheries on the conservation status of cetaceans. In particular, no vessel shall be allowed to keep on board, or use for fishing, one or more drift nets whose individual or total length is more than 2.5 kilometres;
- b) Introduce or amend regulations with a view to preventing fishing gear from being discarded or left adrift at sea, and to require the immediate release of cetaceans caught incidentally in fishing gear in conditions that assure their survival;
- c) Require impact assessments to be carried out in order to provide a basis for either allowing or prohibiting the continuation or the future development of activities that may affect cetaceans or their habitat in the Agreement area, including fisheries, offshore

exploration and exploitation, nautical sports, tourism and cetacean-watching, as well as establishing the conditions under which such activities may be conducted”.

In addition, the Agreement also covers habitat protection: “Parties shall endeavour to establish and manage specially protected areas for cetaceans corresponding to the areas which serve as habitats of cetaceans and/or which provide important food resources for them. Such specially protected areas should be established within the framework of the Convention for the Protection of the Mediterranean Sea Against Pollution, 1976, and its relevant protocol, or within the framework of other appropriate instruments. To this end, the Parties shall:

- a) monitor the status and trends of species covered by this Agreement, especially those in poorly known areas, or species for which little data are available, in order to facilitate the elaboration of conservation measures;
- b) co-operate to determine the migration routes and the breeding and feeding areas of the species covered by the Agreement in order to define areas where human activities may need to be regulated as a consequence;
- c) evaluate the feeding requirements of the species covered by the Agreement and adapt fishing regulations and techniques accordingly;
- d) 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; and
- e) facilitate the development of passive acoustic techniques to monitor cetacean populations.

ACCOBAMS has not yet come into force but, even when it does, there will still be the question on how it is going to be implemented. To achieve its main objective of conservation of cetaceans, each party in the Agreement will undertake “to the maximum extent of their economic, technical, and scientific capacities” management, conservation and research measures. Each party is also expected to “adopt the necessary legislative, regulatory or administrative measures to give full protection to cetaceans in waters under their sovereignty and/or jurisdiction and outside these waters in respect of any vessel under their flag or registered within their territory engaged in activities which may affect the conservation of cetaceans”. However, there is no time limit for these measures to be adopted and no specific guidelines about how they can be reconciled with other objectives of marine activities. In short, ACCOBAMS has many good intentions but has not made any real progress towards cetacean conservation.

4.1.2. Agreement on the Conservation of Small Cetaceans on the Baltic and North Seas

ASCOBANS, adopted on 17 March 1992, entered into force on 29 March 1994. As with ACCOBAMS, the main objective of the Agreement is the close co-operation, "to achieve and maintain a favourable conservation status for small cetaceans", in this case in the Baltic and North Seas. The Parties, in conjunction with other competent international bodies, shall achieve this objective by conservation, management and research measures. The Agreement, in its Conservation and Management Plan, specifically states the need to "work towards

- (a) the prevention of the release of substances which are a potential threat to the health of the animals,
- (b) the development, in the light of available data indicating unacceptable interaction, of modifications of fishing gear and fishing practices in order to reduce by-catches and to prevent fishing gear from getting adrift or being discarded at sea,
- (c) the effective regulation, to reduce the impact on the animals, of activities which seriously affect their food resources, and
- (d) the prevention of other significant disturbance, especially of an acoustic nature.

The Agreement also requires each Party to "endeavour to establish an efficient system for reporting and retrieving by-catches and stranded specimens and to carry out, in the framework of the studies mentioned above, full autopsies in order to collect tissues for further studies and to reveal possible causes of death and to document food composition".

Each Party is required to establish under national law that "(a) prohibition of the intentional taking and killing of small cetaceans where such regulations are not already in force, and (b) the obligation to release immediately any animals caught alive and in good health. Measures to enforce these regulations shall be worked out at the national level".

A Meeting of Parties convenes every three years to decide on the further implementation of the Agreement. The first session of the Meeting of Parties was held in Stockholm in 1994, and adopted an Action Plan for the implementation of the Conservation and Management plan with the following priority actions:

- a- the reduction of pollution;
- b- the reduction of direct interactions with fisheries (e.g. by-catches, particularly of harbour porpoises);

- c- the reduction of indirect interactions with fisheries (e.g. impact on food resources);
- d- the reduction of disturbance (e.g. seismic surveys, whale-watching);
- e- the establishment of protected areas (e.g. areas of special importance to breeding, feeding and migration);
- f- monitoring, status and population studies;
- g- the establishment of national databases on by-catch and strandings;
- h- education and promotion.

During the second Meeting of Parties, which took place in Bonn, Germany, in 1997, progress in the implementation of the Agreement was evaluated and conservation objectives were redefined. The reduction of direct interactions with fisheries was considered the most important task for the Agreement and the Parties agreed that an anthropogenic removal of more than 2% of the best available population estimate was an “unacceptable interaction” with the provision that this figure should be reduced in critical areas.

The aim of the Agreement was interpreted as “to restore and/or maintain biological or management stocks of small cetaceans at the level they would reach when there is the lowest possible anthropogenic influence”. It was considered this could be attained by maintaining the stocks at 80% or more of the carrying capacity. Particular attention was given to the situation of the harbour porpoise in the Baltic where the situation was considered critical (an estimated population of less than 1,000 individuals and known unsustainable levels of by-catch) the Parties agreed to develop a Baltic Harbour Porpoise Recovery Plan which would also include by-catch mitigation measures by 2000.

In addition to these objectives, the Parties agreed to convene a workshop to assist with mitigation measures in 1999 in light of the results from the joint IWC/ASCOBANS Working Group on Harbour Porpoises. The Working Group advised that “the maximum annual by-catch that achieves the ASCOBANS interim objective over an *infinite* time horizon, assuming no uncertainty in any parameter, is 1.7% of the population size in that year”. The Working Group also added, “If uncertainty is considered, such as measurement error in estimating population size, maximum annual by-catch must be less than 1.7% to ensure a high probability of meeting the ASCOBANS objective”.

The third Meeting of Parties took place in Bristol, UK in July 2000, amid concern by the public and environmental organisations about the delay in meeting ASCOBANS objectives. In fact, to date no by-catch mitigation measures have been agreed or implemented by any party in the Agreement area. Of the seven long-standing Parties, only one (Denmark) has drawn up a conservation strategy for by-catch reduction in its jurisdiction. With respect to the Baltic Harbour Porpoise Recovery Plan, in the last Advisory Committee Meeting the Parties failed to reach an agreed plan. The planned 1999 workshop on by-catch mitigation measures did not happen. There is at present no information on pelagic by-catch in the Agreement area.

The third Meeting of Parties recognised the delay and lack of progress in meeting the by-catch reduction objective. It recommended assigning the highest priority in the new work plan to the reduction of by-catch and that the Agreement area should be extended to include the waters of Ireland, Spain and Portugal. At the same time, it stressed the importance of including the objectives of the Agreement in the Community Fisheries Policy taking advantage of the current review of the CFP and in “relevant National Fisheries Policies”.

Where ASCOBANS has been successful is in the setting up of national and regional strandings networks. Necropsies on stranded cetaceans have helped to identify where and when by-catch is occurring and led to other studies, including observer studies, on specific fisheries.

Both ACCOBAMS and ASCOBANS are recognised as important and appropriate forums in which to discuss and achieve conservation measures but both Agreements lack legislative powers, which lie with each Party and only affect those countries that have signed the agreements. It is fair to say that they have not proved to be effective forums for delivering conservation measures.

4.1.3. The Habitats Directive (92/43/EEC)

At European Community level, a number of Directives directly refer to cetaceans. In May 1992, the Council of the European Community adopted a Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (the “Habitats Directive” 92/43/EEC). This Directive potentially constitutes the most important instrument and the strongest legal weapon

for nature protection within the EU. Its aim is to promote the maintenance of biological diversity through the conservation of natural habitats and wild flora and fauna in the European territory of the Member States of the European Union. The fundamental purpose of the Habitats Directive is to establish a network of protected areas (by the year 2004 at the latest), throughout the Community, designed to maintain both the distribution and the abundance of threatened species and habitats, both terrestrial and marine. The network of Special Areas of Conservation (SAC) is called Natura 2000. Criteria for selection include priority habitats and species, as identified in the Annexes. Member States are under an obligation to contribute to Natura 2000 in proportion to the important natural habitat types and species, listed in the annexes, that occur within their territories. Once the Nature 2000 Network is established, it is up to the Member States to protect the sites in order to achieve the Habitats Directive's objectives. The Habitats Directive puts forward a number of important minimum conservation measures required from the member states (see Article 6).

The provisions of this Directive apply automatically to marine habitats and species located in territorial waters (maximum 12 miles, although there is considerable debate as to whether it should be applied to the 200 mile limit). Cetaceans ("all species") are listed in Annex IV as "species of community interest in need of strict protection". *Tursiops truncatus* and *Phocoena phocoena* are also listed in Annex II and, as such, are eligible for the designation of SACs. However, Article 4 paragraph 1 states that "for aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction". While it has proved feasible to identify important areas for bottlenose dolphins it is unlikely that many other cetacean species can be protected in this way. Article 12, paragraph 4 states that "Member States shall establish a system to monitor the incidental capture and killing of the animal species listed in Annex IV (a). In the light of the information gathered, Member States shall take further research or conservation measures as required to ensure that incidental capture and killing does not have a significant negative impact on the species concerned". Member States are also required to prohibit the use of non-selective means of capture and killing, including nets and traps "which are non-selective according to their principle or their conditions of use". However, once SACs have been designated, Article 6, paragraph 4 weakens the protection to species and habitats by acknowledging the possibility that "in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project [may] be carried out for imperative reasons of overriding public

interest, including those of a social or economic nature...”. Although there are no examples or definitions of projects which will fall in this category there are concerns that SACs may be overwhelmed by economic interests (Hughes 1998).

As with ACCOBAMS and ASCOBANS, under the Habitats Directive, Member States are required to bring into force the laws, regulations and administrative provisions necessary to comply with this Directive but, in this case, there was a strict time period for compliance. Member States had two years from notification of the Directive to implement it. The process of creating the Natura 2000 Network includes the following stages:

Stage 1 – National Level (1992-1995)

- 1- By June 1994: member states transpose the Habitats Directive into national legislation (Article 23).
- 2- By June 1995: member states send the European Commission a list of sites which they consider to be eligible for designation as SACs (Article 4.1).

Stage 2 – Community Level (1995-98)

- 1- 1995-1998: The Commission evaluates the national lists and selects Sites of Community Importance. The Commission may also propose sites not mentioned in the national lists in order to ensure a coherent network.
- 2- By June 1998: The Commission adopts a list of Sites of Community Importance (Article 4.2).

Stage 3 – National Level (1998-2004)

By June 2004: All sites on the Community list must be designated as SACs by member states (Article 4.4), and the necessary measures for their protection and restoration are adopted.

Original target dates for Natura 2000 were not met, due to serious delays in designation of sites by member states. In October 1997 the Commission took legal action against France, Finland, Germany, Luxembourg, Netherlands, United Kingdom, Ireland, Spain and Italy for sending only partial lists of sites to the Commission or no list at all. Because the Community list of sites is not established, damage can be done to European habitats and species with no

possibility of applying sanctions. Information on the current status of Natura 2000 is provided on the Europa website³¹.

In many respects, the progress achieved under the Habitats Directive is encouraging. However, it is clearly inherently unsuited to achieving conservation of cetaceans and the various loopholes allow social and economic considerations to outweigh conservation objectives, exactly the kind of problem likely to be encountered when trying to limit cetacean by-catches in fisheries.

4.1.4. Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (part of the Barcelona Convention)

The Barcelona Convention is the legal framework of the Mediterranean Action Plan (MAP), created to protect the environment and to foster development in the Mediterranean Basin. It was adopted in Barcelona (Spain) in 1975 by sixteen Mediterranean States and the EC, under the auspices of the United Nations Environment Programme (UNEP). The Barcelona Convention was adopted in 1976 and revised in 1995, and contains six Protocols covering specific aspects of environmental protection. The MAP covers coastal zone management, pollution assessment and control, protection of ecosystems and preservation of bio-diversity.

The Contracting Parties to the Barcelona Convention (the Mediterranean States and the EU) meet every two years at Ministerial level, to deliberate on general policy, strategy and political issues relevant to their co-operation, as well as to decide on the MAP's programme and budget.

The "Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean" was adopted on 10 June 1995 by the Conference of Plenipotentiaries for the Protection of the Mediterranean Sea against Pollution and its Protocols, held in Barcelona. The Protocol, which will replace the Protocol concerning Mediterranean Specially Protected Areas of 1982, has not yet entered into force. The Annexes to the Protocol were adopted on 24 November 1996 by the Meeting of Plenipotentiaries on the Annexes to the Protocol

³¹ See Appendix III: Website reference No. 12

concerning Specially Protected Areas and Biological Diversity in the Mediterranean, held in Monaco. The protocol calls for the establishment of a list of Specially Protected Areas of Mediterranean Importance (SPAMI) in order to conserve biodiversity and to contain specific Mediterranean ecosystems. Related measures include, protection and conservation of species, regulation of the introduction of non-indigenous or genetically modified species, and the improvement of the scientific, technical, and management research relevant to Specially Protected Areas.

Annex II of the Protocol lists several marine mammal species as “endangered or threatened” species and as such they are given special protection. These species are: *Balaenoptera acutorostrata*, *B. borealis*, *B. physalus*, *Delphinus delphis*, *Eubalaena glacialis*, *Globicephala melas*, *Grampus griseus*, *Kogia simus*, *Megaptera novaeangliae*, *Mesoplodon densirostris*, *Monachus monachus*, *Orcinus orca*, *Phocoena phocoena*, *Physeter macrocephalus*, *Pseudorca crassidens*, *Stenella coeruleoalba*, *Steno bredanensis*, *Tursiops truncatus* and *Ziphius cavirostris*.

Article 11 states that the Parties shall "control and, where appropriate, prohibit: the taking, possession or killing (including, to the extent possible, the incidental taking, possession or killing), the commercial trade, the transport and the exhibition for commercial purposes of these species, their eggs, parts or products. In addition, ...the Parties shall co-ordinate their efforts, through bilateral or multilateral action, including if necessary, agreements for the protection and recovery of migratory species whose range extends into the area to which this Protocol applies”.

As with the Habitats Directive, the Barcelona Convention is a potentially powerful agreement, and specifically mentions many cetacean species, but has loopholes. The wording “to the extent possible” weakens the effective protection afforded. Again it is unlikely to deliver conservation of cetaceans in the short-term.

4.2. *International Fisheries Law*

4.2.1. The Common Fishery Policy

The CFP is the EU's instrument for the management of fisheries and aquaculture. Justification for the existence of a CFP is laid down in the Treaty of Rome, signed in 1957, which established the European Economic Community. Article 38 of the Treaty states in its first paragraph "The common market shall extend to agriculture and trade in agricultural products. 'Agricultural products' means the products of the soil, of stock-farming and of fisheries and products of first-stage processing directly related to these products". In practice, by signing the Treaty, the Member States agree there must be common rules adopted at Community level and implemented in all Member States, covering all aspects of the fishing industry from the sea to the consumer.

In 1970 the first common measures were adopted. Rules were set for access to fishing grounds, for a common market and for a structural policy to co-ordinate the modernisation of fishing vessels, port infrastructures and processing plants. It was agreed that, in principle, all fishers should have equal access to all waters under the Community jurisdiction. However, a coastal band was reserved for local fishers and those who traditionally fished those areas. In 1976, Member States followed the world-wide movement to extend their rights from 12 to 200 miles. The change in the international access to fishing grounds really gave impetus to building the CFP, born after difficult negotiations in 1983.

The CFP can be divided into four separate but interrelated policies dealing with (a) conservation of fish stocks, (b) structures (especially the Multi-Annual Guidance Programs setting objectives in term of fishing effort), (c) the common organisation of the market and (d) an external fisheries policy (which includes fishing agreements with non-EU countries and negotiations in international and regional organisations).

With respect to the Conservation policy, the CFP sets maximum quantities of fish that can safely be caught every year. These maximum quantities, (TACs), are divided among Member States. Each country's share is called a national quota. A number of additional technical measures have been adopted to protect fish stocks, including the setting of minimum mesh

sizes, the closure of certain areas, the banning of some fishing gears, etc. Minimum landing sizes (sizes below which it is illegal to land fish) have also been set.

The first CFP review in 1992 showed that technical measures were insufficient to avoid over-fishing and that compliance with the fisheries regulations had been very poor. There are numerous reasons for this, some of which lie with the system itself, the heterogeneity of the fishing industry, the extent of the areas to be supervised, the mobility of the fishermen, and the multiplicity of landing places. New control measures were taken to regulate fishing efforts and to better control the industry, including the use of new technologies used to transmit data to the authorities and to monitor larger vessels through satellite tracking systems. The CFP comes up for review again in 2002.

The regulations contained in the CFP are not generally concerned with the conservation and management of marine mammals. Two measures are directly relevant however: the ban on the use of driftnets longer than 2.5 km, adopted by the Community in conformity with the UN resolution prohibiting the use of large, pelagic driftnets (Council Regulation -EEC, No 345/92 of 27 January 1992, amends, for the eleventh time, Regulation (EEC) No 3094/86 providing for certain technical measures for the conservation of fishery resources), and the prohibition of "dolphin sets" (Council Regulation -EEC, No 3034/92 of 23 October 1992, amends, for the fourteen time, Regulation (EEC) No. 3094/86 providing for certain technical measures for the conservation of fishery resources). Dolphin sets are encirclements of schools or groups of marine mammals with purse seine nets, when aiming to catch tuna or other species of fish associated with the dolphins.

Taking into consideration that the CFP was created with the idea that the conservation policy will result in effective fisheries management in Community waters and a prosperous fishing industry, it would be expected that it should include regulations for the protection and management of the whole marine ecosystem. The CFP is the best-situated piece of legislation to deal with a group such as marine mammals, which lives across Member State boundaries and interacts to such a degree with the fishing industry. Any measure to decrease the impact of fisheries on cetaceans or vice versa is likely to affect the way the industry operates and can probably only be attempted at Community level.

4.2.2. United Nations Law of the Sea (UNCLOS)

The United Nations Convention on the Law of the Sea (UNCLOS) entered into force in November 1994, almost twelve years after its adoption. It represents the culmination of more than 10 years of intense negotiation and provides the framework for governing all aspects of use of ocean space, such as delimitation, environmental control, marine scientific research, economic and commercial activities, transfer of technology and the settlement of disputes relating to ocean matters.

The Convention comprises 320 articles and nine annexes, which 135 countries have so far ratified. The Convention lays down the geographical boundaries of the Territorial Sea and Contiguous Zone and the EEZ of each coastal state and sets up the rights and obligations of each coastal state in these areas.

The Territorial Sea (over which the coastal state has sovereignty) extends to a limit not greater than 12 nm. Foreign fishing vessels have the right of innocent passage through a Territorial Sea, but not the right to engage in any fishing activities. A coastal state may set conservation rules and prevent the infringement of its fishing regulations in its territorial waters³². The Contiguous Zone is defined as an area contiguous to the Territorial Sea - which may extend no more than 24 miles from the coast, in which the coastal state may exercise the control necessary to prevent or punish infringements of certain laws or regulations within its territory. The extension of the EEZ is set to 200 miles from the coast and each coastal state has *inter alia* sovereign rights for the purpose of exploring and exploiting the living resources within this area. Each coastal state exercises jurisdiction over marine science research and environmental protection in the EEZ. Within its EEZ a coastal state can determine the allowable catch of the living resources and is to ensure, through proper conservation and management measures, that the maintenance of these living resources is not endangered by over-exploitation. These measures should also be designed to maintain stock levels which will produce the maximum sustainable yield, as qualified by reference to relevant economic,

³² In accordance with this, Spain has established a Fishery Protection Zone in the Mediterranean, which entered into force on 27th August 1997 (Real Decreto 1315/1997, later modified by the Real Decreto 431/2000 which entered into force on 31st March 2000). This zone is delimited by a notional line that starts 12 nm from Punta Negra-Cabo de Gata (36°31'42'' N, 02°10'20'' W), heading in the direction 181° (S 0001 W) for 37 nm to the point 35°54'05'' N, 02°12'00'' W, then turns to the east until meeting a second notional line equidistant from the two coasts then continuing, in conformity with international law, until the marine border with France. In this area, the conservation and management of the fishery resources are the responsibility of the Spanish government.

political and environmental factors, interdependence of stocks, and any generally recognised international minimal standards.

Coastal states share with the international community part of the revenue derived from exploiting resources from any part of their shelf beyond the 200 miles limit (the “high seas” area) but are also obliged to adopt, or co-operate with other states in adopting, measures to manage and conserve living resources. These measures must be designed to ensure that harvested species are maintained at or restored to levels that can produce the maximum sustainable level as qualified by relevant environmental and economic factors. Finally all states are bound to prevent and control marine pollution and are liable for damage caused by violation of their international obligations to combat such pollution.

The Convention gives special rules for the conservation of highly migratory species (listed in Annex 1) and commits coastal and other states fishing for these species to co-operate to ensure and promote the optimum utilisation of these species. This co-operation may be bilateral or through appropriate international organisations. Furthermore, States are required to co-operate to establish such organisations where they do not exist. Species listed in Annex 1 include the following cetacean families: Physeteridae, Balaenopteridae, Balaenidae, Eschrichtiidae, Monodontidae, Ziphiidae, Delphinidae.

Marine mammals are also mentioned in the Convention, but the text proves disappointingly vague: “Nothing in this Part restricts the right of a coastal state or the competence of an international organisation, as appropriate, to prohibit, limit or regulate the exploitation of marine mammals more strictly than provided for in this Part. States shall co-operate with a view to the conservation of marine mammals and in the case of cetaceans shall in particular work through the appropriate international organisations for their conservation, management and study” (Article 65, Part V).

As is the case with many pieces of legislation, the only obligation that signatory states have in relation to marine mammals seems to be the duty to co-operate to preserve marine mammals but without no specification of how marine mammal conservation is to be achieved.

4.2.3. FAO Code of Conduct for Responsible Fisheries

The Conference of the FAO adopted, in October 1995, by consensus, the Code of Conduct for Responsible Fisheries. The Code, which is voluntary, aims, *inter alia*, to establish principles for responsible fishing, in accordance with the relevant rules of international law, and to serve as an instrument of reference to help states establish or improve the legal, institutional and managerial arrangements required for responsible and sustainable fishing. It provides the necessary framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment. It applies globally to all fisheries, including fisheries within the EEZ and the territorial sea as well as those on the high seas.

The Code of Conduct comprises 12 articles that deal with fisheries management, fishing operations, aquaculture, coastal area management, post-harvest practices and trade and fisheries research. The Article on fisheries management contains many important sub-headings concerning management objectives, management framework and procedures, data gathering and management advice, the precautionary approach, capacity management measures, implementation and financial institutions. The need for fisheries management to be based on effective data is stressed. The Article on fisheries operations deals with the duties of flag states and port states, as well as provisions on harbours, protection of the environment and the abandonment of structures and reefs. The overall objective of this Article is to promote a framework that would encourage the sustainable development, foster protection of the aquatic environment and the maintenance of biodiversity while making a significant contribution to the safety of fishing operations. This Article of the Code makes special reference to fishing gear selectivity (Article 8, Section 5) stating that:

“States should require that fishing gear, methods and practices, to the extent practicable, are sufficiently selective so as to minimise waste, discards, catch of non-target species, both fish and non-fish species, and impacts on associated or dependent species and that the intent of related regulations is not circumvented by technical devices. In this regard, fishers should cooperate in the development of selective fishing gear and methods. States should ensure that information on new developments and requirements is made available to all fishers.

- In order to improve selectivity, States should, when drawing up their laws and regulations, take into account the range of selective fishing gear, methods and strategies available to the industry.
- States and relevant institutions should collaborate in developing standard methodologies for research into fishing gear selectivity, fishing methods and strategies.
- International co-operation should be encouraged with respect to research programmes for fishing gear selectivity, and fishing methods and strategies, dissemination of the results of such research programmes and the transfer of technology”.

Adherence to the FAO Code for Responsible Fisheries is voluntary. However, certain provisions of the Code will be given binding effect under the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement). This mechanism has not entered into force yet. Nevertheless, as with all the instruments reviewed so far, the lack of specific provisions for cetacean conservation is a fatal flaw.

4.3. Sanctuaries and Protected Areas

A cetacean sanctuary has been defined (after International Union for the Conservation of Nature and Natural Resources (IUCN)/UNEP/World Wildlife Fund workshop on Cetacean Sanctuaries, 1979) as a place where:

- no cetacean may be killed, taken alive or harassed
- the environmental qualities which are necessary for the biological functions that cetaceans perform there (such as breeding, calving, migrating, feeding) are not impaired by human activities.
- benign scientific research and observation by the public may be conducted under appropriate control
- public awareness of the significance of cetaceans in the natural environment can be enhanced

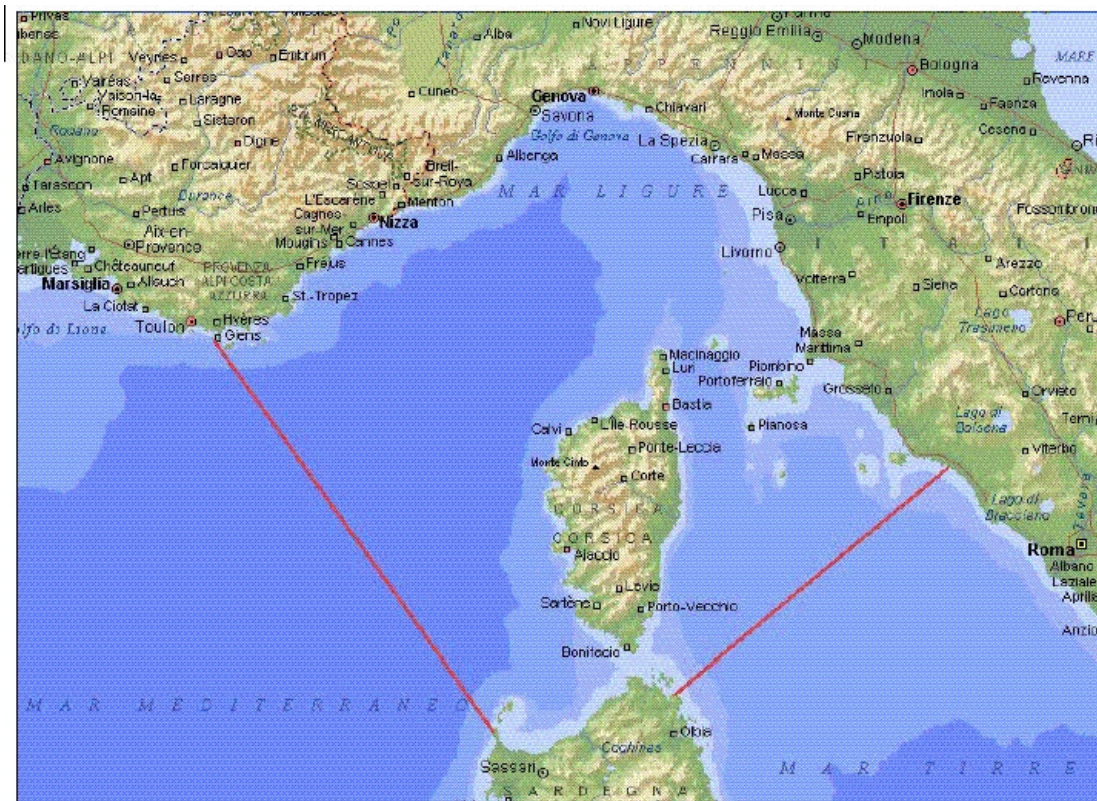
At present there are two examples of sanctuaries in European waters.

The Irish Whale and Dolphin Sanctuary was declared in June 1991 by the Irish Government and covers the entire country's EEZ of 200 miles. The Sanctuary is not a legal entity and therefore does not have the legal status of a reserve or refuge. Because of this, cetacean protection in Irish waters is covered by the legal framework already in place previous to the establishment of the Sanctuary (Rogan & Berrow, 1995).

On November 1999, the Ministers of the Environment for Italy, France, and Monaco signed a Treaty designating a 32,424 square mile area of the Mediterranean Sea to be a whale and dolphin sanctuary. The Ligurian Sea Cetacean Sanctuary (Figure 4) comprises the waters between Toulon (French Riviera), Capo Falcone (western Sardinia), Capo Ferro (eastern Sardinia) and Fosso Chiarone (Tuscany). The region is characterised by very high levels of primary productivity and all cetaceans regularly observed in the Mediterranean are significantly more abundant in this area than in all other seas surrounding Italy, and the rest of the western Mediterranean basin. In the area covered by the Sanctuary, all direct takes and intentional harassment of marine mammals will be forbidden, potentially invasive research activities and whale-watching will be regulated, large-scale pelagic driftnet fishing will be banned, offshore speedboat competitions will be limited and eventually forbidden and special effort will be devoted to control and curb pollution harmful to cetaceans.

It is expected that Ligurian Sea Sanctuary will be designated as one of the first Specially Protected Areas of Mediterranean Importance (SPAMI) in the context of the Barcelona Convention Protocol relative to Specially Protected Areas and Biological Diversity in the Mediterranean. Once this happens, the Sanctuary's provisions for protection will be binding on all parties of the Barcelona Convention and not just on the three bordering countries (Monaco, Italy and France).

Figure 4. Map of the Ligurian Sea Sanctuary. Reproduced from Notarbartolo di Sciara (1999).



4.4. The situation in other areas: the US Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) was enacted in 1972 with the aim of ensuring that marine mammals are maintained at, or in some cases restored to, healthy population levels. The original Act established a moratorium on the taking or importing of marine mammals and marine mammal products except for certain activities which are regulated and permitted (under the MMPA a “take” is defined as “to harass, hunt, capture, or kill or attempt to harass, hunt, capture, or kill any marine mammal”).

The NMFS (under NOAA within the Department of Commerce), along with the U.S. FWS, administers the MMPA. Under the provisions of the MMPA, NMFS is responsible for the management and conservation of whales, dolphins and porpoises, as well as seals, sea lions and fur seals. The remaining marine mammal species (polar bear, walrus, sea otter, and manatee) are under the jurisdiction of the FWS.

In 1988 the Congress amended the MMPA to establish a five-year interim exemption for commercial fishing operations. That exemption expired on October 1, 1993, but was twice extended by temporary measures. This interim program granted fishermen an exemption for taking marine mammals if their vessels were registered with the NMFS, and they recorded marine mammal interactions in logbooks. The interim exemption also included an observer program, which enabled NMFS to collect information on fishery-specific levels of marine mammal incidental take. These data were ultimately used to guide development of the current long-term fisheries management regime established by the MMPA Amendments of 1994 in Section 118. During the interim exemption period, the NMFS developed a three-category fishery classification system based on the level of interaction between the fishery and marine mammals. The classification is as follows:

- (a) Category I: fisheries defined as those in which it is highly likely that one marine mammal will be taken by a randomly selected vessel during a 20-day period.
- (b) Category II: fisheries defined as those in which there is some likelihood of taking one marine mammal during a 20-day period.
- (c) Category III: fisheries defined as those in which it is highly unlikely that any marine mammal will be taken during a 20-day period.

In 1994, Congress re-authorized the MMPA and made a number of changes to the Act known as “the 1994 Amendments”. These changes were related to various aspects of the MMPA as described below.

Marine Mammal Stock Assessments

The NMFS and the FWS, as appropriate, are required to prepare reports, in consultation with Regional Scientific Review Groups, that describe the status of each marine mammal stock which occurs in waters under the jurisdiction of the United States. These reports include a description of the stock, its geographic range and several basic biological parameters of population dynamics; estimates of human-induced mortality, by source; a determination of the status of the stock; and an estimate of a PBR level for the affected stock that, if not exceeded, would allow the stock to reach or maintain its optimum sustainable population. The reports are to be made available for public review and comment and will serve as the basis for TRPs for strategic stocks that interact with category I and II fisheries.

Take Reduction Plans

Take Reduction Teams will be established to develop plans to reduce the incidental mortality and serious injury of marine mammals that interact with category I or II fisheries. The short-term goal of the plans is to reduce mortality and serious injury of marine mammals, caused by commercial fishing operations, to levels below the affected stock’s PBR. The long-term goal of the plans is to reduce the rates of incidental mortality and serious injury of marine mammals to insignificant levels, approaching a zero rate (ZMRG).

Authorisation To Take Marine Mammals

To be authorised to take marine mammals, each commercial fishing vessel participating in a category I or II fishery must be registered with NMFS. The Secretary of Commerce is authorised to revoke an individual fisher’s permit to take marine mammals if that fisher fails to comply with a Take Reduction Plan, with reporting requirements, with the requirement to carry an observer when requested, or with emergency regulations. In addition, an individual fisher may be fined for not complying with regulations to protect marine mammal stocks. Fishers are no longer required to report fishing effort or submit reports for trips in which no marine mammal was killed or injured. However, fishers must report all serious marine mammal injuries or mortalities to NMFS within 48 hours of returning from a fishing trip.

NMFS is to develop a standardised, postage-paid, computer-readable form to facilitate reporting by fishers and to speed-up analysis of the data collected.

Fishers participating in category III fisheries are not subject to penalty for taking marine mammals under the MMPA, provided they report the serious injury or death of any marine mammal within 48 hours of returning from a fishing trip.

On-Board Observer Coverage

All vessels fishing in category I and II fisheries are required to carry on-board observers if so requested by the Secretary of Commerce. The Secretary can request the vessel owner's consent for on-board observers to be placed on category III vessels. Under emergency powers, the Secretary can also require vessels in category III fisheries to carry on-board observers if there is reason to believe that the affected fishery is causing the incidental mortality or serious injury of marine mammals listed as threatened or endangered under the ESA.

Timetable for Implementation

Section 118 of the 1994 Amendments sets two deadlines for achieving the ZMRG. First, ZMRG must be met within the context of each Take Reduction Plan within five years of its establishment, and second, all commercial fisheries must achieve ZMRG by April 30, 2001.

However, at present, efforts to achieve the first deadline of reaching ZMRG for each Take Reduction Plan have been delayed due to difficulties in achieving PBR levels within six months of implementation. It is thought that reaching ZMRG will require extensive further research, development of new gear technology, and identification of new ways to further reduce takes. Therefore, given that it has been difficult to meet PBR levels for most plans, it is unlikely that fisheries will be able to achieve ZMRG within the deadlines set, and possibly not for the foreseeable future.

Despite the lack of success in achieving its ultimate goal of zero by-catch mortality, the MMPA has been responsible for substantial reductions in by-catch rates, and for a vastly improved knowledge base on marine mammal populations.

4.5. Conclusion

Important features of the MMPA include its coverage, its specific goals, its funding and the mechanisms for achieving the goals:

Coverage: The MMPA covers all waters under the jurisdiction of the United States, i.e. all waters within the 200 mile EEZ, not merely coastal waters.

Specific by-catch reduction goals, namely, implementation of the ZMRG.

The MMPA states that:

1. "Commercial fisheries shall reduce incidental mortality and serious injury of marine mammals to insignificant levels approaching a zero mortality and serious injury rate within 7 years after April 30, 1994.
2. Fisheries which maintain insignificant serious injury and mortality levels approaching a zero rate shall not be required to further reduce their mortality and serious injury rates.
3. Three years after April 30, 1994, the Secretary shall review the progress of all commercial fisheries, by fishery, toward reducing incidental mortality and serious injury to insignificant levels approaching a zero rate. The Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Merchant Marine and Fisheries of the House of Representatives a report setting forth the results of such review within 1 year after commencement of the review. The Secretary shall note any commercial fishery for which additional information is required to accurately assess the level of incidental mortality and serious injury of marine mammals in the fishery.
4. If the Secretary determines after review under paragraph (3) that the rate of incidental mortality and serious injury of marine mammals in a commercial fishery is not consistent with paragraph (1), then the Secretary shall take appropriate action under subsection (f) of this section".

Money: In the USA, the take reduction process, requires considerable time, staff resources, and expense. This includes "approximately two to three years of observer coverage, abundance surveys, and research into stock structure and fishery characteristics, at an estimated annual cost of \$2 million. Convening teams for negotiations, including assembling the team and contracting a facilitator, can take approximately two years and cost approximately \$500K per team. Additionally, time is required for NMFS to develop the

regulations, followed by three to five years of monitoring and follow-up with the team, at an approximate cost of \$100K per meeting and \$800K per year of observer coverage”. Nevertheless, this funding is made available.

An established mechanism for achieving by-catch reduction: The MMPA sets out the required actions and there is an established mechanism for achieving them, including establishment of Take reduction Teams and Take Reduction Plans. Take Reduction Teams include industry members.

Having reviewed the existing regulations and directives, it not clear that the current legislation applicable to EU waters is capable of achieving a reduction in marine mammal by-catch in the immediate future. Since there is little likelihood of by-catch reduction goals being achieved entirely through good intentions and voluntary compliance, there is a need for legislation to underpin processes similar to, or equivalent to those, taking place under the MMPA:

- Establishment of management bodies with responsibility for by-catch reduction. These must involve fishermen's representatives in the entire decision-making process. There is a need for formally constituted bodies through which fishermen (or anyone else) may take the initiative in the development of policy on by-catch reduction. It is possible that existing Regional Fisheries Organisations could fulfil this role.
- Development of management plans for each area to reduce by-catch. These management plans need to set management objectives for individual stocks. Fisheries with a significant impact on marine mammals need to be identified. Monitoring and mitigation programmes need to be established, preferably aided by the setting up of a licensing scheme under which rewards (or an absence of penalties) would follow from co-operation.
- Effective enforcement of conservation measures.
- Funding for the entire process

All these points are considered in more detail in the following section.