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MEDITERRANEAN ACTION PLAN

Meeting of the National Focal Points
for Specially Protected Areas in the
Mediterranean
Athens, 26-30 October 1992
including joint consultation concerning
the concervation of cetaceans in the
Mediterranean and the Black sea
Athens 26-27 October 1992

Protected Areas in the Mediterranean : An Analytical Study of the Relevant Legislation (December 1991.)

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This Study was done for the RAC/SPA (Regional Activity Centre for Specially Protected Areas) by IUCN, Environmental Law Center.

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1. FOREWORD

This study is essentially a country-by-country examination of the Mediterranean riparian States' legislation on the establishment of marine or coastal protected areas, and in particular of the specially protected areas designated in application of the protocol of 3rd April 1982 to the Barcelona Convention on Mediterranean Specially Protected Areas (the Geneva Protocol). This examination is followed by a summing-up, in the form of conclusions, which reviews the various problems encountered in the establishment and management of these protected areas. In the analysis of legislation in force an effort has been made to review the greatest possible number of texts. General texts concerning the protection of the coastline, protected areas and fisheries - insofar as the latter make it possible to establish areas where fishing is prohibited - have been examined. As for the texts establishing specific protected areas, this study is not restricted to those dealing with the specially protected areas designated under the Geneva Protocol; it has also sought as far as possible to take into account all those texts which establish a protection system in marine or coastal areas. It has unfortunately not been possible to examine all existing texts, for a number of reasons:

1. For certain countries - Albania, Lebanon and Syria - it was not possible to obtain the relevant legislation. The same very largely applies to Yugoslavia.

2. In other cases, especially with respect to Libya and certain Italian regions such as Sardinia, the available texts are very incomplete. In Sardinia especially, which has a long list of protected marine and coastal areas, the corresponding texts were not transmitted to us, despite of repeated requests.

3. For certain countries (other than those whose language is French, Spanish or Italian) it has not always been possible to avail of English or French translations. It has been possible to make translations for the Cypriot and Greek texts and for certain Turkish texts. For Egypt only a few texts were available in translation. For Israel, texts establishing protected areas existed only in Hebrew, and it was not possible to translate them. Neither was it possible to translate the few Yugoslav texts that could be obtained.

4. In a certain number of countries, in particular Algeria, Italy and Spain, the law provides for the preparation of detailed regulations for each protected area, generally within a specific period following the decision to establish it. Now these texts either do not exist, whereas the time-limits prescribed for their adoption have often long since elapsed, or they exist only in an unofficial or provisional form, not having been officially adopted; or, where they do exist, they are sometimes very difficult to obtain. However, it is only these detailed regulations which make it possible to evaluate with the requisite precision

the nature and extent of the legal protection afforded to a protected area, since the text establishing the park or reserve acts only as a framework within which the regulations must operate; and so when such regulations are lacking or cannot be obtained, it can be very difficult to assess how efficiently a protected area is protected.

5. For some years now there has been a rapid and considerable development of the legislation on protected areas and protection of the coastline, especially in Turkey and, since their regionalisation, in Spain and Italy; and the number of marine and especially coastal protected areas is thus rapidly increasing. It will therefore be essential to update this study periodically if the evolution of the law on these types of protected areas in the Mediterranean riparian countries is to be kept under review.

2. ALGERIA

1. The basic law is the Environmental Protection Act of 5th February 1983. Chapter II of this Act is devoted to national parks and nature reserves. Article 17 specifies that these protected areas may extend to the national maritime domain and to the waters coming within Algerian jurisdiction. This provision could be construed in the strict sense as limiting the possibility of establishing marine parks and reserves only to those cases where coastal protected areas are extended to the sea.

The national parks and nature reserves are set up by decree. The establishing text, which appears to be a step in the administrative procedure prior to the issue of the decree, may prohibit any action liable to be harmful to the natural development of the flora and fauna. It takes account of the maintenance of existing traditional activities insofar as they are compatible with conservation interests.

A decree implementing the 1983 Act was issued on 23rd July of that year. This decree establishes the standard status of national parks. The parks are public establishments which have been granted legal personality and are administered by a Steering Council (Conseil d'orientation) and by a director who may issue orders to execute the deliberations of the Council. The director may regulate access, traffic and parking. The parks are divided into five zones : a strict nature reserve, a primitive zone, a low-growth zone, a buffer zone and a peripheral zone.

2. The order of 23rd October 1976, which sets forth general regulations on fisheries, makes it possible to establish areas at sea which are closed to fishing.

3. Of the four sites designated by Algeria as Specially Protected Areas, three are coastal national parks which do not apparently extend to the sea. The fourth, Reghaia, is an area for the breeding of game species. This is a public establishment established by decree in application of the 1982 Hunting Act. Its main object is the production of game species. Hunting there is prohibited. There seems to be no provision for measures to protect the natural environment. However, the fact that the land is public property confers to it a certain degree of protection.

3. CYPRUS

1. The 1967 Forest Law and its implementation regulations of the same year authorise the government to create nature reserves in state-owned forests. The 1974 Game and Wild Birds - Protection and Development Law provides for the possibility of establishing game reserves where all hunting may be prohibited. The Fishing Law (Laws of Cyprus, Cap. 135) makes it possible to adopt regulations to determine zones where fishing may be prohibited or restricted and to deal with any other question concerning the conservation, protection or maintenance of aquatic animal populations.

2. The Foreshore Protection Law, which goes back to 1934 but which has been amended on numerous occasions since then, applies to the strip of land running from the high-water limit to a distance of 90 meters inland. This law enables the Government to make regulations to delimit areas within this strip that may include private property, where numerous activities, such as the extraction of materials, the dumping of any kind of waste, the construction and installation of hutments, boats, parasols, restaurant of recreational facilities, etc., may be prohibited or made subject to authorisation in order to preserve the natural character of the foreshore.

3. While the Forest Law makes it possible to establish coastal protected areas, it does not seem so far to have been used to this end. The fact that it has only been applied to State Forests does not in any case suit it to the conservation of coastal areas, given that it appears not to have been used on the public maritime domain.

4. The game reserves which may be established in application of the 1974 Law are not instruments for the protection of natural habitats. Only hunting may be prohibited in these reserves.

5. The Fisheries Regulations 1952-1989 were amended in 1989 to organise the protection of important marine turtle egg-laying beaches : the Lara Beaches on the south coast of the Akanias Peninsula. This text prohibits the traffic and mooring of ships and boats of all kinds as well as fishing, with the exception of line-fishing, from 1st June to 30th September annually, in the marine area adjacent to the beach and up to the twenty-meter contour-line. Vehicle traffic, the use of mattresses, parasols, tents, caravans, etc., as well as access by night are prohibited on the beach itself up to a distance of 90 meters from the shore.

6. This area is designed to become part of the future Akamas National Park which is in the process of being developed, and which will be the First National Park of Cyprus. In the absence of any relevant specific legislation, and since it is impossible to use the Forest Legislation on non-State Land, the Cyprus authorities intend mainly to use planning legislation to limit building. In the area adjacent to the Lara Beach, the land-use coefficient will thus be no more than 0,5%.

7. A 1990 decree implementing the Foreshore Protection Law prohibits the installation of hutments, parasols, recreational facilities, etc., on certain beaches where marine turtles lay their eggs. Current permits will not be renewed.

8. The two reserves designated by Cyprus as Specially Protected Areas in fact only benefit from a very limited protection status. The lake of Larnaka is simply a game reserve under the 1974 Law. As for the Lake of Limassol (Akrotiri), it is situated in an area which has remained a British Sovereign Base Area. The legislation applying to it is thus that which is in force on these bases : the 1974 Game and Wild Birds (Protection and Development) Ordinance, whose terms are in any case practically identical to those of the Cyprus Law. The Akrotiri Game Reserve was established in application of this text by an order of 30th August 1977, subsequently replaced by an order of 22nd October 1979, issued by the Administrator of the Sovereign Base Areas. The designation of this reserve as a Specially Protected Area was made by the Sovereign Base Areas Administration.

4. EGYPT

1. The basic law is Law no. 102 of 20th July 1983 on Protected Natural Areas. This law applies to terrestrial and fresh-water areas as well as to coastal marine waters. In the protected areas established under this law, it is prohibited to commit any act which might destroy or degrade natural habitats, or to cause any damage to fauna and flora. The destruction, collection or damaging of shells and coral are, in particular, prohibited in the protected marine areas. These protected areas are created by decree.

2. The four nature reserves designated by Egypt as Specially Protected Areas have all been established by decree in application of the 1983 law. Two of them are exclusively terrestrial : El Arîsh-Rafah and O'Mayed (the latter is a biosphere reserve of the UNESCO MAB programme; according to the biosphere reserve list published by that organisation, the northern limit of the reserve is 20 km from the coast; however, its extension to the coast is being planned). The two other Specially Protected Areas have been established in order to preserve coastal lagoons. Ashtoun and Gamil-Island of Tanees extend to the sea since it encompasses the island of the same name. The Bardaweel Reserve is exclusively a lagoon reserve. Hunting was already prohibited there (by an order of 24th May 1982) before its establishment by decree in 1985.

5. FRANCE

1. In France there is no specific legislation on marine protected areas. The few marine parks and reserves so far existing were established in application of texts which, even though allowing for the establishment of protected areas on the public maritime domain, were designed first and foremost to preserve terrestrial areas : they are thus ill-adapted to the particular conditions of marine ecosystems. These texts are the National Park Act of 22nd July 1960 and the Nature Protection Act of 10th July 1976, an important part of which is devoted to nature reserves. A 1982 Bill On Marine Parks and Reserves, based on the work of the French Society For Environmental Law, has still not been passed in 1991.

2. The National Park Act of 22nd July 1960 provides that a tract of land may be established as a national park when the conservation of a natural habitat is of special importance, and it is necessary to shield it from any human impact liable to damage its appearance, composition or evolution. The land thus established may extend to the public maritime domain. This provision appears to limit the possibility of creating a national park at sea to the sole case of a seaward extension of a terrestrial park. The creation of exclusively marine parks thus seems impossible. National parks are created by decree. The only French park that includes a marine part is Port Cros, created by the decree of 14th December 1963. This park includes a 600 meter wide marine zone surrounding the island of Port Cros.

The Nature Protection Act of 10th July 1976 provides, inter alia, for the possibility of creating nature reserves. The establishment of a tract of land as a nature reserve may affect the public maritime domain and the French territorial waters. It is thus possible, unlike the National parks, to establish purely marine reserves. Nature reserves are created by decree. When any of the landowners concerned disagrees to the establishment of the reserve, the decree must be preceeded by a consultation of the Conseil d'Etat and a public inquiry. This procedure is always required for the de-establishment of a nature reserve. The establishing document may prohibit any act to harm the natural development of the fauna and flora and more generally to damage the character of the reserve. The following may also be prohibited : hunting, fishing, agricultural, forestry, pastoral, industrial, mining, advertising and commercial activities; the execution of public or private works; the extraction of materials; the use of water; public traffic whatever the means employed, etc. Prior to the 1976 Act a certain number of nature reserves had already been established in application of the Law of 2nd May 1930, amended in 1957. This law made it possible to establish sites of scientific interest as nature reserves.
The reserves were created by order unless there was opposition from landowners, in which case a decree was necessary. Most of the 1976 law's provisions on nature reserves, in particular its penal provisions, were made applicable to reserves already

existing. However, these reserves continued to be regulated by provisions featuring in their establishing documents. Similarly, it seems that the 1976 law's provisions on the de-establishment of reserves do not apply to them. Reserves established by an order, for example, may be de-established simply by the issue of another order. Three of the Specially Protected Areas designated by France are nature reserves established in application of the 1930 Law, prior to the adoption of the 1976 Nature Protection Act. These are the Camargue and Estagnol Reserves, both created by order and the Scandola Reserve, created by decree. The Cerbère-Banyuls Reserve was originally created by a 1974 order, which was replaced by a decree in 1990.

3. Regional nature parks are not protected areas in the strict sense, but regional planning instruments relating to areas of particular interest for their natural or cultural value. The institution was created by decree (Decree of 1st March 1967, replaced by the decree of 24th October 1975, which was in turn replaced by the decree of 25th April 1988). Each park is established by a Constitutive Charter (Charte constitutive) which defines its goals. Regional nature parks are not subject to any particular restrictions. The protection measures applying to them are thus the same as for other parts of the country. The existence of a management body with its own staff and budget, and the moral undertaking that the Charter constitutes for the public entities concerned - the municipalities in particular - obviously makes it easier to take conservation measures.

The coastal regional nature parks, such as the Camargue and Corsica Parks, extend in principle to the adjacent sea. The Corsica Park includes the sea-bed to a depth of 100 meters. These marine zones are subject to no particular regulations on account of their inclusion in the park, and cannot therefore be considered as being protected, except of course where they have been established as nature reserves, as in the case of the Scandola Reserve in the Corsica Park.

4. The other legal instruments that can be used to protect marine or coastal ecosystems do not make it possible to cover both land and marine zones : some of these instruments may only be used on the public maritime domain, whereas the others are of exclusively terrestrial application. Moreover, they mostly allow only for partial protection measures. However, the combined use for a given area of several of these instruments may, to some extent, counteract these disadvantages.

5. At sea, and on the public maritime domain, the following instruments may be used :

a) Fishery Establishments

In principle these are concessions granted for the farming and exploitation of shellfish on the public maritime domain. This procedure may however be used to protect an area e.g. for scientific research purposes. The Beaulieu, Golf Juan and Carry-Le-Rouet fishery establishments belong to this category. At Carry-

Le-Rouet, the order granting the concession authorises the concessionnaire (an association bearing the name Parc Marin de la Côte Bleue) to drive stakes into the sea-bed to prevent trawling.

b) Closed Areas ("Cantonnements")

These are zones where fishing is prohibited. There are nine along the Corsican coastline. In the Cerbère-Banyuls Nature Reserve a zone of reinforced protection where all fishing is prohibited was established according to the "Cantonnement" procedure. Since the decree of 6th September 1990, the limits of this no-fishing zone have been fixed by the decree itself.

c) Particular Regulatory Measures may be taken with a view to prohibiting or limiting certain activities at sea, e.g. deep-sea fishing and the navigation and mooring of boats.

The combined use of these three types of instrument is in fact tantamount to the creation of a reserve. There is one such example at Carry-Le-Rouet where, besides the previously-mentioned fishery establishment, a "cantonnement" has also been set up and there is an order prohibiting dredging and the mooring of boats other than those belonging to the concessionaire : all this covers the same area.

d) Maritime Game Reserves are areas situated in the territorial sea, on lagunas and saline stretches of water or on the public maritime domain, where hunting is totally prohibited. There are a fairly large number along the French Mediterranean coast.

e) Orders known as "Biotope Protection Orders" may be issued on the public maritime domain by the Minister for Maritime Fisheries in order to ensure the protection of habitats necessary for the feeding, reproduction, rest or survival of protected species (Article 4 of the decree of 25th November 1977 issued for the implementation of articles 3 and 4 of the Nature Protection Act of 10th July 1976). However, only one order of this kind has been made. This is the order of 13th June 1990 concerning the Bruzzi Islands in Corsica for the protection of a breeding-station of the Shag.

In principle, however, there is nothing to stop this procedure being used to protect posibonia grass-beds, for example, since this marine plant is one of the protected plant species (Order of 19th July 1988).

f) The plans for the use of the sea provided by article 57 of the law of 7th January 1983 establish zones for the coastal marine area and determine the general function of each zone. They also specify the measures to be taken to protect the marine environment. These plans are adopted by the state and must be taken into account in the land-use plans drawn up by local authorities.

6. On the terrestrial part of the coastline, the main legal instruments, apart from nature reserves, allowing for the protection of natural habitats are the following :

a) Prefectoral Biotope Protection Orders

Outside the public maritime domain, the Biotope Protection Orders issued in application of article 4 of the law of 10th July 1976 are adopted by the Préfets. As we have seen, these orders make it possible to protect the habitats of protected species. There are in all about 150, but it seems that there are not yet any that concern the Mediterranean coastline as such.

b) The "Conservatoire" for the Coastline and for Lake Shores

The principal purpose of this public establishment, financed by the State Budget, is to acquire natural areas along the coastline. To this end it enjoys the right of pre-emption and may even, where appropriate, proceed to expropriations. However, since the "Conservatoire" does not have police powers, it cannot impose on the land that it has acquired stricter protection measures than those deriving from its right of ownership. "Conservatoire" land may only be alienated after a vote, by a three-quarters majority, of its Administrative Council followed by a State Council Decree.

c) The Legal Prescriptions of 3rd January 1986 on the Coastline

This law establishes a special land-use system in coastal municipalities. In particular, outside areas that are already built-up it prohibits construction or installations on a hundred-meter wide coastal strip, measured from the upper shore limit.

However, certain exceptions are provided. Moreover, the law requires that documents and decisions (i.e., essentially land-use plans and all permits) "concerning the utilisation of land must preserve terrestrial and marine areas, sites and landscapes which are outstanding or which are characteristic of the natural and cultural heritage of the coastline, and the habitats that are necessary to maintain biological equilibria".

These areas and habitats to be preserved "include in particular, in the light of their ecological value, dunes and coastal heaths, beaches and lidos, forests and wooded coastal areas, uninhabited islets, the natural parts of estuaries, rias or abers and capes, marshes, mudflats, wetlands and temporarily submerged habitats as well as those areas designated by the European Directive of 2nd April 1979 on the Conservation of Wild Birds as resting, breeding and feeding areas for birds, and, in overseas départements, coral reefs, lagoons and mangroves".

This list was made more specific and completed by a decree of 20th September 1989 which added foreshores, cliffs and their surrounding areas, peatlands, stretches of water, habitats holding natural concentrations of animal and plant species such as sea-grass-beds, spawning- and feeding-grounds and natural deposits of living shellfish, geological formations, including caves, the natural parts of sites included or established in

application of the Law of 2nd May 1930 and of National Parks and finally nature reserves. Only certain minor forms of development are permitted in these areas and habitats : footpaths, light structures for the reception and information of the public, necessary development for activities relating to agriculture, marine fishing or farming, shellfish-breeding, herding and forestry, provided they do not alter the character of the areas.

However, exceptions are provided for works necessary for maritime and air security, national defence, civilian security, the operation of airports and public port services other than marinas, where their presence in these areas meets an imperative technical need. The extraction of materials from the sea-bed is limited or prohibited where it is liable directly or indirectly to damage the integrity of beaches, coastal dunes, cliffs, marshes. mudflats, sea-grass-bed areas, spawning-grounds, natural deposits of living shellfish and marine farming operations. Dredging work in ports and their channels, however, is not affected by this rule.

7. France has designated ten marine or coastal areas as Specially Protected Areas under the Geneva Protocol. Seven of these areas, namely the National Park of Port Cros and the nature reserves of Camargue, Cerbère-Banyuls, the Cerbicales Islands, Estagnol, the Lavezzi Islands and Scandola, enjoy strict legal protection. The Regional Nature Park of Corsica, as for all French Regional Nature Parks, has no legal protection. But the existence of a structure, a budget and staff nonetheless makes it possible to negotiate conservation measures with local authorities and private landowners, The Fango Biosphere Reserve (as indeed the Scandola Nature Reserve) is part of the Regional Nature Park. It has no particular legal status other than that of State Forest.

As for Coastline "Conservatory" Land, its protection is merely the consequence of the right of ownership of this public establishment as well as of their quasi-inalienability. Of the ten Specially Protected Areas designated by France, one is exclusively marine (Cerbère-Banyuls) and three are mixed (Port Cros, Scandola and the Lavezzi Islands). All the others are terrestrial.

8. In the absence of a specific legislative text on marine protected areas, it was possible to establish the few existing marine parks and reserves only on the basis of legislation ill-adapted to the conservation of marine ecosystems. In particular, the jurisdictional split between terrestrial and maritime authorities raises practical problems that are difficult to solve. To this must be added the uncertainty that continues to hang over the legal status of certain elements of the marine environment. For instance, marine waters do not in France appear to be part of the public maritime domain.

One example of the problems raised by the jurisdictional split is the National Park of Port Cros. The decree creating the Park merely prohibits deep-sea fishing and the use of dragnets in the

marine zone. The other fishing activities, navigation and the mooring of boats continue to be regulated by the competent authorities, thus falling outside the scope of the park administration, which can merely attempt to negotiate the adoption of the regulations that it deems necessary. It has thus been able to obtain the concession, as if it were an instance of exploitation, of an important population of Pinna nobilis. Of course it does not exploit it. Another example is provided by the reserve of Cerbère-Banyuls, where a zone of reinforced protection had been established by the creation of a fishery "cantonnement". The recent decree of 6th September 1990 relating to this reserve has now corrected this anomaly.

Everywhere outside parks and reserves the land limit of the public maritime domain remains an insuperable legal obstacle. Thus, as we have seen, whereas the Préfet has powers to issue Biotope Protection Orders on the landward part of the coastline, it is the Minister in charge of Fisheries who holds such powers on the public maritime domain. In theory, of course, nothing prevents the two authorities from co-ordinating to enable each to issue in its particular field of responsibility the regulations necessary for the preservation of a complete ecological unit. In practice, however, this does not occur. One could, for instance, think of Ministerial Biotope Protection Orders to protect the public maritime domain along the coastal areas acquired by the Coastal "Conservatoire", or Prefectoral Biotope Protection Orders to protect the terrestrial coastline of a marine reserve.

Similarly, the combination of different instruments may also serve to reinforce the protection of an area. There is nothing to prevent the creation of a nature reserve or the issue of a Biotope Order so as better to protect land acquired by the Coastal "Conservatoire" or land established as a natural zone by a land-use plan. As we have seen, the combined use at sea of three different legal instruments has made it possible to create a zone of reinforced protection at Carry-Le-Rouet.

9. There remains of course the problem of management ! Where the protected area extends over both domains, terrestrial and maritime, only the creation of a national park or a nature reserve makes it possible in principle to establish a management authority with powers, within certain limits, to manage the area in a unitary manner. For all the other legal protection instruments, unitary management is impossible. The 1986 Coastal Act, however, attempts to find partial solution to the difficulty by specifying that the decisions on the use of the public maritime domain must take into account the functions of the areas concerned and those of the neighbouring terrestrial areas, and that in this respect these decisions must be co-ordinated with those relating to neighbouring land for public use (art.25). This means that where coastal land is the property of the Coastal "Conservatoire", it is now necessary to co-ordinate the use of the adjacent public maritime domain. The "Conservatoire" would have preferred to have been granted management of such land.

6. GREECE

1. Until 1986 the only legal instrument making it possible to establish protected areas was the forestry legislation. The framework law of 10th October 1986 on the protection of the environment has now considerably extended the State's ability to take action to create protected areas. It is henceforth possible in particular to establish marine or mixed protected areas. It is also possible to protect natural habitats by regulating certain activities under the planning laws.

2. The creation of protected areas was exclusively governed until 1986 by the Forestry Code (Decree-Law 996 of 1971 amending the 1969 Forestry Code). Article 78 of this text establishes three categories of park and reserve : national parks, "esthetic forests" and natural monuments. The possibility of establishing marine protected areas is not mentioned, which is hardly surprising given that the law is entirely concerned with forests. A few of the protected areas created under this legislation extend to the coast. These are the Sounio National Park, the "Esthetic Forests" of Vai, Pefkias and Myticas-Nikopoli and the island of Skiatos, and the natural monuments of the island of Piperi and of the Petrified Forest of Sigri on the island of Lesbos. The National Park of Samaria in Crete does not for the time being extend to the sea but its southern limit is very close. All these protected areas have been designated by Greece as Specially Protected Areas.

The hunting legislation (Article 253 of the Forestry Code) makes it possible to establish game reserves where all hunting may be prohibited. Some of these reserves have been established in coastal regions, especially on certain islands. National parks, "esthetic forests" and natural monuments are established by decree. Each park must include a central zone and a peripheral zone. In the central zones of the parks and in the natural monuments, most human activities are prohibited in principle. None are in the peripheral zones. There should have been orders to specify the protection system of each of the protected areas established in application of the law. It seems that only a small number were issued, whose aim was mainly to regulate the behaviour of visitors. The law appears to provide no particular protection status for the "esthetic forests". Their effective protection seems to depend on implementation orders.

3. The Environmental Protection Act of 10th October 1986 has brought profound changes to the situation. It is now possible to establish protected areas not just in land regions but also on stretches of water and in mixed areas.

New categories of protected area are appearing : strict reserves, nature reserves, protected landscapes, ecological development regions. Buffer zones may be established around strictly protected areas. Management plans must be drawn up for all

protected areas. The new protected areas will be established by Presidential Decree. Pending the publication of these decrees, provisional measures that are limited in time (two years, extensible for a further year) may be taken by a joint Ministerial Order of the Minister for the Environment and the Minister of Agriculture.

No protected area has yet been definitely established under the 1986 law. A provisional Establishing Order was, however, issued in 1990 for the coastal wetland of Amvrakikos. Other such orders are being prepared. All these texts concern wetlands of international importance included in the Ramsar Convention List. Most of these sites are coastal (Amvrakikos, Messolonghi, Kotichi, the Axios Delta, Lake Visthonis, the Nestos Delta, the Evros Delta). In most cases the protected areas thus created are planned to extend seaward to the six-meter contour-line, in accordance with the definition of coastal wetlands that is given in the above-mentioned Convention. In the longer term a regrouping of the coastal Ramsar sites of Thrace is envisaged, running from the Nestos Delta to the Turkish frontier, within a major coastal National Park.

Two marine areas should also become protected areas under the 1986 law. These are the sea adjacent to the marine turtles' nesting beaches on the island of Zakynthos and the future Northern Sporades Marine Park whose purpose especially will be to protect the monk seal. The natural monument of Piperi will be part of the park. Temporary Ministerial Orders expiring in 1991 are provisionally protecting these two areas.

The 1986 law does not repeal the Forestry Code provisions which affect the protected areas. The two systems are therefore for the time being operating in parallel. The Agriculture Ministry has powers with regard to the parks and reserves established under the forest legislation, and the new Environment Ministry for the 1986 law parks. In the longer term, the new law will also be applied to parks and reserves created under the forest legislation when the necessary decrees have been issued.

4. The planning legislation, in particular article 29 of Law 1337-1983, makes it possible to establish controlled building areas in the regions, such as coastal regions, where special environmental protection measures are necessary. This technique has been used to preserve the marine turtles' nesting beaches at Zakynthos and the neighbouring terrestrial areas.

The decree of 31st December 1986 in particular regulates a whole range of activities liable to be harmful to the turtles on the beaches : access by night, plantations, automobile traffic, parasols, pedal-boats, etc. In the adjacent marine zone, as we have seen, navigation is regulated by a provisional Inter-Ministerial Order issued under the 1986 law. This Order is due to expire in 1991.

5. In Greece there is still no marine protected area as such that enjoys permanent protection. The creation of the Northern

Sporades Park under the 1986 Law seems, however, to be progressing well. The problem of the sharing of powers on the terrestrial and marine areas appears to have been resolved by the new law, at least in theory. In practice, it will be necessary to recognise the powers that are necessary to enable the authorities entrusted with the management of the new protected areas to carry out unitary management of these areas. The composition, competences and mode of operation of the managing bodies, on which the 1986 law is completely silent, will play a crucial role in this respect. The need for unified management seems now to be acknowledged. This has been demonstrated by the experience of Zakynthos, where the problems are many and difficult.

7. ISRAEL

1. The basic law on protected areas is the 1963 National Parks and Nature Reserves Law.

National parks are not defined by the law and no particular criteria are laid down for their designation. They seem mainly to be fairly large areas which have been little affected by human activities. All economic activities other than those existing previously to the date of establishment require permits in the parks. Certain agricultural activities remain authorised. The law is silent on the possibility of establishing national parks at sea. It is, however, clear that they are an institution geared on the land areas, which is similar to the European Nature Parks. There are several coastal national parks.

Nature reserves are defined by the law as areas where animals, plants, soil, caves and water of scientific or educational interest are preserved from undesirable changes to their appearance, biological composition or developmental process. The regulations specific to each reserve may prohibit any activity therein, prohibit or limit all access and, with the agreement of the Minister for Transport, prohibit or limit the entry of vehicles, boats or airplanes. Although the law does not mention it expressively, it is possible to establish nature reserves at sea. There are several of these. It is also possible to create nature reserves within the national parks, as well as mixed reserves, whose unified management does not appear to encounter difficulties.

The two categories of protected area come under different authorities : the National Parks Authority, under the Minister for the Interior, for the parks; the Nature Reserve Authority, under the Minister for Agriculture, for the reserves. A certain degree of co-ordination is ensured by the fact that the president of each of these authorities is a member by right of the other. When a nature reserve is established within a national park, the National Parks Authority may not carry out any works there without the agreement of the Nature Reserve Authority.

2. Of the seven Specially Protected Areas designated by Israel, there are : one national park, one national park including a nature reserve, four nature reserves and a complex composed of a national park and an adjacent nature reserve at sea, i.e. four coastal terrestrial sites and three mixed ones.

8. ITALY

1. The marine protected areas situation in Italy is particularly complex on account of the sharing of powers between the State and the Regions.

There has been since 1982 a law enabling the State to create nature reserves at sea. On land, in the absence of national legislation, parks and reserves have been created on a piecemeal basis. Since regionalisation, a large part of State powers has been transferred to the regions. Most of these have now enacted their own legislation, enabling them to establish regional parks and nature reserves. There is also national legislation on landscape protection which has been considerably reinforced by a 1985 law. This legislation applies in particular to all coastal areas.

2. In principle the State has sole powers with regard to the sea, including the territorial sea, and the public maritime domain. The regulation of navigation, fishing and the extraction of materials from the sea-bed is thus a State matter. However, a few regions enjoy a special status under which certain State maritime powers have been transferred to them. The Special Status Coastal Regions are Friuli-Venezia Giulia, Sardinia and Sicily. The powers that have been transferred include the power to regulate fishing in the territorial sea.

The Protection of the Sea Act of 31st December 1982 makes it possible for the State to establish marine nature reserves. These may extend on the landward side up to the limit of the public maritime domain. They are established by joint orders of the Minister for the Environment and of the Minister for the Merchant Marine. The regulations specific to each reserve are determined by the establishing decree. It is thus possible to prohibit or to limit navigation, access, bathing, fishing, hunting, plant collecting, mineral extraction, the discharge of any kind of waste, etc. With respect to its marine reserve provisions, the constitutionality of the 1982 law has been recognised by the Constitutional Court in a 1988 judgement (1031/1988), concerning the Special Status Regions.

So far, four marine reserves have been established under the 1982 Act. These are Ustica, Miramare, Isole Tremiti and Isole Ciclopi. Probably others will follow in that the Act lists twenty marine areas where the establishment of nature reserves is considered to be a priority.

3. On the landward coastline it is the common law on the creation of nature parks and reserves that applies. Before regionalisation, and in the absence of national legislation on the protection of nature and protected areas, the government established a certain number of national parks and nature reserves by means of laws or individual orders. The only coastal national park is Circeo, created by a law of 1934. In 1979 the little island of Zannone and its neighbouring reefs and islets were included in the park, but not the adjacent marine areas.

The park is thus exclusively terrestrial. The State nature reserves are created by Ministerial orders.

The first go back to 1959. However, unless the landowner agrees otherwise, they may only deal with the State domain as there is no legal basis for the imposition of restrictions in this respect on private property. Some of these reserves are coastal, and several of them extend on the public maritime domain to the water's edge. In such cases they are created by joint orders of the Minister for Agriculture (now the Minister for the Environment) and the Minister for the Merchant Navy.

4. Since regionalisation, State powers on nature protection have been transferred to the regions by a decree of 24th July 1977. However, parks and reserves created before this date continue to be a matter for the State. The same holds for any parks and reserves extending onto the territory of several regions that may be established. Moreover, several Constitutional Court decisions have clearly determined that where it is a question of applying the Ramsar Convention on Wetlands of International importance, the State retains powers to designate such wetlands and to create the nature reserves necessary for their protection, and is alone competent to apply treaties. The same reasoning could apply to the enforcement of other treaties to which Italy is a party, e.g. the Berne and Bonn Conventions and the Geneva Protocol. However, for the time being the Constitutional Court has had to make no judgement in this respect.

On the other hand the court has had to decide on several occasions on the legality of orders establishing nature reserves after 1977 when no international obligation was at stake. It has generally considered that the State had encroached in this respect on regional competence and has consequently annulled the challenged orders. This applied notably to the order of 15th April 1981 creating the Orbetello Nature Reserve.

The situation is, however, unclear for in certain cases the Court has recognised the State's competence to create nature reserves in State owned forests. A framework law on protected areas, which has been under discussion for nearly 20 years but which will now probably be adopted shortly, should make it possible to clarify the situation.

5. Most regions have now adopted their own legislation on protected areas. These texts provide for the possibility of establishing nature reserves and regional nature parks. While the nature reserves are of the traditional kind, the nature parks are generally very innovative instruments which allow for a genuine ecological management of the land concerned.

Some of the parks so far created are coastal : the parks of the Portofino promontory and of the Cinque Terre in Liguria; the Maremma Park in Tuscany; the Conero Park in the Marches; and the Pô Delta Park in Emilia-Romagna. Since most of the regions do not have maritime jurisdiction, the regional parks and reserves cannot in general extend to the sea or to the public maritime domain. The same does not apply, as has already been pointed out,

in certain Special Status Regions, e.g. Sicily, which have maritime competences and whose legislation provides for the possibility of creating marine protected areas.

6. The coastal areas are also protected in Italy by the legislation on the protection of sites and landscapes. This legislation, which dates from 1939, lays down that any modification of the state of the land in sites designated by orders of the minister for Cultural Properties requires a permit.

This legislation has been considerably reinforced by a law of the 8th August 1985 (known as the Galasso Act after its promoter), which extends the application of the legislation to certain types of particularly vulnerable areas. These areas include the entire coastal strip, up to a distance of 300 meters, throughout the country, with the exception of built-up areas or areas ear-marked for development in the land-use plans. This is, however, only a temporary measure pending the preparation by the Regions of landscape plans which will have to contain definitive rules. Where such action was not taken by the Regions before the 31st of December 1986, the state became free to draw up the plans itself.

7. Italy has designated ten marine or coastal areas as Specially Protected Areas under the Geneva Protocol. Nine of these areas are protected areas created by the State. The tenth, the Maremma Nature Park, was established by Tuscany. Of the nine areas protected by the State, there are two marine nature reserves established in application of the 1982 Act (Miramare and Ustica); a national park (Circeo); two State nature reserves (Burano and Caprera); and two areas of biological protection (Castellabate and Portoferraio). All these areas are either exclusively marine (Miramare, Ustica, Castellabate and Portoferraio), or exclusively terrestrial (Circeo, Burano and Caprera).

The two other designated areas are mixed, but the land and marine parts are protected by different instruments. For the island of Montecristo the terrestrial part is a nature reserve (the island is State property) and the marine part an area of biological protection, to which access is prohibited by an order issued in application of the fisheries law. Since 1989 the island and its surrounding marine area are included up to the hundred-meter isobath in zone a, i.e. the strict reserve zone, of the new Tuscan Archipelago National Park.

As far as Orbetello is concerned the situation is more complex. The land part of the site designated as a Specially Protected Area, comprising the dune bar of Feniglia, is a State nature reserve. The adjacent marine or lagoon part has not been made into a reserve nor designated a Specially Protected Reserve. This is the eastern part of the lagoon (Laguna di Orbetello di Levante). On the other hand, two areas situated in the western part of the Lagoon (Laguna di Orbetello di Ponente) have been made into reserves. The first, to the north of this lagoon, has been declared of international importance under the Ramsar Convention. Most of this area is rented by WWF and constitutes an area closed to hunting in pursuance of game legislation. It has not been the

subject of any other conservation measures. But WWF is also a concessionary in the same part of the lagoon of a surface area of 30 hectares belonging to the public maritime domain. An order of 8th August 1980 established these 30 hectares as a nature reserve. The constitutionality of this order was confirmed by the Constitutional Court in 1984 (judgement no. 223/1984) the grounds being that, because it was a Ramsar site, the order had been passed as implementation of a treaty and that, because of this, the powers for establishing a reserve were national. A second order, passed on 15th April 1981, had established another nature reserve in another part of the same eastern lagoon, known as Laguna di Ponenta di Orbetello (parte). Having an appeal referred to it by the Region of Tuscany, the Constitutional Court voided this order (the same judgement as beforehand, no. 223/1984) since, because it was not a Ramsar site, the powers to establish a reserve belonged to the Region and not to the State.

The designation of Orbetello by Italy as a Specially Protected Area is not clear in that it is difficult to determine which of the two parts of the western lagoon is included. The Inventory gives three pieces of information : it is the reserve managed by WWF; it was set up by the order of 15th May 1982; it has a surface area of 950 hectares. Now, the area designated as a Ramsar site and managed by WWF, or for which it has a concession, only covers 887 hectares and the order establishing as a nature reserve the 30 hectares of the public domain conceded to this organisation dates back to 8th August 1980.

On the other hand, the order of 15th April 1981 (and not 15th May, but this must be a mistake), which was voided, concerned an area of 950 hectares. If this is the area which was designated as a Specially Protected Area, then, since 1984, it has been without any legal protection whatsoever, unless a reserve has been established by Tuscany. If, on the other hand, the area designated is the one managed by WWF, then it would be a State nature reserve of 30 hectares and an oasis of fauna protection, in other words, an area where hunting is prohibited, for the remainder.

The provisions concerning marine nature reserves of the 31st December 1982 Act seem well adapted to the specific ecological and legal characteristics of the marine environment. Unfortunately, more than seven years after their adoption, only four marine reserves have been established. On the land side, in the absence of a national law, announced but always postponed, and in the absence of any clear attribution of powers to the State, it is up to the regions to adopt and apply their own parks and reserves legislation. The majority of coastal regions have now done this and some regional laws adopted recently are, without doubt, amongst the most advanced in the world in that their purpose is to include, within the regional nature parks, the requirements of conservation of natural environments and the regulations on land use.

However, because the regions do not have any maritime powers, unless they are regions with a special status, the problem of protecting and managing coastal ecosystems in a unified way remain unsolved. Thus, in the Coastal Regional Park of Maremma it

has been impossible until now to regulate fishing along the coast. Certainly nothing in legal terms prevents the national authorities from establishing a marine reserve or a fishing reserve contiguous to the Maremma Park or from granting a public concession to the management authority of the park. In practice, however, this seems difficult to achieve.

If the coastal reserves are State-owned, in principle the situation is simpler because, in theory, all one needs to do is juxtapose two reserves, one on land, one at sea, as was done at Montecristo. Moreover, State reserves may extend to the public maritime domain as is the case at Caprera. Finally, the 31st December 1982 Act states that when a public coastal strip forms an integral part of the land ecosystem and there is no reason for establishing a marine reserve, the management of the public maritime domain may be entrusted, by means of a public concession, to the parks' or land reserve's management body.

9. Unified management of a mixed reserve, marine and land, is, therefore, only organised in this specific instance, but even here, supervision of the public area continues to be allotted to the maritime authorities which the management body of the protected area must call upon (article 27 of the 1982 Act).

When a marine reserve borders on a national park or a State reserve, in the absence of unified management, the 1982 Act does nonetheless lay down coordination measures. The order setting up the marine reserve must, in fact, establish the necessary coordination between the management of the marine reserve and that of the land reserve or park. There is no text which applies to the opposite situation, in other words to the setting up of a State reserve bordering on a marine reserve which has already been established.

Finally, when a land park or reserve has been set up by a region, there are no institutional means enabling its management to be coordinated with that of the adjacent marine reserve. This obviously would not prevent, as the Constitutional Court itself underlines in its judgement of 1988, mentioned above, any de facto cooperation between the competent administrations. However, this does not seem to have occurred up until now.

Before 1982, some reserves had already been set up at sea in pursuance of fishing legislation. The Fishing Act of 14th July 1965 in fact authorises the Minister of the Merchant Marine to set up biological protection areas where all kinds of fishing are prohibited. The biological protection areas of Castellabate and Portoferraio were established in pursuance of this act. The Castellabate area will probably soon be converted into a nature reserve. In this same category is the biological protection area set up around the Island of Montecristo to protect the monk seal. Another method used in the past to establish protected areas at sea was the granting of concessions. In this way a public concession was granted at Miramare to the World Wildlife Fund (WWF).

The 1986 order officially establishing the Miramare reserve in pursuance of the 1982 Act meant the concession was no longer needed. So it was revoked. But WWF was officially designated to manage the reserve.

It should be pointed out that, in the high seas, beyond the limits of the territorial sea, the State has powers to designate areas where fishing is prohibited for Italian nationals and ships. Thus a biological protection area was set up near the Island of Lampedusa.

If the majority of regions do not have maritime powers, the same does not apply to regions with a special status. If they so wish, these regions may establish marine nature reserves or, at least, areas where fishing is prohibited. Thus, the Parks and Nature Reserves Act of 6th May 1981, of the region of Sicily, expressly provides for the region having the possibility of establishing marine parks.

9. LIBYA

1. Act No.2 of 1982 on Environmental Protection provides for the possibility of creating, by regulations, areas where the fishing of certain fish, crustaceans or molluscs is prohibited or restricted. Regulations may also prohibit damage being inflicted on marine plants which are used for egg-laying by marine organisms. The Act also provides for the setting up of reserves for wild animals and birds where hunting would be strictly prohibited. Although the Act does not say so explicitly, it would seem that this provision mainly concerns the setting up of land reserves.

2. The El Kouf Park, the only Specially Protected Area designated by Libya, was set up prior to the 1982 Act, by an order of 1978. Because the text of this order and the other regulations concerning this park are not available, it is not possible to analyse the legal regime of this park.

10. MALTA

1. In Malta there was before the enactment of the Environment Protection Act of 6 February 1991 no general legislation on the setting up of protected areas. Hunting legislation provides for the establishment of "bird sanctuaries" where hunting is prohibited (Protection of Birds and Wild Rabbits Regulations, 1980). Fisheries legislation allows for closing of marine areas to fishing. A special act was necessary to set up the Filfla Reserve. The new Environment Protection Act now empowers the Minister in charge of the Environment to establish nature reserves on land and in the territorial sea.

2. The two Specially Protected Areas designated by Malta have very different regimes : Ghadira is an inland wetland close to the sea. Hunting is prohibited within a radius of 500 metres around this area under the Bird Protection Regulations of 1980. It does not seem to be covered by any other protection measures.

Filfla is a rocky islet which was made into a nature reserve by an Act of 1st June 1988. This Act only applies to the land part of the reserve. In the marine part, mooring is regulated by an order of 1975; hunting is prohibited within a radius of one kilometre around the island by the 1980 Bird Protection Regulations; fishing as well as other maritime activities are prohibited within a radius of one nautical mile by regulations of 1987; access to the island is prohibited, except for scientific or educational purposes, by the 1988 Act.

11. MONACO

1. In Monaco there are no land or mixed reserves. There is no legislation either which is specific to marine reserves. The two existing marine reserves were set up in pursuance of general legislation regulating fishing and navigation.

2. Monaco has designated its two marine reserves as Specially Protected Areas. The decree of 25th April 1978, amending the decree on maritime matters of 2nd July 1908 prohibits fishing, any harming of fauna, flora or the sea-bed, the traffic of ships or boats with propellers and the mooring of any ship or boat in the area of Larvotto. The decree of 18th August 1986, also amending the 1908 decree, established a second reserve known as the Red Coral Reserve. The prohibitions applicable there are essentially the same as those applying to the Larvotto Reserve. Ships and boats with engines may, however, use the area and line-fishing from aboard is permitted.

3. The act of 29th December 1978 lays down the penalties applicable in the event of infringement of regulations concerning fishing and the conservation of the marine environment.

12. MOROCCO

1. The Dahir of 11th September 1934 on national parks states that national parks may be made of natural areas which it is necessary, for reasons of tourism or science or clear social utility, to keep in their existing state. Any action likely to bring about a change in the land within national parks is prohibited unless the Water and Forests Administration grants authorisation. The national parks are set up by decrees. If necessary, a decree sets out measures useful for the preservation or reconstitution of fauna and flora, in particular, the prohibition of hunting, fishing and grazing. This text seems mainly to cover the setting up of protected areas of land as is indicated by the reference to the Water and Forests Administration. The text has two regulations for its enforcement : the decree of the vizir of 26th September 1934 defining the procedure to be followed for the setting up of parks, and the Decree of the Resident General of 20th March 1946 setting up a National Parks Consultative Committee.

2. The Dahir on the Conservation and Exploitation of Forests of 10th October 1917 states that maritime dunes are part of the State forestry domain up to the boundary of the public maritime domain.

3. The Dahir of 23rd September 1973 on sea fishing empowers the Minister of Fisheries to prohibit temporarily certain kinds of fishing in order to conserve marine species or for any other reason of public interest.

4. Morocco has not designated any Specially Protected Area under the Geneva Protocol.

13. SPAIN

1. At sea, the new act of 27th March 1989 on the conservation of natural areas and of wild flora and fauna now makes it possible to create marine protected areas. Such action falls within the competence of the State. Before this date, it had nonetheless been possible to establish certain marine reserves in application of the fisheries legislation.

On land, since regionalisation, only the autonomous communities are competent to establish protected areas. There are two exceptions : National Parks, and parks and reserves whose territory is situated on more than one Region. In these two cases it is the State which has powers to create protected areas. However, regional powers may be exercised only in accordance with the basic legislation adopted by the State on the protection of the environment.

As far as the sea-shore is concerned, the new Coastal Act of 28th July 1988 defines the public maritime domain, renamed as the public maritime-terrestrial domain. This includes in particular beaches, dunes and all coastal wetlands. The public maritime domain is the property of the State. Under the act of 27th March 1989 it is only the State which has powers to establish protected areas therein. Coastal wetlands are also governed by the Water Act of 2nd August 1985, as are other wetlands. Any activity having an impact on a wetland requires a permit or an administrative concession.

2. Before the Act of 23rd March 1989, no text mentioned the possibility of establishing marine protected areas. However, certain reserves have been established under the fisheries legislation. For instance, an order of 4th April 1986 of the Minister nationally responsible for fisheries and an order of the same date of the Autonomous Community of Valencia establish a marine reserve around the island of Tabarca in the Province of Alicante. Only fishing and the collecting of marine fauna and flora are prohibited in the reserve. Deep-sea diving is regulated. The national order sets out the rules applicable in the part of the reserve situated beyond the base-line of the territorial sea. The order issued by the Autonomous Community of Valencia establishes the regulations concerning the part of the reserve situated on the shoreward side of this base-line, i.e. in the inland waters, where the autonomous community is competent for fishery matters.

Another technique, which has been used for the protection of the marine area surrounding the Columbretes Islands - also in the Autonomous Community of Valencia - involves submitting for the approval of the competent State bodies any activity coming within State jurisdiction, such as the exploration and exploitation of the sea-bed. This is provided for by the Act of 18th December 1987 on the exercise of State powers with regard to the protection of the Columbretes Islands Archipelago. An order implement-

ing this act, issued on 19th April 1990, establishes a marine reserve around the islands in which fishing and diving are prohibited or regulated, according to the zones. We may note, finally, that under the fisheries legislation a decree of 25th June 1988 severely restricts trawling, which is totally prohibited where the sea-bed is less than 50 meters deep. This text is very important for the protection of the natural benthic coastal habitats, which are often highly threatened. In its article 10 the 1989 Act now expressly allows the creation of marine protected areas in maritime regions falling within national jurisdiction, including the exclusive economic zone and the continental shelf.

3. On land, before the 1989 Act the creation of protected areas was successively governed by a law of 1916, the 1957 Forest Code, and the protected natural areas Act of 2nd May 1975 and its implementing regulations of 24th March 1977. These last texts provided for four different types of protected area : National parks, strict nature reserves, natural sites of national interest and nature parks. All the protected areas that have been created in application of these texts are almost entirely terrestrial. Of the nine national parks, only one - the Park of Doñana - has a seaboard. The Act establishing this park (dated 29th December 1978) takes this fact into account by establishing a protective buffer zone on the seaward side of one nautical mile in width. The park management plan, approved by a decree of 12th December 1984, provides that the use of boats and fishing shall be jointly regulated in this zone by the competent bodies and by the park administration. The first national park that has been established under the Act of 1989 is a mixed land and marine park, the Cabreras National Park in the Balearic Islands. The park was created by an Act of 29 April 1991. It includes the islands of Cabrera and Sa Cenillera, a number of small islets and the surrounding sea area and covers 1836 hectares.

4. State powers in respect of the creation and management of protected land areas have now been transferred to the autonomous communities through a series of decrees, issued mostly in 1984 and 1985. This transfer of powers is clearly confirmed by the 1989 Act. However, the State remains competent for national parks (except in Catalonia) and for protected areas situated on the territories of two or more Communities.

In this last case, though the establishment of protected areas does appear to be a matter for the central State alone, their management will require the participation of all the Communities concerned. Management will be co-ordinated by the State (Article 21.4 of the 1989 Act). The State also retains sole powers to establish and manage protected areas on the land which is part of the public maritime domain in accordance with the 1988 Coastal Act, namely sea-shores up to the high-tide limit, coastal wetlands, beaches and dunes. Those coastal wetlands which are now clearly part of the public maritime domain are therefore subject

to all the conditions applicable to it. Moreover, the provisions in the Water Act of 2nd August 1985 which concern wetlands also apply to them. In accordance with this act, any activity affecting a wetland requires a permit or an administrative concession.

5. Certain Autonomous Communities have now adopted their own legislation on protected areas. This is the case of Catalonia (Act of 13 June 1985 on natural areas), the Autonomous Community of Valencia (Act of 24 June 1988 on a category of reserves called "Parajes naturales de la Communidad Valenciana") and Andalusia (Act of 18 July 1989 establishing a large number of protected areas, many of them coastal, and laying down rules for their protection)

The absence of regional legislation does not, however, mean that an Autonomous Community cannot create protected areas. All it has to do is apply the national legislation. For instance, the Community of Valencia has created the Albufera de Valencia Coastal Nature Park in application of the national Act of 2nd May 1975. Now that the 1989 act has repealed that of 1975, it is obviously the new one that must be applied. Finally, the Autonomous Communities now have sole competence to manage the protected areas other than national parks. It must also be pointed out that certain Autonomous Communities also use special development and land-use controls to protect certain natural areas. The Balearic Islands, for instance, have enacted a law (Act of 14 March 1984 on the protection of natural areas of special interest) under which several coastal areas are now subject to strict controls. This Act has been supplemented by an Act of 11 February 1991 which lists almost 90 zones, including many coastal areas, where stringent rules on construction and other matters are applicable.

6. Spain has designated six coastal protected areas as Specially Protected Areas. All have been established by regional laws of the Autonomous Communities concerned. None extends to the sea.

The Albufera de Valencia and the Ebro Delta Park are regional nature parks established respectively by the Autonomous Communities of Valencia and Catalonia in application of the national Act of 2nd May 1975 (the creation of the Ebro Delta Park antedates the adoption of the Catalan regional Protected Areas Act). These are not, therefore, strictly protected areas but inhabited land where traditional economic activities compatible with the preservation of natural habitats are maintained.

All public bodies must exercise their powers in such a way as to preserve the ecological and landscape values of the park. A special plan establishing zones of reinforced protection must be drawn up. This plan constitutes a land-use plan with which the municipal plans must comply. The park is administered by a "Junta Rectora" and a director (Act establishing the Albufera de Valencia Park). The decree of 4th August 1983 concerning the Ebro Delta Park contains very similar provisions.

The Albufera de El Grao is a coastal wetland which has been designated a natural area of special interest under a Balearic Law of 7th May 1986. This qualification involves applying the provisions of the Balearic Law of 14th March 1984, and in particular of very restrictive planning regulations and the obligation to draw up a special protection plan.

Castello de Ampurias and San Pedro Pescator are in fact the two main elements of the complex constituted by the "Los Aiguamolls de L'Empordà" Nature Park and the nature reserves of the same name. This park and the reserves which are part of it were established by a Catalan Act of 28th October 1983, in application of the national act of 2nd May 1975 on protected natural areas. The original title of these protected areas (Natural sites of national interest and strict reserves) was amended by the Catalan Natural Areas Act of 13th June 1985 to align them with the new terminology drawn up by the autonomous community. Their legal system has not been modified.

Pals appears to be a distinct zone, though it is nearby to the preceding one. It has hitherto not been possible to trace its establishing text.

7. To try to summarise a fairly complex situation it may be pointed out that the State alone has powers to create national parks (except in Catalonia), exclusively marine protected areas, coastal protected areas on territory belonging to the public maritime-terrestrial domain within the meaning of the 1988 Act, and inter-regional protected areas. To create marine parks or reserves the State may use its national powers with respect to fisheries, navigation and exploitation of the sea-bed. Since the 1989 act it has been able to use the new legislative provisions on marine protected areas.

On land, powers to create protected areas belong to the Autonomous Communities, with the above-mentioned exceptions. These powers cease at the limit of the maritime-terrestrial domain as defined by the Constitution and the 1988 Coastal Act. Beyond this limit the State is competent. Consequently, with the exception of national parks, the creation of mixed protected areas will be difficult in legal terms, and their management even more so.

The national Act of 18th December 1987 on the protection of the Columbretes Islands attempts to solve the problem. The explanatory report of this Act recognises the need to establish a special protection system for the Archipelago by combining and co-ordinating the constitutional and statutory powers of the State and of the Autonomous Community of Valencia. It specifies that this system will have to be co-ordinated when the time comes with the one to be established by the Autonomous Community for the land or activities falling within its jurisdiction. Through a decree of 25th January 1988 the Community of Valencia has now established a nature park covering the terrestrial part of the Archipelago. However, the co-ordination measures envisaged by this decree are limited, all state services are required to give prior notice to the Junta de Proteccion of the park before granting permits; and the Junta itself, a consultative body, must

include a State representative. For the marine part, a national order of 19th April 1990 has created a nature reserve covering all the waters of the Archipelago. This order establishes a Commission for the management and supervision of the reserve, composed of four State representatives and of an equal number of members of the Junta de Protección of the terrestrial nature park. The commission may put proposals to the competent national or regional authorities. In this way, co-ordination is ensured by the presence of regional representatives on the national managing body and by the presence of a state representative on that of the regional park. There is, however, no managing body that is common to both protected areas.

Another example is the Tabarca Island marine reserve. A 1988 amendment to the national order creating the reserve establishes a commission for management and supervision, composed of an equal number or representatives of the State, the autonomous community and the municipality of Alicante. The commission is entrusted with putting management proposals to the competent government services. These services will then implement them as appropriate in application of the legislation pertaining specifically to them. Alongside this an identically-worded text was adopted on the same day by the Autonomous Community of Valencia.

While the 1989 Act on protected natural areas does provide for the possibility of establishing inter-regional protected areas for which moreover only the State appears to have the initiative, it is silent on the possibility of establishing joint State-Autonomous Community protected areas. Now in the light of the re-definition of the nature of the public maritime domain given in the new Coastal Act, there will certainly be many cases where these joint areas will be necessary.

But the Autonomous Communities have established a certain number of coastal protected areas which extend onto land which comes now clearly within the purview of the State and over which the State has exclusive powers with regard to protected areas. In the case of the Cabo de Gata-Nijar Nature Park, created by a law of the community of Andalusia of 23rd December 1987, the park even extends to a marine zone one nautical mile wide starting from the coast. Without prejudging the legality of such provisions, after the adoption of the new law on protected natural areas, it now appears essential to establish a system for co-ordinated management between the State and the regions concerned.

14. TUNISIA

1. The basic law as far as protected areas are concerned is the new Forestry Code, adopted by an Act of 13th April 1988, and which replaces the 1966 Forestry Code. Chapter III of Part III of the new code is devoted to protected areas. National parks are defined as relatively large areas of land containing one or several ecosystems either unchanged or virtually unchanged by human use, and nature reserves as sites limited in size whose purpose is the maintenance of wild species. The national parks are created by decree, the nature reserves by order of the Minister of Agriculture. A further order then establishes, for each park and reserve, the conservation measures applicable. In protected areas, only activity likely to harm the natural development of fauna and flora is prohibited or may be subject to restrictions. No mention is made anywhere of the possibility of setting up protected areas at sea or in the public maritime domain. Thus, this would probably be impossible legally.

2. The Forestry Code (Chapter III, part IV) also contains provisions concerning the protection of wetlands. The definition of wetlands given in this chapter comprises expanses of brackish or salt water, including shores frequented by water fowl. The protection granted to wetlands includes the prohibition on filling them in or draining them, unless authorisation be granted for pressing reasons of national interest, and on dumping toxic or pollutant products. A priori all coastal wetlands are protected by this text.

3. Before the new Forestry Code was adopted, the setting up of protected areas was governed by the Forestry Code of 4th July 1966. The protected areas already in existence when the new code was adopted were set up in pursuance of the former code.

4. At sea, existing protected areas were established in pursuance of fishing legislation (decree of 26th July 1951 recasting the legislation on the policing of sea-fishing) which makes it possible to close areas to fishing.

5. Of the three Specially Protected Areas designated by Tunisia, one is a national park : Ichkeul, which is an inland lake connected to the sea; another, the islands of Zembretta and Zembra, is a national park where Zembra is surrounded by a biological protection areas set up in pursuance of the 1951 decree on fishing. The only activity prohibited in this area, which is one and a half miles wide, is fishing, both professional and sport. This protection area extends as far as the low-tide line. If, as is probable, the boundary of the park on the sea side coincide with the boundary of the public maritime domain, i.e. the high-tide line, it would appear that the two protected areas are separated by a strip, admittedly narrow, of non-protected land. Also the protection area was set around Zembra and not Zembretta.

As for the third Specially Protected Area, Galiton, despite it being called a Strict Reserve, it is also only a marine area close to fishing in pursuance of the 1951 decree. The only difference in comparison with the protection set up around Zembra is that, in addition to sport and professional fishing, at Galiton the harvesting of sea products is also prohibited. Navigation and mooring do not seem to be regulated. This islet of Galiton is not, itself, protected.

15. TURKEY

1. The basic law on protected areas is the National Parks Act of 11th August 1983. Prior to this date it was the Forestry Act of 5th September 1956 which applied. The 1983 Act defines national parks as natural areas having natural and cultural value of national and international importance from a scientific and aesthetic viewpoint. The act also lays down other categories of protected areas : nature parks, natural monuments and nature reserves. National parks are set by decree. In protected areas activities are prohibited which may harm ecological equilibria, the natural ecosystem and fauna. Specifically forestry, hunting, grazing, building etc. are prohibited.

2. The focus of this act, like that of the one preceding it, is resolutely on land. It does not seem possible, on the basis of these provisions, to set up protected marine areas. There is fishing legislation (the act of 22nd March 1971 and its implementation regulations) which enables the creation of areas closed to fishing. It has been used to prohibit commercial fishing in a 200 metres wide strip along the coastline of two national parks. The act of 9th July 1982 authorises coastguards to enforce legislation applicable at sea, in particular with respect to fishing, mooring of ships, diving, pollution and the application of international agreements.

3. The Environmental Pollution Act of 9th August 1983 has, as one of its aims, the conservation of national fauna and flora as well as the natural and historic wealth of the country, for present and future generation. The government may establish "Special Environmental Protection Areas" to preserve areas of world ecological importance and to keep them intact for future generations. This provision, which is very general, applies to marine areas, although the text does not state this explicitly: at least six mixed special protection areas, involving land and sea, have already been designated by decree in pursuance of this act and its implementing decree of 19th October 1989. The first three created in 1988 were Fethiye, Gökovu and Köycegiz-Dalyan. The latter includes the beaches where marine turtles lay their eggs and whose preservation is very important. The three others, set up in 1990, are Pataza, Kekova and the Göksu Delta areas. The 1989 decree makes it possible to designate, within the special protected areas, sensitive areas whose status is close to that of a nature reserve. In the special protection areas all development projects, particularly those related to tourism, have been stopped and are being re-assessed.

4. A law on the coast and its implementing decree were adopted in 1990. This law lays down the boundaries of coastal areas where buildings may not be erected.

5. The Bosphorus Act of 18th November 1988 has as its goal the protection and development of the cultural and historic values and the natural beauty of the Bosphorus. It applies mainly to building. Certain wooded areas will be nationalised and become public forests.

6. The three Specially Protected Areas in Turkey on the Inventory (Dilek-Yazimedasi, Gelibolu and Beydaglasi) are all national coastal parks established in pursuance of the 1956 Forestry Act. They do not have a marine part. But at Dilek and Beydaglasi commercial fishing is prohibited within 200 metres from the coast through regulations made pursuant to fishery legislation.

16. CONCLUSIONS

1. Preliminary Considerations

Of the 75 Specially Protected Areas on the Inventory only 23 concern marine areas. All the others, that is 52, in other words more than two-thirds, must be considered as land areas in so far as they do not extend beyond the shore or the boundary of the public maritime domain. Their coastal characteristics, or the fact that they are included to preserve coastal lagoon or wetlands, do not confer upon them any legal specificity. These protected areas are, therefore, subject to the common law system governing the parks and reserves of the country on whose territory they have been established. This system cannot be examined in detail in such a study which is necessarily limited. These conclusions will focus essentially on legislation applicable to protected marine areas which are either isolated or an extension into the sea of a land park or reserve.

In order to understand the problems encountered in the setting up and management of protected marine areas, particularly when the areas involve land and sea, it might be of use to recall the rules governing the powers of the State vis-à-vis the marine environment. The sea-shore, up to the high-tide line, as well as the soil and the sub-soil of the territorial sea, in other words up to a maximum breadth of 12 miles starting from the base line, belong to the public maritime domain and, because of this, constitute inalienable and imprescriptible State property. The sea-water itself is generally considered to be something whose use is common to all (res communis). In some countries, like Spain, the water of the territorial sea is also part of the State's domain. Whatever the patrimonial status of the water, it is universally accepted that the coastal State exercises sovereign rights over the territorial sea, which enables it to regulate all human activities to do with the sea, in particular, fishing. As far as navigation is concerned, the coastal State may prohibit in its territorial sea the passage of ships of another State when these ships endanger peace, law and order and security. In pursuance of this rule, contained in the Convention on the Law of the Sea of 1982, the coastal State may adopt laws and regulations concerning navigational safety and the regulation of maritime traffic; the prevention of fishing offences; the conservation of its environment; the prevention, reduction and control of pollution; and the conservation of the living resources of the sea. Administrative powers for policing maritime areas, including the public maritime domain, are almost always exercised by a special administration which is responsible for regulating the majority of activities at sea and for enforcing legislation. Frequently it is the Minister of Merchant Shipping of the Sea, or the Minister of Transport, who will be responsible. In some countries maritime fishing comes under the Minister of Agriculture. On land, beyond the boundary of the public maritime domain, the beaches, dunes and other components of the

coast often belong to the local authorities, to other public administrative bodies or are private property. The administration responsible for regulation and policing will vary from case to case but will virtually never be the one with responsibility for the sea.

The upper boundary of the public maritime domain therefore constitutes a barrier which is virtually unbreakable between the competent administrations, a veritable legal obstacle which makes it very difficult to take coastal ecosystems into consideration in their entirety when setting up protected areas. The result is that the majority of parks and reserves established along the coast, be they land or sea, stop at the high-tide line and their natural prolongation towards the land or the sea remains without protection. But even in these rare cases where the protected area extends into the sea, or on the public maritime domain, the administration responsible for the sea almost always holds on to its own powers, or to most of them, which does not facilitate the integrated management of the protected area in its entirety.

Finally, whereas in unitary States the administrations involved are generally at the same level of government, which at least, in theory, makes agreements possible, things become more complicated in Federal or regionalised States. Thus in Spain and in Italy, the Constitution confers upon the regions the powers to establish most of the protected land areas whereas at sea or on the public maritime domain powers lie with the Central State. There is no legal means enabling the establishment of mixed protected areas, regulated and managed jointly by the Sate and the region concerned.

2. Legislation enabling marine preserves to be set up

Of the 23 Specially Protected Areas comprising a marine part, 8 are entirely marine and 15 are mixed. If one considers that States have designated the majority of protected marine areas with a protection regime considered as satisfactory, one cannot fail to be struck by the very small number of existing reserves.

One of the reasons for this is the lack, virtually everywhere, of specific legislation enabling the creation of marine parks and reserves. In the absence of such legislation it was necessary, each time a protected marine areas was to be created, to use texts and institutions drawn up for different purposes. This is true for the concession system, used at Miramare, until it was possible to set up a true marine reserve in accordance with the 1982 Act. Here the purpose of an institution was being circumvented in that a development concession was being granted to a body which would not use it, solely with the intention of preventing third parties from exploiting the area. Moreover, because of the rules of untransferability of the public domain, a concession is always granted on a temporary basis. The continued existence of a reserve thus established is far from being guaranteed even if the concession is renewed periodically.

Another method used frequently consists in establishing an area where fishing is prohibited or regulated under the fishing legislation.

Of the 23 Specially Protected Areas comprising a marine part at least five (Castellabate and Portoferraio in Italy; Filfla in Malta; Galiton and Zembra in Tunisia) are protected thus. Fishing, however, is only one of the activities for which regulation is necessary in a protected marine area. But fishing legislation seldom enables the regulation of other activities, such as navigation and the mooring of ships. It is thus necessary to use different legislation whose application is superimposed in the same areas. Thus in France, at Carry-le-Rouet (which is not a Specially Protected Area) there is a concession granted for scientific research, an order prohibiting fishing and a third order prohibiting dredging and the mooring of ships.

In the marine reserve of Cerbère-Banyuls, at the beginning a reinforced protection area was set up, where all fishing was prohibited, by creating a closed area in pursuance of the fishing legislation. But the new decree of 6th September 1990 on this reserve now defines the boundaries of the area where all kinds of fishing are prohibited. In Malta, in the marine area surrounding the small Island of Filfla, hunting, fishing and the mooring of ships are prohibited by three different texts. In the biological protection area set up around the Island of Montecristo in Italy, if, in addition to fishing the order setting up the area also places a total prohibition on navigation, this is, apparently, in breach of the law. Article 98 of the implementing regulations of the Fishing Act (decree of 2nd October 1968), which provides the legal basis for the order concerning the marine area of Montecristo, only allows for the prohibition of fishing. Hence the prohibition on navigation seems to be lacking in any legal basis and it is difficult to imagine how offenders could be sanctioned. This anomaly has now been remedied because the waters surrounding the island, as far as the hundred meters contour line, have been established as a strict reserve within the new Tuscan Archipelago National Park, set up on a provisional basis by an interministerial order of 21st July 1989.

In order to avoid having to have recourse to legal instruments which are imperfectly suited to the particular requirements of the conservation of marine spaces, the only solution seems to be for a State to legislate specifically for protected marine areas. Aware of this necessity, quite a few countries throughout the world have started to do so, for example the United States, Canada, Australia, New Zealand and, in Europe, the United Kingdom. In the Mediterranean, however, only Italy has such legislation. The majority of other countries have adopted texts which enable protected areas to be set up at sea, without having taken special measures with respect to their establishment and management. Some States continue to use no instrument other than their fishing legislation.

To start with the latter, Morocco and Tunisia have laws on protected areas, and, as far as Tunisia is concerned, the law is very recent, only dating back to 1988. However, these laws remain resolutely land-centred and the possibility of setting up protected marine areas is not mentioned. The same seems to apply to Libya where the 1982 Environmental Protection Act does not provide expressly, as far as the sea is concerned, for the possibility of setting up areas closed to fishing (art.20). Article 60 of the same Act on the setting up of reserves seems only to concern land areas since the sole protection measure mentioned is the prohibition on hunting. In Malta, until 1991 there was no general legislation on protected areas. To set up the Filfla Island Reserve a special law was necessary. As to the protection area surrounding this island, it is protected, as has been seen, by three different instruments. In Monaco, the two existing marine reserves were established on the basis of general legislation regulating fishing and navigation, which does not seem to have given rise to difficulties since all activities likely to harm the protected areas can be prohibited or limited by this text. Finally, there is no information available for Albania, Lebanon and Syria. It seems unlikely, however, that these countries have specific legislation on protected marine areas.

A second group of countries is constituted by those which, in their general legislation on protected areas, provide expressly for the possibility of setting up marine parks or reserves, but which have not adopted special provisions with respect to the regulations applicable to these or their method of management, these questions being left to the implementing texts. These countries are Algeria, Egypt, France, Greece, Spain and, since 1991, Malta. However, there are still very few protected marine areas established as a result of this legislation; none, by mid-1989, in Algeria, Spain and Greece (although several are in the process of being set up in this country), one in Egypt (Ashtoun el Gamil-Island of Tanees, a mixed reserve where the marine part seems to cover a small area) and four in France. The majority of these laws being very recent (Algeria : 1983; Spain : 1989; Greece : 1986), it is certainly too early to judge to what extent the simple legal possibility of setting up protected marine areas, without further specification, will suffice to promote the spread of this kind of institution. The example of France leads one to have doubts. The National Parks Act dates back to 1960, since when only one single park with a marine part, that of Port Cros, has been set up. As for nature reserves, the reserves of Cerbère-Banyuls and of Scandola were set up in 1972 and 1975, in other words before the adoption of the Nature Protection Act of 1976 which provides expressly for the possibility of setting up nature reserves on the public maritime domain. The only marine reserve to be established in the Mediterranean since the promulgation of this act was that of the Lavezzi Islands where, it should be pointed out, only fishing is regulated.

For three other countries the situation is ambiguous in that the legislation says nothing about the possibility of setting up

reserves at sea although some have been set up apparently without difficulty. These countries are Cyprus, Israel and Turkey.

In Cyprus fishing legislation confers on the competent authority extensive powers of regulation which have enabled it to prohibit not just fishing but also movement and mooring of ships of all kinds in the protected area of Lara.

In Israel three Specially Protected Areas include a marine part classified as a nature reserve, in pursuance of the National Parks and Nature Reserves Act of 1963. In Turkey, the National Parks Act of 1983, clearly land-based, does not seem to be able to be used for the setting up of protected marine areas. But there is another act, the Environmental Protection Act of the same year, which provides for the setting up of special protection areas in order to conserve areas of world ecological importance. This act has been used to set up six mixed protected areas.

In Yugoslavia the establishment of marine protected areas does not seem to pose a problem because five mixed areas have been designated as Specially Protected Areas. It has not been possible to find out if the texts provide expressly for this possibility.

To conclude, Italy is the only Mediterranean riparian State to have adopted special legislation for protected marine areas. This is through the Protection of the Sea Act of 31st December 1982. The four reserves which have been set up so far in pursuance of this act are : Ustica, Miramare, The Tremiti Islands and the Ciclopi Islands. From a legal point of view, they are models of their kind. Probably more reserves will soon be established. It should not, however, be forgotten that this act only provides for the establishment of marine reserves and not mixed reserves.

3. Regulations for marine reserves

The basic legislation concerning the establishment of protected areas generally mentions the categories of activities which can be prohibited or restricted and leaves it to the implementing texts to specify for each park or reserve the particular regulations which apply. Because not all texts having set up parks or reserves designated as Specially Protected Areas were available, unfortunately it has not been possible to draw up a complete picture of the protection measures in force. The information available does nonetheless enable one to form a relatively accurate idea of the overall situation.

When a protected marine area is set up in pursuance of sectoral legislation such as, for example, fishing legislation, the protection conferred on it cannot go beyond what this legislation permits. Other activities liable to cause harm remain authorised and protection cannot be complete. Even when an activity can be regulated, this does not mean that it will be in a given protected area. This will depend on the condition there and possibly on local opposition. Thus often certain kinds of fishing still remain authorised.

Fishing

Fishing is prohibited or restricted in all Specially Protected Marine Area on which information is available. It is prohibited completely in the Protected Marine Areas of Egypt, Monaco and Tunisia. It is subject to permit in the waters around the Island of Filfla in Malta. In Italy, it is prohibited completely in Castellabate, Montecristo and Area A of the Ustica Reserve. The prohibition is accompanied by derogations for Castellabate and Portoferraio. In Area B of the Ustica Reserve only underwater fishing is prohibited; other kinds of fishing are subject to permit. In Area C of this reserve sport fishing may be limited if necessary.

In France, in the marine part of the Port-Cros National Park, only underwater fishing and the use of drag-nets, such as trawls, is prohibited. Other kinds of fishing remain authorised within the general regulations in force. In the Cerbère-Banyuls Reserve, fishing is simply regulated. There is, however, an area within the reserve where all fishing is prohibited. In the marine part of the Scandola Reserve, fishing is also prohibited except for local professional fishermen. As is the case for Cerbère-Banyuls, ships authorised may not exceed 10 tons and 50 MP. There is no restriction on the number of boats authorised. There is also an area where all fishing is prohibited. On the Lavezzi Islands only underwater fishing is prohibited. All other kinds of fishing may be carried out within the framework of the general regulations in force.

In the two Spanish marine reserves, the situation is as follows : in Tabarca, fishing is prohibited but there are certain derogation : ledger lines may be used. In the Columbretes Islands, maritime fishing is prohibited in the strict reserves and severely limited in the remainder of the protected areas. In Cyprus, in the Lara Reserve, all fishing is prohibited except linefishing.

Harvesting of sea products

What is generally understood by this is the harvesting of marine plants or sedentary animals such as sponges or coral. This type of activity is prohibited in protected marine areas in Egypt and Monaco. In France it is prohibited at Cerbère-Banyuls and Scandola, but not in the Port-Cros National Park nor in the Lavezzi Islands Reserve where it may be carried out according to general legislation in force. The Port-Cros National Park obtained a public concession on a population of fan mussels, Pinna nobilis, to prevent its use by third parties. In Italy, the harvesting of sea products is prohibited at Miramare and in Area A of the Ustica Reserve. For the three areas of biological protection established in pursuance of fishing legislation (Castellabate, Montecristo and Portoferraio) the texts say nothing. In so far as the harvesting of sea products can be understood as being a kind of fishing, it could be considered as being prohibited. At Montecristo the problem did not really arise because access to the marine reserves is prohibited. Since the setting up of the

Tuscan Archipelago National Park in 1989, the removal of marine organisms is prohibited all around the island as far as the hundred meters isobath. In Malta, the harvesting of marine plants and animals is subject to permit in the marine reserve surrounding the Island of Filfla. In Tunisia, it is prohibited in Galiton but not in Zembra. In Spain it is prohibited at Tabarca and the Columbretes Islands.

Hunting

Hunting, particularly from boats, is prohibited in a certain number of marine reserves. This applies to the protected areas in Egypt, in the Port-Cros National Park and the reserves of Cerbère-Banyuls, Scandola and the Lavezzi Islands in France. In Italy, hunting is prohibited in the Miramare Reserve, in Area A of the Ustica Reserve and the Tremiti Islands Reserve and in Area A of the Tuscan Archipelago National Park. it is limited to residents in Area B of this park. In Malta, hunting is prohibited in the marine area around the island of Filfla. In Monaco it has been prohibited since 1880 throughout all the territory of the Principality and hence, of course, in the marine reserves.

Navigation

Navigation, as well as access and mooring of ships and boats, are totally prohibited in Italy in the Miramare Reserve and in Areas A of the Ustica Reserve and the Tremiti Islands Reserve. In Area A of the Tuscan Archipelago National Park only the accosting of boats and the traffic of ships with engines along the coast are prohibited. In Greece, navigation is strictly regulated in the Northern Sporades National Park. In Israel, access and movement of ships may be prohibited or limited in marine reserves in pursuance of the National Parks and Nature Reserves Act of 1963, It has not been possible to find out whether navigation is regulated in the three Specially Protected Marine Areas designated by this country. In Malta, mooring around the Island of Filfla is regulated. In Monaco, ships with propellers whose engines are running are prohibited in the reserve, as is mooring with anchors and grapnels. In France, in the Port-Cros Park, access, navigation, mooring and accosting of boats may be regulated, at the suggestion of the park director, by the maritime authority which alone has the power so to do. The regulations do not apply to ships of the State. In the Scandola Reserve, navigation is unrestricted but the speed of boats may be regulated by the maritime authority. Mooring may not exceed 24 hours. In the Lavezzi Islands there are no restrictions on navigation. In Cyprus, in the Lara Reserve, the movement and mooring of boats is prohibited completely. In Cerbère-Banyuls, navigation and mooring will be regulated.

Swimming and diving

Swimming and, a fortiori, diving are prohibited in Italy at Miramare and in Areas A of the Ustica and Tremiti Islands Reserves. The order which set up the Tuscan Archipelago Park says nothing on the matter. However, the order setting up the bio-

logical protection area around the Island of Montecristo and which still seems to apply, prohibits swimming in this area. Aqua-Lung diving is prohibited in the Scandola Reserve in France. In Spain, in the Tabarca reserve, there is an area closed to diving. In the remainder of the reserve, diving without spearguns is permitted.

The removal of rocks, minerals and soil

These activities are generally prohibited in the protected areas of Egypt. They are also prohibited at Cerbère-Banyuls in France and, in Italy, at Miramare and in Areas A of the Ustica and Tremiti Islands Reserves. In Malta a permit is probably required in the area around the Island of Filfla. They are prohibited in Monaco if they harm the fauna, the flora and the sea-bed.

The introduction of exotic species

Any introduction is prohibited in the protected areas in Egypt, in the Miramare Reserve and in the Areas A of the Ustica and Tremiti Islands Reserves in Italy, and in the Port Cros National Park in France. In the French reserve at Cerbère-Banyuls this prohibition only applies to plant species.

The discharge of polluting substances

The discharge of solid or liquid waste as well as any substance likely to alter, even on a temporary basis, the nature of the marine environment, is prohibited in Italy in the Miramare Reserve and in Areas A of the Ustica and Tremiti Islands Reserves. In Egypt, the law prohibits in general terms pollution of the soil, water or air of protected areas. In France, in the Port-Cros National Park, there is a general prohibition on leaving or dumping rubbish or waste of whatever kind outside those places specially designated for that purpose. In the reserves of Cerbère-Banyuls, Scandola and the Lavezzi islands, the discharge, immersion in the sea or depositing on the public maritime domain of liquid waste, other waste or rubbish of any kind is prohibited.

General prohibitions

Some texts also contain general prohibitions, the purpose of which is to prevent any action likely to harm the integrity of the reserve. In Italy, in the reserve of Miramare and in Areas A of the Ustica and Tremiti Islands Reserves and in the Tuscan Archipelago Park there is a prohibition on any change, by any means, direct or indirect, in the geophysical environment and the biochemical characteristics of the water. In Monaco any act whatsoever liable to harm the fauna, flora or sea-bed is prohibited. In Egypt any action which would lead to the destruction or damaging of the natural environment or would harm animals and plants is also prohibited. In the Port-Cros National Park and in the Cerbère-Banyuls Reserve in France, all public or private works are prohibited. In the area surrounding the Columbretes Islands in Spain, any activity concerning the exploration or development of the marine sub-soil is subject to permit.

4. The dividing of marine reserves into areas

It appears increasingly necessary to divide protected areas into zones in order to vary regulations according to the requirements of conservation whilst maintaining certain economic activities. The technique of dividing up protected marine areas into zones is still in its early stages, and there are very few examples of it throughout the world, the best known being that of the Great Barrier Reef in Australia. In the Mediterranean, there are, as has been seen, areas where all kinds of fishing are prohibited within the reserves of Cerbère-Banyuls and Scandola in France; in Spain, diving is prohibited completely in a given area of the Tabarca Reserve. In Italy, the Ustica and Tremiti Islands Reserves are divided into three areas : a strict reserve, or Area A, where access is prohibited and no activity is authorised; a general reserve or Area B, where underwater fishing is prohibited and where professional or sport fishing is subject to permit (with the exception of line fishing or dragnet fishing); a partial reserve, or Area C, where professional fishing is subject to permit but where sport fishing is, in principle, unregulated but may be restricted if necessary. The new Tuscan Archipelago National Park is also divided up into three areas where similar rules apply. In Greece the protected marine areas which are being set up, such as the Northern Sporades National Park and the protection area for the beaches where sea-turtles lay their eggs at Zakynthos, will also be divided into zones. The same applies to the large coastal wetlands on the list of wetland areas of international importance of the Ramsar Convention and which extend into the sea as far as the six meters contour line. The special environmental protection areas in Turkey are also likely to be divided into zones.

5. The management of marine reserves

Only some of the marine reserves set up in the Mediterranean have management bodies. In Egypt the Protected Areas Act of 1983 provides for the creation of an administrative body responsible for the management of parks and reserves, if necessary through regional offices. In France the Port Cros Park has an administrative council and a director. The Scandola Reserve has a management committee and a director. The Lavezzi Islands Reserve only has an Advisory Committee which may appoint a director. The Cerbère-Banyuls Reserve only has an Advisory Committee. In Italy the Ustica Reserve is managed by the local authority of the same name and the Miramare Reserve by the World Wildlife Fund. A special management body is planned for the Tuscan Archipelago Park. There do not seem to be any official management structures elsewhere, which does not exclude the possibility of agreements, for example with scientific bodies, as is certainly the case in Monaco. The problem may be especially complicated if the reserves are mixed, with land and seas, because of the distribution of powers between the different administrations concerned. Rather than trying to integrate land and sea areas within the same protected area subject to one set of regulations and one management, often it is necessary to set up protection areas which are juxtaposed and which come under different administrations for the

purposes of regulations, management and enforcement. Thus juxtaposed with the land reserves of parks are the marine protection areas of the Island of Montecristo in Italy, at least until the creation of the Tuscan Archipelago National Park in 1989, the Island of Filfla in Malta and the Island of Zembra in Tunisia. In France, as has been seen, questions concerning navigation and fishing continue to come under the administration responsible for the sea which alone has the powers to regulate access, mooring and ships' speed, to regulate fishing where, in principle, it is unrestricted, and to grant derogations when fishing is restricted by the decree setting up the reserve. When a protected land area includes the neighbouring public maritime domain, which is not always the case, the powers of the minister responsible for the sea are mostly reserved. This is the case in Italy for several state reserves on the coast. In France the order setting up the Camargue National Reserve, which extends to the public maritime domain excluding the waters and sea-bed, clearly states that if the Nature Protection Directorate is responsible for the administration, management and development of the reserve, this provision does not amend the management rules for the public maritime domain, particularly with respect to administrative powers and procedures. According to some officials, this type of rule may act as a veritable strait jacket. In Italy and in Spain, as a result of powers having been devolved to the regions as far as protected areas on land are concerned, the problem seems virtually insoluble.

In Italy, however, the 1982 Act states that when a reserve set up by the State (in other words more often than not on state-owned land) is on the coast, the managing body of the reserve may be granted the concession to manage the adjacent coastal strip. Moreover, when a marine reserve is adjacent to a national park or to a State land reserve, the order setting up the reserve must settle the coordination of the management of the two protected areas. Up until now, no such case has arisen. These provisions only apply, however, when the reserves are State-owned. If the land reserves are owned by the regions, which will be more frequently the case, the problem remains. The State does have the possibility of setting up, in agreement with the region concerned, mixed protected areas, land and sea, like the Tuscan Archipelago National Park set up in 1989. This park, which exists at present only in a provisional form, pending adoption of the framework law on protected areas, has no special management body. Supervision, and the verification that protection measures provided for in the order setting up the park are being observed, are carried out, for the land part, by the local authorities having territorial powers and, for the marine part, by the harbour masters.

In Spain the marine reserve of the Island of Tabarca has had, since 1988, a management committee with an equal number of representatives from the State, the Region and the Local Authority. This committee submits proposals to the competent administrations which then implement them, according to their own standards, for those questions coming within their competence. A similar system operates for the Columbretes Islands.

6. Measures for the general protection of the coast

The conservation of natural coastal areas by means of protected areas should take place within the broader context of the general protection of the coast by means of land use legislation, on land and at sea. Parks and reserves would then simply be areas of re-inforced protection along a coast-line already preserved to a great degree. Few Mediterranean countries already have coastal protection legislation. The Galasso Act in Italy constitutes a first step which will have to be followed up by the regions which alone have the powers to adopt development plans. In Spain, the assertion by the 1988 Coastal Act that beaches, dunes and coastal wetlands belong to the public domain of the State and that an adjacent area should be established where building and other activities are strictly regulated, ought to have far-reaching consequences for the conservation of natural coastal areas.

France, the new rules of land-use which apply to the coast since the 1986 Act, in particular the obligation to conserve natural coastal environments, also constitutes a major step forward. To this should be added the institution of plans for the use of the sea which enable marine areas to be divided into zones, as well as the "Conservatoire" for the coastline whose sole purpose is to acquire natural areas in order to conserve them.

7. Final Conclusions

This survey has shown that the situation varies considerably from one country to another both in terms of the possibility of establishing protected marine areas as well as the protection measures applying to them. These protection measures range from simply prohibiting fishing to the establishment of strict reserves to which access is totally excluded and where all human activities are prohibited. This kind of reserve is still rare and many activities which are highly destructive for natural environments continue to be allowed in the majority of marine reserves, such as sand and minerals extraction, the exploration and development of the marine sub-soil, dredging and the discharge of pollutant waste.

Navigation is rarely regulated. Frequently, it would seem, there is reluctance to introduce prohibitions for fear of restricting the freedom of the seas. But the Convention on the Law of the Sea, as has been seen, expressly permits the regulation of navigation when it is necessary to preserve biological resources. Moreover, even in the Exclusive Economic Zone where freedom of navigation is far greater than in the territorial sea, Article 211.6 of the Convention provides for the setting up of special areas where navigation rules may be more strict in order to avoid risks of pollution. Prohibiting or strictly limiting navigation in a protected area may have considerable advantages because, whereas it is easy to observe the presence of a boat contravening regulations, it is more difficult to control mooring and fishing and virtually impossible to control the discharge of waste.

The durability of the majority of marine reserves created up until now in the Mediterranean remains vulnerable in so far as they have often been established by a simple order which may be revoked at any moment without any special procedure. Only two countries have procedures for de-establishment which are more severe than those for establishment.

In France, protected areas are set up by decree. De-establishment of a nature reserve requires a decree after consultation of the Conseil d'Etat and a public inquiry, whereas establishment may be carried out by means of a simple decree. In Israel, the establishment of a nature reserve is carried out by ministerial order, de-establishment requires approval from the Internal Affairs and Ecology Committee of the Knesset.

The legal difficulties arising from the jurisdictional split between maritime and land administrations must be ironed out. These difficulties seem not to exist or, at any rate, not to constitute major obstacles in certain countries like Egypt, Greece, Israel and Turkey. Solutions ought to be able to be found elsewhere. In regionalised States the solution could lie in setting up joint management bodies. The new management committee for the marine reserve at Tabarca, in Spain, seems to be moving in this direction.

The mechanisms of regional planning and land use legislation are still not really used properly in the majority of countries in order to protect the coast. The establishment of regional nature parks inspired by the Italian and Spanish examples and including marine spaces where this is possible legally could constitute the best instrument for the conservation of natural areas of coast.

The setting up of buffer zones around the protected marine areas and the control of activities carried out outside them which are likely to affect their integrity, are virtually never provided for in the texts.

Protected marine areas must be managed by specialists. For the present, a goodly number of these areas seem scarcely to be managed at all. If there is a management body then it must be properly qualified. This, generally speaking, is not the case with the Forestry Department nor even necessarily the case with the department responsible for sea fishing because, in principle, this is not their task.

Protected marine areas in the Mediterranean are still very few in number; one of the primary reasons for this is that virtually nowhere is there specific legislation on protected marine areas nor an administration specifically responsible for their management.