

GUIDELINES TO DESIGN LEGISLATION AND REGULATIONS RELATIVE TO THE CONSERVATION AND MANAGEMENT OF MARINE TURTLES POPULATIONS AND THEIR HABITATS



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FOREWORD

Protecting threatened species is a requirement that has become most urgent, given the accelerated decline noted in the populations of most of these species around the world and in the Mediterranean.

To this end, the international community, meeting within the context of the Second Earth Summit (Johannesburg, September 2002) agreed to introduce all the appropriate measures to reduce the decline of species of flora and fauna by the year 2010.

To participate in this objective, the Mediterranean Action Plan, and the countries bordering on the Mediterranean, as part of implementing the Protocol on SPAs and biodiversity, are working together to implement action plans to protect endangered species in the Mediterranean. The Action Plan for the Conservation of Marine Turtles is one of these tools, which highlights the action needed at both country and regional level to provide the most favourable conditions for reducing the threats level to provide the most favourable conditions for reducing the threats to the marine turtle populations in the region.

The revised Action Plan emphasizes the need to adopt the essential legal measures that will satisfy the priorities and measures for its implementation. In particular, it recommends that:

- those Contracting Parties which have not yet extended legal protection to marine turtles do so as soon as possible, bearing in mind the existing international agreements
- each Contracting Party 'should be encouraged to draw up and enforce the legislation necessary for creating, protecting, conserving and managing protected areas for marine turtles'.

For effective enforcement of these legal measures, it is suggested that the biological and ecological conditions that are specific to these species be borne in mind. Marine turtles have a staggered period of maturity. In consequence, conservation measures must give priority to the adult stage and to the final period of the juvenile stage, as well as to preserving natural conditions on the nesting beaches. Also, marine turtles go through two main ecological phases, first pelagic and then demersal. There may be exceptions when the turtles migrate between areas where they hibernate, feed and nest. More than one quarter of the Mediterranean countries have still neither passed laws nor finalized the legislative process to strengthen protection for marine turtles during these two phases.

These guidelines aim at providing decision-makers and lawyers with the relevant basic information and practical advice about elaborating and implementing effective measures for the conservation of Mediterranean marine turtles, bearing in mind the existing international legislation. An analysis of the international context regarding the conservation of marine turtles appears in the Annex to the present document.

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I. DEVELOPING APPROPRIATE FRAMEWORKS AT NATIONAL LEVEL

Where provisions of international instruments are couched in such a way that they are not 'self-executing', national legislation and regulations are necessary to make them operational in national legal systems. This may be done through existing national measures, or, if these are insufficient, by amending existing measures or adopting new ones.

Whether national measures should be legislative or regulatory will depend on the internal law of the State concerned. Certain matters usually have to be dealt with by legislation, notably the establishment of offences and penalties. Others can be dealt with at the level of regulations, issued by the relevant ministry or department, which can be updated and amended more easily.

An important function of national legislation is to establish institutional mechanisms with appropriate decision-making powers to develop implementing regulations, ensure compliance, monitor success and failure, and promote policies for improved implementation and any necessary legislative changes. Institutions are key to overseeing implementation and compliance, as well as to generate needed reforms. Establishing efficient institutions is one of the most important roles of legislation, though this is often underestimated.

The following sections present issues, objectives and basic indicators for making international obligations effective at national and local level.

I.1 REVIEWING EXISTING ARRANGEMENTS : COMMON GAPS AND WEAKNESSES

Human activities affecting marine turtles are often subject to different sectoral laws that have evolved in a piecemeal way and are administered by separate branches of government. This can create a risk of inter-sectoral policy conflicts and gaps or inconsistencies in legal frameworks.

In addition, most countries have separate planning and regulatory frameworks for activities on land and at sea (the high-tide limit of the shoreline usually marks the dividing line).

On land, conservation departments usually have responsibility for endangered species and often act as focal point for negotiation of treaties and implementation of treaty obligations. However, unless their mandate extends to conservation of marine species and areas, they cannot implement the full range of measures for turtle conservation or establish protected areas that straddle the land-sea interface.

At sea, fisheries department may have no mandate to protect endangered species or their critical habitats or to regulate or manage non-fishing marine activities (sand extraction, tourism) that can adversely affect such species.

1.1.1 GUIDELINES FOR ASSESSING EXISTING LEGAL AND INSTITUTIONAL ARRANGEMENTS¹

(a) Preferably coordinated with national environmental/biodiversity planning processes, each State should seek to establish a knowledge base of :

¹ For more detailed guidance on how to carry out such an assessment, see *Reviewing laws and institutions to promote the conservation and sustainable use of wetlands (Ramsar Handbook 3, January 2000, which incorporates Resolution VII.7 on this subject)* and *A Guide to Undertaking Biodiversity Legal and Institutional Profiles (IUCN Environmental Policy and Law Paper No.35)*.

- measures that directly promote conservation of marine turtles, on land and at sea;
 - sectoral measures that directly or indirectly affect marine turtles;
 - relevant customary and religious rules.
- (b) Each State should assess this knowledge base to identify legal and institutional measures that conflict with its international obligations and constrain marine turtle protection and management.
- (c) The review process should specifically identify 'perverse incentives', such as sectoral subsidies, grants and tax benefits that may have the unintended effect of encouraging activities or development damaging to turtles or their habitats. Examples might include financial incentives for tourist development in or near turtle nesting beaches or for the manufacture/purchase of fisheries gear that falls below mandatory or recommended standards.
- Example : Costa Rica's 1998 Biodiversity Act mandates the removal of negative incentives. The Ministry of Environment and Energy and public authorities, taking into consideration public interest, must revise existing legislation and propose or carry out changes necessary to eliminate or reduce incentives that are negative for conservation of biodiversity and its sustainable use and propose appropriate disincentives.
- (d) The review should assess the adequacy of existing frameworks, in the light of these Guidelines. It should specifically assess whether provision is made for effective monitoring, adequate enforcement procedures and deterrent penalties for taking of turtles or destruction or damage to their critical habitats. It should also assess whether civil or administrative law remedies are available to interested parties (NGOs, individuals) for unlawful actions or omissions related to their critical habitats.
- (e) Where jurisdiction over marine turtles is shared by more than one department (e.g. fisheries and nature conservation or agriculture departments), the review should assess whether the overall mandate is adequate to meet treaty obligations and whether lines of institutional responsibility are sufficiently clear and comprehensive.
- (f) Based on the above, the review should aim to make proposals for the reduction and, where possible, elimination of incompatible measures and the promotion of positive legal, institutional and economic measures for marine turtle conservation.

I.2 DESIGNING APPROPRIATE LEGISLATION

All laws and regulations should use clear and precise language to define the scope, requirements and procedures established by law. This is important to avoid ambiguity and facilitate effective implementation, monitoring and enforcement.

1.2.1 KEY ISSUES RELATE TO THE SCOPE, TYPE AND GENERAL OBJECTIVES, PRINCIPLES AND CONTENT OF LEGISLATION

1.2.1.1 Guidelines on scope of legislation

The geographical coverage of legislation is extremely important because turtles spend different stages of their life at sea and on land. Legal frameworks must provide a comprehensive basis for turtle protection and management throughout their terrestrial and marine range. As discussed above, this will include waters under national sovereignty or jurisdiction as well as the high seas.

- (a) On land and in marine areas under national sovereignty, legislation must make it possible for the State to apply and enforce protection measures to all processes and activities and to all categories of actors (including non-nationals such as foreign tourist operators and foreign tourists that breach national or local regulations).
- (b) In areas beyond national jurisdiction (the high seas), each State must ensure that fisheries legislation is broad enough to cover activities by its nationals and by vessels flying its flag. Under Art.117 of UNCLOS, all States have the duty to take, or to co-operate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas.

1.2.1.2 Guidelines on type of legislation

A State may use one or more sectoral laws or special unitary legislation to protect marine turtles. Many States implement international species conservation obligations by amending existing sectoral legislation or regulations. For marine turtles, hunting, nature conservation or fisheries laws are most commonly used.

- (c) Hunting laws are primarily designed to regulate exploitation of species of commercial or recreational importance (usually classified as 'game'). They provide a basis for regulating direct taking and trade and can be used in a limited way to protect species by listing those that may not be hunted ('non-game'). This list may be contained in the Act or in regulations that sometimes have to be reissued annually.

The problem with relying on hunting legislation is that it rarely provides a basis for identifying and protecting critical habitats or developing recovery plans for threatened species. By definition, it does not apply to fisheries operations. For this reason, it is not enough on its own to implement comprehensive measures for turtle populations at all stages of their lifecycle.

- (d) Nature conservation laws usually provide a more satisfactory basis for turtle conservation as they make it possible to combine species-based and area-based protection measures, together with management planning provisions. Protected area provisions need to be broadly based to provide for multiple use and zoning of protected coastal and marine areas. This will not be possible if the legislation is narrowly drafted or if its coverage stops at the highwater line. In such cases, parallel protection measures must be developed under fisheries legislation but this is often not the case.
- (e) Fisheries laws (or most older ones) rarely provide a legal basis for conservation of non-target species or marine habitats or for regulation of non-fisheries activities (powered pleasure boating and jet-skiing, marine pollution, dumping etc.). Their area-based protection provisions are often single-purpose (closure of defined areas to fishing to support recovery of target stocks). The legal basis may be too narrow for management of coastal waters off nesting beaches or regulation of destructive practices.

However, fisheries legislation and the institutional mandate can be enlarged in scope to provide an integrated framework for marine biodiversity conservation.

Example : The Canadian Fisheries Act of 1985 prohibits, except under a permit, any work or undertaking resulting in the harmful alteration, disruption or destruction of spawning grounds and nursery, rearing and food supply areas on which marine animals depend directly or indirectly to carry out their life processes. The impact of projects potentially affecting fish

habitats must be considered before an activity may begin.

- (f) Where turtles are covered by two or more laws, these must be consistent with one another and appropriate arrangements must be made for coordinated planning and implementation by the relevant institutions.
- (g) Special legislation, such as modern biodiversity or environmental protection legislation, may also be used and has the advantage of providing a single framework for all aspects of turtle conservation. However, if turtles are to be covered by a single law, this needs to be broad enough to support protection of populations throughout their range and conservation of critical habitats on land and at sea. This will generally necessitate an extension of the mandate of the competent authority.

1.2.1.3 Guidelines on general objectives and principles

National legal frameworks should be consistent with principles and approaches supported by applicable international instruments.

- (h) Clear objectives provide a conceptual framework to develop the legislation itself, guide implementation, set priorities and build public and political awareness. The objectives of national legal measures should, as a minimum, correspond to the three broad objectives set out in the revised Action Plan.
- (i) The legal framework should be consistent with the ecosystem approach and provide for international, transboundary and inter-sectoral cooperation

Principles to be applied should include prevention of environmental harm; the precautionary approach; the polluter pays principle; access to information and public participation in decision-making; access to justice in environmental matters; and provision of information and assistance in environmental emergencies.

Example : The FAO Code of Conduct for Responsible Fisheries supports the application of the precautionary approach to vulnerable marine species. It recommends to States and all involved in fisheries management and conservation that "the absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment. It further recommends that where activities may have an adverse transboundary environmental effect on coastal areas, States should provide timely information and, if possible, prior notification to potentially affected States; and consult with those States as early as possible.

1.2.1.4 Guidelines on general content of legislation

Whatever the enabling law or combination of laws, certain minimum components are essential.

- (k) Legislation should provide formal backing for research and open exchange of information; capacity-building; emergency planning and response measures; and education and public awareness measures.

The Revised Action Plan provides that development of research and exchange of information should cover all the priority fields for the conservation of marine turtle population by using various methods such as surveys, tagging, data logging, satellite telemetry, Geographic Information Systems (GIS), genetics, on-board observers, and modelling. Contracting Parties that have little or no information on critical habitats and size of breeding populations of marine turtles should make particular efforts to undertake such research programmes.

- (l) The competent authority (authorities) should have powers and adequate funding to:
- initiate and participate in planning processes for land and sea;
 - make regulations and/or provide incentives to control or manage potentially damaging processes and activities;
 - establish procedures, requirements and standards;
 - undertake monitoring, inventories and surveys and require the submission of information; and
 - hire and train sufficient personnel to carry out adequate coastal and beach monitoring and patrol activities for pre-enforcement education and enforcement and compliance of fisheries regulations.

1.2.2 PROMOTING INSTITUTIONAL COORDINATION AND ACCOUNTABILITY

Each coastal State needs to make efficient institutional arrangements for best management practices throughout the species management unit for turtles. As noted earlier, this unit crosses territorial jurisdictional boundaries (between land and sea, between areas under local government jurisdiction and national jurisdiction, between neighbouring territorial seas). It also crosses functional jurisdictional boundaries (between nature conservation, fisheries, planning, tourism and transport sectors...).

- (a) Looking outwards, there needs to be systematic communication between a State's various focal points for relevant treaties and regional organisations (both fisheries and biodiversity conservation). Each branch of government should know what other relevant branches are doing, particularly in advance of negotiation rounds, meetings of conferences of the parties and meetings of regional fisheries organisations. This is not always the case.
- (b) Still looking outwards, competent departments and personnel should have all necessary powers to cooperate with their counterparts in other Mediterranean coastal States for information exchange, coordinated research and management, cooperative planning on the establishment and management of transboundary protected areas and other relevant issues.
- (c) Looking inwards, horizontal (cross-sectoral) coordination should be promoted between sectoral bodies responsible for activities that directly or indirectly impact on turtles and the departments with statutory responsibility for turtle protection and management. Maximum use should be made of existing coordination mechanisms and biodiversity planning processes to avoid duplication.

- (d) Arrangements should support vertical coordination between different tiers or levels of government. In States with a regionalised system of government, legal responsibility for species and habitat conservation may be devolved to the provinces or regions or exercised concurrently by national and sub-national governments. Competence for fisheries and generally for activities in the public maritime domain is nearly always exercised by national government. Legal frameworks should ensure that measures adopted by provinces or regions are compatible with national measures and with treaty obligations. One way of doing this is to enact national framework legislation setting out basic norms and standards that bind lower levels of government.
- (e) States should recognise the extremely important role played by local (municipal) governments in land-use planning, economic development and tourism and their primary responsibility for enforcing local regulations, controlling illegal construction and so on. These bodies are usually closest to community needs and priorities and should be key players in site-specific conservation and management strategies. Procedures should be in place to ensure that local decision-making powers are exercised consistently with national legislation and with international obligations to which the country is party.
- (f) Where legislation does provide for the establishment of protected areas at sea or across the land-sea divide, it may be necessary to make special coordination arrangements where the competent authority is not the nature conservation authority.
- (g) Legislation should provide a basis for conservation authorities to be systematically consulted in sectoral planning and impact assessment procedures for activities that could have adverse impacts on marine turtles, where decision-making powers lied with other institutions.

Example (terrestrial context): Hungary's Nature Conservation Act of 1996 mandates the Nature Conservation Directorate to act "as a cooperating authority" in regional and municipal planning and development procedures related to natural areas, values and unique landscape features in order to enforce the provisions for landscape protection.

II. GUIDELINES FOR CONSERVING, MANAGING AND ENHANCING TURTLE POPULATIONS

Legal measures for the maintenance and recovery of viable populations of turtle species in their natural surroundings must be broadly-based, in view of the serious depletion caused by direct taking in the recent past and the biological characteristics of the species concerned.

II.1 SPECIES TO BE LEGALLY PROTECTED

Turtles have delayed maturity: the bigger (older) they are, the more they contribute to the demographic growth of the populations to which they belong. Conservation measures must therefore attach as a priority to the adult and last juvenile stages and to the preservation of natural conditions on nesting beaches. This is particularly important

because the two species that breed in the Mediterranean, *Caretta caretta* and *Chelonia mydas*, appear to be genetically isolated from Atlantic populations of the same species. This means that their populations cannot apparently be increased through immigration². Marine turtles go through two main ecological phases, first pelagic and then demersal (shallow waters above the continental shelf). Exceptions may occur when turtles migrate between wintering, feeding and nesting grounds. More than a quarter of Mediterranean States have not yet enacted legislation or completed the legislative process to confer protected status on marine turtles during both these phases (source, Revised Action Plan).

II.1.1 GUIDELINES ON SCOPE OF LEGAL PROTECTION

- (a) Legislation/regulations must confer strictly protected status on the five species of marine turtles that may occur in the Mediterranean: *Caretta caretta*, *Chelonia mydas*, *Dermochelys coriacea*, *Eretmochelys imbricata*, *Lepidochelys kempii*. The standard taxonomic references should be used as well as the common names used in the language of the State concerned.
- (b) Legal protection measures must clearly apply to turtles and also all parts and derivatives, including carapace and eggs, and their nests (see below for the CITES interpretation of parts and derivatives).
- (c) Turtles must be legally protected at each stage of their life cycle. One approach is for legislation/regulations to specify that the protection measures apply to all stages of life and natural development processes of marine turtles.

II.2 PROHIBITION OF INTENTIONAL "TAKING"

The Revised Action Plan restates international law by calling on States to eliminate the exploitation and deliberate killing of marine turtles by designing and enforcing appropriate legislation. For this purpose, legal frameworks need to address a series of actions.

II.2.1 GUIDELINES FOR PROHIBITING TAKING

- (a) Legislation/regulations should specify each of the actions that is prohibited in order to promote legal certainty and to facilitate enforcement. The prohibition should apply to:
 - intentional capture, killing or mutilation of turtle specimens in the wild, including hunting, fishing, injury, collection or other forms of taking;
 - intentional disturbance or harassment of specimens, particularly during the period of breeding, nesting, hibernation and migration;
 - intentional destruction or taking of eggs from the wild
 - keeping of turtle eggs, even if empty (based on the Bern Convention obligation)

² Background information in section 4 is taken from Gerosa G. and Casale P. 1999. *Interaction of Marine Turtles with Fisheries in the Mediterranean (UNEP/MAP1999 RAC/SPA)* and expert research cited in that publication.

- intentional damage or destruction of turtle nests;
 - attempts and conspiracies to commit any of the above actions.
- (b) Although most of these terms are self-explanatory, it is useful to define more general terms such as “disturbance” or “harassment” to avoid ambiguity. Definitions used should be broad enough to include harmful but non-lethal disturbance that could for example result from non-essential scientific research.
- Example: The German Nature Protection Act of 20 December 1976 prohibits disturbance of animals belonging to endangered species or their nests or breeding places, including through photography or filming. The US federal Endangered Species Act of 1973 prohibits harassment and pursuit of or harm to protected species. “Harm” is broadly defined³ to cover significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioural patterns, including breeding, feeding or sheltering.

II.3 STRICT CONTROL AND REPORTING OF EXEMPTIONS

International species conservation instruments all provide for limited exemptions to the above prohibitions. The criteria they establish have many points of similarity and should be followed as closely as possible.

II.3.1 GUIDELINES FOR CONTROLLING EXEMPTIONS TO THE PROHIBITION ON TAKING

- (a) Where coastal States provide for exemptions, applicable criteria should be clearly and unambiguously defined by legislation/regulations, consistently with applicable international law. Tight wording is important to guide the exercise of administrative discretion by competent authorities, to promote transparency and administrative accountability and to ensure compliance by those benefiting from the exemption.
- (b) The exemption must not harm the survival of the population or of any other species.
Example : The EC Habitats Directive provides that it must not be detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range.
- (c) No other satisfactory solutions must be available.
Example: Under CMS, exemptions may only be granted if extraordinary circumstances so require. They must be precise as to content and limited in space and time.
- (d) The taking must be for scientific, research, education or management purposes necessary to ensure the survival of the species.
Example: ACCOBAMS (which applies to cetaceans in the Mediterranean) requires Parties to limit exceptions to purposes of non-lethal in situ research aimed at maintaining a favourable conservation status for cetaceans.
- (e) No exemptions shall be granted for traditional subsistence and cultural activities.

Source: The Barcelona Protocol states that traditional subsistence and cultural activities shall not be allowed if they would inter alia cause the extinction or substantial reduction in the number of individuals making up the populations or species of endangered, threatened or migratory species (Art 18).

³ In implementing regulations issued by the US Fish and Wildlife Service.

II.3.2 GUIDELINES FOR REPORTING AND RECORD-KEEPING

- (f) Competent authorities should be legally required to keep records of applications and decisions relating to exemptions and to monitor and follow up on exemptions granted. Under the Barcelona Protocol, exemptions with regard to listed Endangered or Threatened Species must be notified to the Contracting Parties.
- (g) Regulations should specify the information to be included in recording systems for exemptions and, as appropriate, reports to international bodies. This is important to promote harmonised approach and establish basic common standards and transparency. Example : Information requirements could be modelled on the relevant provisions of the EC Habitats Directive (Art.16.3), to cover:
- the species which are subject to the derogations and the reason for the derogation, including the nature of the risk, with, if appropriate, a reference to alternatives rejected and scientific data used;
 - the means, devices or methods authorised for the capture or killing of animal species and the reasons for their use ;
 - the circumstances of when and where such derogations are granted;
 - the authority empowered to declare and check that the required conditions obtain and to decide what means, devices or methods may be used, within what limits and by what agencies, and which persons are to carry but the task;
 - the supervisory measures used and the results obtained.

II.4 MEASURES TO MINIMISE INCIDENTAL CATCH AND MORTALITY IN FISHERIES OPERATIONS

All marine turtle species occurring in the Mediterranean are known to be affected by fishing activities, although data on turtle-fisheries interactions is often incomplete and is lacking for certain regions. To date, many States have not yet adequately researched such interactions (see Priority Actions annexed to Revised Action Plan). Research of this kind is an essential component of ongoing strategies to design and target appropriate conservation measures.

There are many variations between States regarding the scale, type and target species of fisheries operations, the techniques used, the main areas in which fisheries activities take place and the character of the fisheries (industrial, artisanal and small coastal etc.). This means that some of the guidelines given below will not apply to all States (e.g. some of the more technical regulatory guidelines in 4.4.2).

II.4.1 GENERAL GUIDELINES FOR FISHERIES LEGISLATION AND REGULATIONS

- (a) National fisheries legislation should provide for the development, implementation and enforcement of regulations to protect marine ecosystems and to minimise incidental capture, retention, harm and mortality through fisheries operations. There should be a general legal basis for the development and strengthening of fishing regulations concerning depth, season, gear and so on, especially in areas with a high concentration of turtles.

- (b) States should ensure that fishers are involved in the policy formulation and implementation process relating to conservation and management of the fishery resources on which they depend and that legal rules for the implementation of fisheries conservation and management measures are effectively disseminated (see for example FAO Code of Conduct for Responsible Fisheries).
- (c) Fisheries regulations should comply with requirements and recommendations issued by regional fisheries organisations or other bodies to which the State is a party or member nation. It may be appropriate for legislation to specify that regulations to implement regionally agreed technical standards must be issued by the competent authorities within a reasonable time and/or to provide for periodic review of regulations in force.
- (d) Non-compliance with applicable regulations should be an offence punishable with criminal/administrative penalties as appropriate.

II.4.2 GUIDELINES ON MEASURES TO PROTECT MARINE ECOSYSTEMS AND COMMUNITIES

- (a) Consistently with international fisheries law, regional rules and recommended best practice, national legal systems should provide for measures for the conservation of marine ecosystems and communities as a whole. These should be carefully designed to take account of the ecology of legally protected species and habitats. There should be a legal basis for the different types of regulatory measures described below.
- (b) Measures to restrict fishing effort should provide a basis for limiting the number of craft, their total and individual power and total fishing time.
- (c) Area-based measures should make it possible to close defined areas to all access or to use of certain techniques. As a minimum, zones close to the shore (less than 50m deep) with fragile marine ecosystems or critical habitats for marine species should be closed to damaging practices. In addition, areas most frequented by marine turtles should be identified and, where necessary, made subject to total or seasonal fishing reduction measures.
Example : EC Member States are required ⁴ to draw up a list of protected zones in which fishing activities are restricted for biological reasons specific to those zones and to regulate fishing gear which may be used in protected zones, as well as appropriate technical rules on the basis of the relevant conservation objectives.
- (d) Temporal restrictions (closed seasons) should be put in place where needed to protect marine turtles during the most vulnerable periods of their life cycle. Regulations for this purpose should be consistent with species protection legislation covering all life forms and natural development processes of marine turtles.

⁴ Council Regulation (EC) No 1626/94 of 27 June 1994 laying down certain technical measures for the conservation of fishery resources in the Mediterranean (as amended).

(e) Regulations should be implemented to minimise waste, discards and pollution in the course of fisheries operations.

Example: The FAO Code (sections 8.7.1-4) recommends the following practices:

- States should introduce and enforce laws and regulations based on the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78).
 - Owners, charterers and managers of fishing vessels should ensure that their vessels are fitted with appropriate equipment as required by MARPOL 73/78 and should consider fitting a shipboard compactor or incinerator to relevant classes of vessels in order to treat garbage and other shipboard wastes generated during the vessel's normal service.
 - Owners, charterers and managers of fishing vessels should minimize the taking aboard of potential garbage through proper provisioning practices.
 - The crew of fishing vessels should be conversant with proper shipboard procedures in order to ensure discharges do not exceed the levels set by MARPOL 73/78. Such procedures should, as a minimum, include the disposal of oily waste and the handling and storage of shipboard garbage.
- (f) Deliberate discarding or abandonment of fishing gear at sea should be prohibited, as this leads to incidental mortality as well as environmental degradation. States should cooperate to develop and apply technologies, materials and operational methods that minimize the loss of fishing gear and the ghost fishing effects of lost or abandoned fishing gear (FAO Code, section 8.4.6).

II.4.3 GUIDELINES FOR MODIFICATION OF FISHING GEAR, METHODS AND PRACTICES

- (a) Fisheries legislation/regulations must prohibit or restrict the use of destructive gear and promote the development and systematic use of more selective gear, methods and strategies, in cooperation with regional fisheries organisations and other coastal States.
- (b) Before new fishing gear, methods and operations are introduced on a commercial scale to an area, regulations should provide for environmental impact assessment to be carried with specific reference *inter alia* to possible habitat disturbance (FAO Code, section 8.4.7).

Three types of fishing gear are responsible for significant incidental mortality of marine turtles. These are covered by the technical regulatory guidelines in 4.4.2.1-3 below.

II.4.3.1 Trawls

Trawling practices involve the towing by one or more ships of a net which catches all animals (target, non-target) in a large mouth, kept open by various devices, and passes them to a terminal bag. Turtle mortality results from stress or drowning, where the net is kept submerged for several hours. Where trawl periods are shorter, caught specimens may be brought alive to the surface.

Trawling can be mid-water (pelagic) or involve bottom trawling (demersal). In the Mediterranean, several turtles are caught in bottom trawlers, but mortality for this reason seems to be low (Gerosa and Casale).

The relatively new technique of physical trawling (using heavy weights to physically rake the sea bed also has serious implications for marine habitats.

The revised Action Plan recommends that Mediterranean States conduct trials for the

use of Turtle Excluder Devices (TEDs). TEDs are technical fitments used in trawls that are designed to divert caught turtles towards a special exit before they enter the terminal bag along with the catch. They were first developed to reduce by-catch in American shrimp fisheries in the Gulf of Mexico. A range of TEDs of different specifications now exists to improve the selectivity of trawling practices. In certain fisheries (small target species, mainly shrimp), such devices appear to have been successful in reducing by-catch and contributing to broader marine biodiversity protection.

In the context of the Mediterranean as a whole, shrimp fishing is much less developed. However, it is extremely important in certain areas, including the Gulf of Gabes and the benthic feeding grounds of the Bay of Iskenderun. The Revised Action Plan recommends that introduction of TEDs into fishing practices in the areas where the largest catches occur (A.3.19).

II.4.3.1.1 Guidelines on trawling practices

(a) States should prohibit bottom trawling at shallow depths to protect demersal species and critical habitats in marine and coastal ecosystems. This prohibition may be permanent or seasonal, depending on the needs of turtle populations in the waters concerned.

Example : EC Regulation 1626/94 requires Member States to prohibit the use of trawls, seines or similar nets within three nautical miles of the coast or within the 50 m isobath where that depth is reached at a shorter distance, irrespective of the method of towing or haulage (unless specific derogations apply).

(b) Fishing with bottom trawls, seines or similar nets above *Posidonia* beds or other marine phanerogams should be specifically prohibited.

(c) Trawling practices should be regulated with regard to:

- maximum trawling time (to increase the chance of trapped specimens being brought alive to the surface);
- design of the trawl: States with relevant fisheries should, as soon as reasonably practicable, adopt regulations to require the use of TEDs in conformity with technical specifications appropriate to local fisheries and fishing conditions;
- handling by fishermen of incidentally caught turtles.

Example : One example of a comprehensive set of regulations is provided by the United States Code of Federal Regulations⁵. This provides that:

- with some exceptions, turtle excluder devices must be used by all shrimp trawlers in the Atlantic and Gulf of Mexico areas;
- shrimp trawlers exempt from the TED requirements must observe maximum tow-time durations ranging from 30 to 75 minutes depending on the targeted species and geographic area the trawler is fishing.

⁵ 50 CFR 17 (b)(1)(v), 222.41, 227.72(e) (1998). The associating handling regulations are cited in 4.4.3 below.

II.4.3.2 Longlines

Surface and bottom longlining are relatively simple techniques that involve the placing of baited hooks to attract a variety of target species. Practice varies widely with regard to line length, type of bait used, depth at which the lines are placed and so on. For surface lines, turtle mortality is due to hook-related injuries or, after release by fishermen, to stress or to part of the hook and line remaining in the turtle's body. Less data is available for bottom lines.

The revised Action Plan provides that effective measures need to be identified and applied urgently, in order to minimize the accidental catches by longlines fisheries. It recommends that States conduct trials of modified longlines and, as appropriate, introduce their use into fishing practices.

II.4.3.2.1 Guidelines on longlining practices

- (a) Technical regulations should, in accordance with research findings, establish minimum requirements related to line length, number and design of hooks, kind of bait, times of setting and hauling, length of line and minimum depth at
- (a) Technical regulations should, in accordance with research findings, establish minimum requirements related to line length, number and design of hooks, kind of bait, times of setting and hauling, length of line and minimum depth at which bottom long lines may be set.
- (b) As a minimum, fisheries regulations should comply with rules and standards adopted by regional fisheries organisations and be updated as necessary. Relevant measures currently applicable to some or all Mediterranean States include prohibitions on:
 - use of surface-set longlines from vessels greater than 24 m in length for bluefin tuna during the period from 1 June to 31 July each year (applicable to ICCAT Parties and to EC Member States under Council Regulation (EC) No 1075/96 of 10 June 1996) ;
 - keeping on board or using surface-set longline longer than 60 km per vessel and bottom-set longline longer than 7 000 m of longline per vessel (applicable to EC Member States under EC Regulation No 1626/94 of 27 June 1994).

II.4.3.3 Drift nets and gill nets

Many different types of gill nets are used throughout the Mediterranean to catch a variety of target species. They are placed vertically to fence in or block off areas of water and catch the marine organisms that try to pass through them. Turtles are caught as they move from place to place or as they feed on trapped fish. Mortality is mainly due to drowning.

Internationally, a series of resolutions and regulations have been adopted to control the use of non-selective large-scale drift nets that have serious adverse impacts on non-target species. The UN General Assembly called for a global moratorium on large-scale pelagic driftnet fishing (over 2.5km) on the high seas of the world's oceans and seas,

including enclosed seas and semi-enclosed seas (UNGA Resolution 46/215 of 20 December 1991). Subsequent resolutions (especially Resolution 52/29 of 26 November 1997) urge competent authorities of members of the international community that have not done so to take greater enforcement responsibility to ensure full compliance with Resolution 46/215 and to impose appropriate sanctions, consistent with their obligations under international law, against acts contrary to the terms of that resolution.

Stricter standards apply within the European Union under Council Regulation No 1239/98 of 8 June 1998 (see below).

II.4.3.3.1 Guidelines on drift net fishing practices

- (a) All Mediterranean States with drift net fisheries must as a minimum prohibit the keeping on board or use of drift nets whose individual or total length is more than 2.5 km.
- (b) In addition, EC Member States must prohibit the use of any drift nets by 1 January 2002. This ban applies to Community vessels anywhere in the world, except for the Baltic Sea.
- (c) To minimise the risk of unlawful use and/or trading in such nets, States should also prohibit the manufacture, sale, distribution or transfer of such drift nets.

II.4.3.4 Regulation of turtle handling and landings

The Revised Action Plan recommends that fishermen should be trained to correctly haul, handle, release and record incidentally caught turtles and urged to release marine turtles caught incidentally. Campaigns should be also conducted to reduce mutilations and killings because of ignorance and/or prejudice with possible support from and cooperation with GFCM and ICCAT.

II.4.3.4.1 Guidelines for turtle handling

- (a) States should, individually or in cooperation with other States, develop education and training programmes for fishermen on techniques for correctly hauling, handling, releasing and recording incidentally caught turtles. Where possible, they should involve existing rescue centres and aquariums.
- (b) Regulatory measures should be adopted to govern handling of incidentally caught turtles and to deter their landing.

Example : The United States Code of Federal Regulations ⁶ provide that incidental takings of listed endangered species during fishing activities is lawful only the following general rules are observed (in addition to the specific TEDS regulations mentioned above):

- active and dead turtles must be immediately returned to the sea;
- resuscitation of inactive or comatose turtles must be attempted;

⁶ 50 CFR 17 (b)(1)(v), 222.41, 227.71-72 (1998).

- any sea turtle caught incidentally may not be consumed, sold, landed, offloaded, transhipped, or kept below deck;
- exemption for incidental takings of sea turtles does not authorize incidental takings during fishing activities if the takings may be likely to jeopardize the continued existence of a species listed under the U.S Endangered Species Act.

II.4.3.4.2 Guidelines for turtle landings and strandings

- (c) In very exceptional circumstances, it may not be safe for fishermen to release turtles caught incidentally in fishing gear and return them to the sea. Regulations should specifically apply to turtle landings to remove any incentive for landing specimens for consumption or trade purposes.

Example : Malta's 1992 Reptile (Protection) Regulations provide that any marine turtle accidentally caught by fishermen in the course of routine fisheries activities and landed at the La Valette fish market must be handed over immediately to the Fisheries Director. Specimens may only be disposed of for scientific purposes. Where applicable, fishermen must be compensated for lost equipment and earnings.

- (d) Legislation/regulations should provide for the establishment of rescue centres, or the improvement of existing facilities, for the rehabilitation of sick and injured marine turtles. Such centres must be operated by appropriate scientific institutions and personnel.
- (e) Countries that have high numbers of strandings should establish a network of stranding observers and rescue centres along the coast of Spain. They should seek to harmonise rescue methodologies and contribute to the establishment of a common database on stranded and rescued turtles in the Mediterranean.

II.4.4 MONITORING, IMPLEMENTATION AND COMPLIANCE

II.4.4.1 Guidelines on monitoring

- (a) States should, individually or in cooperation with other States, establish and strengthen monitoring programmes to gather information on population status and trends. A standardised methodology should be followed in order to allow statistical comparisons to be made.
- (b) A monitoring system should be in place to record the incidental capture and mortality of turtles through fisheries operations. Fishermen should be actively encouraged to participate in information networks on turtles (report sightings of turtles, participate in tagging programmes and so on).
- (c) Regulations may require relevant information to be submitted as part of routine operating procedures.

Example : US Federal Regulations provide that fishing vessels' log books must contain information on sea turtles observed in the fishing area or in the vicinity of the fishing gear, on interference with fishing operations by sea turtles, on sea turtles entangled in fishing gear and released, whether alive or dead.

II.4.4.2 Guidelines on implementation and compliance

(d) Legal frameworks should establish measures to enhance compliance and facilitate enforcement. These should be consistent with international law and measures and practices supported by regional fisheries organisations.

(e) A non-exhaustive list of components of compliance/enforcement systems should include:

- a mandatory permit system for all flag vessels (whether fishing in waters under national jurisdiction or on the high sea);
- binding permit conditions that require permit-holders to comply with appropriate conservation and management measures;
- provision of meaningful sanctions, including the refusal, withdrawal or suspension of fishing permits in the event of non-compliance with such measures;
- stringent penalties for illegal fishing with dynamite, poisons or toxic materials ;
- powers to confiscate and destroy prohibited gear and gear used in the violation of applicable regulations;
- cooperative monitoring, control, surveillance and law enforcement measures;
- cooperative observer programmes, inspection schemes and vessel monitoring systems.

Example : The FAO Code specifically addresses problems linked to non-flag vessels. Without prejudice to relevant international agreements, States should encourage banks and financial institutions not to require, as a condition of a loan or mortgage, fishing vessels or fishing support vessels to be flagged in a jurisdiction other than that of the State of beneficial ownership where such a requirement would have the effect of increasing the likelihood of non-compliance with international conservation and management measures.

(f) All Mediterranean States with relevant fisheries should implement a vessel monitoring system to provide for systematic satellite tracking of flag vessels.

Example : EC Member States ⁷ are required to set up a vessel monitoring system designed to locate fishing vessels flying their flag and to enable the latter to communicate to the Member States in whose waters they are carrying out their activities and to indicate their position at least once every two hours. This monitoring applies to all fishing vessels exceeding 24 m. length overall or 20 m between perpendiculars. From 1 January 2000, all Community vessels exceeding the length mentioned above must be equipped with a satellite tracking device, wherever they operate, the same goes for the vessels of third countries operating in Community waters.

(g) States should extend monitoring, inspection and surveillance measures to non-flag vessels operating in waters under their jurisdiction.

Example : EC fisheries regulations have recently been strengthened ⁸ to provide or reinforced controls after landing, control of third country vessels in

⁷ Council Regulation No 686/97 25 amending Regulation No 2847/93; Commission Regulation No 1489/97 26, which establishes detailed implementing rules.

⁸ Council Regulation No 2846/98 31 of 17 December 1998 amending Regulation No 2847/93.

Community waters and transparency and co-operation between national surveillance authorities and the Commission in monitoring activities. The regulations provide for strengthening the monitoring of landings carried out by these vessels and subjecting such vessels to monitoring by satellite from the date on which the system will be fully applicable to Community vessels. The intention is that Community vessels and vessels of third countries in Community waters should be treated in the same manner

II.5 MEASURES TO CONTROL TRADE AND ASSOCIATED ACTIVITIES

Controls on trade, commercial display, possession and consumption of endangered species are essential to underpin controls on deliberate and incidental taking. The primary aim should be to eliminate any legal channels for trade and associated activities in marine turtles, parts and derivatives as well as opportunities for financial gain. The long-term effectiveness of such measures is closely linked to education and awareness-building amongst target groups or communities with traditions of turtle consumption. long-term effectiveness of such measures is closely linked to education and awareness-building amongst target groups or communities with traditions of turtle consumption.

II.5.1 CONTROL OF INTERNATIONAL TRADE

The revised Action Plan recommends that States issue instructions “prohibiting the purchase and sale of carapace and giving effect to the relevant ratified international conventions” (A.3.16). The FAO Code of Conduct for Responsible Fisheries also calls on States to cooperate in complying with relevant international agreements regulating trade in endangered species (section 11.2.4).

All Mediterranean States must be legally equipped to enforce the provisions of CITES.⁹ With regard to marine turtles, the following elements should be given particular consideration in national legal frameworks.

II.5.1.1 Guidelines for applying the law to turtle species, parts and derivatives

- (a) Legislation/regulations should apply to the five marine turtle species that occur in the Mediterranean and are listed in CITES Appendix I.
- (b) If nature conservation legislation is used for this purpose, care should be taken that it is broad enough to cover marine species. A fairly common problem is that a legislative definition of “animal” quite often excludes fish and reptiles.
- (c) Where regulations under customs legislation are used as the basis for implementing CITES border controls, it is important to check that all listed turtle species, parts and derivatives feature on the Customs list. It may also be necessary to train Customs officers in recognition skills.

⁹ For further information, see Shine C. and de Klemm, C. 2000. *Guidelines for the implementation of CITES (2nd Edition, in press)*.

- (d) Legislation should define “specimen” broadly, consistently with CITES, to cover live and dead turtles and their readily recognisable parts or derivatives.¹⁰ To facilitate enforcement, it is strongly preferable to list the main parts and derivatives that are likely to feature to be traded internationally. For turtles, a basic list should include carapace (shell) in raw or worked state and in any size, scales, flippers, cartilage, oil, eggs, raw hides, skins or leather.

II.5.1.2 Guidelines on transactions to be covered and applicable criteria

- (e) Legislation should prohibit the import, introduction from the sea, export or re-export of any marine turtle specimen without a valid permit issued by the appropriate Management Authority in conformity with conditions laid down in Articles III, IV and V of CITES. The legislation should cross-refer to or reproduce the CITES permit criteria. It is not satisfactory to use a vague formula like “subject to permit” as this does not guide the exercise of administrative discretion.
- (f) To minimise the risk of fraudulent transactions, legislation should specifically apply to transit and transshipment¹¹ as is done under Tunisian legislation. Competent authorities should have the power to inspect specimens in transit or being transhipped in order to control the existence of valid CITES export documentation.
- (g) Equivalent prohibitions should apply to all transactions, whether conducted between Parties or between Parties and non-Parties to CITES (Art.X).
- (h) Parties may adopt stricter domestic measures regarding the conditions for trade, taking, possession or transport of listed turtle species (Art.XIV.1).

II.5.1.3 Guidelines on exemptions

- (i) CITES provides for limited exemptions to the permit system (Art.VII). Parties may incorporate these exemptions into national legislation or impose more restrictive conditions. For marine turtles, permitted exemptions should be kept to an absolute minimum (e.g. limited to scientific and research purposes) and worded in precise and unambiguous language.
- (j) The sale of tourist souvenir specimens of Appendix-I species from places of international departure should be prohibited by all Parties (Resolution Conf. 10.6).

II.5.1.4 Guidelines on institutional arrangements for CITES implementation

- (k) Each Party must designate a CITES Management Authority with general powers to issue regulations necessary for CITES implementation, as well as a Scientific Authority to advise on permit applications in accordance with the Convention.

¹⁰ Readily recognizable parts or derivatives shall be interpreted to include any specimen which appears from an accompanying document, packaging, mark or label, or from any other circumstances, to be a part or derivative of an CITES-listed animal, unless such part or derivative is specifically exempted from the provisions of the Convention (Res.Conf.9.6).

¹¹ These are not considered as an “import” under CITES if the specimens remain in Customs control (Article VII.1). Transit includes cases where the specimens remain at all times in the aircraft, ship or other means of transport in which they were brought in, as well as cases where specimens are transferred to a different form of conveyance during their stopover. Trans-shipment should refer only to specimens that remain in Customs control and are in the process of shipment to a named consignee in another country when any interruption in the movement arises only from the arrangements necessitated by this form of traffic. Any shipments that fall outside this narrow definition should be considered as imports subject to the normal CITES trade controls (COP Resolution Conf. 9.7).

- (l) Because turtles are marine species, it may be necessary to establish a coordination procedure between the CITES Management Authority, the Fisheries Department and possibly Customs officers in order to promote consistency in the application and enforcement of CITES controls.
- (m) Legislation/regulations should clearly specify which agencies and classes of officers are responsible for enforcing protection measures for CITES-listed marine species.

II.5.1.5 Guidelines on enforcement and penalties

- (n) Parties to CITES must enact measures to penalise trade in or possession of specimens in violation of the Convention as well as measures for the confiscation of such specimens or for their return to the State of export (Article VIII.1).
- (o) The legal framework should confer general powers on enforcement officers, subject to the law of the country concerned, to search vessels, persons and premises and to request information, inspect documents and, if necessary, make arrests.
- (p) Specific powers should be available to seize turtle specimens if enforcement officers have reasonable grounds to believe that these are traded or possessed in contravention of the law.
- (q) Penalties for unlawful transactions should be meaningful. It should be possible to confiscate vessels, containers or other items used in committing the offence.
- (r) For confiscated specimens, detailed CITES recommendations apply to their disposal (Conf. Res.9.10 (Rev.) and 10.7):
 - live confiscated turtles should be entrusted to the Management Authority, which should be required to consult with the Scientific Authority before reaching a decision on disposal. Competent authorities should exercise their discretion in accordance with the CITES Guidelines for the Disposal of Confiscated Live Animals (Conf.Res.10.7, Annex I). The Management Authority should prepare an Action Plan on Seized and/or Confiscated Live Specimens (same Resolution, Annex 3);
 - dead confiscated turtles, parts and derivatives should be transferred to an approved institution for scientific or educational purposes, or to another government agency, for official use. If this is not possible, they should be kept in storage or destroyed.
 - Under no circumstances should Appendix I-listed marine turtle specimens be sold or otherwise disposed of in any way that would result in their being the object of trade.
- (s) Legislation should provide for the recovery of costs of seizure, confiscation and disposal from the importer and the person for whom the import has taken place. Where the identity of these persons cannot be established, costs should be recoverable from the transporter.

II.5.1.6 Controls on domestic trade, possession and consumption

Several conservation instruments require regulation of domestic trade, possession and associated activities involving marine turtle specimens.

Parties to the 1995 Barcelona Protocol should control and where appropriate prohibit commercial trade and transport of these species, their eggs, parts or products. (Art.11.3(a)). The revised Action Plan recommends that a campaign be carried out for fishermen and local populations to facilitate the implementation of legislation to ban the consumption and sale of all products derived from marine turtles.

The Bern Convention additionally requires Parties to prohibit the possession of such animals, alive or dead, including stuffed animals and any readily recognisable part or derivative thereof, where this would contribute to effective species protection.

The EC Habitats Directive also covers transport, sale, exchange, and offering for sale or exchange, of specimens taken from the wild and applies to all stages of life of marine turtles (Art.12.2, 3).

II.5.1.6.1 Guidelines for controlling domestic trade, possession and consumption

- (a) Legislation/regulations should prohibit the consumption and sale of marine turtles or any products derived from sea turtles. Again, it is preferable to list the full range of trade-related activities to remove uncertainty about what is or is not covered and to give greater visibility to the problem.

Example: An indicative list of prohibited activities, drawing on legislation in France, Malta and Israel, could include: possession, transport, sale, exchange, offering for sale or exchange, purchase, exhibition, display for commercial purposes, processing, taxidermy, serving in restaurants or consumption of any turtle specimen.

- (b) Exemptions to these prohibitions should be subject to permit. The legal basis for exemptions should again be narrow, precisely worded and subject to any necessary conditions. Exemptions should only be granted for specimens that have been lawfully imported (e.g. under a scientific research permit). A record should be kept of exemptions granted.
- (c) To facilitate enforcement, legislation may require a person found in possession of turtle shell or other specimen to prove that the specimen was lawfully introduced into the country or otherwise lawfully obtained. Possession is deemed to be unlawful if the person in possession cannot produce the necessary proof.
- (d) In States with a regionalised system of government, controls on trade, transport and possession should be harmonised at national level to ensure consistent practice.

III. GUIDELINES FOR CONSERVING, MANAGING AND RESTORING MARINE TURTLES HABITATS

The revised Action Plan recommends a series of legal measures for protection of habitats on which marine turtles depend.

- Each country should be encouraged to develop and implement the necessary legislation for the establishment and management of protected areas for marine turtles (para.12).
- Integrated management plans should be drafted for terrestrial and marine areas which encompass marine turtle critical habitats (para.13).
- Measures and regulations aimed at protecting critical habitats, on land and at sea, should be developed and implemented (para.14).
- All Parties that have critical habitats for marine turtles should make immediate efforts for the adequate protection, conservation and management of the areas encompassing those habitats (para.19)
- An inventory of marine turtle critical habitats, including migration routes, in the Mediterranean should be prepared urgently, and should be regularly reviewed in the light of increased knowledge (para.20).
- A network of marine and coastal protected areas throughout the Mediterranean should be created covering known areas for reproduction, feeding, migration and wintering of marine turtles (para.21).

Critical habitat conservation measures are mandated under several other treaties and instruments. The Bern Convention, for example, breaks this requirement down into three interrelated steps. Parties must:

- take appropriate and necessary legislative/administrative measures to ensure the conservation of the habitats of listed turtle species and endangered natural habitats;
- have regard in their planning and development policies to the conservation requirements of such areas, to avoid or minimise as far as possible any deterioration of such areas; and
- give special attention to the protection of areas important to migratory turtle species that are appropriately situated in relation to migration routes, as wintering, feeding and breeding areas (Arts.4.1-3).

III.1 IDENTIFICATION AND INVENTORIES OF CRITICAL HABITATS

At different stages of the life cycle of marine turtles, the following habitats are critical:

- nesting beaches
- summer and winter feeding grounds;
- wintering areas;
- migration routes.¹²

¹² For a summary of current research findings, see Gerosa and Casale (1999) and sources cited at p.29-30.

Preparation of inventories of endangered or threatened species' habitats is legally required under the Barcelona Protocol (Art.15). The revised Action Plan specifies that an inventory should include known sites (protected or monitored) and potential sites and should be regularly reviewed in the light of increased knowledge.

III.1.1. GUIDELINES FOR INVENTORIES OF CRITICAL HABITATS AND THEIR LEGAL EFFECTS

- (a) Each State should give formal backing for a comprehensive inventory of marine and terrestrial critical habitats. This should as far as possible be coordinated with and build on existing inventory programmes, bearing in mind that habitats important for turtles may house other animal and plant species that are inventoried pursuant to other conservation instruments (e.g. CBD, EC Habitats Directive).
- (b) The inventory should be designed to build the knowledge base about the location and conservation status of key habitats and sites so that planning and management tools can be designed and targeted to make best use of available resources.
- (c) Where appropriate, the inventory should also seek to identify potential nesting sites and feeding and wintering areas. This information may in some cases feed into strategies for site restoration and rehabilitation.
- (d) Contributors of information to an inventory programme can include government and non-government ¹³ bodies as well as local communities and individuals.
- (e) The identification of a critical habitat for an endangered species should trigger appropriate legislative/regulatory provisions by the State concerned. Allowing for differences between national legal systems and terminology, the following sequence of measures or equivalent steps should be followed:
 - designation of critical habitats as 'protected' (managed for conservation objectives) and notification to owners/occupiers and relevant authorities;
 - precise delimitation of habitat boundaries on a map annexed to primary legislation or incorporated in nature conservation, fisheries and/or planning regulations; ¹⁴
 - identification of existing or potential threats to a particular site;
 - selection and implementation of legal measures to provide a basis for controlling or managing on-site and external activities and processes that may modify the physical, biological and ecological conditions of the habitat concerned, as well as measures for any necessary restoration.
 - protection measures may be site-specific or apply to all habitat types within a defined category. If possible, they should apply automatically once a critical habitat is designated (as under the US Endangered Species Act): otherwise, their adoption is a matter of administrative discretion.

¹³ A 1998 survey of the Turkish coastline was carried out by the World Wide Fund for Nature and provided a basis for specific recommendations for conservation and management of 17 identified nesting sites.

¹⁴ The US Endangered Species Act 1973 provides for exceptions where public disclosure of these locations might expose the species to vandalism, collection or other threats, or where insufficient information is available when the species is listed to designate the appropriate habitats.

- (f) National government, local authorities and public departments and agencies responsible for planning, authorisation and administration of activities affecting critical habitats should be required to exercise their functions consistently with the conservation and, where appropriate, rehabilitation of such habitats.

III.1.2 LEGAL TOOLS FOR PROTECTION AND MANAGEMENT OF NESTING AREAS

The revised Action Plan calls on all countries that have nesting areas for marine turtles to make immediate efforts for the stringent protection of these sites. Several of the Priority Actions emphasise the need for urgent steps in named beaches.

It is essential for the States concerned to apply and enforce existing regulatory powers to control activities and development on beaches, without waiting for longer-term developments (cadastral plans, new legislation, new integrated coastal plans etc.). Using existing legal tools can lessen the strain on administrative departments and personnel on the ground. However, political will at both national and local authority level is of critical importance in this respect.

III.1.2.1 General guidelines

- (a) As a minimum, the States concerned should prohibit deliberate damage to or destruction of sites used by *Caretta caretta* and/or *Chelonia mydas* for nesting (consistently with Article 12 of the Barcelona Protocol and Article 6 of the Bern Convention).
- (b) Potentially damaging activities should be subject to permit, following satisfactory completion of environmental impact assessment (EIA). No public authority should grant a permit or a regulatory exemption for activities liable to damage nesting areas (individually or in combination with other activities or developments).
- (c) Maximum use should be made of existing planning tools, such as setback zones and special planning areas, to protect beaches and surrounding coastal areas. This may help to secure interim protection for a beach pending the adoption of legislation/regulations to create a protected area.

III.1.2.2 Guidelines for controlling the location and design of buildings, facilities and infrastructure

- (d) Aquaculture and mariculture facilities (fish farms) should not be located on or near nesting beaches.
- (e) Airport night flights in the area of nesting beaches must be banned.
- (f) New buildings, restaurants, infrastructure and sports facilities (e.g. tennis courts) should be set back from the beach and construction restricted within a defined band or radius. The enlargement or extension of existing constructions and transport routes should be strictly controlled.
- (g) Where planning permission is granted to construct buildings and facilities, binding conditions should specify the height (number of floors), density of occupation and the hours, voltage and direction of external lighting. This is essential to minimise photo-pollution and the disorientation of hatchlings caused by artificial light.

- (h) Sewage and waste disposal arrangements should not involve discharge of untreated waste to the sea. Tourist operators should be required to provide for and finance the necessary treatment facilities as a condition of planning permission.
- (i) On beaches, the sitting and number of fixed structures (kiosks, sanitation facilities) and rented beach furniture should be strictly controlled to preserve natural conditions on the beach. Planting trees or non-indigenous plants in the nesting beach sand must be prohibited. Authorisation for other beach uses should only be granted if compatible with the ecological needs of turtles and hatchlings using the beach and the protection of nests. Beach furniture must be removed at night and stacked at the back of the beach.
- (j) Large litter bins should be placed in non-obstructive windproof positions, covered and emptied daily. Dumping of litter must be prohibited. Garbage dumps should not be located on or near nesting beaches, as these attract seabirds, which predate hatchlings.
- (k) All nesting beaches should be cleaned by hand at any time of year. Mechanical means such as bulldozers should never be used.
- (l) The development of marine facilities (yacht marinas, mooring and anchorage points) in the vicinity of nesting beaches should be rigorously controlled. No groynes or breakwaters to be built on or near nesting beaches.
- (m) Applicable planning rules and conditions should be included in a publicly-accessible land registry. Planning authorities should have legal powers to impose “stop” or demolition orders for illegal construction or encroachment.
- (n) Where competent authorities do not exercise enforcement powers with regard to unlawful development or activities, interested parties – specifically including NGOs – should have legal standing, funding and resources to bring proceedings for judicial review of administrative actions and, where applicable, to submit the matter to an environmental commissioner or ombudsman.

III.1.2.3 Guidelines for controlling access to and use of the beach

- (o) Turtle nesting warning and information signs should be erected on all nesting beaches.
- (p) No roads should be allowed along the back of the beach, and access roads to the nesting beach should be carefully arranged to prevent vehicular access to the beach. It may be appropriate to provide for the erection of barriers between car parks and access points to the beach.
- (q) The use or transit of vehicles across nesting beaches should be prohibited, either permanently or at least during the nesting season (May-September). Camping, caravans and camper vans should not be allowed on all or part of the beach. Horse-riding on nesting beaches must be strictly prohibited
- (r) Powers should be available to close parts of the beach to public access if necessary during the nesting season. Access to all nesting beaches should be prohibited from sunset to dawn, and the beach should be patrolled to enforce this rule.

- (s) Where necessary, cages should be used to minimise nest predation. Arrangements should be made for the translocation of endangered nests by trained and authorised personnel.
- (t) No hunting should be permitted where this may disturb or harass turtles or other protected species.

III.1.2.4 Guidelines for controlling activities damaging to sand lines

- (u) Dune systems are extremely fragile ecosystems and must be preserved. Moto-cross and similar events must be prohibited. Human access to coastal dunes should be regulated where necessary to conserve these sites.
- (v) The extraction of sand and shingle from dunes, foreshores and estuaries, and core drilling for mineral exploration on or near turtle nesting beaches, should be prohibited where this may adversely affect critical turtle habitats.
- (w) Where an application is made to renew an operating licence or concession for such activities, the competent authority should assess the compatibility of the activity concerned with turtle conservation requirements before deciding whether to renew or refuse a new licence or concession. If the licence is renewed, appropriate conditions or operating criteria should be attached as necessary.

III.1.2.5 Guidelines for controlling nautical activities in inshore waters

- (x) Jet-skiing, water-skiing and other sea sports that can cause incidental mortality or disturbance to turtles should be subject to geographic and seasonal restrictions as appropriate. During nesting season, corridors for sea sports should not be demarcated in waters used by turtles to access nesting beaches.
- (y) Where corridors or operating licences are allocated to tourist operators, non-compliance with applicable rules should be grounds for withdrawal of the licence or termination of the concession. The terms of the licence or concession should be publicly accessible, except for commercially sensitive information.
- (z) Underwater activities near nesting beaches should be prohibited. Turtles should be protected from harassment by 'turtle watching' tourist boats.

III.2 LEGAL TOOLS FOR PROTECTION AND MANAGEMENT OF MARINE HABITATS

Critical marine habitats include benthic feeding grounds, shallow waters used for wintering and deeper waters frequented by turtles during migration and for feeding during their pelagic phase. Although some Mediterranean sea areas are known to house high turtle populations (e.g. the Gulf of Gabes is an important foraging or feeding area for both juvenile and adult turtles throughout the year), much research is still needed into habitats and migration routes.

III.2.1 GUIDELINES FOR CONSERVING CRITICAL MARINE HABITATS

- (a) States should equip themselves with a legal basis to designate and legally protect identified critical habitats in waters under national sovereignty or jurisdiction (territorial waters, continental shelf and the waters above, EEZ where applicable). Fisheries legislation will usually provide the most suitable framework but may need to be amended for this purpose.
- (b) Appropriate regulatory measures may include permanent or seasonal closure to fisheries, modification of fishing gear, controls on dumping and discards and restrictions on navigation and vessel movements consistent with international law. It may be necessary to exclude non-fisheries vessels such as powered pleasure boats or to impose speed restrictions on a permanent or seasonal basis to minimise the risk of turtles being hit by propellers or hulls
- (c) Consultation and collaboration should be actively promoted between nature conservation interests, the fishing sector, the boating and tourist industry and other stakeholders. Particularly because enforcement presents logistical challenges at sea, efforts should be made to develop agreed best practices and to build awareness and support in different key sectors.
- (d) For the high seas, protection of critical habitats can only be implemented through regional cooperation. The 1995 Barcelona Protocol provides a legal mechanism for the establishment of Specially Protected Areas of Mediterranean Importance in the high seas, subject to the approval of the Meeting of the Parties established under the Protocol. All Parties to the Protocol will be bound by the protection rules adopted for a SPAMI.

III.3 LEGISLATION FOR MARINE OR MIXED PROTECTED AREAS (MPAS)

Relatively few Mediterranean States have a legal or institutional framework to establish and manage marine protected areas, whether entirely at sea or across the land-sea divide. Conventional protected area legislation often applies only on land, while area-based protection, measures under fisheries legislation are usually narrow in scope. Such laws are ill-equipped to promote multiple uses of coastal areas consistently with turtle conservation requirements.

III.3.1 GENERAL GUIDELINES FOR MPA LEGISLATION ¹⁵

- (a) In the short term, existing legal processes and tools should be used and flexibly combined to provide maximum protection for key sites and build public awareness. Appropriate action will vary from one country to another, depending on culture, tradition and legal processes. In some cases, it may be enough to upgrade the management category of an existing protected area to confer more effective legal protection

¹⁵ These principles are partly drawn from Kelleher G. (ed.) 1999. *Guidelines for Marine Protected Areas. Best Practice Protected Area Guidelines Series No.3.* IUCN-The World Conservation Union (especially Chapter 2 on Legal Frameworks).

Example : In some cases, legal protection can be progressively extended (usually from land out to sea) as support grows for an MPA. This was done in the Port-Cros Marine National Park, France (Europe's first MPA). In Ecuador's Galapagos Islands, the land area (comprising 13 major islands) was first designated as a national park; the near and offshore waters around the islands were separately designated as a Marine Resources Reserve in 1986; and in 1998, special legislation was adopted, which brought all waters within 40 nautical miles of the outer perimeter of the islands under the jurisdiction of the National Park Service. The Service is now responsible for fisheries and a artisanal fisheries management plan is under development (Special Law for the Conservation and Sustainable Development of the Province of Galapagos)

- (b) States that have not already done so should take priority steps to amend existing legislation or enact new legislation to provide a legal basis for integrated protection and management across the land/sea interface.
- (c) For this purpose, States should decide whether to adopt site-specific legislation or 'umbrella' legislation that generally provides for the future establishment of MPAs by secondary regulations.

Example : Italy has adopted a framework Sea Protection Law of 31 December 1982, which provides a general basis for establishment of marine reserves: site-specific regulations may be adopted for the designation and management of individual MPAs.

Example : Site-specific legislation may be particularly appropriate for large MPAs. In Australia's Great Barrier Reef Marine Park, legislation provides for a special management authority and zoning system. Iceland has also adopted a special law to create the ~~British~~ ~~Islands~~ Conservation Area, which includes a marine area, its coastline and a very large number of small islands.¹⁶

- (d) When designing an MPA system, planners should also consider whether to propose a small number of large MPAs or a large number of smaller ones (perhaps linked to community-based management). They should specifically avoid any fragmentation of important nesting sites, and promote the development of complementary environmental policies in the surrounding ecosystem.
- (e) Legislation should provide for clear delineation of boundaries and establish a restrictive procedure for the alteration of boundaries. The legal procedure used to establish an MPA (primary/secondary legislation, public enquiry etc.) should also be followed if there is a proposal to abolish the MPA or to reduce its size. This is very important to secure long-term conservation of the area, even if there is a change of political direction. Equivalent safeguards against changing SPAMI boundaries are laid down by the Barcelona Protocol (Art.10).

¹⁶ Law of 8 March 1995.

III.3.1.1 Guidelines for basic components for establishing and managing MPAs

- (f) The primary objective of an MPA should be conservation, as broadly defined by the World Conservation Strategy to include conservation of biological diversity and biological productivity. Legislation should recognize the link between protection and maintenance of ecological processes and states and the ecologically sustainable use of living resources, particularly by local users including fishermen.
- (g) Institutional mechanisms are needed to establish specific responsibility, accountability and capacity for management of the MPA. For mixed land-sea protected area, there should be if possible an integrated system of administration and management. Failing this, management of the constituent parts should be fully coordinated.
- (h) For each MPA, it must be decided whether management responsibility should be allocated to existing agencies or whether a new agency should be created. Appropriate action will depend on the circumstances of each case. Choosing an existing institution usually has the advantage of minimising inter-agency disputes or delay, but may be perceived as too sectoral. Where there is strong public and political support for a new agency, this should have an objective and balanced structure that includes full representation of local and national civil society, including environmental NGOs.
- (i) Coordination with other institutional processes should be established. The legal instrument should specify the relationship between the MPA institutional structure and other national and local authorities. It should provide for coordination of planning and management by all agencies with statutory responsibilities for internal or external activities affecting the MPA and establish a procedure for resolution of conflicts between different agencies.
- (j) Public participation and consultation processes should preferably be backed by legislation/regulations. Appropriate procedures need to be put in place to maximise the involvement of local communities, NGOs and users of the coastal and marine environment, inter alia through representation on a consultative committee. There should be opportunities for participate with the MPA management agency at all stages of preparation of management and zoning plans.
- (k) Like any protected area, an MPA should be managed for perennity (long-term conservation) and ecological integrity. Management rules and criteria for decision-making should be developed with due regard for a State's international commitments and recognised best management practices.

Example : For Specially Protected Areas designated under the Barcelona Protocol, regulations should cover the dumping or discharge of waste or harmful substances; the passage, stopping or anchoring of ships; the introduction of alien species and genetically modified organisms; activities involving the exploration of the sea-bed; fishing and hunting; taking and destruction of and trade in wild animals and plants. Permit procedures should be developed for activities compatible with the conservation objectives of the SPA.

- (l) A management plan should be prepared for each MPA and reviewed and revised at regular intervals (e.g. every five years). Where MPAs are established for multiple uses (usually the case in the coastal zone), there needs to be a legal basis for zoning as part of management. Management plans should prescribe appropriate regulatory and management measures for different zones within the MPA. Regulatory provisions of zoning and management plans should override inconsistent provisions in local land- use plans and sectoral plans.

III.3.2 GUIDELINES ON FINANCIAL ASPECTS AND ENFORCEMENT

- (m) Compensation should be considered where the establishment or extension of an MPA entails the loss of clearly-established local rights and practices. In many cases, it will first be necessary to create or update a cadastral plan for the terrestrial areas concerned in order to determine ownership and use rights for the land concerned.
- (n) The legal instrument should specify financial arrangements for MPA management. Where possible, there should be a legal basis to earmark revenue generated from activities in the MPA for park management or for programmes involving local communities and/or conservation NGOs. The management authority should have legal powers to set fees, charge for concessions, provide services and operate with the same flexibility as operators in the private sector. Treasury departments in countries oppose earmarking provisions of this kind should update their policies to reflect a progressive approach for effective MPA management.
- (o) The management body must have authority to delegate and enforce the rules and regulations it promulgates. The civil or administrative code should therefore provide adequate powers for personnel to take enforcement action, backed by meaningful penalties. Under appropriate circumstances, coastal or marine conservation officers should have the authority to impose on-the-spot fines for minor resource and environmental offences. For more serious violations, their authority should extend to the gathering of evidence, impounding and confiscation of equipment, imposing a court summons, and when appropriate, arrest and detention powers.

III.4 MEASURES TO ENHANCE COMPLIANCE

- (a) Where possible, incentives and non-regulatory approaches should be used to encourage voluntary conservation and a culture of self-enforcement of rules by user groups.
- (b) It may be appropriate to conclude contractual management agreements between relevant agencies and local authorities, private organisations and NGOs to finance habitat management activities (patrolling, beach maintenance and protection, public information/awareness).
- (c) States should recognise the positive contribution that conservation NGOs can make

to turtle conservation and environmental governance through their educational, campaigning and monitoring activities and their scrutiny of administrative actions or omissions. Where feasible, there should be close cooperation between national law-making bodies, the agencies responsible for application and enforcement and competent NGOs close to the ground.

- (d) Countries and institutions that provide financial assistance should establish procedures to ensure that financial and technical aid is not provided for programmes and projects that undermine international or national obligations for conservation of Mediterranean marine turtles.

Example : EC funding must, in accordance with the integration principle, take into consideration the environmental laws of the Community. The EC should not co-finance projects which have a negative impact on environmental interests that are protected under Community legislation, such as SACs protected under the Habitats Directive, unless the project complies in principle and practice with the protection requirements of that legislation.

All Community funds must be granted in an appropriate policy context.¹⁷

- (e) States that request international assistance should ensure, as a priority, that the proposed projects and programmes do not involve damage to turtle populations or critical habitats.

IV. GUIDELINES FOR INTEGRATING TURTLE CONSERVATION MEASURES INTO COASTAL AND MARINE PLANNING PROCESSES

Species-based and area-based measures for turtle protection are, as noted above, likely to be most effective when they are supported by broad-based ecosystem management policies and practices for the wider marine and coastal environment. The following sections provide brief indicators on how legal techniques and frameworks can facilitate this process of integration.

IV.1 ENVIRONMENTAL IMPACT ASSESSMENT AND PLANNING PROCESSES

Like the CBD (Art. 14), the Barcelona Protocol requires Parties to adopt a broadly-based approach to planning and environmental impact assessment (EIA). Art. 17 specifies that “in the planning process leading to decisions on industrial and other projects and activities that could significantly affect protected areas and species and their habitats, the Parties shall evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and Like the CBD (Art. 14), the Barcelona Protocol requires Parties to adopt a broadly-based approach to planning and environmental impact assessment (EIA). Art. 17 specifies that “in the planning process leading to decisions on industrial and other projects and activities that could significantly affect protected areas and species and their habitats,

¹⁷ Communication on implementing Community environmental law, Com(96)500 Final.

the Parties shall evaluate and take into consideration the possible direct or indirect, immediate or long-term impact, including the cumulative impact of the projects and activities being contemplated”.

IV.1.1 Guidelines on environmental impact assessment

- (a) Each State should have procedures in place for environmental impact assessment of proposed projects that are likely to have adverse effects on marine turtle populations or their habitats. EIA procedures should be conducted in an open and transparent way and the participation of the public and conservation organisations should be promoted.
- (b) EIA regulations should clearly specify the following matters:
- when an EIA is required (project type; size/cost threshold etc.);
 - the information and analysis it should contain (direct and indirect impacts, short- and long-term, possible cumulative effect, areas of uncertainty, possible alternatives to mitigate or compensate for anticipated impacts etc.);
 - who should carry out the EIA (where possible, this should be an independent and qualified EIA practitioner, and not the project proponent);
 - which agency or institution should review the EIA during the decision-making process;
 - circumstances in which a public enquiry may be required;
 - criteria for determining whether a permit should be granted;
 - who should bear the costs of the EIA and associated procedures.
- (c) For marine turtles (and other protected species and habitats), stricter EIA requirements should apply to proposed developments in and around critical habitats and protected areas. EIA must be an integral part of tourist and development projects concerned with important nesting beaches. There should also be a legal basis for environmental impact assessment of new or modified types of fishing gear or methods and for potentially damaging categories of activities offshore.

IV.2 GUIDELINES FOR PLANNING PROCESSES

- (d) All countries use some form of territorial planning legislation to control the permitted type and density of land use and development in different locations. Most commonly, general strategic guidance is adopted at national or provincial level and must be followed by local authorities when developing detailed local plans. States and provinces must ensure that their strategic planning processes are consistent with international obligations and provide adequate visibility for nature conservation interests, including protected species.
- (e) Local land-use plans usually establish a system of zones for different categories of development (residential, industrial, tourism, maintenance of natural character etc.). Nesting beaches and other designated critical turtle habitats must be clearly marked in the most protective zone of the plan ('no-building' zone or equivalent). Protected areas should be clearly delimited in local land-use plans.
- (f) Particular care should be taken to ensure that areas in or near nesting beaches are not zoned for incompatible purposes or allocated an inconsistent legal status (e.g. the provision of tax incentives for high-density tourist development).

(g) In the sensitive coastal zone, consideration should be given to developing special planning rules to protect natural amenity, prevent 'ribbon strip' development and safeguard public access to the coast. Where such rules are binding on local planning authorities, this helps to promote consistent practice between different coastal municipalities. The best-known rule of this type involves setback zones or protection strips (public interest servitudes).

Example : These are required by law in several Mediterranean States or provinces. In the Balearic Islands (Spain), new construction is prohibited in dunes, coastal wetlands, on cliffs and within 100m of the shore. In France, the width of protection strips varies depending on the activity: new transit routes may not be built within 2 kilometres of the shore.

(h) Constructive working relationships should be developed between tourist operators, local authorities, nature conservation interests and other interested parties. It is important to promote responsible tourism practices through a combination of voluntary codes, regulatory sanctions and appropriate economic interests.

(i) In areas subject to high levels of tourism, it may be useful to develop a sectoral tourism plan in collaboration with tourist operators. This could involve an assessment of the carrying capacity of beach areas and inshore waters, followed by a review of planning and sectoral controls to ensure that these are adequate for turtle conservation needs.

IV.3 INTEGRATED APPROACHES TO COASTAL AND MARINE MANAGEMENT

Integrated management of marine and coastal ecosystems is now a formal policy of the CBD institutions (Jakarta Mandate on the conservation and sustainable use of marine and coastal biological diversity", Decision II/10, 1995: work programme approved in 1998). The Jakarta Mandate recognizes that sectoral activities in the coastal zone, including construction, mining, shipping, tourism and fishing, can adversely affect biodiversity. Effective solutions should consider all sectors simultaneously, so that changes in policies or practices in one area are consistent with and complementary to those adopted in another. It recommends that Parties should establish and/or reinforce institutional, administrative and legislative arrangements for integrated coastal/marine management and integrate such measures within national development plans. Specific recommendations cover the establishment of marine and coastal protected areas to protect ecosystem processes and functions as well as particular species.

Many other international processes provide guidance on integrated coastal zone management (ICZM)¹⁸. Mediterranean States should also draw on the results of the recent EU demonstration programmes on ICZM. They should specifically promote involvement of local stakeholders in the conservation of the coastal zone, through awareness-building and practical opportunities for participation in coastal conservation projects.

An integrated framework is necessary to safeguard turtles against certain categories of damaging processes that are generated by sectoral activities, sometimes at long

¹⁸ See bibliography for recommended further reading.

distance. For example, critical benthic habitats may be modified by a combination of trawling, dredging, gravel extraction, dumping of waste or rubble or pollution from marine or land-based sources. Pollution of the marine environment is mainly generated from land-based sources but also results from the dumping of persistent plastic and other debris at sea and accidental oil spills.

IV.3.1 GUIDELINES FOR LEGAL AND INSTITUTIONAL FRAMEWORKS FOR CLOSER INTEGRATION

- (a) There is no blueprint or model for integration. One option for fairly rapid implementation is an informal or *ad hoc* coordination committee of key agencies and stakeholders, which can be established without the need for special legislation. It can help to build institutional and public awareness and identify areas of conflict and complementarity. In several countries, national wetland committees established to streamline implementation of the Ramsar Convention on Wetlands may provide a useful model.
- (b) Another possibility is for planning legislation to establish a special institution with planning and management powers that bridge the land-sea divide and extend to the public maritime domain.

Example : In Tunisia, the Coastal Protection and Planning Agency (Agence de protection de d'Aménagement du Littoral) is a public body established in 1995 within the Ministry for Environment and Territorial Planning. Its statutory duties are to implement government policy for coastal protection and planning, with specific regard to the public maritime domain which must be protected against encroachments and unlawful occupation. All planning and development along the littoral is subject to permit from APAL. It must prepare an audit of existing land ownership and uses and carry out measures to identify, protect and restore natural and sensitive areas. Provision is made for monitoring procedures and for the establishment of a coastal observatory. The APAL carries out its functions under a detailed five-year management plan.

- (c) Integration may be promoted through a special law (such as the pioneering 1972 US Coastal Zone Management Act) or developed progressively through the gradual amendment of legislation to reflect an ecosystem-based approach to management. This type of legislative development needs to be supported by the development of one or more institutions with a broadly-based mandate.

Example : Jamaica has taken a progressive approach to developing an integrated legal and institutional framework. Its Beach Control Act has been gradually amended since 1956 to incorporate conservation measures in the legal regime applicable to the public maritime domain. All uses, including port facilities and commercial activities on bathing beaches, are

subject to permit. It is now possible to create protected areas in the foreshore and including the seabed. Fishing, motorboat use, dredging, removal of coral or sedentary species and hunting and removal of treasure may all be prohibited in such areas.

The institutional mandate of the Natural Resources Conservation Authority has been significantly broadened: since 1991, it has had responsibility for coastal areas as well as river basins and watersheds (i.e. entire ecological units). A Council on Ocean and Coastal Zone Management has been formally established to implement integrated coastal zone management. Members include representatives of local authorities, the private sector, marine navigation, fisheries and protected area management bodies. Local standing committees for coastal management are being established and will include representatives of local communities and NGOs.

(d) Marine legislation may also be used as an instrument for integrated management of the public maritime domain and marine waters. The FAO Code of Conduct calls on States to ensure that their fisheries interests, including the need for conservation of the resources, are taken into account in the multiple uses of the coastal zone and are integrated into coastal area management, planning and development (section 6.9).

Example : New South Wales (Australia) provides one example. The Fisheries Management Act (1994, amended 1997) not only regulates fisheries and aquaculture but also functions as a nature conservation law for marine ecosystems. It lays down protection measures for threatened species and critical habitats, including seagrass beds; provides for the institution of habitat protection plans, creation of marine reserves, regulation of dredging and dyking operations and prohibits introductions of alien species. Competent authorities must prepare recovery plans and address threats to biodiversity caused by destructive processes.

APPENDIX
RELEVANT INTERNATIONAL AND
SUPRANATIONAL MEASURES

I. RELEVANT INTERNATIONAL AND SUPRANATIONAL MEASURES

Decision-makers and legislators need to take account of a series of internationally-agreed obligations and best practices, which form the baseline for the minimum content of national legal frameworks. This section describes the evolution and current position regarding key instruments and ends with a brief assessment of the existing regime.

Two distinct 'strands' of international law contain measures relevant to marine turtles:

- protection of species, habitats and ecosystems. Sources of relevant obligations include components of the Barcelona Convention regime as well as global and regional instruments for conservation and sustainable use of biological diversity; and
- management and conservation of fish stocks and other marine biological resources. Sources of relevant obligations include global and regional fisheries instruments as well as measures adopted by regional fisheries organisations.

Supranational legislation applicable within the European Union also covers these thematic areas.

I.1 THE BARCELONA CONVENTION FRAMEWORK

The Mediterranean Action Plan was adopted by 16 Mediterranean States and the European Community in Barcelona in 1975 (MAP Phase II was adopted in 1995). Pursuant to MAP, several instruments have been adopted to address different aspects of environmental protection and management in the Mediterranean. None of these applied specifically to Mediterranean fisheries. Early components of the Convention framework contained no binding provisions for marine turtle conservation.

The Barcelona Convention was significantly amended in 1995 to promote protection of the marine environment and the coastal region of the Mediterranean. Parties to the amended Convention are required "individually or jointly, take all appropriate measures to protect and preserve biological diversity, rare or fragile ecosystems, as well as species of wild fauna and flora which are rare, depleted, threatened or endangered and their habitats, in the area to which this Convention applies" (Art.10).

Based on this provision, a Protocol to the amended Convention has been concluded to provide a detailed framework for protection of endangered species and their habitats in the Mediterranean.

I.1.1 PROTOCOL CONCERNING SPECIALLY PROTECTED AREAS AND BIOLOGICAL DIVERSITY IN THE MEDITERRANEAN (BARCELONA, 9-10 JUNE 1995) ¹⁹

The Barcelona Protocol lays down species and habitat protection requirements that Parties must incorporate into national legal frameworks.

Parties must identify and compile lists of endangered and threatened species in zones subject to their sovereignty or jurisdiction and accord protected status to such species. They must regulate and, where appropriate, prohibit activities having adverse effects on such species or their habitats, and carry out management, planning and other measures to ensure a favourable state of conservation of such species (Art.11.1)

Stricter obligations apply to species in the list of Endangered or Threatened Species ²⁰. The list includes five marine turtle species: *Caretta caretta*, *Chelonia mydas*, *Dermochelys coriacea*,

¹⁹ The Protocol entered into force in December 1999. It replaces the 1982 Geneva Protocol (Protocol concerning Mediterranean Specially Protected Areas) in the relationship among the Parties to both instruments.

²⁰ Annex II to the Protocol, adopted in Monaco, 24 November 1996.

Eretmochelys imbricata, *Lepidochelys kempii*. Parties must ensure “the maximum possible protection and recovery” of these species by controlling, and where appropriate, prohibiting:

- taking, possession or killing (including, to the extent possible, incidental taking, possession or killing), commercial trade, transport and exhibition for commercial purposes of these species, their eggs, parts or products (Art.11.3(a));
- “to the extent possible”, disturbance of wild fauna, particularly during breeding, incubation, hibernation or migration, as well as other periods of biological stress (Art.11.3(b));

Parties must also:

- prohibit the destruction of and damage to the habitat of such species (Art.12.3);
- formulate and implement action plans for their conservation or recovery and continue to cooperate in implementing relevant action plans already adopted (Art.12.3);
- where a species’ range extends to both sides of a national frontier or a jurisdictional limit between two Parties to the Protocol, cooperate with the Parties concerned to ensure the protection and conservation and, if necessary, the recovery of such species.

The Protocol provides a legal basis for creating protected areas to safeguard habitats critical to the survival, reproduction and recovery of endangered, threatened or endemic species of flora or fauna (Art.4(c)). It establishes detailed procedures for the establishment, planning and management of two categories of area (Arts.5-7 on Specially Protected Areas; Arts.8-10 on Specially Protected Areas of Mediterranean importance).

Parties must also comply with more general requirements closely modelled on the 1992 Convention on Biological Diversity (see 2.2.1 below). They must, in particular:

- adopt strategies, plans and programmes for conservation of biological diversity and sustainable use of marine and coastal biological resources and integrate these considerations into relevant sectoral and intersectoral policies (Art.3.4);
- identify and monitor processes and categories of activities which have or are likely to have a significant adverse impact on the conservation and sustainable use of biodiversity (Art.3.5);
- provide for environmental impact assessment procedures in the planning process leading to decisions on industrial and other projects and activities that could significantly affect protected areas and species and their habitats (Art 17);
- take necessary measures for public awareness and education, scientific, technical and management research, mutual cooperation and assistance and reporting (Articles 19-23).

1.1.2 REVISED ACTION PLAN FOR THE CONSERVATION OF MEDITERRANEAN MARINE TURTLES (1999)

The protection of Mediterranean marine turtles was identified as a priority target for the period 1985-1995 in the 1985 Genoa Declaration by the Parties to the Barcelona Convention.

The first Action Plan for the Conservation of Mediterranean Marine Turtles was adopted in 1989. Revisions were proposed by a Meeting of Experts (Arta, 27-29 October 1998), reviewed and approved by the 4th Meeting of National Focal Points for Specially Protected Areas (Tunis, 12-14 April 1999) and by the Meeting of MAP National Focal Points (Athens, 6-9 September

1999), and eventually adopted by the 11th Ordinary Meeting of the Contracting Parties to the Barcelona Convention (Malta, 27-30 October 1999). These Meetings also approved Annex I to the Plan, which sets out Proposed Priority Actions for its implementation at Regional/Sub-regional and National Levels.

The Revised Action Plan takes a holistic approach to processes threatening Mediterranean turtle populations and sets out mutually reinforcing objectives, priorities, and implementation measures. Its three objectives are:

- Protection, conservation and, where possible, enhancement of marine turtle populations in the Mediterranean, with special priority accorded to *Chelonia mydas* where appropriate;
- Appropriate protection, conservation and management of marine turtle habitats including nesting, feeding, and wintering areas and migration routes;
- Improvement of the scientific knowledge by research and monitoring.

An important feature of the Revised Action Plan is its emphasis on addressing interactions of marine turtles with Mediterranean fisheries. It generally recommends that coastal States combine legally-backed tools and awareness-building programmes to address deliberate and incidental taking and take steps for protection and management of known nesting, feeding (benthic and pelagic) and wintering areas and migration routes.

The Plan emphasises that appropriate legal measures are essential to fulfil the priorities and implementation measures. It specifically recommends that:

Parties that have not yet extended legal protection to marine turtles should do so as soon as possible, especially having regard to the relevant international conventions (para.11);

Each Party “should be encouraged” to develop and implement the necessary legislation for the establishment, protection, conservation and management of protected areas for marine turtles (para.12).

The Annex to the Revised Action Plan lists concrete actions for individual States, many of which concern the adoption or strengthening of legal protection for turtles and critical habitats. These actions are to be taken forthwith and are not contingent on further research. In addition, the Plan provides for ongoing research into turtle status, biology and behaviour and recognises that readjustments may be needed when further information becomes available.

Lastly, the Revised Action Plan emphasises the importance of developing public awareness, information and education measures to meet the needs of different target groups. Depending on specific conditions, these may include the local population and visitors to nesting areas; fishermen and other stakeholders; tourists and relevant organisations; schoolchildren and teachers; and decision makers at local/regional levels.

1.2 OTHER BIODIVERSITY-RELATED TREATIES

Several elements of the Barcelona Protocol and/or the Revised Action Plan draw on substantive provisions of earlier treaties. These are summarised below.

1.2.1 CONVENTION ON BIOLOGICAL DIVERSITY (RIO DE JANEIRO, 1992)

All but two Mediterranean States are party to the CBD, which applies to terrestrial and aquatic species, habitats and ecosystems. This legally binding agreement establishes a country-driven framework for biodiversity planning and legislation and for regulation or management of processes and activities that may adversely affect biodiversity.

The CBD does not prescribe measures for individual species or groups of species, which makes it less easy for Parties to apply directly to marine turtle conservation. The most relevant measures are laid down by Article 8 on *in situ* conservation and call on Parties to:

- establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;
 - regulate or manage biological resources important for the conservation of biological diversity both in and outside protected areas, and promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in their natural surroundings;
 - promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas;
 - restore degraded ecosystems and promote the recovery of threatened species;
- and to

- develop or maintain necessary legislation for protection of threatened species/populations.

The CBD can make an important contribution to integrated planning approaches for conservation and sustainable use of biological resources, including fish stocks. Under Article 10, Parties shall integrate relevant considerations into national decision-making; adopt measures for the use of biological resources to avoid or minimise adverse impacts on biological diversity; support local populations to develop and implement remedial action in degraded areas; and encourage government-private sector cooperation in developing methods for sustainable use of such resources. This provides a legal basis for reviewing and, where necessary, modifying sectoral activities that involve incidental environmental damage.

The CBD's work programme on integrated management of marine and coastal ecosystems should provide a supportive, if general, framework for planning coastal development in ways compatible with marine turtle conservation.

1.2.2 CONVENTION ON THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS (BONN, 1979)

CMS provides a global framework within which Parties must take appropriate action, individually and in cooperation, to conserve migratory species and their habitats and to avoid any migratory species becoming endangered.

The five turtle species that may occur in the Mediterranean are listed in Appendix I as endangered migratory species, for which Parties must endeavour to provide immediate protection. Article III requires Parties to:

- prohibit any "taking" of specimens of such species, broadly defined to include hunting, fishing, capturing, harassing and deliberate killing;
 - endeavour to conserve and, where feasible, restore the important habitats of these species;
 - prevent, remove, compensate for or minimise the adverse effects of activities or obstacles that seriously impede or prevent their migration;
 - to prevent, reduce or control factors that endanger or are likely to endanger these species.
- These species are also listed in Appendix II, which means that Range States must "endeavour" to conclude international agreements for their conservation and management (Article IV). No such agreement has been developed for the Mediterranean.²¹

²¹ A regional agreement for the Mediterranean has been concluded for cetaceans under CMS and may provide a useful frame of reference (Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), Monaco, November 1996).

In 1999, the CMS Conference of the Parties adopted a specific resolution on by-catch of marine turtles and other species as a result of fishing operations (Resolution 6.2). This restates key obligations under the Convention and calls on Parties to strengthen measures to protect migratory species against by-catch by fisheries within their territorial waters and exclusive economic zones, and by vessels fishing on the high seas under their flags. It requests all Parties, as a matter of gravity, to continue and strengthen measures within fisheries under their control and to minimize as far as possible the incidental mortality of migratory species listed in Appendices I and II, including marine turtles. Parties to regional fisheries organisations are urged to highlight there the serious problems of incidental turtle mortality with a view to the adoption of mitigating measures.

Range States of marine turtles with relevant fisheries are urged to co-operate mutually and with other countries to reduce incidental taking, for example by sharing and further development of practical and effective mitigation devices. The Resolution calls upon all donor countries to consider helping developing countries acquire and use relevant technology and with appropriate education and training of fishermen.

1.2.3 CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (WASHINGTON, 1973)

All conservation treaties, including the Barcelona Protocol, leave regulation of international trade in endangered species to CITES.

The five marine turtle species that may occur in the Mediterranean are listed in Appendix I of CITES (species threatened with extinction which are or may be affected by international trade). Trade in listed species, their parts or derivatives must be strictly controlled under a reciprocal system operated by the States of export and import. Parties must prohibit transactions involving a specimen of an Appendix-I listed species if the relevant Scientific Authority advises that this would be detrimental to the survival of that species.

CITES is implemented within the European Union through binding regulations²². Member States must adopt legal measures to control the import, export, internal sales and movements of species listed in Annex A (which includes marine turtles) as well as possession of live specimens.

1.2.4 AFRICAN CONVENTION ON THE CONSERVATION OF NATURE AND NATURAL RESOURCES (ALGIERS, 16 SEPTEMBER 1968)

This regional Convention has been ratified by four African States bordering the Mediterranean. All marine turtles are listed in Class A of the Appendix and must be strictly protected. Parties must prohibit hunting, killing, taking and collection of such species and confer special protection on habitats necessary to the survival of species threatened with extinction. Strict controls apply to trade in and transport of specimens and trophies of these species.

Despite these provisions, this Convention is effectively an instrument that does not contribute significantly to conservation of Mediterranean marine turtles. It has no institutional mechanism to oversee and review implementation or adopt policy recommendations.

²² Council Regulation (EC) No. 338/97 (all species listed in CITES Appendix I are listed in Annex A to the Regulation), Commission Regulation (EC) No. 939/97 as amended.

1.2.5 CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS (BERN, 19 SEPTEMBER 1979)

This European treaty, which has also been ratified by one African Mediterranean State at the invitation of the Council of Europe, currently makes the most significant contribution to enforcement of international obligations related to marine turtle conservation.

The most significant difference between this Convention and other conservation treaties is that it has effective institutional mechanisms and procedures for scrutinising national compliance, publicising cases of non-compliance and facilitating active participation of non-governmental organisations expert in species and habitat conservation.

The five marine turtle species that may occur in the Mediterranean are listed as strictly protected animal species in Appendix II to the Convention. Parties must protect members of listed species and their habitats and give special attention to the protection of areas of importance for listed migratory species. Deliberate damage to or destruction of breeding sites must be prohibited (Arts.4 and 6). They must co-ordinate their efforts for the protection of the migratory species specified in Appendices II and III whose range extends into their territories.

A Standing Committee, composed of one or more representative of each Party, meets annually to review implementation of the Convention. Compliance with turtle-related obligations has been on its agenda since 1986 and specialist NGOs in the area of marine turtle conservation regularly attend as observers.

The Committee has developed a procedure for opening 'case files' where there appears to be a breach of the Convention with regard to specific sites. The decision to open a case file is often based on information contained in reports submitted by NGOs with local knowledge of the situation. The Committee may commission an on-the-spot appraisal by an independent expert. Files are usually kept open until the matter is resolved or enforcement action is initiated.

The Committee has the power to address recommendations to individual Parties concerning measures to be taken for the purposes of this Convention (Art.14). Several recommendations adopted to date list specific actions to be taken at named nesting beaches that provide critical habitat for marine turtles. These cover the establishment of protected areas, the grant of planning permission for potentially damaging developments and matters related to tourism and other Sectoral activities. Significantly, these recommendations are sufficiently detailed to be capable of objective verification by NGOs, donors or others and to promote transparency.

Sites that have been specifically considered by the Standing Committee include Patara (Turkey), Belek (Turkey), Akamas Peninsula (Cyprus), Kaminia (Greece) and Laganas Bay, Zakynthos, Greece. The latter, which is probably the best known case, has been considered in 14 Standing Committee meetings. The file was eventually closed in December 1999, after the European Commission opened an infringement procedure for non-compliance and submitted the matter to the European Court of Justice. European Structural Funds have been blocked in the area for lack of conformity with European legislation.

The Standing Committee has also established a Group of Experts on the Conservation of Amphibians and Reptiles, which has adopted the following recommendations:²³

²³ Report of meeting, Thessaloniki 28-31 May 1998.

- sectoral policies should indicate the requirements for the conservation of turtle species;
- action should be taken in connection with fishing policies, notably within the European Community;
- a positive dialogue should be initiated as soon as possible with all or at least significant groupings of fisheries authorities.

I.3 INSTRUMENTS AND ORGANISATIONS RELEVANT TO FISHERIES MANAGEMENT AND CONSERVATION

Whereas earlier fisheries instruments focussed on target species and their exploitation, recent instruments support a more holistic approach to the marine environment and include measures related to critical marine habitats and conservation of non-target species. There is also much greater emphasis on improving procedures for compliance and enforcement, a notoriously difficult matter particularly in the high seas.

The following sections briefly outline key instruments as well as the organisational arrangements for fisheries in the Mediterranean. Technical aspects are discussed in more detail in section III.4 below.

1.3.1 UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (1982)

The international law of the sea, as codified in UNCLOS, sets out the rights and duties of States for fisheries management, conservation of marine species and environmental protection in each part of the marine environment. A brief summary of the legal position applicable to each jurisdictional zone is given below.

- Within its territorial sea (up to a limit not exceeding twelve nautical miles measured from its baseline), a coastal State has sovereign rights over all resources, living or non-living.
- A coastal State may establish an exclusive economic zone (EEZ) beyond its territorial sea to a maximum of 200 miles from its baseline. In its EEZ, a State has sovereign rights for exploring, exploiting, conserving and managing natural resources. It must ensure that maintenance of living resources is not endangered by over-exploitation and that populations of species associated to or dependent on harvested species are maintained above levels at which their reproduction may become seriously threatened. The State also has jurisdiction over scientific research and the protection and preservation of the marine environment.
- A coastal State has sovereign rights over the whole continental shelf, even where it extends beyond the 200 mile limit of a declared EEZ. Where the shelf does not extend as far as 200 miles (as is more usual), the coastal State has sovereign rights over the sea bed beyond the end of the continental shelf up to the 200 mile limit.
- The high seas are beyond the limits of national jurisdiction. These waters are open to all States and the principle of freedom of fishing applies, subject to general conservation and management rules laid down by Articles 116-120 of UNCLOS and to other treaty obligations a State has accepted. All States are required to co-operate with each other to conserve and manage living marine resources in the high seas, including associated and dependent marine species.

States bordering a semi-enclosed sea, such as the Mediterranean, must cooperate in exercising their rights and duties, either directly or through an appropriate regional organisation. They should coordinate management, conservation, exploration and exploitation of the living resources of the sea, implementation of their rights and duties for protection and preservation of the marine environment and scientific research policies (Art.123).

1.3.2 UN STRADDLING STOCKS AGREEMENT (1995)

Because migratory fish move across different fisheries areas, conservation measures need to be defined jointly by all parties concerned.

Under the UNCLOS, common conservation and management rules for straddling fish stocks (stocks located across one or several EEZs and the high seas) and highly migratory fish stocks have now been laid down by the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (not yet in force).

The Agreement requires States to apply the precautionary approach to conservation and management of these stocks in their EEZs, taking into account uncertainties concerning the impact of fishing activities on non-target and associated and dependent species (such as marine turtles). They should not exceed precautionary reference points set out in an appendix to the Agreement. States must take measures to minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target species, both fish and non-fish species, and impacts on associated or dependent species, in particular endangered species.

Compliance and enforcement provisions cover the duties of the flag State to control vessels flying its flag (e.g. to ensure that they do not conduct unauthorized fishing within areas under the jurisdiction of other States) and the rights of a port State to take measures to promote the effectiveness of conservation and management measures. States must cooperate to ensure compliance with such measures and establish procedures for boarding and inspection through subregional/regional fisheries organisations. The Agreement lays down procedures to be followed pending the adoption of such measures by these organisations.

The UN General Assembly²⁴ has recently called on States and other entities to integrate requirements for environmental protection, notably those resulting from multilateral environmental agreements described in I.1 above, in the management of these fish stocks.

1.3.3 FAO COMPLIANCE AGREEMENT (1994)

The Agreement to promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas was concluded under the auspices of the UN Food and Agriculture Organization (Rome, 23 November 1994, not yet in force). It establishes measures to promote the harmonised monitoring of fishing activities in international waters and to deter reflagging of vessels as a way of avoiding compliance with measures applicable on the high seas. Parties must ensure that vessels flying their flag do not engage in any activity that undermines the effectiveness of international conservation and management measures. Fishing in the high seas should be subject to a permit from the flag State and permit conditions must be complied with. In the event of non-compliance, Parties must take enforcement measures. Sanctions for serious offences must include the refusal, suspension or withdrawal of permits. Parties must maintain a record of fishing vessels authorised to fish on the high seas and make this information available to FAO.

²⁴ A/RES/54/32, 19 January 2000.

1.3.4 FAO CODE OF CONDUCT FOR RESPONSIBLE FISHERIES (1995)

This non-binding global Code, adopted unanimously by FAO Member Nations on 31 October 1995, sets out principles and standards to ensure effective conservation, management and development of living aquatic resources, with due respect for marine and coastal biodiversity. It is addressed to States, international governmental and non-governmental organisations and all those involved in the conservation of fishery resources and management and development of fisheries. The Code is fully integrated with the Straddling Stocks and Compliance Agreements summarised above.

The Code provides a comprehensive basis for States to review and strengthen policy, legal and institutional measures for responsible fisheries. It is particularly relevant to these Guidelines because it goes beyond fisheries management to cover conservation of critical habitats, integration of fisheries into coastal area management, regulation of damaging processes such as pollution and the need for participative approaches with fishing communities. Selected provisions of the Code are referenced later in these Guidelines.

Mediterranean States and other stakeholders involved in Mediterranean fisheries should as a priority consult and follow this Code when developing or strengthening legal and institutional frameworks for fisheries management and conservation of marine living resources and ecosystems.

1.3.5 GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN

The General Fisheries Council for the Mediterranean was established in 1949 as a UN institution under the auspices of the FAO to coordinate activities related to fishery management, regulations and research in the Mediterranean and Black Seas.

In 1998, following a series of intergovernmental meetings involving the EC, the institution was reformed and renamed the General Fisheries Commission for the Mediterranean. It now provides a forum for multilateral cooperation between all the countries whose vessels are fishing in the Mediterranean and has a broader mandate to promote the development, conservation, rational management and best utilisation of living marine resources of the Mediterranean basin. The European Community adhered to the GFCM in 1998 and has promoted the adoption of procedures consistent with those of other regional fisheries organisations (RFOs). A scientific fisheries committee has been established, meetings now take place annually and provision has been made for an autonomous budget.

The GFCM has the power to formulate and recommend appropriate measures for this purpose, notably to:

- regulate fishing methods and fishing gear;
- prescribe the minimum size for individuals of specified species;
- establish open and close fishing seasons and areas.

The GFCM has adopted measures to ensure that fishing vessels flying the flags of non-member nations do not undermine regional conservation and management measures.

1.3.6 INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS

The Commission, established under the International Convention for the Conservation of Atlantic Tunas (ICCAT), has jurisdiction regarding fisheries of tuna and tuna-like fishes in the Convention Area (which includes the Mediterranean as a connected sea). This RFO aims to manage stocks of tuna and other associated species in these waters and has the power to adopt resolutions that are binding on its Parties. Existing resolutions include measures to regulate bluefin tuna fisheries in the Mediterranean and the use of large-scale pelagic drift-nets.

A GFCM/ICCAT Joint Working Group on Stocks of Large Pelagic Fishes has been convened on an *ad hoc* basis to promote institutional synergy.

1.4 SUPRANATIONAL MEASURES APPLICABLE IN THE EUROPEAN UNION

1.4.1 IMPLEMENTATION OF COMMUNITY LEGISLATION BY MEMBER STATES

Four Mediterranean States (Spain, France, Italy, Greece) are Member States of the European Community. Several other States around the Mediterranean, including Croatia, Cyprus, Malta, Slovenia and Turkey, have begun pre-accession talks with the European Community. These candidate States will need to take progressive steps to bring their legal frameworks into compliance with European norms.

Member States are bound to implement legal instruments adopted by the various Community institutions, which are designed to secure harmonised implementation of agreed policies throughout the European Union. Whereas EC Regulations are directly applicable in Member States, EC Directives must be transposed into national legal systems within a defined period of time. "Transposition" refers to legislative, regulatory or administrative measures taken by any competent authority of a Member State to incorporate the obligations, rights and duties enshrined in Community directives into the national legal order. It also includes any additional provisions, such as the amendment or repeal of conflicting national provisions which are necessary to ensure that national law as a whole properly reflects the provisions of a directive.²⁵

1.4.2 EC HABITATS DIRECTIVE (1992)

The European Community is party in its own right to the Barcelona Convention, CBD, CMS, and the Bern Convention and as noted earlier, a signatory to the Mediterranean Action Plan. The Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC of 21 May 1992) is the key Community instrument laying down biodiversity-related measures consistent with these treaties for implementation by Member States.

The five species of marine turtles occurring in the Mediterranean are listed in Annex IV (Animal species of Community interest in need of strict protection). Member States must strictly protect these species through prohibitions on:

- deliberate capture, killing, disturbance, destruction or taking of eggs from the wild;
- deterioration or destruction of breeding sites or resting places; and
- possession, transport and associated activities. (Article 12).

Caretta caretta is also listed in Annex II (Animal species of Community interest whose

²⁵ Communication on implementing Community environmental law, Com(96)500 Final.

conservation requires the designation of special areas of conservation). This means that it benefits from mandatory habitat conservation requirements. For Annex II species, Member States must propose sites that contribute significantly to their maintenance at or restoration to a favourable conservation status as Special Areas of Conservation (SACs). The Directive sets out detailed rules for the establishment of a coherent European ecological network of SACs (Natura 2000), including conservation, management planning and impact assessment rules for SACs (Art.6). For aquatic species that range over wide areas, SACs should be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction (Art 4.1).

Caretta caretta is currently the only marine turtle species listed in Annex II. This is because it is the only turtle species that nests on the beaches of an EC Member State and reproduces in Community waters. If and when Cyprus and/or Turkey become Member States of the European Community, it will then be possible to include the seriously endangered *Chelonia mydas* in Appendix II.

1.4.3 EC FISHERIES REGULATIONS

Community fisheries measures are developed within the framework of the Common Fisheries Policy (CFP), which will be revised in 2002. The EC has competence for fisheries management and conservation within Community waters: outside Community waters, its core responsibilities are to make proposals and to negotiate on behalf of the Community in international fora and to monitor the implementation of control and enforcement rules applied by the Member States. It has also concluded bilateral fisheries agreements with some third countries (non-EU States). The International Council for the Exploration of the Sea (ICES) also provides key scientific support for implementation and review of the CFP.

There is an increasing focus on integrating environmental issues into EC fisheries policy. The EC Scientific, Technical and Economic Committee for Fisheries was restructured in 1997 to expand representation of experts in the fields of fisheries economics and the environment. The Community Strategy on Biological Diversity²⁶ provides for the preparation of an Action Plan for the fisheries sector (due for completion in 2000) with two key objectives:

- to conserve commercially fished species of marine finfish, in order to achieve sustainability of stocks, fishing opportunities and food supply, and
- to reduce the impact of fishing and aquaculture operations on other components of the ecosystem i.e. non-target species (at all taxonomic levels) and marine habitats.

The main forum for debate with stakeholders is the Advisory Committee for Fisheries and Aquaculture. This Committee was reformed in 1999 to promote closer dialogue with the fishing industry and groups concerned with the impact of the CFP on consumers, the environment and development.²⁷ The aim is to promote better understanding of the overall context of the CFP so that, in addition to the legitimate defence of special interests, each group acknowledges the rights of other groups and the limitations of the natural environment.²⁸

²⁶ COM(1998)42, endorsed by the Council on 21 June 1998.

²⁷ Action plan (XIV/859/99); Commission Decision of 14 July 1999 renewing the Advisory Committee on Fisheries and Aquaculture 1999/478/CE (OJ L 187/70).

²⁸ Report from the Commission to the Council and the European Parliament on the application of the Community system for fisheries and aquaculture in 1996-1998 (COM(2000) 15 Final, 24 January 2000).

The EC is a contracting party to several regional fisheries organisations, including the GFCM and ICCAT. Where RFOs issue recommendations setting catch limitations and other conservation rules for certain species, the Community is responsible for ensuring the timely incorporation of the necessary technical measures into the Community legal order. This is generally done by means of binding fisheries regulations with which Member States must comply. Given the rising number of such technical rules, the Commission is progressively consolidating existing measures in order to increase clarity and improve enforcement of Community legislation.²⁹ For example, it is currently developing a single regulation to bring together technical measures to protect highly migratory species, whether these are fished by Member States' fleets in Community waters or on the high seas.

Specific conservation rules for Mediterranean marine turtles have been established under the Regulation laying down certain technical measures for the conservation of fishery resources in the Mediterranean³⁰. Member States must provide for the conservation of listed fragile or endangered species or environments, including all marine turtle species occurring in the Mediterranean, coastal wetlands and beds of marine phanerogams.

Clearly, the CFP can only be implemented effectively if decisions taken at Community level are followed up by the necessary actions at national level. Developments in the Community control and enforcement regime are discussed in below.

1.5 Assessment of the existing regime with regard to marine turtles

The preceding summary reveals a pattern of separate, cumulative development of biodiversity-related and fisheries instruments. This reflects the traditional separation of 'conservation' and 'exploitation' interests, which has been embedded for decades in international law-making and institutional organisation. Different instruments have different Contracting Parties: there are many overlaps but little in the way of formal linkages or coordination.

This fragmentation makes it difficult to get a clear picture of the body of rules applicable to Mediterranean marine turtles. They have low visibility within the existing international regime as a whole, even though the position is slowly improving.

None of the biodiversity-related treaties explicitly address interactions between marine turtles and tourism or fisheries, although the Barcelona Protocol places important emphasis on action planning and provides a legal basis for regulating or prohibiting fishing and other activities in Specially Protected Areas. However, very recent non-binding instruments – the Revised Action Plan, CMS Resolution 6.2 – do emphasise the need to initiate systematic dialogue and coordination with the regional fisheries organisations.

In a European context, the Bern Convention has made a remarkable contribution through the proven willingness of the Standing Committee and observer NGOs to deploy resources and keep up pressure on individual countries. However, its contribution is basically confined to terrestrial habitats. There is no equivalent procedure under any international instrument for marine terrestrial habitats. For African Mediterranean States, regional conservation rules have been comparatively weak until the very recent entry into force of the Barcelona Protocol.

²⁹ E.g. Regulation No 850/98 for the Conservation on Fishery resources through Technical Measures for the Protection of Juveniles of Marine Organisms*, adopted by the Council on 30 March 1998. This contains measures for the harmonisation of mesh sizes over the whole of the area covered by the Regulation; significant reduction of the amount of mandatory discarding; increase of selectivity of fishing gears; and simplification of the rules to improve monitoring and control.

³⁰ Council Regulation (EC) No 1626/94 of 27 June 1994. This has been amended on several occasions to implement recommendations issued by ICCAT for the management of bluefin tuna and swordfish. These concern minimum landing sizes, seasonal closures and restrictions on the use of aircraft as an aid to fishing operations.

Modern fisheries instruments have made dramatic progress insofar as they now address the effects of fishing activity on the whole ecosystem, not just on commercially valuable target species (De Klemm, 2000). Internationally, there is now a legal basis to take conservation needs of marine turtles and critical habitats into account when negotiating and designing technical conservation rules. However, these changes are extremely recent, key fisheries agreements are not yet in force and enforcement of multilateral agreements is weak. Much has to be done to build political, sectoral and community support for the kind of broad-based measures recommended in the Code of Conduct for Responsible Fisheries. In the sensitive Mediterranean context, the relationship between the European Community and the GCFM for policy development, standard setting and enforcement procedures may need to be clarified and made more transparent.

The Revised Action Plan expressly supports enhanced cooperation and coordination between Parties and with regional organisations and experts to support management of the Mediterranean as a whole. CMS Resolution 6.2 supports consultation with relevant regional fisheries organisations to obtain scientific data and to coordinate conservation measures. The Bern Convention Experts' Group on the Conservation of Amphibians and Reptiles has issued a similar recommendation.

Mediterranean marine turtle conservation would benefit from improving and streamlining linkages between all competent bodies and concerned sectors, including the fisheries and tourism sectors. The Bern Convention, Barcelona Protocol and CMS each have elements that could be better knitted together, possibly through an agreed joint work programme or memorandum of understanding for marine turtles. A catalyst for Mediterranean synergies could be the first Conference on Mediterranean marine turtles, which is currently planned for 2001. However, coordination must be an ongoing process, not a one-off event.

Lastly, no amount of resolutions or regional cooperation will suffice if Mediterranean countries do not comply with the measures described above. Existing levels of compliance with treaty obligations are too low, as shown by the list of priority actions annexed to the Revised Action Plan.

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PHOTOS



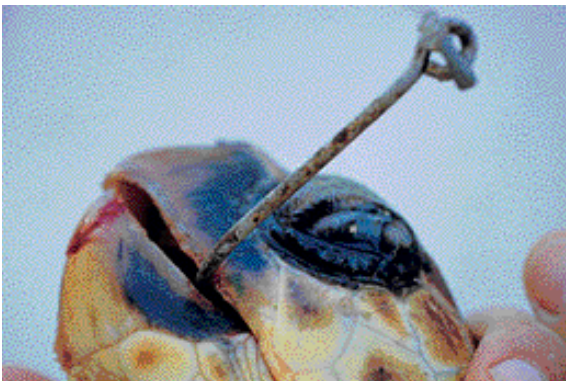
The geographical coverage of legislation is extremely important because turtles spend different stages of their life at sea and on land. Legal frameworks must provide a comprehensive basis for turtle protection and management throughout their terrestrial and marine range.

A State may use one or more sectoral laws or special unitary legislation to protect marine turtles. Many States implement international species conservation obligations by amending existing sectoral legislation or regulations.





All marine turtle species occurring in the Mediterranean are known to be affected by fishing activities, although data on turtle-fisheries interactions is often incomplete and is lacking for certain regions.



National fisheries legislation should provide for the development, implementation and enforcement of regulations to protect marine ecosystems and to minimise incidental capture, retention, harm and mortality through fisheries operations.



Each State should give formal backing for a comprehensive inventory of marine and terrestrial critical habitats. This should as far as possible be coordinated with and build on existing inventory programmes, bearing in mind that habitats important for turtles may house other animal and plant species that are inventoried pursuant to other conservation instruments.



It may be appropriate to conclude contractual management agreements between relevant agencies and local authorities, private organisations and NGOs to finance habitat management activities (patrolling, beach maintenance and protection, public information/awareness).



States should recognise the positive contribution that conservation NGOs can make to turtle conservation and environmental governance through their educational, campaigning and monitoring activities and their scrutiny of administrative actions or omissions. Where feasible, there should be close cooperation between national law-making bodies, the agencies responsible for application and enforcement and competent NGOs close to the ground.



Critical marine habitats include benthic feeding grounds, shallow waters used for wintering and deeper waters frequented by turtles during migration and for feeding during their pelagic phase



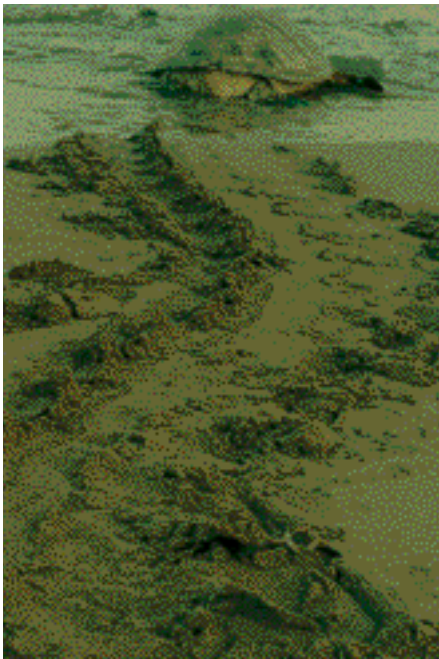
Although some Mediterranean sea areas are known to house high turtle populations much research is still needed into habitats and migration routes.



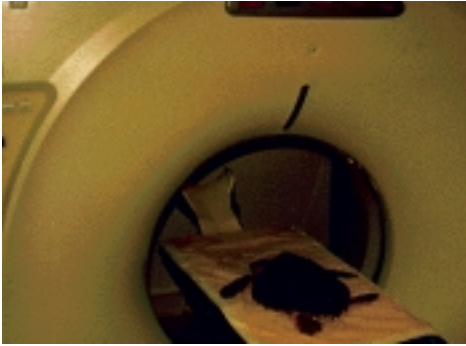
States should equip themselves with a legal basis to designate and legally protect identified critical habitats in waters under national sovereignty or jurisdiction.

Relatively few Mediterranean States have a legal or institutional framework to establish and manage marine protected areas, whether entirely at sea or across the land-sea divide. Conventional protected area legislation often applies only on land, while area-based protection measures under fisheries legislation are usually narrow in scope. Such laws are ill-equipped to promote multiple uses of coastal areas consistently with turtle conservation requirements.





The revised Action Plan calls on all countries that have nesting areas for marine turtles to make immediate efforts for the stringent protection of these sites. Several of the Priority Actions emphasise the need for urgent steps in named beaches. It is essential for the States concerned to apply and enforce existing regulatory powers to control activities and development on beaches, without waiting for longer-term developments (cadastral plans, new legislation, new integrated coastal plans etc.). Using existing legal tools can lessen the strain on administrative departments and personnel on the ground. However, political will at both national and local authority level is of critical importance in this respect.



Legislation/regulations should provide for the establishment of rescue centres, or the improvement of existing facilities, for the rehabilitation of sick and injured marine turtles. Such centres must be operated by appropriate scientific institutions and personnel.

Countries that have high numbers of strandings should establish a network of stranding observers and rescue centres along the coast of Spain. They should seek to harmonise rescue methodologies and contribute to the establishment of a common database on stranded and rescued turtles in the Mediterranean.



