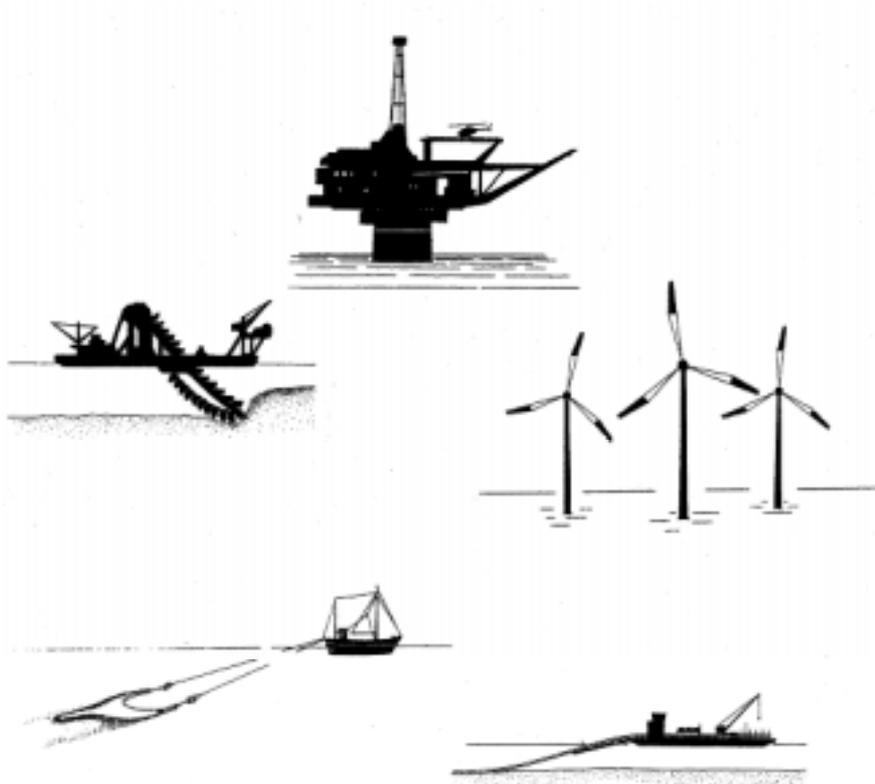


Detlef Czybulka & Peter Kersandt

**Legal Regulations, Legal Instruments
and Competent Authorities with
Relevance for Marine Protected Areas
(MPAs) in the Exclusive Economic
Zone (EEZ) and the High Seas of the
OSPAR Maritime Area**



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Federal Agency for Nature Conservation 2000

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Preface

The authors of this study endeavoured to provide correct and unmitigated results, however, cannot entirely exclude shortenings and incompleteness due to the amount of relevant material subject to the examination and the complexity of the topic.

A. General Part

I. Basic Aspects of Public International Law

Public international law is the sum of rules, which establish the principles of conduct, necessary for the well-ordered living together of the people of this world and are not provided for in the municipal law of each sovereign state.¹

1. The Sources of International Law

Art. 38 para. 1 of the Statute of the International Court of Justice (ICJ) provides a non-exhaustive list of the following sources of international law:

- international conventions, whether general or particular, establishing rules expressly recognized by the contesting parties;
 - international custom, as evidence of a general practice accepted as law;
 - the general principles of law recognized by civilized nations;
- and finally judicial decisions and the teaching of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

2. The Translation of International Law into Municipal Law

The rights and obligations imposed by international law must be translated into municipal law by each subject of public international law. International law leaves the modality to do so to the respective domestic legal order. It only provides the aim: The States must successfully enforce international rules in relation to the national state bodies, in particular administrative authorities and courts. To this end they must give effect to international law in their internal law in some form, they must declare it applicable.²

This, however, requires first to decide whether the respective international law is capable of being given legal effect or not. A rule of international law can only be given legal effect if it is "self-executing". To qualify as such, the norm must be designed by contents and purpose to directly legally bind or entitle state bodies and those subject to law without the need of any further implementation by national legislation.³ The norm is "non-self-executing" if these requirements are lacking. It then is not enforceable but calls for national measures of implementation, normally an Act of Parliament.⁴

States' constitutions in principal provide different juridical techniques to implement international law⁵:

- According to one method⁶ the promulgation of the act of consent to an international treaty or the publication of a treaty or an administrative agreement in the competent organs of publication automatically results in the immediate national applicability of the respective rule of public international law – provided it enters into force internationally ("automatic/

¹ *I. Seidl-Hohenveldern*, *Völkerrecht*, 9th ed. 1997, para. 1.

² *M. Schweitzer*, *Staatsrecht III, Staatsrecht, Völkerrecht, Europarecht*, 6th ed. 1997, para. 418 and 419.

³ *M. Schweitzer*, *supra* 2, para. 438.

⁴ *M. Schweitzer*, *supra* 2, para. 439.

⁵ See *I. Seidl-Hohenveldern*, *supra* 1, para. 562 and 563.

⁶ E.g. in the constitutions of the Federal Republic of Germany, Austria, Switzerland and the United States of America.

general transformation or adoption").

- According to another technique⁷ a treaty provision, even if its wording is self-executing, is only legally binding within the national legal order, if after the treaty had entered into force internationally the legislator "transforms" its contents into municipal law by passing a special national law ("special transformation").

Notice: The specific implementation of public international law into national law is not subject of this study.

3. The Relationship Among International Treaties

As far as the relationship among international treaties with corresponding subject-matters is concerned, the recognized general principles of law – the later prevails the prior and the more specific prevails the general rule – applies to those States which are parties to both treaties (lex posterior derogat legi priori, lex specialis derogat legi generali).⁸

4. The United Nations Convention on the Law of the Sea (UNCLOS) as Umbrella Convention for the Law of the Sea

The contemporary law of the sea is predominantly shaped by the United Nations Convention on the Law of the Sea of 1982/1994 (UNCLOS).⁹ It lays down a comprehensive regime of law and order in the world's oceans and seas; it is an umbrella convention which establishes rules governing all uses of the oceans and their resources.¹⁰ The four Geneva Conventions on the Law of the Sea of 29 April 1958:

- Convention on the Territorial Sea and the Contiguous Zone,
- Convention on the High Seas,
- Convention on Fishing and Conservation of the Living Resources on the High Seas,
- Convention on the Continental Shelf

are still in force and the group of signatory States partly differs from that of UNCLOS but non-the-less their importance inevitably is diminishing with the increasing global coming into force of UNCLOS.¹¹ The UNCLOS prevails, as between State Parties, over the Geneva Conventions on the Law of the Sea (Art. 311 para. 1 UNCLOS). For these reasons the representation of the public international law of the sea in this study is oriented towards UNCLOS.

a) Provisions of UNCLOS with Regard to the Protection and Preservation of the Marine Environment

UNCLOS dedicates a separate part to the protection and preservation of the marine environment. This Part XII of UNCLOS is an attempt to establish a general framework for a legal system which rules in a global, legally binding convention on the **rights, obligations**

⁷ E.g. in the United Kingdom; similar also in Austria.

⁸ C. Fitzpatrick, Künstliche Inseln und Anlagen auf See, Der völkerrechtliche Rahmen für die Errichtung und den Betrieb künstlicher Inseln und Anlagen, in: G. Gornig, Schriften zum internationalen und zum öffentlichen Recht, Vol. 21, 1998, p. 50.

⁹ Adopted in New York on 30 April 1982; concluded at Montego Bay (Jamaica) on 10 December 1982; entry into force: 16 November 1994.

¹⁰ Source: "Ocean and Law of the Sea Home Page" (<http://www.un.org/Depts/los/index.htm>).

¹¹ K. Ipsen, Völkerrecht, 4th ed. 1999, p. 718.

and responsibilities of (coastal) States with respect to the marine environment.¹² This framework mainly consists of:

- **General provisions** (Art. 192 et seq. UNCLOS):
 - Art. 192 provides the **general obligation of the States to protect and preserve the marine environment**. States have the **sovereign right** to exploit their *natural resources* pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment (Art. 193 UNCLOS).
 - Art. 194 para. 1 and para. 2 UNCLOS obliges **States** to adopt **measures** that are necessary *to prevent, reduce and control pollution* of the marine environment from any source. Art. 194 para. 2 hereby repeats the general principle on the prohibition of "*non-transboundary-pollution*", i.e. of not causing damage to the environment of other States or areas beyond the limits of national jurisdiction – a principle which also can be found in principle 21 of the Stockholm Declaration¹³, but which is made topical in so far as preventive measures have to be adopted in order to avoid pollution and its extension to areas beyond national jurisdiction in the first place.¹⁴
 - According to Art. 194 para. 3 UNCLOS the measures taken pursuant to Part XII of UNCLOS shall deal with *all sources of pollution* of the marine environment. They shall include those designed to minimize to the fullest possible extent in particular the release of toxic, harmful or noxious substances, pollution from vessels, pollution from installations and devices used in exploration or exploitation of the natural resources of the sea-bed and subsoil and pollution from other installations and devices operating in the marine environment.
 - All **measures** taken in accordance with Part XII of UNCLOS shall include pursuant to Art. 194 para. 5 UNCLOS those necessary to protect and preserve **rare or fragile ecosystems** as well as the habitat of **depleted, threatened or endangered species and other forms of marine life**.
- Provisions concerning the global and regional co-operation of States (Art. 197 et seq. UNCLOS), according to the holistic approach of UNCLOS¹⁵, as environmental pollution does not stop at the borders of national jurisdiction;
- **Provisions governing the legislative powers of states** with regard to the *specific sources of pollution* (Art. 207 et seq. UNCLOS):
 - Pursuant to Art. 208 para. 1 and para. 2 UNCLOS **coastal States** shall adopt **laws and regulations** and take **other measures** to prevent, reduce and control pollution of the marine environment arising from or in connection with *sea-bed activities* subject to their jurisdiction and from *artificial islands, installations and structures* under their jurisdiction.
 - International Rules, regulations and procedures shall be established in accordance with Part XI of UNCLOS, which lays down the status of the **Area** and its resources, in order to prevent, reduce and control pollution of the marine environment from activities in the Area (Art. 209 para. 1 UNCLOS). Art. 209 para. 2 UNCLOS obliges the **States** to adopt **laws and regulations** to prevent, reduce and control pollution of the marine

¹² A. E. Boyle, Marine Pollution under the Law of the Sea Convention, AJIL Vol. 79 (1985), pp. 347 et seq. (350).

¹³ J. I. Charney, The Marine Environment and the 1982 United Nations Convention, The International Lawyer Vol. 28 (1994), pp. 879 et seq. (886).

¹⁴ C. Fitzpatrick, supra 8, p. 140.

¹⁵ J. I. Charney, supra 13, p. 887.

- environment from *activities in the Area* undertaken by vessels, installations, structures and other devices flying their flag or of their registry or operating under their authority.
- Art. 210 UNCLOS provides for the **legislative powers** of the (**coastal**) **States** with regard to *dumping*.
 - According to Art. 211 para. 1 UNCLOS **States**, acting through the **competent international organization or general diplomatic conference**, shall establish **international rules and standards** to prevent, reduce and control pollution from *vessels*. Moreover Art. 211 para. 2 UNCLOS imposes on them the obligation to adopt laws and regulations for the prevention, reduction and control of the pollution of the marine environment from *vessels* flying their flag or of their registry. Pursuant to Art. 211 para. 5 UNCLOS the **coastal States** are entitled in respect of their **exclusive economic zones (EEZs)** to adopt **laws and regulations** for the prevention, reduction and control of pollution from *vessels* conforming and giving effect to generally accepted international rules and standards established through the competent international organization or general diplomatic conference.
 - **Enforcement powers** (Art. 213 et seq. UNCLOS), which correspond with the legislative powers according to Art. 197 et seq. UNCLOS:
 - Thus Art. 214 UNCLOS entitles but also obliges the **States** to **enforce** their laws and regulations adopted in accordance with Art. 208 UNCLOS (pollution from sea-bed activities). At the same time the **States** shall adopt laws and regulations and take other measures to **implement** applicable international rules and standards established through competent international organizations or diplomatic conferences to prevent, reduce and control *pollution* arising from or in connection with *sea-bed activities* subject to their jurisdiction and from *artificial islands, installations and structures* under their jurisdiction.
 - With regard to the **enforcement** of international rules, regulations and procedures established to prevent, reduce and control pollution of the marine environment from activities in the **Area**, Art. 215 UNCLOS refers to Part XI of UNCLOS, which lays down the status of the Area and its resources.
 - Pursuant to Art. 216 para. 1 UNCLOS laws and regulations adopted in accordance with Art. 210 UNCLOS (pollution by dumping) and applicable international rules and standards established through competent international organizations or diplomatic conferences for the prevention, reduction and control of pollution by *dumping* shall be enforced by the **coastal State** with regard to dumping within its **EEZ** or onto its **continental shelf**, by the **flag State** with regard to vessels flying its flag of its registry, and by **any State** with regard to acts of loading of wastes or other matter occurring within its territory or at its off-shore terminals.
 - The **flag State** shall in accordance with Art. 217 para. 1 UNCLOS ensure **compliance** by vessels flying its flag or of its registry with applicable international rules and standards, established through the competent international organization or general diplomatic conference, and with its laws and regulations adopted in accordance with Art. 211 UNCLOS (pollution from vessels) for prevention, reduction and control of pollution from *vessels* and shall accordingly adopt laws and regulations and take other measures necessary for their implementation. The **flag State** is also obliged to provide for the effective enforcement of such rules, standards, laws and regulations, irrespective where a violation occurs. According to Art. 220 UNCLOS the **coastal State** enjoys only **restricted enforcement powers** in its **EEZ** as to *vessels* flying a flag other than that of

the coastal State, e.g. rights to information, inspection and to institute proceedings with regard to the violation of international rules and standards for the prevention, reduction and control of pollution from vessels (para. 3, 5 and 6).

- None of the listed provisions shall prejudice the **right of States**, pursuant to international law to take and enforce **measures beyond the territorial sea** proportionate to the actual or threatened damage to *protect their coastline or related interests*, including fishing, from pollution or threat of pollution following upon a maritime casualty or acts relating to such a casualty, which may reasonably be expected to result in major harmful consequences (Art. 221 para. 1 UNCLOS).

b) The Maritime Areas According to UNCLOS

UNCLOS divides up the sea into different zones measured from a so-called baseline: internal waters, territorial sea, contiguous zone, continental shelf, exclusive economic zone and high seas.

aa) The Exclusive Economic Zone (EEZ)

The exclusive economic zone (EEZ) is a maritime zone established and codified by UNCLOS. The dividing up into maritime zones is directly applicable law.

Art. 55, 57 UNCLOS entitles the coastal state to establish a EEZ of a maximum breadth of 200 nautical miles from the baseline. Geographically restricted to this zone the **coastal State** enjoys **functionally restricted rights**¹⁶ according to Art. 56 para. 1 UNCLOS:

- **sovereign rights:**

- for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil, and
- with regard to other activities for the economic exploitation and exploration of the zone;

- **jurisdiction** with regard to:

- the establishment and use of artificial islands, installations and structures;
- marine scientific research;
- the protection and preservation of the marine environment.

These rights are *exclusive* in relation to other states. An exception is provided for by the European Community in "Community waters", which terminologically includes the EEZs of the Member States. Art. 12 (ex-Art. 6) EC-Treaty prohibits any discrimination on the ground of nationality within the scope of application of the EC-Treaty and thus obliges the Member States to grant to all nationals of the Member States equal access to their EEZs.

Art. 58 et seq. UNCLOS and provisions in other chapters of UNCLOS specify, complement but also restrict Art. 56 para. 1 UNCLOS:

In particular Art. 58 UNCLOS ought to be mentioned here which contains general provisions on rights and duties of other States in the EEZ. Pursuant to Art. 58 para. 1 UNCLOS the principle of the freedom of the high seas and its related freedoms as listed in Art. 87 UNCLOS apply also to the EEZ, thus e.g. the freedom of navigation and the freedom of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships and submarine cables and pipelines, and compatible with the other provisions of UNCLOS. As the EEZ regime restricts

¹⁶ L. Gründling, Die 200 Seemeilen-Wirtschaftszone, 1983, p. 119 with further quotations.

the resource-related rights of other States, this provision must be understood to the end that all non-resource-related uses are open to other States.¹⁷ Art. 58 para. 2 UNCLOS declares Art. 88 to 115 UNCLOS constituting the high seas régime applicable to the EEZ, in so far as they are not incompatible with the provisions of the EEZ régime. Art. 58 para. 3 UNCLOS obliges the States in exercising their rights and performing their duties in the EEZ to have due regard to the rights and duties of the coastal State and to **comply with the laws and regulations adopted by the coastal State** in accordance with the UNCLOS and other rules of international law in so far as they are not incompatible with the EEZ régime.

With regard to the exercise of the rights with respect to the sea-bed and subsoil, Art. 56 para. 3 UNCLOS refers to the continental shelf régime of Part VI of UNCLOS.

bb) Continental Shelf

The Continental Shelf of a coastal state comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance (Art. 76 para. 1 UNCLOS). Yet, the continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the sea-bed and subsoil of the shelf, the slope and the rise, but it does not include the deep ocean floor with its oceanic ridges or the subsoil thereof (Art. 76 para. 3 UNCLOS). The continental shelf of a coastal State shall not extend beyond the limits provided for in Art. 76 para. 4 to 6 UNCLOS (Art. 76 para. 2 UNCLOS), i.e. not beyond a maximum of 350 sm measured from the baselines.

Art. 77 para. 1 UNCLOS bestows upon the **coastal State over the continental shelf sovereign rights** for the purpose of exploring and exploiting its *natural resources*. These rights:

- are **exclusive** in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State (Art. 77 para. 2 UNCLOS);
- do not affect the legal status of the superjacent waters (Art. 78 para. 1 UNCLOS);
- must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States as provided for in the UNCLOS (Art. 78 para. 2 UNCLOS).

cc) High Seas

High seas are all parts of the sea that are not included in the EEZ, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State (Art. 86 UNCLOS). Here the principle of the **freedom of the high seas** as laid down in Art. 87 para. 1 UNCLOS applies, which comprises, inter alia, both for coastal and land-locked States:

- freedom of navigation and, subject to the respective relevant provisions in other parts of the Convention,
- freedom to lay submarine cables and pipelines,
- freedom to construct artificial islands and other installations permitted under international law,
- freedom of fishing,

¹⁷ K. Ipsen, supra 11, p. 750.

- freedom of scientific research.

These freedoms shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas, and also with due regard for the rights under the UNCLOS with respect to activities in the Area (Art. 87 para. 2 UNCLOS).

No State may validly purport to subject any part of the high seas to its sovereignty (Art. 89 UNCLOS).

dd) The Area

The status of the sea-bed beyond the continental shelf, called "the Area", and its resources are provided for in Part XI of UNCLOS. They are the common heritage of mankind (Art. 136 UNCLOS). Therefore activities in the Area shall be carried out for the benefit of mankind as a whole (Art. 140 para. 1 UNCLOS).

According to Art. 141 UNCLOS the Area shall be open to use exclusively for peaceful purposes by **all States**, whether coastal or land-locked, without discrimination. The general conduct of States in relation to the Area shall be in accordance with the provisions of Part XI of UNCLOS, the principles embodied in the Charter of the United Nations and other rules of international law in the interests of maintaining peace and security and promoting international co-operation and mutual understanding (Art. 138 UNCLOS). State Parties have the responsibility to ensure that activities in the Area, whether carried out by State Parties, or State enterprises or natural or juridical persons which possess the nationality of State Parties or are effectively controlled by them or their nationals, shall be carried out in conformity with Part XI of UNCLOS (Art. 139 para. 1 UNCLOS).

Art. 137 para. 1 UNCLOS rules that no State shall:

- claim or exercise sovereign rights over any part of the Area or its resources;
- appropriate any part thereof.

The **rights over the resources** which in compliance with Art. 137 para. 2 UNCLOS appertain to the whole mankind, are administered and managed in accordance with Art. 156 et seq. UNCLOS by the **International Sea-Bed Authority (ISBA)** with seat at Kingston, Jamaica. All State Parties are ipso facto members of the ISBA (Art. 156 para. 2 UNCLOS). Through the ISBA State Parties shall organize and control activities in the Area, particularly with a view to administering the resources of the Area (Art. 157 para. 1 UNCLOS). Art. 152 para. 1 UNCLOS provides that the ISBA shall avoid discrimination in the exercise of its powers and functions, including the granting of opportunities for activities in the Area.

Part XI of UNCLOS comprises special provisions on the protection of the marine environment in the Area. In particular Art. 145 UNCLOS empowers the **ISBA** to adopt appropriate **rules, regulations and procedures** for, inter alia,:

- the prevention, reduction and control of *pollution and other hazards* to the marine environment, including the coastline, and of *interference with the ecological balance* of the marine environment, particular attention being paid to the need for protection from harmful effects of such activities as drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities;
- the protection and conservation of the *natural resources* of the Area and the prevention of damage to the flora and fauna of the marine environment.

Activities in the Area shall be carried out with reasonable regard for other activities in the marine environment (Art. 147 para. 1 UNCLOS).

5. The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) as Regional Convention of International Environmental Law

The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) which was done in Paris on 22 September 1992 replaced according to its Art. 31 para. 1 with its entry into force on 25 March 1998 the Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (Oslo Convention) and the Convention for the Prevention of Marine Pollution from Land-based Sources (Paris Convention). The OSPAR Convention refers to the same maritime areas, listed in Art. 1 a) OSPAR Convention, and contains a summary and further development of the two preceding Conventions.

On completion of the OSPAR Convention the Contracting Parties aimed at adopting, on a regional level, more stringent measures with respect to the prevention and elimination of pollution of the marine environment and with respect to the protection of the marine environment against adverse effects of human activities than are provided for in international conventions or agreements with a global scope (Preamble of the OSPAR Convention).

The **Contracting Parties** are obliged to take, individually and jointly, **all possible steps to prevent and eliminate pollution:**

- from land-based sources (Art. 3 in connection with Annex I OSPAR Convention);
- by dumping or incineration (Art. 4 in connection with Annex II OSPAR Convention);
- from offshore sources (Art. 5 in connection with Annex III OSPAR Convention).

Further the Contracting Parties shall undertake and publish at regular intervals joint assessments of the quality status of the marine environment and of its development, for the maritime area or for the sub-regions thereof (Art. 6 a) in connection with Annex IV OSPAR Convention). Art. 7 OSPAR Convention requires the Contracting Parties to co-operate with a view to adopting additional annexes prescribing measures, procedures and standards to protect the maritime area against pollution from other sources, to the extent that such pollution is not already the subject of effective measures agreed by other international organizations or prescribed by other international conventions.

Based on Art. 10 et seq. OSPAR Convention a Commission was established upon which Art. 10 para. 2 OSPAR Convention bestows, inter alia, the following duties:

- to supervise the implementation of the OSPAR Convention;
- generally to review the condition of the maritime area, the effectiveness of the measures being adopted, the priorities and the need for any additional or different measures;
- to draw up, in accordance with the General Obligations of the OSPAR Convention, programmes and measures for the prevention and elimination of pollution and for the control of activities which may, directly or indirectly, adversely affect the maritime area.

Art. 10 para. 3 in connection with Art. 13 OSPAR Convention provides as legal instruments for the **OSPAR Commission decisions and recommendations.**

At the ministerial meeting of the OSPAR Commission in 1998, Annex V "On the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area" was adopted which extended the OSPAR Convention in favour of nature conservation provisions. Thus the Contracting Parties are obliged by Art. 2 of Annex V in order to perform their obligations under the OSPAR Convention and the Convention on Biological Diversity (CBD) of 5 June 1992:

- to take the necessary measures to protect and conserve the ecosystems and the biological diversity of the maritime area, and to restore, where practicable, marine areas which have

been adversely affected; and

- to co-operate in adopting programmes and measures for those purposes for the control of the human activities identified by the application of the criteria in Appendix 3.

In this context the **OSPAR Commission** has the duty – as described in more detail in Art. 3 para. 1 b) of Annex V – to draw up **programmes and measures for the control of the human activities** identified by the application of the criteria in Appendix 3.

6. International Environmental Custom and Environmental "Soft Law"

The environmental customary international law is a primary source of non-codified international environmental law. According to today's unanimous school in literature (see also Art. 38 para. 1 b) of the Statute of the ICJ) the emergence of international customary law requires two constitutive elements: a constant general practice and the respective acceptance of the practice as binding law (*opinio iuris et necessitatis*).¹⁸ Therefore a common international practice of the states is required which by conviction of the states postulates immediate obligations.¹⁹ Thus the repeated and constant existence of a rule on the level of soft law is a valuable evidence for the formation of the necessary conviction that it reflects a legal obligation. Also international treaties contribute to the emergence of international custom.²⁰

International custom therefore has legally binding effect. However, particularly in international environmental law a differentiation into "principles" and "rules" is required with regard to the normative contents of international customary rules. "Rules" contain a binding commitment, whereas "principles" grant a relatively wide scope for performance and need to be completed by application of law and legislation.²¹

International customary principles do not comprise concrete rights or duties. They rather serve as ground for interpretation and application of specific international rules. As such they are legally binding though they are operationally manageable only to a limited extent.²² Such legally binding effect as customary principle can be claimed in the first place by the precautionary principle because of its generalized acceptance. The principle provides that in case of danger of considerable damage to be caused to the environment the necessary measures must even be adopted, if there is no absolute scientific certainty whether the environmental damage really will occur or whether there exists a causal connection between the conduct and the feared impacts on the environment.²³

International customary law as binding international law must be distinguished from so-called international "soft-law". These are rules of conduct for the international practice, which in principle are not legally binding but non-the-less show certain – also legal – effects.²⁴ The transition from international "soft law" to international custom very often is fluid.²⁵

¹⁸ A. Epiney/ M. Scheyli, *Strukturprinzipien des Umweltvölkerrechts*, 1998, p. 98.

¹⁹ A. Epiney/ M. Scheyli, *supra* 18, p. 77.

²⁰ A. Epiney/ M. Scheyli, *supra* 18, p. 101.

²¹ A. Epiney/ M. Scheyli, *supra* 18, p. 82.

²² A. Epiney/ M. Scheyli, *supra* 18, p. 82.

²³ A. Epiney/ M. Scheyli, *supra* 18, pp. 107, 125 and 126.

²⁴ A. Epiney/ M. Scheyli, *supra* 18, p. 78; partly the existence of international "soft law" is denied any justification, see quotations in: A. Epiney/ M. Scheyli, *supra* 18, pp. 79 footnotes 183 and 184; "soft law" does in fact not belong to the accepted sources of international law, but there is discussion whether "soft law" supplements the classical sources of international law, see quotations in: A. Epiney/ M. Scheyli, *supra* 18, p. 78 footnote 177.

²⁵ A. Epiney/ M. Scheyli, *supra* 18, p. 81.

II. Basic Aspects of European Community Law

The law of the European Union consists of the law of the three European Communities²⁶ (European Community Law) and the provisions governing the new forms of inter-governmental co-operation in the European Union²⁷ (European Union Law).

European Community Law is constituted by primary and secondary law.

1. Primary law

The primary law, i.e. the Acts of Member States, comprises the constitutive Treaties including all Annexes and Protocols, subsequent Treaty amendments, accession and association treaties, international treaties concluded by the Community with third countries²⁸, but also (non-codified) general principles of law.

a) The Environmental Law in the EC-Treaty

The Treaty basis of environmental law of the Community can be found in the provisions of the constitutive Treaty on the European Community (EC-Treaty) of 25 March 1957 as amended by the Treaty of the European Union (Maastricht Treaty) of 7 February 1992 and by the Treaty of Amsterdam of 2 October 1997. The Amsterdam Treaty – and thus the revised EC-Treaty – entered into force on 1 May 1999.

As Treaty basis first Art. 6 (ex Art. 3c) EC-Treaty should be given notice, which provides that environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities referred to in Art. 3 EC-Treaty, in particular with a view to promoting sustainable development. This embodies the so-called cross-the-board principle.²⁹

Further Art. 95 (ex Art. 100a) EC-Treaty must be pointed out – its para. 3 and 4 explicitly mention environmental protection:

- Art. 95 para. 1 (ex Art. 100a para. 1) EC-Treaty is the **legal basis for measures** on the establishment and functioning of the internal market. These regulations can (additionally) also aim at environment protection.³⁰
- According to Art. 95 para. 3 (ex Art. 100a para. 3) EC-Treaty the Commission when submitting its suggestions in compliance with para. 1 shall adopt a high level of protection, taking account in particular of any new development based on scientific facts. The European Parliament and the Council will also seek to achieve this objective.
- Art. 95 para. 4 (ex Art. 100a para. 4) EC-Treaty allows Member States under certain conditions to maintain national provisions on grounds of major needs relating to the protection of the environment.

The EC-Treaty dedicates an entire Title XIX (ex Title XVI) to environmental policy. This Title contains three categories of provisions:

²⁶ European Coal and Steel Community (ECSC); European Community (EC; former European Economic Community); European Atomic Energy Community (Euratom or EAC).

²⁷ Common Foreign and Security Policy (CFSP); Co-operation in the fields of justice and home affairs (JHA; in future co-operation of police and justice in combating crime).

²⁸ There is dispute as to the classification of treaties with third countries as primary Community law, see *M. Schweitzer/W. Hummer*, *Europarecht*, 5th ed. 1996, para. 14.

²⁹ The "cross-the-board principle" requires to take due regard of environmental issues in all other common policies, see *A. Epiney*, *Umweltrecht in der Europäischen Union*, 1997, p. 15.

³⁰ *A. Epiney*, *supra* 29, p. 15.

- Art. 174 (ex Art. 130r) EC-Treaty describes the **objectives and principles of action** of Community environmental policy as well as principles for their preparing. Para. 2 subpara. 1 prescribes the Community a high level of protection taking into account the diversity of situations in the various regions of the Community and lays down the precautionary principle, the principles that preventive action should be taken, that environmental damages should be rectified at source and the polluter-pays principle.
- Art. 175 (ex Art. 130s) EC-Treaty is the **legal basis for Community measures** in order to achieve the objectives listed in Art. 174 (ex Art. 130r) EC-Treaty, though para. 2 provides for a different decision-making procedure. Para. 3 rules on the competence and procedures for the adoption of general action programmes in the field of environmental protection. Para. 4 imposes on the Member States the financing and implementation of the EC environmental policy, though para. 5 provides for exceptions in cases of Member States which are un-proportionally affected.
- Art. 176 (ex Art. 130t) EC-Treaty allows the **Member States** to derogate from Art. 175 (ex Art. 130s) EC-Treaty in order to maintain or introduce **more stringent measures**.

b) International Treaties Concluded by the Community

Due to its institutional powers the Community has concluded various international treaties in the field of environmental protection. As a rule these agreements are mixed agreements, involving both the Community and the Member States.³¹ According to Art. 300 (ex Art. 228) para. 7 EC-Treaty international agreements concluded by the Community are legally binding on its institutions and on the Member States. They thus prevail secondary legislation adopted by the Community institutions.³²

Also the OSPAR Convention has been signed by the Commission of the European Community and was approved on behalf of the Community by Council Decision of 7 October 1997³³.

2. Secondary Legislation

Secondary legislation means the legislative acts of the Community institutions which are based on the Community Treaties or on the empowering provision of another legislative act.³⁴ According to Art. 249 (ex Art. 189) EC-Treaty Community legislation comprises the following categories of legislative acts:

- regulations (subpara. 2),
- directives (subpara. 3),
- decisions (subpara. 4),
- recommendations and opinions (subpara. 5),

and other legislative acts, in particular organizational acts.

A regulation has general application and is binding in its entirety. It is directly applicable in all Member States, thus has direct effect for the individual.³⁵

³¹ A. Epiney, supra 29, p. 84.

³² R. Streinz, *Europarecht*, 3th ed. 1996, para. 431.

³³ Council Decision 98/249/EC of 7 October 1997 on the conclusion of the Convention for the protection of the marine environment of the North-East Atlantic, Official Journal L 104, 03/04/1998 p. 1.

³⁴ M. Herdegen, *Europarecht*, 2nd ed. 1999, para. 175.

³⁵ M. Herdegen, supra 34, para. 176.

Directives, which constitute the main legislative instrument in the field of environmental protection³⁶, are binding only as to the aim which should be achieved and only on the Member States they address. They leave to the Member States to choose the appropriate form and method to achieve the set aim ("graded binding nature").³⁷

Directives call for their effective implementation within a given period of time. Before its expiry however, directives develop some pre-effect. Thus while the implementation period is running a Member State must not adopt laws, which seriously endangers the achievement of the set aim of the directive.³⁸ Unlike the regulation the directive has in principle no direct effect in the Member States. According to the consistent decisions of the European Court of Justice (ECJ)³⁹ a directive as an exception may develop direct effect if:

- after expiry of the given period of implementation the Member State has not or only insufficiently implemented the directive into national law and
- if it the provision invoked is clear and unambiguous and unconditional.

In case of non-implementation of a directive an enforcement action can be brought against the Member State before the ECJ pursuant to Art. 226 (ex Art. 169) EC-Treaty.

3. Environmental Action Programmes

Action programmes have no legally binding effect. They lay down the aims and priorities of the common environmental policy, they thus describe in a general way measures planned for a certain period of time, bring them into a global context and introduce as the case may be new developments and orientations.⁴⁰

So far five action programmes were adopted. The Community's fifth environmental action programme "Towards Sustainability" was produced in 1992.

In point 5.4 of the programme, under the heading "Management of water resources" those actions to be adopted or developed are listed which should serve the objective to reduce discharges of all substances, which due to their toxic persistence or accumulating impact could negatively affect the environment, to levels which are not harmful to a high standard of ecological quality of all surface waters. In particular the following actions are enumerated:

- marine water: further to the measures to achieve a high ecological quality and to reduce surface water pollution;
- proposals on marine transport preventing environmental damage from shipping activities (oil spills, loss of cargo, reduction of operational pollution) to be developed;
- surveillance of geographic zones with appropriate monitoring techniques;
- proposal for a directive on the reduction of operational and accidental pollution from small-tonnage boats;
- economic and fiscal measures.

In point 5.3 "Protection of nature and biodiversity" the Community commits itself to the following main targets for 2000:

- the maintenance or restoration of natural habitats and species of wild fauna and flora at a favourable conservation status on the basis of the Habitats Directive (92/42/EEC) and the Birds Directive (79/409/EEC);

³⁶ A. Epiney, supra 29, p. 20, arguing that directives grant a certain flexibility which allows Member States to take account of their national and regional peculiarities when implementing them.

³⁷ R. Streinz, supra 32, para. 384.

³⁸ ECJ case C-129/96 *Inter-Environnement Walloni* [1997] E.C.R. I-7411.

³⁹ Since ECJ case 9/70 *Leberpfennig* [1970] E.C.R. 825/837 et seq.

⁴⁰ A. Epiney, supra 29, p. 20 and 21.

- the creation of a European network of protected areas Natura 2000;
- strict control of abuse and trade of wild species.

On 24 January 1996, the European Commission adopted an Action Plan to ensure more effective implementation of the European Union's Environment Strategy and Policies. To that end, the Union's fifth Action Programme "Towards Sustainability" was updated.

So far action programmes always were adopted in form of a decision of the Council of Ministers and the European Council of Heads of State or Government.⁴¹ With the EU-Treaty in Art. 175 (ex Art. 130s) EC-Treaty the adoption of environmental action programmes explicitly was regulated.⁴²

4. Applicability of Community Law Beyond the Territorial Sea

The question whether primary and secondary Community law is applicable in sea areas beyond the seaward boundary of the territorial sea of the Member States and thus beyond their territory needs clarification.

Art. 299 (ex Art. 227) para. 1 EC-Treaty according to which the Treaty shall apply to the Member States listed there, is interpreted with regard to the applicability of Community law as reference to the territory, on which Member States enjoy their exclusive territorial sovereignty.⁴³ To these territories also belongs the marine territorial waters, which are constituted by the internal water and the territorial sea, including the appertaining sea-bed and subsoil⁴⁴, but not by other maritime zones beyond the seaward boundary of the territorial sea.

However, the main school in literature⁴⁵ agrees on the applicability of Community law beyond the territorial sea:

- The legal responsibility of the Community for the marine orientation should not be answered dependent on the question of the applicability of Community law in a physical-geographical sense. The necessary Community powers for a marine orientation requires rather a functional connection between the subject-matter of the rules of the law of the sea and an aim-determined field of action of the Community.⁴⁶
- The Community can exercise its jurisdiction – like any other subject of public international law – in any space provided that no exclusive territorial jurisdiction of any other subject of public international law exists or that there is no inconsistency with other international rules. The fact that specific Community powers like those set out in Art. 80 (ex Art. 84) para. 2 EC-Treaty are not limited in their applicability in the first place to the territory of the Member States confirm this interpretation.⁴⁷

In the leading case *Kramer* the ECJ confirms that under Community law the starting point for the extension and applicability of Community law beyond the territory of the Member States

⁴¹ A. Epiney, supra 29, p. 22.

⁴² See A. Epiney, supra 29, p. 23, according to whom Art. 175 (ex Art. 130s) para. 3 EC-Treaty is merely a rule of procedure for the adoption of action programmes and not an empowering norm.

⁴³ M. Schröder, in: H. v. d. Groeben/ J. Thiesing / C.-D. Ehlermann, Kommentar zum EU-/EG-Vertrag, Bd. 5, Art. 210-248 EGV, Art. H-S EUV, 5th ed. 1997, Art. 227 EGV, para. 7.

⁴⁴ M. Schröder, supra 43, Art. 227 EGV, para. 9.

⁴⁵ D. Czybulka, NuR 21 (1999), pp. 562 et seq. (565); U. Jenisch, Rechtsprobleme der Meeresnutzungen in der Nordsee und im EG-Meer - Auswirkungen der Seerechtskonferenz auf die EG -, in: R. Krämer, Die wirtschaftliche Nutzung der Nordsee und die Europäische Gemeinschaft, 1979, pp. 103 et seq. (106 and 107); H. P. Ipsen, EWG über See, in: Festschrift für Rolf Stödter, 1979, pp. 167 et seq. (180 and 182); W. Graf Vitzthum, Die EG und das Internationale Seerecht, AöR 111 (1986), pp. 33 et seq. (44).

⁴⁶ H. P. Ipsen, supra 45, pp. 180 and 182.

⁴⁷ W. Graf Vitzthum, supra 45, p. 44.

is the subject-related legislative power of the Community. It first must be established with regard to the internal relationship among the Member States, but – following the principles developed by the ECJ in *AETR*⁴⁸ – as a rule extends to the performance of the corresponding international jurisdictional powers of the Member States.⁴⁹

The ECJ's reasoning in *Commission v. Ireland*, according to which each extension of marine areas subject to sovereignty or jurisdiction of the Member States results in a corresponding extension of the application of Community law, is of fundamental importance.⁵⁰ At the core of the matter this means that existing Community law possibly can include the extension of the rights of a coastal state without any formal amendment.⁵¹

By decision of the High Court (London) of 5 November 1999⁵² the Court ordered the United Kingdom Government to apply the Habitats Directive (92/43/EEC) throughout its 200-mile fishing zone and to the continental shelf (the United Kingdom officially has not proclaimed a EEZ) before granting offshore oil or gas exploration licenses. The judgement is the first on this point by an EU national court.

At an early stage Community law included into its scope of application the continental shelf which does not belong to the territory of the Member States. Art. 4 para. 2 h) of the Council Regulation 802/68/EEC on the common definition of the origin of goods⁵³ provides that produced goods and other products extracted from the sea-bed beyond the territorial sea are goods which are entirely produced in one country provided that the country exercised exclusive rights over the sea-bed for the purpose of its exploitation. Thus implicitly the continental shelf is included⁵⁴, and even the applicability of Community law in the EEZ is covered by this formula.⁵⁵

With effect on 1 January 1977 the so-called "Community waters" were created, in which the Community exercises the Common Fisheries Policy. This was preceded by a concerted action of the coastal Member States which proclaimed each a 200 sm exclusive fisheries zone in the North Sea and the North Atlantic. The Community could not establish such a zone by itself as it lacks the quality of coastal State capable of making proclamations.⁵⁶

⁴⁸ ECJ case 22/70 *Commission v. Council* [1971] E.C.R. 265 (275).

⁴⁹ ECJ cases 3, 4 and 6/76 *Kramer* [1976] E.C.R. 1279 (1311).

⁵⁰ ECJ case 61/77 *Commission v. Ireland* [1978] E.C.R. 417 (447 and 448).

⁵¹ *M. Schröder*, supra 43, Para. 71.

⁵² File number: CO 1336/1999.

⁵³ Official Journal L 148, 1968 p. 1.

⁵⁴ *W. Hummer*, in E. Grabitz/ M. Hilf, *Das Recht der Europäischen Union*, Teil I: Primärrecht, Vol. II, Art. 137-248 EGV (Maastrichter Fassung), EWGV (Römische Fassung), Loseblattsammlung, Stand: 13. Ergänzungslieferung Mai 1999, Art. 227 EGV, para. 25; *M. Schröder*, supra 43, para. 61.

⁵⁵ *W. Hummer*, supra 54, Art. 227 EGV, para. 14; *M. Schröder*, supra 43, para. 62.

⁵⁶ Starting point was Council Resolution of 3 November 1976 on certain external aspects of the creation of a 200-mile fishing zone in the Community with effect from 1 January 1977, Official Journal C 105, 07/05/1981 p. 1; see to this generally *M. Schröder*, supra 43, para. 63.

B. Legal Regulations, Legal Instruments and Competent Authorities with Relevance for Marine Protected Areas (MPAs)

I. Legal Regulations, Legal Instruments and Competent Authorities with Relevance for the Creation of Marine Protected Areas (MPAs)

1. International Law

a) International (Global or Regional) Conventions

Nearly all relevant international (global or regional) conventions for this study encourage the designation of (marine) protected areas by national Governments or international organizations. In their relationship among another these convention – though they only partly refer to each other explicitly – are of mutual complementary, close and overlapping character.

Figure 1: Synopsis on the Protection of Areas and International Conventions

Convention • <i>global</i>	Abbrevia- tion	Done	Entry into force	Regulations
United Nations Convention on the Law of the Sea	UNCLOS	Montego Bay, 10 December 1982	16 November 1994	<ul style="list-style-type: none"> • General obligation (Art. 192): -States have the obligation to protect and preserve the marine environment. • Measures taken by the States (Art. 194 para. 5): -shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life. • Special for EEZ: coastal States have a (restricted) option (Art. 211 para. 6 a)): -after appropriate consultations through the competent international organization of identifying particular, clearly defined areas of their respective EEZ where the adoption of special mandatory measures for the <i>prevention of pollution from vessels</i> is required for recognized technical reasons in relation to the oceanographical and ecological conditions in such areas, as well as their utilization or the protection of their resources and the particular character of their traffic; -of submission to IMO for its approval special measures which exceed existing international rules and standards for such areas.
Convention on the Conservation of Migratory Species of Wild Animals	CMS	Bonn, 23 June 1979	1 November 1983	<ul style="list-style-type: none"> • Parties that are Range States of a migratory species listed in Appendix I shall endeavour: -to conserve and, where feasible and appropriate, to restore those habitats of the species which are of importance in removing the species from danger of extinction (Art. III para. 4 a)).

				<ul style="list-style-type: none"> • Parties that are Range States of a migratory species listed in Appendix II shall endeavour: <ul style="list-style-type: none"> -to conclude agreements where these would benefit the species (Art. IV para. 3), which should provide for, but not be limited to, inter alia: <ul style="list-style-type: none"> conservation and, where required and feasible, restoration of the habitats of importance in maintaining a favourable conservation status, and protection of such habitats from disturbance (Art. V para. 5 e)); maintenance of a network of suitable habitats appropriately disposed in relation to the migratory routes (Art. V para. 5 f)).
Convention on Biological Diversity	CBD	Rio de Janeiro, 5 June 1992	29 December 1993	<ul style="list-style-type: none"> • <i>Protected area</i> =a geographically defined area which is designed or regulated and managed to achieve specific conservation objectives (Art. 2). • Obligation of the Contracting Parties, as far as possible and as appropriate, to establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity (Art. 8 a)), in particular: <ul style="list-style-type: none"> -to develop guidelines for the selection, establishment and management of such areas (Art. 8 b)); -to regulate and manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use (Art. 8 c)).
<i>Convention</i> • <i>regional</i>				
Convention on the Conservation of European Wildlife and Natural Habitats	Berne Convention	Berne, 19 September 1979	1 June 1982	<ul style="list-style-type: none"> • Obligation of the Contracting Parties to protect habitats (Art. 4): <ul style="list-style-type: none"> -to adopt the appropriate and necessary legislative and administrative measures to ensure the conservation of the habitats of the wild flora and fauna species and the conservation of endangered natural habitats (para. 1); -to take into account in the planning and development policies conservation requirements of the areas protected under para. 1, so as to avoid or minimize as far as possible any deterioration of such areas (para. 2); -to give special attention to the protection of areas that are of importance for the migratory species specified in Appendix II and III and which are appropriately situated in relation to migration routes, as wintering, staging, feeding, breeding or moulting areas (para. 3).

Convention for the Protection of the Marine Environment of the North-East Atlantic	OSPAR Convention	Paris, 22 September 1992	25 March 1998	<ul style="list-style-type: none"> ● Obligation of the Contracting Parties (Art. 2 of Annex V): <ul style="list-style-type: none"> -to take the necessary measures to protect and conserve the ecosystems and biological diversity of the maritime area; -to <i>co-operate</i> in adopting programmes and measures for the purposes for the control of the human activities identified by the application of the criteria in Appendix 3 which are: <ul style="list-style-type: none"> the extent, intensity and duration of the human activity under consideration; the actual and potential adverse effects of the human activity on specific species, communities and habitats and on specific ecological processes; the irreversibility or durability of these effects. ● Obligation of the OSPAR Commission (Art. 3 para. 1 of Annex V): <ul style="list-style-type: none"> -to draw up programmes and measures for the control of the human activities by the application of the criteria in Appendix 3.
Agreement on the Conservation of African-Eurasian Migratory Waterbirds	AEWA	The Hague, 16 June 1995	1 November 1999	<ul style="list-style-type: none"> ● Obligation of the Parties (Art. III para. 2 c) and d)): <ul style="list-style-type: none"> -to identify sites and habitats for migratory waterbirds occurring within their territory and encourage the protection, management, rehabilitation and restoration of these sites; -to co-ordinate their efforts to ensure that a network of suitable habitats is maintained or, where appropriate, re-established throughout the entire range of each migratory waterbird species concerned, in particular where wetlands extend over the area of more than one Party. ● Obligation of the Parties to undertake actions consistent with the general conservation measures specified in Art. III pursuant to an action plan which is appended as Annex 3 (Art. IV para. 1); <ul style="list-style-type: none"> under the heading "Conservation of Areas" (para. 3 of Annex 3) the following actions are listed, inter alia: <ul style="list-style-type: none"> -to endeavour to continue establishing protected areas to conserve habitats important for the populations listed in Table 1, and to develop and implement management plans for these areas (para. 3.2.1 of Annex 3); -to endeavour to give special protection to those wetlands which meet internationally accepted criteria of international importance (para. 3.2.2 of Annex 3).

b) Protection of Sea Areas Under IMO Conventions and Resolutions

aa) "Special Areas" under MARPOL 73/78

The International Convention for the Prevention of Pollution from Ships, 1973⁵⁷, as modified by the Protocol of 1978 relating thereto⁵⁸ (MARPOL 73/78), in Annexes I, II and V, defines certain areas as "special areas" in relation to the type of pollution covered by each annex.

A "special area" is defined as a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by oil (MARPOL, regulation 1 (10) of Annex I), noxious liquid substances (MARPOL, regulation 1 (7) of Annex II), or garbage (MARPOL, regulation 1 (3) of Annex V), as applicable, is required. Under MARPOL 73/78, these special areas are provided with a higher level of protection than other areas of the sea.

A **proposal to designate** a given sea area as a special area should be submitted to the **International Maritime Organization (IMO)**⁵⁹ for consideration by its **Marine Environment Protection Committee (MEPC)** (section 2.3.1. Res. A.720(17)). The formal amendment procedure applicable to proposals for the designation of special areas is set out in Art. 16 of the International Convention for the Prevention of Pollution from Ships, 1973.

bb) Designation of Areas to be Avoided by Ships under SOLAS 1974

An option to limit operational discharges in very small areas would be to limit the access of ships in such areas. The International Convention for the Safety of Life at Sea, 1974⁶⁰ (SOLAS 1974), and more specifically IMO Assembly Resolution A.572(14) of 20 November 1985 which provides the basis for the General Provisions on Ships' Routeing, provide for the option of designating areas to be avoided by ships or certain classes of ships.

IMO is recognized as the **only body** responsible for **establishing and recommending measures** on an international level concerning ships' routeing and areas to be avoided (chapter V regulation 8 b) and c) SOLAS 1974 and section 3.1 Res. A.572 (14)). The **selection and development of routeing systems**, however, is primarily the responsibility of the **Governments concerned** (section 3.7 Res. A.572 (14)). IMO shall not adopt or amend any routeing system without the **agreement of the interested coastal States**, where that system may affect (section 3.4 Res. A.572(14)):

- their rights and practices in respect of the exploitation of living and mineral resources;
- the environment, traffic pattern or established routeing systems in the waters concerned;
- demands for improvements or adjustments in the navigational aids or hydrographic surveys in the waters concerned.

Available routeing methods include (see sections 4, 5 and 6 Res. A.572(14)):

- areas to be avoided;
- traffic separation schemes (which may or may not include an inshore traffic zone);
- precautionary areas and
- deep-water routes.

⁵⁷ Done at London on 2 November 1973; not intended to enter into force and be applied on its own.

⁵⁸ Done at London on 17 February 1978; entry into force: 2 October 1983.

⁵⁹ As to IMO see below B. II. 2. c).

⁶⁰ Done at London on 1 November 1974; entry into force: 25 May 1980.

Chapter 3, sections 3.5 to 3.7, of Res. A 572(14) provides further information about the designation of areas to be avoided and other ships' routing measures.

cc) "Particularly Sensitive Sea Areas" (PSAs)

Based on Art. 15 (j) of the Convention on the International Maritime Organization⁶¹ the IMO Assembly at its 17th session on 6 November 1991 adopted the Assembly Resolution A.720(17) on Guidelines for the Designation of Special Areas and the Identification of Particular Sensitive Sea Areas. These Guidelines are primarily intended to assist **IMO and national Governments in identifying, managing and protecting sensitive areas** (Preface of the Res. A.720(17)). A PSA is defined as an area which needs special protection through action by IMO because of its significance for recognized ecological or socio-economic or scientific reasons and which may be vulnerable to environmental damage by maritime activities (section 3.1.2 Res. A.720 (17)). In order to be identified as a PSA an area **beyond or within the limits of the territorial sea** should meet at least one of the criteria listed under sections 3.3.5 to 3.3.7.⁶² Among the ecological criteria listed in section 3.3.5 are:

- uniqueness

(An area is unique if it is "the only one of its kind".);

- high dependency

(of ecological processes on biotically structured systems);

- high representativeness

(Representativeness is the degree to which an area represents a habitat type, ecological process, biological community, physiographic feature or other natural characteristic.);

- diversity

(areas having a high variety of species or including highly varied ecosystems, habitats, communities, and species);

- high natural biological productivity

(Production is the net result of biological processes which result in an increase in biomass in areas of high natural productivity such as oceanic fronts, upwelling areas and some gyres.);

- high degree of naturalness

(as a result of the lack of human-induced disturbance or degradation);

- integrity

(areas being a biologically functional unit, an effective, self-sustaining ecological entity);

- vulnerability

(areas being highly susceptible to degradation by natural events or the activities of people).

So far neither the nature and type nor the combined action of these criteria are sufficiently dealt with by science. **Special protective measures** are limited to actions **within the purview of IMO** and include the following options (section 3.1.3 Res. A.720 (17)):

- to **designate an area as a special area** under Annexes I, II or V of MARPOL 73/78 or to apply certain discharge restrictions to vessels operating in a PSA;
- to adopt **routing measures near or in the area**, under SOLAS 1974 (chapter V, regulation 8) and in accordance with the General Provisions on Ship's Routing;
- to develop and adopt other measures aimed at protecting specific sea areas against environmental damage from ships, such as compulsory pilotage schemes or vessel traffic management systems.

⁶¹ Adopted in Geneva on 6 March 1948.

⁶² 3.3.6 Social, cultural and economic criteria; 3.3.7 Scientific and educational criteria.

2. European Community Law

EC legislation on the protection of the natural environment concerns on one side the conservation of areas including impact assessment, on the other the protection of species. The most important legislative acts in this context are the Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds⁶³ (Birds Directive) and the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora⁶⁴ (Habitats Directive).

a) *The Directive 79/409/EEC (Birds Directive)*

The Birds Directive relates to the conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States (Art. 1 para. 1 of the Directive 79/409/EEC). Art. 2 of the Directive 79/409/EEC requires the **Member States** to **take the requisite measures** to maintain the population of the species referred to in Art. 1 of the Directive 79/409/EEC at a level which corresponds in particular to ecological, scientific and cultural requirements or to adopt the population of these species to that level, though at the same time also economic and recreational requirements must be taken into account. Such measures are pursuant to Art. 3 para. 2 of the Directive 79/409/EEC in particular:

- **creation of protected areas;**
- upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones;
- re-establishment of destroyed biotopes;
- creation of biotopes.

Art. 4 para. 1 subpara. 3 of the Directive 79/409/EEC obliges **Member States**, to **designate** those areas which are for the conservation of the species mentioned in Annex I the most suitable territories in number and size, as **protection areas**. With regard to regularly occurring migratory species not listed in Annex I Member States shall take similar measures, bearing in mind their need for protection in the geographical sea where the Birds Directive applies (Art. 4 para. 2 of the Directive 79/409/EEC). In respect of the protection areas referred to in Art. 4 para. 1 and 2 of the Directive 79/409/EEC, **Member States** shall take **appropriate steps** to avoid pollution or deterioration of habitats or any disturbance affecting the birds. Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats (Art. 4 para. 4 of the Directive 79/409/EEC).

These provisions have considerable effect on the scope of the Member States with respect to the designation and the retention of protected areas.⁶⁵ Following the ECJ's rulings in *Leybucht*⁶⁶ and *Santoña*⁶⁷ this means:

- The obligation to conserve the habitats is unconditional, i.e. it must be performed without the necessity of a concrete endangerment of a bird species;⁶⁸
- Minimizing the expanse of a protected area is not regulated in the Birds Directive but

⁶³ Official Journal L 103, 25/04/1979 p. 1.

⁶⁴ Official Journal L 206, 22/07/1992 p. 7.

⁶⁵ See *D. Czybulka*, Rechtspflichten des Bundes und der Länder zur Ausweisung und Erhaltung von Schutzgebieten nach nationalem, europäischem und internationalem Recht, in: U. Di Fabio/ P. Marburger/ M. Schröder, Jahrbuch des Umwelt- und Technikrechts 1996, pp. 235 et seq. (251); *M. Gellermann*, *Natura 2000*, Europäisches Habitatschutzrecht und seine Durchführung in der Bundesrepublik Deutschland, p. 16 and 17.

⁶⁶ *ECJ* case C-57/89 *Leybucht* [1991] E.C.R. I-883.

⁶⁷ *ECJ* case C-355/90 *Santoña* [1993] E.C.R. I-4221.

⁶⁸ *ECJ* case C-355/90 *Santoña* [1993] E.C.R. I-4221, para. 15.

according to the ratio of the Birds Directive this should only be admissible in the case of the existence of exceptional reasons of public interest. They must have priority with respect to the environmental interest which is to be answered in the negative in the case of economic interest, but might be approved in the case of overriding public interests like e.g. the protection of the population's life and health. Moreover the measures must be absolutely necessary and thus result in the least possible minimization of the protection area;⁶⁹

- There is a **mandatory obligation to designate protection areas according to Art. 4 para. 1 and 2 of the Directive 79/409/EEC**, from which exception may only be made in case of extraordinary overriding public interest which carries more weight than the ecological interests.⁷⁰ Additionally, however, the discretion of the Member States is restricted by the above mentioned (ornithological) criteria of the Birds Directive.⁷¹

b) The Directive 92/43/EEC (Habitats Directive)

The Habitats Directive's aim is to contribute ensuring bio-diversity through the conservation of natural habitats and of wild flora and fauna in the European territory of the Member States (Art. 2 para. 1 of the Directive 92/43/EEC). Natural habitats in this sense are also **aquatic areas** distinguished by geographic, abiotic and biotic features, whether natural or semi-natural (Art. 1 b) of the Directive 92/43/EEC).

Altogether the Habitats Directive sets up a coherent European **ecological network of special areas of conservation** under the title "**Natura 2000**". This network should consist of sites hosting the natural habitat types listed in **Annex I**, among which are e.g. sandbanks, posidonia beds and estuaries, and habitats of the species listed in Annex II and it shall enable the natural habitat types and species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range (Art. 3 para. 1 subpara. 1 of the Directive 92/43/EEC). The designation should proceed in the following stages:

- On the basis of the criteria set out in Annex III (Stage 1) of the Directive 92/43/EEC and relevant scientific information, each Member State shall propose a (complete) list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host (Art. 4 para. 1 subpara. 1 of the Directive 92/43/EEC).
- On the basis of the criteria set out in Annex III (Stage 2) of the Directive 92/43/EEC the **Commission** shall establish, in agreement with each Member State, a **draft list of sites of Community importance** drawn from the Member States' lists identifying those which lost one or more priority natural habitat types or priority species (Art. 4 para. 2 subpara. 1 of the Directive 92/43/EEC). This list should be established within six years of the notification of the Habitats Directive (Art. 4 para. 3 of the Directive 92/43/EEC).
- Once a site of Community importance has been adopted in accordance with the procedure laid down in Art. 4 para. 2 of the Directive 92/43/EEC, the **Member State** concerned shall **designate** that site as a **special area of conservation** as soon as possible and within six years at most (Art. 4 para. 4 of the Directive 92/43/EEC).

The adoption of an area in the Community list or its designation as special area of conservation entails obligations for the Member States to adopt certain conservation measures in these areas:

⁶⁹ *ECJ case C-57/89 Leybucht* [1991] E.C.R. I-883, para. 20 et seq.

⁷⁰ *ECJ case C-44/95 Lappel Bank* [1996] E.C.R. I-3843, para. 28 et seq.

⁷¹ *ECJ case C-355/90 Santoña* [1993] E.C.R. I-4221, para. 26.

- For special areas of conservation, **Member States** shall establish the necessary **conservation measures** which take into account the ecological requirements of the natural habitat types in Annex I and the species in Annex II present on the sites (Art. 6 para. 1 of the Directive 92/43/EEC).

According to Art. 4 para. 2 of the Directive 92/43/EEC with adoption of an area in the Community list the special conservation provisions of Art. 6 para. 2 to 4 of the Directive 92/43/EEC do apply:⁷²

- Art. 6 para. 2 of the Directive 92/43/EEC prohibits any deterioration of natural habitats and disturbances of the species for which the areas have been designated.
- Art. 6 para. 3 of the Directive 92/43/EEC provides for an impact assessment procedure with regard to the compatibility of plans and projects with the sites' conservation objectives. If, in spite of a negative assessment of the implications for the site and in the absence of an alternative solution, a plan or project must nevertheless be carried out for imperative reasons of overriding public interests, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected (Art. 6 para. 4 subpara. 1 of the Directive 92/43/EEC). Where the site concerned hosts a priority natural habitat type and/ or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interests (Art. 6 para. 4 subpara. 2 of the Directive 92/43/EEC).

Those protection areas designated under the Birds Directive constitute an integral part of Natura 2000 (Art. 3 para. 1 of the Directive 92/43/EEC). For these areas the conservation commitments of the Habitats Directive do apply (Art. 7 of the Directive 92/43/EEC). They replace the commitments under the Birds Directive, if the designation of the areas still is based exclusively on the Birds Directive.⁷³

c) Applicability of These Directives in the EEZ

According to the decisions of the ECJ it is the legislative power related to a specific subject-matter of the Community which is the starting point for the extension and application of Community law beyond the territory of the Member States. First it must be established within the Community, and then as a general rule extends to the exercise of the corresponding international jurisdiction of the Member States.⁷⁴ Later the ECJ held that each extension of sea areas subject to sovereignty or jurisdiction of Member States entails automatically the same extension of the geographical application of Community law.⁷⁵

Art. 175 (ex Art. 130s) EC-Treaty is the legal basis for the Community to adopt measures within its environmental policy in order to achieve the objectives listed in Art. 174 (ex Art. 130r) EC-Treaty.⁷⁶ One of these objectives is the conservation and protection of the environment to which belongs also the protection of the natural habitats and of wild flora and fauna (grounds of consideration of the Directive 92/43/EEC). Thus Art. 175 (ex Art. 130s) EC-Treaty was the legal basis for the adoption of the Habitats Directive. Before Title XIX (ex Title XI) "environment" was introduced to the EC-Treaty by the Single European Act in 1987, Community measures on environmental policy were based on the general competence

⁷² A. Epiney, supra 29, p. 271.

⁷³ A. Epiney, supra 29, p. 270.

⁷⁴ ECJ cases 3, 4 and 6/76 *Kramer* [1976] E.C.R. 1279 (1311).

⁷⁵ ECJ case 61/77 *Commission v. Ireland* [1978] E.C.R. 417 (447 and 448).

⁷⁶ See above A. II. 1. a).

of Art. 308 (ex Art. 235) EC-Treaty, like in the case of the Birds Directive. Subject of the Birds Directive is the conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States to which the EC-Treaty applies (Art. 1 of the Directive 79/409/EEC). The Habitats Directive has the aim to contribute ensuring biodiversity through the conservation of natural habitats and of wild flora and fauna referring to the same territory (Art. 2 para. 1 of the Directive 92/43/EEC). Thus both directives serve the conservation and protection of the environment. That marine areas are comprised ensues directly from the wording of the directives (Art. 4 para. 1 subpara. 1 of the Directive 92/43/EEC and Art. 4 para. 1 subpara. 3 of the Directive 79/409/EEC). The Community has the corresponding internal legislative powers for this subject-matter which also extend to the exercise of the respective rights of Member States under international law in their EEZs. With view to the EEZ Art. 56 para. 1 UNCLOS assigns to the Member States functionally restricted rights in form of, inter alia, jurisdiction with regard to the protection and preservation of the marine environment.⁷⁷

Therefore pursuant to the ECJ's precedents the Birds Directive and the Habitats Directive do apply in the EEZ of the Member States though by its implementation regard must be taken to international obligations in particular to UNCLOS.

II. Legal Regulations, Legal Instruments and Competent Authorities with Relevance for the Regulation of Human Activities within Marine Protected Areas (MPAs)

1. Definition of MPAs

On the basis Annex V of the OSPAR Convention, in particular of its Art. 2, and on the basis of Art. 194 para. 5 UNCLOS MPAs can be briefly defined as follows:

MPAs are such marine areas, whose ecosystems and biological components

- *based on* the general obligations under the OSPAR Convention, Art. 1 para. 1 a), and the Convention on Biological Diversity (CBD), Art. 6 a),
- *because of* their biodiversity, rareness and/ or fragility
- *by means of* appropriate measures and programmes (see Art. 194 para. 5 UNCLOS)
- *against* damages and deterioration due to adverse effects of human activities

are **protected** or, if they have already been adversely affected, must be restored where practicable.

2. Navigation

a) Navigation in the EEZ

In the EEZ, **all States**, whether coastal or land-locked, enjoy, subject to the relevant provisions of UNCLOS, the *freedom of navigation* (Art. 58 para. 1 UNCLOS).

In exercising this right States shall have due regard to the rights and duties of the coastal State and shall *comply with the laws and regulations adopted by the coastal State* in accordance with the provisions of the Convention and other rules of international law in so far as they are not incompatible with the EEZ régime (Art. 58 para. 3 UNCLOS). In the **EEZ**, the **coastal**

⁷⁷ See above A. I. 4. b) aa).

State has in particular those functional limited **jurisdictional rights** granted by Art. 56 para. 1 UNCLOS.⁷⁸ In respect of their **EEZ** the **coastal States** may adopt **laws and regulations** for the prevention, reduction and control of *pollution from vessels* conforming to and giving effect to generally accepted international rules and standards established through the competent international organization or general diplomatic conference (Art. 211 para. 5 UNCLOS); the **enforcement powers** of the **coastal State** in the **EEZ** with view to vessels flying a foreign flag, however, are limited (see Art. 220 UNCLOS).⁷⁹

Art. 211 para. 6 a) UNCLOS provides **coastal States** with the (**restricted**) **option** after appropriate **consultations** through the **competent international organization** of *identifying particular, clearly defined areas* of their respective **EEZ** where the adoption of special mandatory measures for the *prevention of pollution from vessels* is required for recognized technical reasons in relation to the oceanographical and ecological conditions in such areas, as well as their utilization or the protection of their resources and the particular character of their traffic. Where a coastal State considers that a particular area meets these criteria, it submits to the **International Maritime Organization (IMO)** for its **approval special measures** which exceed existing international rules and standards for such areas.⁸⁰

b) Navigation on the High Seas

The freedom of navigation according to Art. 87 para. 1 a) UNCLOS is part of the principle of the freedom of the high seas. Every State, whether coastal or land-locked, has the right to sail ships flying its flag on the high seas (Art. 90 UNCLOS). This includes at the same time that only ships, which belong to a certain State and fly under its flag, can claim the right of freedom of navigation on the high seas. The right to claim the freedom of navigation therefore is closely related to the right to be granted a flag.⁸¹ According to Art. 91 para. 1 UNCLOS ships have the nationality of the State whose flag they are entitled to fly. But this also means that every State shall fix the conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag (Art. 91 para. 1 UNCLOS).

Art. 94 UNCLOS lays down the duties of the flag State. In particular **every State** shall take such **measures** for ships flying its flag as are necessary *to ensure safety at sea* (Art. 94 para. 3 UNCLOS). This includes also measures necessary to ensure, that the master, officer and, to the extent appropriate, the crew are fully conversant with and required to observe the applicable international regulations concerning the safety of life at sea, the prevention of collisions and the prevention, reduction and control of marine pollution (Art. 94 para. 4 c) UNCLOS).

Restrictions of navigation on high seas are likely in form of **joint measures** to prevent, reduce and control pollution of the marine environment, to which **States** are generally obliged under Art. 192, 194 and 197 UNCLOS. Such measures shall include those designed to minimize to the fullest possible extent *pollution from vessels*, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operation at sea, preventing intentional and unintentional discharges, and regulating the design, construction, equipment, operation and manning of vessels (Art. 194 para. 3 b) UNCLOS).

⁷⁸ See above A. I. 4. b) aa).

⁷⁹ See above A. I. 4. a).

⁸⁰ See above B. I. 1. a); as to IMO see below B. II. 2. c).

⁸¹ *K. Ipsen*, supra 11, p. 767.

c) Global Conventions Adopted by the International Maritime Organization (IMO) Relating to Maritime Safety and Marine Environmental Protection

Art. 211 para. 1 UNCLOS requires the States, **acting through the competent international organization** or general diplomatic conference, to establish **international rules and standards** to prevent, reduce and control *pollution of the maritime environment from vessels* and promote the adoption, in the same manner, wherever appropriate, of **routeing systems** designed to minimize the threat of accidents which might cause pollution of the marine environment. Laws and regulations, which the States shall adopt for the prevention, reduction and control of pollution of the marine environment from vessels flying their flag or of their registry, shall at least have the same effect as that of generally accepted international rules and standards established through such competent international organization or general diplomatic conference (Art. 211 para. 2 UNCLOS).

On 6 March 1948 the Inter-Governmental Maritime Consultative Organization (IMCO) was founded as special organization of the United Nations. In 1982 the name of the Organization was changed into **International Maritime Organization (IMO)**. The **adoption of maritime legislation** is IMO's most important responsibility. Around 40 conventions and protocols have been adopted by the Organization.

aa) Maritime Safety, especially SOLAS 1974

IMO's first task was to adopt a new version of the International Convention of Life at Sea, 1974 (SOLAS 1974). The SOLAS Convention is generally regarded as the most important of all international treaties dealing with safety of merchant ships. The main objective of the SOLAS Convention is to specify **minimum standards** for the construction, equipment and operation of ships, compatible with their *safety*.⁸² On 1 November 1974 a completely new Convention was adopted. It entered into force on 25 May 1980.

Another objective of SOLAS 1974, and more specifically of IMO Assembly Resolution A.572(14) of 20 November 1985 which provides the basis for the General Provisions on Ships' Routeing, is to provide for the option of **designating areas to be avoided by ships or certain classes of ships**.⁸³

On 4 November 1993 the International Management Code for the Safe Operation of Ships and for *Pollution Prevention* (**ISM Code**) was adopted by IMO and made mandatory through the new chapter IX of SOLAS 1974. It establishes a **safety management system** applicable both on shipboard and on shore by the company responsible for operation of the ships and verified by the administration of the country in which the company conducts its business. The ISM Code entered into force on the international level on 1 July 1998 for all passenger ships and for oil tankers, chemical tankers, gas carriers and cargo high-speed craft with a gross tonnage of 500 tons or more. It is an essential contribution to maritime safety and to protection of the marine environment (grounds of consideration of the Directive 98/25/EC).

Other IMO conventions dealing with maritime safety, which are not further dealt with here, are:

- International Convention on Load Lines (LL), 1966,
- Special Trade Passenger Ships Agreement (STP), 1971,
- Convention on the International Regulations for Preventing Collisions at Sea (COLREG), 1972,

⁸² Source: "IMO's web site" (<http://www.imo.convent/safety.htm>).

⁸³ See above B. I. 1. b) bb).

- International Convention for Safe Containers (CSC), 1972,
- Convention on the International Maritime Satellite Organization (INMARSAT), 1976,
- The Torremolinos International Convention for the Safety of Fishing Vessels (SFV), 1977,
- International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978,
- International Convention on Maritime Search and Rescue (SAR), 1979,
- International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F), 1995.

bb) Prevention of Marine Pollution, especially MARPOL 73/78

IMO introduced a series of measures designed to prevent accidents and to minimize their consequences. It also tackled the environmental threat caused by routine operations such as cleaning of oil cargo tanks and the disposal of engine room wastes.⁸⁴

The most important of all these measures was the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). It is legally binding international law and covers not only accidental and operational oil pollution but also pollution by chemical, goods in packaged form, sewage and garbage.

The most important IMO conventions, which provide for general rules with regard to *maritime pollution from ships* are:

Figure 2: IMO-Conventions Relating to Marine Pollution by Shipping

<i>Convention</i> • <i>global</i>	<i>Abbrevia- tion</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
International Convention Relating to Intervention on the High Seas in the Case of Oil Pollution Casualties	INTER-VENTION	Brussels, 29 November 1969	6 May 1975	<ul style="list-style-type: none"> • affirms the right of a coastal State (Art. I para. 1): -to take such measures on the high seas as may be necessary to prevent, mitigate or eliminate danger to its coastline or related interests from <i>pollution by oil</i> or the threat thereof, following upon a maritime casualty.
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention)	LDC	London, Mexico City, Moscow and Washington, 29 December 1972	30 August 1975	<ul style="list-style-type: none"> • applies to: <i>dumping</i> (Art. III n° 1 a) i)) =any deliberate disposal at sea of wastes or other matter from, inter alia, <i>vessels</i>. • Contracting Parties shall prohibit the dumping of any wastes or other matter in whatever form or condition <i>except as</i> otherwise specified below (Art. IV para. 1): -the dumping of wastes or other matter listed in Annex I (certain hazardous materials) is prohibited; -the dumping of wastes or other matter listed in Annex II requires a prior special permit (Art. III n° 5); -the dumping of all other wastes or matter requires a prior general permit (Art. III n° 6). • <i>Permits</i>: -shall be issued by an appropriate authority or

⁸⁴ Source: "IMO's web site" (<http://www.imo/convent/pollute.htm>).

				authorities of a Contracting Party only after careful consideration of all the factors set forth in Annex III (Art. IV para. 2, VI para. 1 and 2).
International Convention for the Prevention of Pollution from Ships, 1973 ----- The Protocol of 1978	MARPOL 73/78	London, 2 November 1973 ----- London, 17 February 1978	Not intended to enter into force and be applied on its own ----- 2 October 1983, absorbed the parent convention of 1973	<ul style="list-style-type: none"> • covers: <ul style="list-style-type: none"> -all the technical aspects of <i>pollution from ships</i> of all types: accidental and operational <i>oil pollution</i> (Annex I), <i>pollution by chemical</i> (Annex II), <i>goods in packaged form</i> (Annex III), <i>sewage</i> (Annex IV) and <i>garbage</i> (Annex V). • does <i>not</i> apply (Art. 2 n° 3 b)): <ul style="list-style-type: none"> -to the disposal of waste into the sea by dumping within the meaning of the LDC; or -to pollution arising from the exploration, exploitation and associated off-shore processing of <i>sea-bed mineral resources</i>; or -to release of harmful substances for purposes of legitimate <i>scientific research</i> into pollution abatement or control. • Obligation of the Parties (Art. 1 para. 1): <ul style="list-style-type: none"> -to give effect to the provisions of the Convention and its Annexes, in order to prevent the pollution of the marine environment by the discharge of harmful substances or effluents containing such substances in contravention of the Convention.
International Convention on Oil Pollution Preparedness, Response and Co-operation	OPRC	London, 30 November 1990	13 May 1995	<ul style="list-style-type: none"> • Purpose: <ul style="list-style-type: none"> -to provide a global framework for international co-operation in combating major incidents or threats of marine pollution.

d) Regional Agreements Providing for Competence with Regard to Marine Pollution from Ships

aa) The Co-operation in the Protection of the Northeast Atlantic Against Pollution

The Co-operation Agreement for the Protection of the Coasts and Waters of the Northeast Atlantic Against Pollution⁸⁵ requires the **Contracting Parties** among which is the EC, to undertake, individually or jointly as the case may be, all appropriate **measures** under this Agreement in order to be prepared to deal with an *incident of pollution at sea* such as pollution caused by hydrocarbons or other harmful substances (Art. 1 of the Agreement). "Pollution incident" means an event or series of events having the same origin and resulting in a discharge or a danger of discharge of hydrocarbons or other harmful substances which has occasioned or may occasion damage to the marine environment, the coast or the related interests of one or more Parties, and requiring emergency action or an immediate reaction of some other kind (Art. 2 of the Agreement).

Measures under the Agreement which must be adopted by each of the Parties in order to be prepared to deal with pollution incidents are, inter alia:

⁸⁵ Done at Lisbon, 17 October 1990; entry into force: for each State acceding the Agreement on the first day of the second month following the date on which the State concerned deposits its instrument of accession with the Government of Portugal (Art. 24 para. 1 of the Agreement).

- the establishment of a national system to prevent and combat incidents of pollution at sea (Art. 4 para. 2 of the Agreement);
- the development of means for monitoring shipping by setting up departments dealing with shipping movements (Art. 12 of the Agreement);
- the setting up of statutory obligations to register for its officials with powers in this context, for vessels of its maritime inspectorate and for other department captains of all vessels flying its flag with regard to incidents of pollution due to hydrocarbons or other harmful substances (see Art. 7 of the Agreement).

For the sole purposes of the Agreement, the North-East Atlantic region is **divided into areas**. These areas correspond in principle to the **EEZs** of each of the contracting States (Art. 8 para. 1 in connection with n° 1 Annex I of the Agreement). A Party in whose area a pollution incident occurs shall conduct the requisite evaluations as to its nature, magnitude and possible consequences (Art. 8 para. 2 of the Agreement). Where the magnitude of the pollution incident so warrants, the Party concerned shall (Art. 8 para. 3 of the Agreement):

- immediately inform all other Parties through their operational contact points of any action taken to combat the hydrocarbons or other harmful substances;
- keep these substances under observation for as long as they are present in its area and keep the other Parties informed of developments concerning the pollution incident and of the measures taken or planned.

According to Art. 9 para. 1 of the Agreement the **Parties** may also **designate areas of joint interest**. If pollution occurs in such an area, the Party in whose area of responsibility the incident occurs shall (Art. 9 para. 2 of the Agreement):

- not merely inform the neighbouring Party immediately as required by Art. 8 para. 3 of the Agreement but also
- invite that Party to take part in the evaluation of the nature of the incident and to decide whether the incident must be regarded as being of sufficient gravity and magnitude to warrant joint action by both Parties in combating it.

b) Other Regional Agreements of this kind

Other regional agreements relating to responsibility for pollution from vessels, which are not further dealt with here, are:

- Agreement between Denmark, Finland, Norway and Sweden concerning Co-operation in Measures to Deal with Pollution of the Sea by Oil, 1971;
- Agreement for Co-operation in Dealing with Pollution of the North Sea by Oil and Other Harmful Substances, 1983.

e) *European Community Law Relating to Safety at Sea*

Since 1 January 1993, for Community shipowners who have their ships registered in, and flying the flag of a Member State, provided that these ships comply with all conditions for carrying out cabotage in that Member State, the *freedom to provide maritime transport services within a Member State* (maritime cabotage) applies (Art. 1 of the Regulation 3577/92/EEC⁸⁶). Maritime cabotage means maritime transport services normally provided for

⁸⁶ Council Regulation (EEC) No 3577/92 of 7 December 1992 applying the principle of freedom to provide services to maritime transport within Member States (maritime cabotage), Official Journal L 364, 12/12/1992 p. 7.

remuneration and includes, inter alia, off-shore supply services, so the carriage of passengers or goods by sea between any port of a Member State and *installations or structures* situated on the **continental shelf** of that Member State (Art. 2 n° 1 b) of the Regulation 3577/92/EEC).

In the event of a serious disturbance of the internal transport market due to cabotage liberalization, a Member State may request the Commission to adopt safeguard measures (Art. 5 para. 1 of the Regulation 3577/92/EEC).

aa) Ship Inspection and Survey Organizations

The Council Directive 94/57/EC of 22 November 1994⁸⁷ establishes **measures** to be followed by the **Member State** and **organizations** concerned with the inspections, survey and certification of ships for compliance with the international conventions on *safety at sea* and *prevention of marine pollution*⁸⁸, while furthering the objective of freedom to provide services. This process includes the development and implementation of safety requirements for hull, machinery and electrical control installations of ships falling under the scope of the international conventions (Art. 1 of the Directive 94/57/EC).

In assuming their responsibilities and obligations under international conventions, Member States shall ensure that their **competent administrations** can assure an appropriate **enforcement of the provisions of the international conventions**, in particular with regard to the inspections and survey of ships and the issue of certificates and exemption certificates (Art. 3 para. 1 of the Directive 94/57/EC). For this purpose all Member States may authorize to a various extent **technical organizations** for the certification of compliance with international conventions and may delegate the issue of the relevant safety certificates (see Art. 3 para. 2 in connection with the grounds of consideration of the Directive 94/57/EC). These organizations must be "**recognized organizations**" which fulfil the criteria set out in the Annex (Art. 3 para. 2 subpara. 1, Art. 4 para. 1 and Art. 2 f) of the Directive 94/57/EC).

Art. 14 para. 1 of the Directive 94/57/EC obliges the Member States to ensure that ships flying its flag shall be constructed and maintained in accordance with the hull, machinery and electrical and control installation **requirements** of a **recognized organization**.

bb) Port State Control

The purpose of the Council Directive 95/21/EC of 19 June 1995 concerning the enforcement, in respect of shipping using Community ports and sailing in the waters under the jurisdiction of the Member States, of international standards for ship safety, pollution prevention and shipboard living and working conditions (port State control)⁸⁹ is to help drastically to reduce substandard shipping in the waters under the jurisdiction of Member States by (Art. 1 of the Directive 95/21/EC):

- increasing compliance with international and relevant Community legislation on maritime safety, *protection of the marine environment* and living and working conditions on board of ships of all flags,
- establishing common criteria for control of ships by the port State and harmonizing

⁸⁷ Council Directive 94/57/EC of 22 November 1994 on common rules and standards for ship inspection and survey organizations and for the relevant activities of maritime administrations, Official Journal L 319, 12/12/1994 p. 20.

⁸⁸ SOLAS 1974, LL 1966 and MARPOL 73/78 (Art. 2 d) of the Directive 94/57/EC), see above B. II. 2 c).

⁸⁹ Official Journal L 157, 07/07/1995 p. 1.

procedures on inspection and detention, taking proper account of the commitments made by the maritime authority of the Member States under the Paris Memorandum of Understanding on Port State Control (MOU)⁹⁰.

According to Art. 3 para. 1 of the Directive 95/21/EC this Directive applies to any ship and its crew:

- calling at a port of a Member State or at an *offshore installation*, or
- anchored off such port or such installation;

at the same time off-shore installation means a fixed or floating platform operating **on or over the continental shelf** of a Member State (Art. 2 n° 4 of the Directive 95/21/EC). Certain types of vessels like fishing vessels, are excluded from the scope of the Directive (Art. 3 para. 4 of the Directive 95/21/EC).

Art. 4 of the Directive 95/21/EC obliges the **Member States** to maintain appropriate national **maritime administrations** (competent authorities), for the inspection of ships and to take **whatever measures** are appropriate to ensure that their competent authorities perform their duties as laid down in this Directive. The competent authority of each Member State shall carry out an annual total number of **inspections** corresponding to at least 25% of the number of individual ships which entered its ports during a representative calendar year (Art. 5 para. 1 of the Directive 95/21/EC).

In the case of deficiencies which are *clearly hazardous to safety, health or the environment*, the **competent authority of the port State** where the ship is being inspected shall ensure that the ship is **detained**, or the operation in the course of which the deficiencies have been revealed is **stopped**. The detention order or stoppage of an operation shall not be lifted until the hazard is removed or until such authority shall establish that the ship can, subject to any necessary conditions, proceed to sea or the operation be resumed without risk to the safety and health of the passengers or crew, or risk to other ships, or without unreasonable threat of harm to the *marine environment* (Art. 9 para. 2 of the Directive 95/21/EC). But all possible efforts shall be made to avoid a ship being unduly detained or delayed (Art. 9 para. 7 of the Directive 95/21/EC).

Art. 9a of the Directive 95/21/EC provides for a special procedure applicable in the absence of ISM certificates: Where the inspection reveals that the copy of the document of compliance or the safety management certificate issued in accordance with the **ISM Code**⁹¹ are missing on board a vessel to which, within the Community, the ISM Code is applicable at the date of the inspection, the **competent authority** shall ensure that the vessel is **detained** (Art. 9a para. 1 of the Directive 95/21/EC).

cc) Vessels Carrying Dangerous or Polluting Goods

Vessels carrying dangerous or polluting goods must comply with certain **minimum requirements** according to the Council Directive 93/75/EEC of 13 September 1993⁹² if they bind for or leave Community ports. By that the Community wants to avoid conditions likely to cause serious accidents and to reduce the resulting damage when such accidents occur (grounds of consideration of the Directive 93/75/EEC).

⁹⁰ Signed in Paris on 26 January 1982.

⁹¹ See above B. II. 2. c) aa).

⁹² Council Directive 93/75/EEC of 13 September 1993 concerning minimum requirements for vessels bound for or leaving Community ports and carrying dangerous or polluting goods, Official Journal L 247, 05/10/1993 p. 19.

To that end the Directive 93/75/EEC comprises in particular several **obligations to inform**. An example for this is the obligation of the Member States to require that, in the case of an accident or circumstances **at sea** which pose a threat to its coastline or related interest, the master of the vessels concerned shall at least provide immediate information to the competent authority of the Member State concerned as to the particulars of the incident and the information in Annex I (Art. 6 para. 1 subpara. 1 of the Directive 93/75/EEC).

In this context Art. 6 para. 3 of the Directive 93/75/EEC refers to Annex III which sets out what **measures** are available to Member States **under international law**: Where, following upon an incident or circumstance of the type described in Art. 6 para. 1 of the Directive 93/75/EEC in regard to a vessel falling within the scope of this Directive, the **competent authority of the Member State** concerned considers, in the framework of international law (inter alia Art. 221 UNCLOS⁹³; Art. I, II, III INTERVENTION⁹⁴), that it is necessary to prevent, mitigate or eliminate a serious and imminent danger to its coastlines or related interests, the safety of other ships, the safety of crews, passengers or people ashore or to *protect the marine environment* such authority may, inter alia, **restrict the movement** of the vessel or **direct it to follow a certain course**.

dd) Other Directives and Regulations on the Safety at Sea

Other directives and regulations of the European Community on the safety at sea, which are not further dealt with here, are:

- Council Regulation (EC) No 3051/95 of 8 December 1995 on the safety management of roll-on/roll-off passenger ferries (ro-ro ferries)⁹⁵;
- Council Directive 96/98/EC of 20 December 1996 on marine equipment⁹⁶;
- Council Directive 97/70/EC of 11 December 1997 setting up a harmonized safety regime for fishing vessels of 24 meters in length and over⁹⁷;
- Council Directive 98/18/EC of 17 March 1998 on safety rules and standards for passenger ships⁹⁸.

3. The Establishment and Use of Artificial Islands, Installations and Structures

"Artificial islands" are structures which have been created by the dumping of natural substances like sand, gravel, or rock, and the term "installations" is used for constructions attached to the seafloor by means of piles or tubes driven into the bottom, and for concrete structures.⁹⁹

"Installations" thus are erected of materials which are produced by man¹⁰⁰; they differ however from "artificial islands" in particular by the fact, that they can be transported as a whole from one site to another without losing its identity.¹⁰¹

⁹³ See above A. I. 4 a).

⁹⁴ See above B. II. 2. c) bb).

⁹⁵ Official Journal L 320, 30/12/1995 p. 14.

⁹⁶ Official Journal L 46, 17/02/97 p. 25.

⁹⁷ Official Journal L 34, 09/02/98 p. 1.

⁹⁸ Official Journal L 144, 15/05/98 p. 1.

⁹⁹ A. H. A. Soons, Artificial Islands and Installations in International Law, Occasional Paper Series, Occasional Paper No. 22, 1974, p. 3.

¹⁰⁰ L. Gründling, supra 16, p. 226.

¹⁰¹ R. Lagoni, Künstliche Inseln und Anlagen im Meer, JIR 1975, pp. 241 et seq. (244).

a) The Establishment and Use of Artificial Islands, Installations and Structures in the EEZ

According to Art. 56 para. 1 b) i) UNCLOS in the EEZ, the **coastal State** has **jurisdiction** with regard to the *establishment and use* of artificial islands, installations and structures.

Furthermore Art. 60 UNCLOS contains a detailed relevant rule:

"1. In the exclusive economic zone, the coastal State shall have the **exclusive right to construct and to authorize and regulate the construction, operation and use** of:

(a) artificial islands;

(b) installations and structures for the purposes provided in article 56 and other economic purposes;

(c) installations and structures which may interfere with the exercise of the rights of the coastal State in the zone."

This means that the coastal State has the exclusive right (only) for the construction of *artificial islands* as well as for the authorization and regulation of their construction, operation and use. According to this the **coastal State** can also **prohibit** the construction of artificial islands for reasons of the protection and preservation of rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life (see Art. 194 para. 5 UNCLOS).

The exclusive right of the coastal State as to the construction, operation and use of *installations and structures* including the authorization and regulation of their construction, operation and use on the other hand is restricted to such installations and structures, which serve those objectives provided for in Art 56 UNCLOS, i.e. exploring and exploiting, conserving and managing of the natural resources, marine scientific research and the protection and preservation of the marine environment, and also to installations and structures for other economic purposes.¹⁰² The **coastal State** can also **prohibit** their construction for the purpose of the protection and preservation of the ecosystems and habitats set out in Art. 194 para. 5 UNCLOS.

The right of establishment of artificial islands, installations and structures is limited by Art. 60 para. 7 UNCLOS, which provides that such constructions may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation.

The coastal State, where necessary, establishes reasonable safety zones around such artificial islands, installations and structures in which it may take appropriate measures to ensure safety both of navigation and of the artificial islands, installations and structures (Art. 60 para. 4 UNCLOS). All ships must respect these safety zones and shall comply with generally accepted international standards regarding navigation in the vicinity of artificial islands, installations and structures and safety zones (Art. 60 para. 6 UNCLOS).

b) Artificial Islands, Installations and Structures on the Continental Shelf

According to Art. 80 UNCLOS, Art. 60 UNCLOS applies *mutatis mutandis* to artificial islands, installations and structures on the continental shelf.

Art. 60 UNCLOS therefore is incorporated into Art. 80 UNCLOS. Art. 80 UNCLOS applies autonomously if the coastal State has not established an EEZ or if the extension of the continental shelf reaches beyond the outer limits of the EEZ.¹⁰³

¹⁰² C. Fitzpatrick, *supra* 8, p. 74.

¹⁰³ C. Fitzpatrick, *supra* 8, p. 78.

c) The Construction of Artificial Islands and other Installations on the High Seas

The freedom of the high seas comprises pursuant to Art. 87 para. 1 d) UNCLOS explicitly the freedom to construct artificial islands and other installations permitted under international law, subject to Part VI of UNCLOS governing the continental shelf. Accordingly all states are entitled to the right of construction, as soon as the sea-bed of the high seas is not covered by the continental shelf régime.¹⁰⁴

Restrictions on the construction of artificial islands and other installations on the high seas are likely in the form of **joint measures** to prevent, reduce and control pollution of the marine environment which the **States** are generally **obliged** to adopt according to Art. 192, 194 and 197 UNCLOS. These measures shall include those designed to minimize to the fullest possible extent *pollution from installations and other devices*:

- used in exploration or exploitation of the natural resources of the sea-bed and subsoil;
- operating in the marine environment,

in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operation at sea, and regulating the design, construction, equipment, operation and manning of such installations and devices (Art. 194 para. 3 c) and d) UNCLOS).

d) Installations in the Area

Installations used for carrying out activities in the Area shall according to Art. 147 para. 2 UNCLOS be subject to specific conditions. Such installations:

- shall be erected, emplaced and removed solely in accordance with Part XI of the Convention and subject to the **rules, regulations and procedures** of the **ISBA**;
- may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation or in areas of intense fishing activity;
- shall be surrounded by safety zones with appropriate markings to ensure the safety of both navigation and the installations;
- shall be used exclusively for peaceful purposes;
- do not possess the status of islands;
- have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the EEZ or the continental shelf.

The **ISBA** has the right pursuant to Art. 153 para. 5 UNCLOS **to inspect all installations in the Area** used in connection with activities in the Area.

Also in the Area **restrictions** with regard to installations are possible in form of **joint measures** to prevent, reduce and control pollution of the marine environment, which the **States** are generally **obliged** to adopt according to Art. 192, 194 and 197 UNCLOS. These measures shall include those designed to minimize to the fullest possible extent *pollution from installations and other devices* (Art. 194 para. 3 c) and d) UNCLOS).

¹⁰⁴ C. Fitzpatrick, supra 8, p. 85.

e) International Environmental Law with Relevance for Artificial Islands, for Installations and Structures

Figure 3: International Environmental Law with Relevance for Artificial Islands, for Installations and Structures

<i>Convention</i> • <i>global</i>	<i>Abbrevia- tion</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
United Nations Convention on the Law of the Sea	UNCLOS	Montego Bay, 10 December 1982	16 November 1994	<ul style="list-style-type: none"> • Construction of such structures: <ul style="list-style-type: none"> -to choose the construction site in such a way as to comply with the requirements of Art. 194 para. 5:¹⁰⁵ to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life; -duty of the States to assess the potential effects of the installation (see Art. 206). • Pollution from such structures: <ul style="list-style-type: none"> -obligation of the States to take all measures necessary (Art. 194 para. 1 and 2): to prevent , reduce and control pollution of the marine environment; to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment; to ensure that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with the UNCLOS; -these measures shall include those designed to minimize to the fullest possible extent pollution from installations (Art. 194 para. 3 c) and d)): used in exploration or exploitation of the natural resources of the sea-bed and subsoil; operating in the marine environment. • Introduction of waste connected with the normal operation: <ul style="list-style-type: none"> -no "dumping" (Art. 1 para. 1 n° 5 b i)); -but: introduction by man of substances with noxious effect on the marine environment is "pollution of the marine environment" according to Art. 1 para. 1 n° 4, which entails that the State pursuant to Art. 194 para. 2 generally is obliged to take all measures to prevent damage by pollution to other States and their environment. • Special in the Area (Art. 145): <ul style="list-style-type: none"> -obligation to take necessary measures with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. -To this end the Authority (ISBA) shall adopt appropriate rules, regulations and procedures for, inter alia: the prevention, reduction and control of pollution and other hazards to the marine environment and

¹⁰⁵ C. Fitzpatrick, supra 8, p. 145.

				of interference with the ecological balance of the marine environment, particular attention being paid to the need for protection from harmful effects of such activities as disposal of waste, construction and operation or maintenance of installations; the prevention of damage to the flora and fauna of the marine environment.
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention)	LDC	London, Mexico City, Moscow and Washington, 29 December 1972	30 August 1975	<ul style="list-style-type: none"> applies to: <i>dumping</i> (Art. III n° 1 a)) =any deliberate disposal at sea of wastes or other matter from, inter alia, <i>platforms or other man-made structures</i> at sea. Contracting Parties shall prohibit the dumping of any wastes or other matter in whatever form or condition <i>except as</i> otherwise specified below (Art. IV para. 1): -the dumping of wastes or other matter listed in Annex I (certain hazardous materials) is prohibited; -the dumping of wastes or other matter listed in Annex II requires a prior special permit (Art. III n° 5); -the dumping of all other wastes or matter requires a prior general permit (Art. III n° 6). <i>Permits</i>: -shall be issued by an appropriate authority or authorities of a Contracting Party only after careful consideration of all the factors set forth in Annex III (Art. IV para. 2, VI para. 1 and 2).
International Convention for the Prevention of Pollution from Ships, 1973 ----- The Protocol of 1978	MARPOL 73/78	London, 2 November 1973 ----- London, 17 February 1978	not intended to enter into force and be applied on its own ----- 2 October 1983, absorbed the parent convention of 1973	<ul style="list-style-type: none"> applies to: <i>ships</i> =vessel of any type whatsoever operating in the marine environment including <i>fixed or floating platforms</i> (Art. 2 n° 4). covers: -accidental and operational <i>oil pollution</i> (Annex I), <i>pollution by chemical</i> (Annex II), <i>goods in packaged form</i> (Annex III), <i>sewage</i> (Annex IV) and <i>garbage</i> (Annex V). does <i>not</i> apply (Art. 2 n° 3 b)): -to the disposal of waste into the sea by dumping within the meaning of the LDC; or -to pollution arising from the exploration, exploitation and associated off-shore processing of <i>sea-bed mineral resources</i>; or -to release of harmful substances for purposes of legitimate <i>scientific research</i> into pollution abatement or control. Obligation of the Parties (Art. 1 para. 1): -to give effect to the provisions of the Convention and its Annexes, in order to prevent the pollution of the marine environment by the discharge of harmful substances or effluents containing such substances in contravention of the Convention.

<p><i>Convention</i> • <i>regional</i></p>				
<p>Convention for the Protection of the Marine Environment of the North-East Atlantic</p>	<p>OSPAR Convention</p>	<p>Paris, 22 September 1992</p>	<p>25 March 1998</p>	<ul style="list-style-type: none"> • "<i>Offshore Sources</i>" (Art. 1 k) =offshore installations and offshore pipelines from which substances or energy reach the maritime area; "<i>offshore installations</i>" (Art. 1 l) =man-made structures, plants or vessels or parts thereof, whether floating or fixed to the seabed, placed within the maritime area for the purpose of "<i>offshore activities</i>" (Art. 1 j) =activities for the purpose of the exploration, appraisal or exploitation of liquid and gaseous hydrocarbons. • Obligation of the Contracting Parties (Art. 5): -to take all possible steps to prevent and eliminate pollution from <i>offshore sources</i> in accordance with the provisions of the Convention, in particular as provided for in Annex III: to prohibit in principle the dumping of waste or other matter from such <i>structures</i> (Art. 3 para. 1 of Annex III); to require authorization or regulation by the competent authorities of a Contracting Party as prerequisite for the use on, or the discharge or emission from, <i>offshore installations</i> of substances which may reach and affect the maritime area (Art. 4 para. 1 of Annex III).
<p>Agreement on the Conservation of African-Eurasian Migratory Waterbirds</p>	<p>AEWA</p>	<p>The Hague, 16 June 1995</p>	<p>1 November 1999</p>	<ul style="list-style-type: none"> • Obligation of the Parties (Art. III para. 2 e)): -to investigate problems that are posed or are likely to be posed by <i>human activities</i> and endeavour to implement remedial measures, including habitat rehabilitation and restoration, and compensatory measures for loss of habitats; • Obligation of the Parties to undertake actions consistent with the general conservation measures specified in Art. III pursuant to an action plan which is appended as Annex 3 (Art. IV para. 1); under the heading "Management of Human Activities" (para. 4 of Annex 3) the following actions are listed, inter alia: -as far as possible, to promote high environmental standards in the <i>planning and construction of structures</i> to minimize their impact on populations listed in Table 1 (para. 4.3.5 of Annex 3); -to consider steps to minimize the impact of <i>structures already in existence</i> where it becomes evident that they constitute a negative impact for the populations concerned (para. 4.3.5 of Annex 3).

f) European Community Law

The EC-Treaty does not contain any provisions by which an exclusive competence of the Community for the construction of artificial islands, installations and structures might be conferred. The Member States when exercising their jurisdiction in this field and when adopting respective regulations, must respect Community law, in particular the fundamental freedoms¹⁰⁶, e.g.:

- Art. 25 (ex Art. 12) EC-Treaty prohibits to impose customs duties or charges having equivalent effect on building materials which are imported for the construction of artificial islands, installations and structures from other Member States;
- the provisions on the free movement of workers of Art. 39 et seq. (ex Art. 48 et seq.) EC-Treaty apply to workers from other Member States who apply for work on artificial islands, installations and structures.

For construction and use of artificial islands, installations and structures furthermore a secondary legislative act is important: Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment¹⁰⁷. The main idea of the Directive 85/337/EEC can be described to the end that prior to the carrying out of certain projects an overall assessment of their impacts on the environment should be made in a legally provided and transparent procedure, to the results of which must be given due regard when deciding on the grant of a respective authorization.¹⁰⁸ Due regard, however, is not synonymous with (obligatory) observation.

Art. 2 para. 1 of the Directive 85/337/EEC requires the Member States to adopt all measures to ensure that, before consent is given, projects likely to have *significant effects on the environment* by virtue, inter alia, of their nature, size or location are made subject to a **requirement for development consent** and an **assessment with regard to their effects**. According to Art. 3 of the Directive 85/337/EEC the assessment must refer to the direct and indirect effects on the following factors:

- human beings, fauna and flora;
- soil, water, air, climate and the landscape;
- material assets and the cultural heritage;
- the interaction between the factors mentioned in the first, second and third intends.

Annex I of the Directive 85/337/EEC provides for projects, which shall be made subject to an **obligatory assessment** (Art. 4 para. 1 of the Directive 85/337/EEC), while for the projects listed in Annex II of the Directive 85/337/EEC the Member States shall determine through a case-by-case examination or thresholds or criteria set by the Member States whether the project shall be made subject to an assessment (Art. 4 para. 2 subpara. 1 of the Directive 85/337/EEC). Annex I of the Directive 85/337/EEC lists as projects also such which can be thought to be realized by artificial islands, installations and structures on sea, e.g. thermal power stations and other combustion installations with a heat output of 300 megawatts or more (point 2 of Annex I). Also Annex II of the Directive 85/337/EEC comprises such

¹⁰⁶ C. Fitzpatrick, supra 8, pp. 130 and 132.

¹⁰⁷ Official Journal L 175, 05/07/1985 p. 40.

¹⁰⁸ A. Epiney, supra 29, p. 171.

projects, e.g. industrial installations for the production of electricity not covered by Annex I (point 3 a) of Annex II) or airfields (point 10 d) of Annex II).

The Member States determine the respective **competent authority or authorities** for the implementation of the tasks deriving from the Directive 85/337/EEC (Art. 1 para. 3 of the Directive 85/337/EEC).

4. The Laying of Submarine Cables and Pipelines

a) The Laying of Submarine Cables and Pipelines in the EEZ

In the EEZ, all States enjoy, subject to the relevant provisions of UNCLOS, the freedom of the laying of submarine cables and pipelines (Art. 58 para. 1 UNCLOS).

In exercising this right States shall have due regard to the rights and duties of the coastal State and shall **comply with the laws and regulations adopted by the coastal State** in accordance with the provisions of the Convention and other rules of international law in so far as they are not incompatible with the EEZ régime (Art. 58 para. 3 UNCLOS). In the EEZ, the **coastal State** in particular has the **functionally restricted jurisdiction** granted by Art. 56 para. 1 UNCLOS.¹⁰⁹

b) Submarine Cables and Pipelines on the Continental Shelf

According to Art. 79 para. 1 all States are entitled to lay submarine cables and pipelines on the continental shelf. The coastal State:

- may not impede the laying or maintenance of submarine cables or pipelines, but
- has the right to take reasonable **measures** for the exploration of the continental shelf, the exploitation of its natural resources and the prevention, reduction and control of *pollution from such pipelines* (Art. 79 para. 2 UNCLOS);
- may submit the delineation of the course for the laying of such pipelines on the continental shelf to its **approval** (Art. 79 para. 3 UNCLOS), i.e. may introduce a procedure for approval;
- has the right to **establish conditions** for cables and pipelines entering its territory or territorial sea or its jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction (Art. 79 para. 4 UNCLOS).

When laying submarine cables or pipelines, States shall have due regard to cables or pipelines already in position (Art. 79 para. 5 UNCLOS).

Further **restrictions** on the laying of submarine cables and pipelines can be imposed in form of **measures** to prevent, reduce and control pollution of the marine environment, which the **States** are **obliged** to adopt according to Art. 192, 194 UNCLOS.

c) The Laying of Submarine Cables and Pipelines on the High Seas

According to Art. 87 para. 1 c) UNCLOS the freedom to lay submarine cables and pipelines is part of the freedom of the high seas. All States are entitled to lay submarine cables and

¹⁰⁹ See above A. I. 4. b) aa).

pipelines on the bed of the high seas beyond the continental shelf (Art. 112 para. 1 UNCLOS). When doing so, States shall have due regard to cables or pipelines already in position (Art. 112 para. 2 in connection with Art. 79 para. 5 UNCLOS).

Beyond that, Art. 113 to 115 UNCLOS include provisions, which oblige the States, to adopt laws and regulations with regard to cases of breaking or injury of a submarine cable or pipeline or concerning indemnity for loss incurred in avoiding such injuries.

Furthermore Art. 192, 194 and 197 UNCLOS generally impose on **States** the **duty** to take **joint measures** to prevent, reduce and control pollution of the marine environment, which entails the possibility to restrict the right to lay submarine cables and pipelines on the high seas international law.

d) International Environmental Law with Regard to Submarine Cables and Pipelines

Figure 4: International Environmental Law with Regard to Submarine Cables and Pipelines

<i>Convention</i> • <i>global</i>	<i>Abbrevia- tion</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
United Nations Convention on the Law of the Sea	UNCLOS	Montego Bay, 10 December 1982	16 November 1994	<ul style="list-style-type: none"> • <i>Laying</i>: -to choose position in order to comply with the requirements of Art. 194 para. 5¹¹⁰: to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life; -duty of the States to assess the potential effects of the laying (see Art. 206). • <i>Pollution</i> from submarine cables and pipelines: -obligation of the States to take all measures necessary (Art. 194 para. 1 and 2): to prevent , reduce and control pollution of the marine environment; to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution; to ensure that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with UNCLOS.
<i>Convention</i> • <i>regional</i>				
Convention for the Protection of the Marine Environment of the North-East Atlantic	OSPAR Convention	Paris, 22 September 1992	25 March 1998	<ul style="list-style-type: none"> • "<i>Offshore Sources</i>" (Art. 1 k) =offshore installations and <i>offshore pipelines</i> from which substances or energy reach the maritime area. • Art. 5 requires the Contracting Parties: -to take all possible steps to prevent and eliminate pollution from <i>offshore sources</i> in accordance with the provisions of the Convention, in particular as provided for in Annex III which provides for the use on <i>offshore sources</i> of substances which may reach and affect the maritime area, to be submitted to the

¹¹⁰ C. Fitzpatrick, supra 8, p. 145 for the construction of artificial islands and installations.

				authorization or regulation by the competent authorities of a Contracting Party (Art. 4 para. 1 of Annex III).
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e) European Community Law

The Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment¹¹¹ has also relevance for the laying of submarine pipelines.

Annex I of the Directive 85/337/EEC includes projects, which shall be made subject to an **obligatory assessment** (Art. 4 para. 1 of the Directive 85/337/EEC), among which are pipelines for the transport of gas, oil or chemicals with a diameter of more than 800 mm and a length of more than 40 km (point 16 of Annex I). With regard to the projects listed in Annex II, among others oil and gas pipeline installations as far as they are not included in Annex I (point 10 i) of Annex II), Member States shall determine through a case-by-case examination or thresholds or criteria set by the Member States whether the project shall be made subject to an assessment (Art. 4 para. 2 subpara. 1 of the Directive 85/337/EEC).

For the implementation of the duties set out in the Directive 85/337/EEC, the Member States are required to determine the **competent authority or authorities** (Art. 1 para. 3 of the Directive 85/337/EEC).

5. Dumping

a) The Term "Dumping" under UNCLOS, LDC and the OSPAR Convention

Art. 210 para. 4 UNCLOS requires the States, acting especially through **competent international organizations or diplomatic conferences**, to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the maritime environment by dumping.

On 13 November 1972 the **Inter-Governmental Conference on the Convention on the Dumping of Wastes at Sea**, which met in London at the invitation of the United Kingdom, adopted the **Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (LDC)**, generally known as the London Convention. When the Convention came into force on 30 August 1975, the **International Maritime Organization (IMO)** was made responsible for the Secretariat duties related to it (Art. IV para. 1 LDC). The Convention has a global character, and contributes to the international control and prevention of marine pollution by dumping (Art. I LDC).¹¹²

The **OSPAR Convention** was done with the aim to adopt, on the regional level, more stringent measures with respect to the prevention and elimination of pollution of the marine environment and with respect to the protection of the marine environment against the adverse effects of human activities than are provided for in international conventions or agreements with a global scope (Preamble of the OSPAR Convention). It also contains regulations relating to the pollution by dumping of wastes or other matter both in general (Art. 4 in

¹¹¹ Official Journal L 175, 05/07/1985 p. 40.

¹¹² Source: "IMO's web site" (<http://www.imo.org/imo/convent/pollute.htm>).

connection with Annex II) and in particular from offshore sources (Art. 5 in connection with Art. 3 of Annex III).

In principle "dumping" is defined in the aforesaid conventions in a similar way. However, there are differences as to the requirements for exceptions, i.e. as to the norms which determine which kind of disposal does not fall under the term "dumping" (differences in **bold** letters):

Figure 5: The Term "Dumping" in International Conventions

"dumping"	UNCLOS	LDC	OSPAR Convention
<i>means:</i>	<ul style="list-style-type: none"> Art. 1 para. 1 n° 5 a) -any deliberate disposal of <i>wastes or other matter</i> from vessels, aircraft, platforms or other man-made structures at sea; -any deliberate disposal of vessels, aircraft, platforms or other man-made structures at sea. 	<ul style="list-style-type: none"> Art. III n° 1 a) <i>corresponds to Art. 1 para. 1 n° 5 a) UNCLOS</i> 	<ul style="list-style-type: none"> Art. 1 f) -any deliberate disposal in the maritime area of <i>wastes or other matter</i> 1. from vessels or aircraft; 2. from offshore installations; -any deliberate disposal in the maritime area of 1. vessels or aircraft; 2. offshore installations and offshore pipelines.
<i>does not include:</i>	<ul style="list-style-type: none"> Art. 1 para. 1 n° 5 b) i) -the disposal of <i>wastes or other matter</i> incidental to, or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, other than wastes or other matter, transported by or to vessels, aircraft, platforms, or other man-made structures at sea, operating for the purpose of disposal of such matter or derived from the treatment of such wastes or other matter on such vessels, aircraft, platforms or structures. Art. 1 para. 1 n° 5 b) ii) -placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Convention. 	<ul style="list-style-type: none"> Art. III n° 1 b) <i>corresponds to Art. 1 para. 1 n° 5 b) UNCLOS</i> additionally: Art. III n° 1 c) -the disposal of wastes or other matter directly arising from, or related to the 	<ul style="list-style-type: none"> Art. 1 g) i) -the disposal in accordance with MARPOL 73/78 or other applicable international law, of <i>wastes or other matter</i> incidental to, or derived from, the normal operations of vessels or aircraft or offshore installations other than wastes or other matter transported by or to vessels or aircraft or offshore installations for the purpose of disposal of such wastes or other matter or derived from the treatment of such wastes or other matter on such vessels or aircraft or offshore installations. Art. 1 g) ii) -placement of matter for a purpose other than the mere disposal thereof, provided that, if the placement is for a purpose other than that for which the matter was originally designed or constructed, it is in accordance with the relevant provisions of the Convention. additionally: Art. 1 g) iii) -for the purposes of Annex III, the leaving wholly or partly in place of a disused offshore installation or disused offshore

		exploration, exploitation and associated off-shore processing of sea-bed mineral resources.	pipeline, provided that any such operation takes place in accordance with any relevant provision of the Convention and with other relevant international law.
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b) Regulations on Dumping under UNCLOS, LDC and OSPAR Convention

Figure 6: Regulations on Dumping under UNCLOS, LDC and OSPAR Convention

<i>Convention</i> • <i>global</i>	<i>Abbrevia- tion</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
United Nations Convention on the Law of the Sea	UNCLOS	Montego Bay, 10 December 1982	16 November 1994	<ul style="list-style-type: none"> • Obligation of the States: <ul style="list-style-type: none"> -to adopt laws and regulations and to take other measures to prevent, reduce and control pollution of the marine environment by dumping (Art. 210 para. 1 and 2); -such laws, regulations and measures shall ensure that dumping is not carried out without the permission of the competent authorities of States (Art. 210 para. 3). • Special: EEZ and continental shelf (Art. 210 para. 5): -dumping shall not be carried out without the express prior approval of the coastal State; -the coastal State has the right to permit, regulate and control such dumping after due consideration of the matter with other States which may be adversely affected thereby. • National Laws, regulations and measures: <ul style="list-style-type: none"> -shall be no less effective in preventing, reducing and controlling pollution by dumping than the global rules and standards (Art. 210 para. 6).
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	LDC	London, Mexico City, Moscow and Washington, 29 December 1972	30 August 1975	<ul style="list-style-type: none"> • Contracting Parties shall prohibit the dumping of any wastes or other matter in whatever form or condition <i>except as</i> otherwise specified below (Art. IV para. 1): -the dumping of wastes or other matter listed in Annex I (certain hazardous materials) is prohibited; -the dumping of wastes or other matter listed in Annex II requires a prior special permit (Art. III n° 5); -the dumping of all other wastes or matter requires a prior general permit (Art. III n° 6). • <i>Permits:</i> <ul style="list-style-type: none"> -shall be issued only after careful consideration of all the factors set forth in Annex III (Art. IV para. 2). -Contracting Parties shall designate an authority to deal with permits, keep records, and monitor the condition of the sea (Art. VI para. 1).

<i>Convention</i> • <i>regional</i>				
Convention for the Protection of the Marine Environment of the North-East Atlantic	OSPAR Convention	Paris, 22 September 1992	25 March 1998	<ul style="list-style-type: none"> • Obligation of the Contracting Parties (Art. 4): <ul style="list-style-type: none"> -to take, individually and jointly, all possible steps to prevent and eliminate pollution by dumping in accordance with the provisions of the Convention, in particular as provided for in Annex II: its Art. 3 para. 1 prohibits the dumping of <i>all wastes or other matter</i>, except for those wastes or other matter listed in para. 2 (among which is dredged material) and para. 3 of this Article; its Art. 4 para. 1 a) submits the dumping of <i>wastes or other matter listed in Art. 3 para. 2</i> to an authorization by the competent authorities of the Contracting Parties, or regulation. • Special: dumping of wastes or other matter <i>from offshore installations</i>: <ul style="list-style-type: none"> -is generally prohibited (Art. 3 para. 1 of Annex III).

c) *European Community Law on Waste*

The law on waste management of the Community comprises general provisions on the treatment of waste, special provisions dealing with special categories of waste and provisions on the import and export of waste.¹¹³

aa) The Directive on Waste 75/442/EEC

The Council Directive 75/442/EEC of 15 July 1975 on waste¹¹⁴ as a framework directive defines the notion of "waste" and establishes general obligations as to the dealing with it. But it also contains specific provisions for the conduct of Member States which are generally applicable if no individual Directives for particular categories of waste have been adopted on the basis of Art. 2 para. 2 of the Directive 75/442/EEC.¹¹⁵

According to Art. 1 a) of the Directive 75/442/EEC waste means any substance or object in the categories set out in Annex I which the holder discards or intends or is required to discard. Art. 3 et seq. of the Directive 75/442/EEC provides for rules on how to treat waste. According to the main concept of the common waste management policy as set out in Art. 3 para. 1 of the Directive 75/442/EEC, the *disposal of waste* is the **ultima ratio**.¹¹⁶ "*Disposal*" also means the *release* into **seas/ oceans** including **seabed insertion** (Art. 1 e) in connection with Annex IIA, n° D7, of the Directive 75/442/EEC). **Member States** are requested to take the necessary **measures** to ensure that waste is *disposed of* without endangering human health and without using processes or methods which could harm the environment, and in particular without risk to water, air, soil, plants and animals (Art. 4 subpara. 1 of the Directive 75/442/EEC). **Member States** shall also take the necessary **measures to prohibit** the abandonment, *dumping* or uncontrolled *disposal* of waste (Art. 4 subpara. 2 of the Directive 75/442/EEC).

¹¹³ A. Epiney, supra 29, p. 273.

¹¹⁴ Official Journal L 194, 25/07/1975 p. 39.

¹¹⁵ A. Epiney, supra 29, p. 273.

¹¹⁶ A. Epiney, supra 29, p. 275.

Finally the Member States have the duty according to Art. 6 of the Directive 75/442/EEC to establish or designate the **competent authority or authorities** to be responsible for the **implementation** of the Directive 75/442/EEC. This competent authority or authorities shall be required to draw up one or more **waste management plans** (Art. 7 of the Directive 75/442/EEC with further details).

bb) Special Provisions for Special Categories of Waste

Besides the general framework directive on waste, the Community law comprises a series of legislative acts related to special categories of waste which contain specific or complementary rules with due regard to their respective particularities.¹¹⁷

(1) The Council Directive 91/689/EEC of 12 December 1991 on *hazardous waste*¹¹⁸ imposes for a string of categories of waste classified as hazardous (listed in Annexes I and II) complementary requirements in particular as to control and supervision. Thus Art. 2 para. 1 of the Directive 91/689/EEC obliges the **Member States** to take the necessary **measures** to require that on every site where tipping (discharge) of hazardous waste takes place the waste is **recorded and identified**. Furthermore **Member States** shall take the necessary **measures** to **require** that establishment and undertakings which *dispose of*, recover, collect or transport hazardous waste **do not mix** different categories of hazardous waste or **mix** hazardous waste with non-hazardous waste (Art. 2 para. 2 of the Directive 91/689/EEC). The **requirement of authorization** for establishments and undertakings which *dispose of* hazardous waste is designed in a **more stringent way** than in the Directive 75/442/EEC (see Art. 3 of the Directive 91/689/EEC).¹¹⁹ In cases of emergency or grave danger, **Member States** shall take **all steps**, including, where appropriate, temporary derogations from the Directive 91/689/EEC, to **ensure** that hazardous waste is so dealt with as not to constitute a threat to the population or the *environment* (Art. 7 of the Directive 91/689/EEC).

(2) The Council Directive 75/439/EEC of 16 June 1975 on the disposal of *waste oils*¹²⁰ obliges the **Member States** to take the necessary **measures** to ensure that waste oils are collected and *disposed of* without causing any avoidable damage to man and the environment (Art. 2 of the Directive 75/439/EEC). These measures include, inter alia, the **prohibition** of any *discharge* of waste oils into inland surface water, ground water, territorial sea water and drainage systems and the **prohibition** of any *deposit and/ or discharge* of waste oils harmful to the soil and any uncontrolled *discharge* of residues resulting from the processing of waste oils (Art. 4 a) and b) of the Directive 75/439/EEC). In order to comply with these measures, any undertaking which *disposes of* waste oils must obtain a **permit** (Art. 6 para. 1 of the Directive 75/439/EEC). "*Disposal*" hereby means the processing or destruction of waste oils as well as their storage and *tipping* above or under the ground (Art. 1 of the Directive 75/439/EEC).

¹¹⁷ A. Epiney, supra 29, p. 277.

¹¹⁸ Official Journal L 377, 31/12/1991 p. 20.

¹¹⁹ A. Epiney, supra 29, p. 278.

¹²⁰ Official Journal L 194, 25/07/1975 p. 23.

(3) The Council Directive 78/176/EEC of 20 February 1978 on *waste from the titanium dioxide industry*¹²¹ requires the **Member States** to take the necessary **measures** to ensure that such waste is *disposed of* without endangering human health and without harming the *environment*, and in particular without risk to water, air, soil and plants and animals (Art. 2 of the Directive 78/176/EEC). "*Disposal*" means in particular (Art. 1 para. 2 c) of the Directive 78/176/EEC):

- the collection, sorting, transport and treatment of waste as well as its storage and *tipping* above ground or underground and its *injection* into the ground;
- the **discharge** of waste into surface water, ground water and the **sea**, and **dumping at sea**.

The *discharge*, *dumping*, storage, *tipping* and *injection* of waste from the titanium dioxide industry is **prohibited unless prior authorization is issued by the competent authority of the Member State** in whose territory the waste is produced. Prior authorization must also be issued by the competent authority of the Member State in whose territory such waste is *discharged*, stored, *tipped* or *injected* or from whose territory it is *discharged* or *dumped* (Art. 4 para. 1 of the Directive 78/176/EEC). Authorization may be granted for a limited period only and may be renewed (Art. 4 para. 2 of the Directive 78/176/EEC). In the case of *discharge* or *dumping*, the **competent authority** may, in accordance with Art. 2 of the Directive 78/176/EEC, and on the basis of the information supplied in accordance with Annex I of the Directive 78/176/EEC, grant the **authorization**, provided that (Art. 5 of the Directive 78/176/EEC):

- the waste cannot be disposed of by more appropriate means;
- an assessment carried out in the light of available scientific and technical knowledge shows that there will be no deleterious effect, either immediate or delayed, on the aquatic environment;
- there is no deleterious effect on boating, fishing, leisure activities, the extraction of raw materials, desalination, fish and shellfish breeding, on regions of special scientific importance or on other legitimate uses of the waters in question.

In the case of storage, *tipping* or *injection*, the **competent authority** may, in accordance with Art. 2 of the Directive 78/176/EEC, and on the basis of the information supplied in accordance with Annex I, grant the **authorization**, provided that (Art. 6 of the Directive 78/176/EEC):

- the waste cannot be disposed of by more appropriate means;
- an assessment carried out in the light of available scientific and technical knowledge shows that there will be no detrimental effect, either immediate or delayed, on underground waters, the soil or the atmosphere;
- there is no deleterious effect on leisure activities, the extraction of raw materials, plants, animals, on regions of special scientific importance or on other legitimate uses of the environment in question.

The **competent authority**, however, is also obliged to take **all appropriate steps to remedy** one of the following situations and, if necessary, to require the **suspension** of *discharge*, *dumping*, storage, *tipping* or *injection* operations (Art. 8 para. 1 of the Directive 78/176/EEC):

- if the results of the monitoring provided for in Annex II (A) (1) show that the conditions for the prior authorization referred to in Art. 4, 5 and 6 of the Directive 78/176/EEC have not been fulfilled, or

if the results of the acute toxicity tests referred to in Annex II (A) (2) show that the limits laid down therein have been exceeded, or

¹²¹ Official Journal L 54, 25/02/1978 p. 19.

- if the results of the monitoring provided for in Annex II (B) reveal a deterioration in the environment concerned in the area under consideration, or
- if *discharge* or *dumping* produces a deleterious effect on boating, fishing, leisure activities, the extraction of raw materials, desalination, fish and shellfish breeding, on regions of special scientific importance or on other legitimate uses of the waters in question, or
- if storage, *tipping* or *injection* produces a deleterious effect on leisure activities, the extraction of raw materials, plants, animals, on regions of special scientific importance or on other legitimate uses of the environment in question.

cc) Shipments of Waste

The transport of waste is ruled by Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community¹²². Its adoption must be seen in the context with the Basle Convention of 22 March 1989 on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basle Convention). Regulation 259/93/EEC prescribes – differentiating as to the category of waste, the country of destination and the purpose of transport (disposal and recovery) – different procedures which must be respected when transporting waste. In special constellations the Regulation also prohibits the transport of waste. Within the Community the **Member States** in principle have the **possibility** to **prohibit** the *transport* or to **raise objections**.¹²³

Regulation 259/93/EEC applies to shipments of waste within, into and out of the Community, excluding the offloading to shore of waste generated by the normal operation of ships and offshore platforms, including waste water and residues, provided that such waste is the subject of a specific binding international instrument (Art. 1 para. 1 and 2 a) of the Regulation 259/93/EEC).

The shipments of waste *between Member States* is subject of Title II (Art. 3 et seq. of the Regulation 259/93/EEC) which differentiates between transport of waste for *disposal* and transport of waste for recovery. With regard to the transport of waste for disposal Regulation 259/93/EEC provides a detailed notification system which shall guarantee the registration and control of each transboundary transport of waste. In the end this is just a **kind of authorization procedure** as the legality of the *import* of waste depends on the **prior authorization from the competent authority of destination** (Art. 5 para. 1 of the Regulation 259/93/EEC).¹²⁴ In order to implement the principles of proximity, priority for recovery and self-sufficiency at Community and national levels in accordance with the Directive 75/442/EEC, Art. 4 para. 3 a) i) of the Regulation 259/93/EEC grants to the **Member States** the opportunity, to take measures in accordance with the EC-Treaty to **prohibit** generally or partially or to **object** systematically to shipments of waste for *disposal*. These "exception clauses" give to the Member States **far-reaching possibilities** to **restrict** the *import and export* of waste to the end that Regulation 259/93/EEC constitutes a renunciation to the principle of open borders in the field of waste management.¹²⁵

The aforementioned provisions do not apply to shipments *within a Member State* (Art. 13

¹²² Official Journal L 30, 06/02/1993 p. 1.

¹²³ A. Epiney, supra 29, p. 281.

¹²⁴ A. Epiney, supra 29, p. 282.

¹²⁵ A. Epiney, supra 29, p. 282.

para. 1 of the Regulation 259/93/EEC). Art. 13 para. 2 of Regulation 259/93/EEC however obliges the **Member States** to establish an **appropriate system for the supervision and control** of shipments of waste within their jurisdiction. This system should take account of the need for coherence with the Community system established by the Regulation 259/93/EEC.

Title IV (Art. 14 et seq.) of the Regulation 259/93/EEC) regulates the *exports* of waste by differentiation also between waste for disposal and waste for recovery. For waste for *disposal* Art. 14 para. 1 of the Regulation 259/93/EEC establishes a **general prohibition of export** except to EFTA countries which are also Parties to the Basle Convention.

Title V (Art. 19 et seq.) of the Regulation 259/93/EEC which rules on *imports of waste into the Community* follows similar principles. All imports of waste for *disposal* into the Community shall be **prohibited** except those from EFTA countries which are Parties to the Basle Convention, other countries which are Parties to the Basle Convention or with which the Community and its Member States or with which individual Member States have concluded corresponding bilateral or multilateral agreements or arrangements (Art. 19 para. 1 of the Regulation 259/93/EEC).

Title VI (Art. 23 et seq.) of the Regulation 259/93/EEC provides for special notification procedures for the *transit* of waste from outside and through the Community for disposal or recovery outside the Community. Here the **Member States** have far-reaching possibilities to **deny** the transit.¹²⁶

6. The Exploration and Exploitation, the Conservation and Management of the Non-Living Natural Resources - Mining Activities

Mining activities can ideal-typically be classified in two variants:¹²⁷

- exploitation of resources which are at the same time the living ground for marine flora and fauna (I);
- winning of hydrocarbons and other minerals without long-term intensive use of the sea-bed (II).

As far as variant I is concerned, the primary aim of protection is the conservation of habitats worth of protection, whereas for variant II this is rather the prevention of pollution of the marine environment. The focus of mining activities in the North Sea is the exploitation of oil and gas.

Many of the legal basis described bellow exclusively or primarily concern pollution. They are mentioned on account of completeness.

a) The Exploration and Exploitation, the Conservation and Management of the Non-Living Natural Resources in the EEZ

In the EEZ, the **coastal State** has **sovereign rights** for the purpose of *exploring* and *exploiting*, *conserving* and *managing* the non-living natural resources of the sea-bed and its subsoil (Art. 56 para. 1 a) UNCLOS). Pursuant to Art. 56 para. 3 UNCLOS these rights shall be exercised in accordance with Part VI of UNCLOS, which provides for the status of the continental shelf and its resources.

¹²⁶ A. Epiney, supra 29, p. 283.

¹²⁷ See D. Czybulka, Probleme des küstennahen marinen Bergbaus aus naturschutzrechtlicher Sicht, in: German Journal of Hydrography, Supplement 8 (1999) p. 155.

b) The Exploration of the Continental Shelf and the Exploitation of its Non-Living Natural Resources

The non-living natural resources of the continental shelf régime consist of the mineral and other non-living resources of the sea-bed and subsoil (Art. 77 para. 4 UNCLOS).

According to Art. 77 para. 1 UNCLOS the **coastal State** exercises over the continental shelf **sovereign rights** for the purpose of *exploring* it and *exploiting* its natural resources. These rights:

- are **exclusive** in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the **express consent of the coastal State** (Art. 77 para. 2 UNCLOS);
- do not depend on occupation, effective or notional, or on any express proclamation (Art. 77 para. 3 UNCLOS).

The coastal State has, however, also the obligation to make payments or contributions in kind in respect of the exploitation of the non-living resources of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured (Art. 82 para. 1 UNCLOS).

The **exclusive right to authorize and regulate drilling** on the continental shelf is granted by Art. 81 UNCLOS exclusively to the **coastal State**.

c) Development of and Rights over Resources of the Area

For the purpose of Part XI of UNCLOS, which provides for the statues of the Area and its resources, "resources" means all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the sea-bed, including polymetallic nodules; resources, when recovered from the Area, are referred to as "minerals" (Art. 133 UNCLOS). The interest focuses in the first place on polymetallic nodules, which mainly contain the mineral resources manganese (24%), nickel (1,6%), copper (1,4%) and cobalt (0,21%).¹²⁸

According to Art. 137 para. 1 UNCLOS no State shall claim or exercise sovereign rights over the resources of the Area. The **rights to the resources**, which belong to the whole mankind (Art. 137 para. 2), are managed by the **International Sea-Bed Authority (ISBA)** established on Art. 156 et seq. UNCLOS. Through the **ISBA** State Parties shall **organize** and **control** activities in the Area, particularly with a view to administering the resources of the Area (Art. 157 para. 1 UNCLOS).

The functions, management and membership of the ISBA have been affected by the adoption of the Agreement on the Implementation of Part XI of the Convention¹²⁹, which was negotiated to facilitate universal participation in the UNCLOS after a number of mainly industrialized countries expressed difficulties with the UNCLOS' seabed mining provisions. The Agreement addresses a number of those difficulties, particularly the early functioning of the ISBA and decision-making within its organs.¹³⁰ The provisions of the Agreement and Part XI of UNCLOS shall be interpreted and applied together as a single instrument, but in the event of any consistency the Agreement shall prevail (Art. 2 para. 1 of the Agreement).

According to Art. 137 para. 2 UNCLOS the minerals recovered from the Area may only be *alienated* in accordance with Part XI of UNCLOS and the **rules, regulations and procedures**

¹²⁸ K. Ipsen, supra 11, p. 776.

¹²⁹ Entry into force: 28 July 1996.

¹³⁰ Source: "Oceans and Law of the Sea: International Organizations and Institutions" (<http://www.un.org/Depts/los/losio.htm>).

of the ISBA. No State or natural or juridical person shall claim, acquire or exercise rights with respect to the minerals recovered from the Area except in accordance with Part XI of UNCLOS (Art. 137 para. 3 UNCLOS).

Rights and legitimate interests of coastal States are provided for in Art. 142 UNCLOS. Para. 1 provides that activities in the Area, with respect to resource deposits in the Area which lie across limits of national jurisdiction, shall be conducted with due regard to the rights and legitimate interests of any coastal State across whose jurisdiction such deposits lie. Consultations shall be maintained with the State concerned or in cases where activities in the Area may result in the exploitation of resources lying within national jurisdiction the **prior consent of the coastal State concerned** even shall be required (Art. 142 para. 2 UNCLOS). Pursuant to Art. 142 para. 3 UNCLOS the **coastal States** have the **right** to take such **measures** consistent with their legislative and enforcement powers according to Part XII of UNCLOS as may be necessary **to prevent, mitigate or eliminate** grave and imminent *danger* to their coastline, or related interests from pollution or threat thereof or from other hazardous occurrence resulting from or caused by any activities in the Area.

Art. 150 et seq. UNCLOS extensively regulates the development of resources of the Area. Art. 150 UNCLOS provides that for activities in the Area the following *policies* shall apply. Activities shall be carried out in such manner as:

- to foster healthy development of the world economy and balanced growth of international trade, and
- to promote international co-operation for the over-all development of all countries, and with a view to ensuring, inter alia:
 - the development of the resources of the Area;
 - orderly, safe and rational management of the resources of the Area, including the efficient conduct of activities in the Area and, in accordance with the sound principles of conservation, the avoidance of unnecessary waste;
 - increased availability of the minerals derived from the Area as needed in conjunction with the minerals derived from other sources, to ensure supplies to consumers of such minerals;
 - the enhancement of opportunities for all State Parties, irrespective of their social and economic systems or geographical location, to participate in the development of the resources of the Area and the prevention of monopolization of activities in the Area;
 - the development of the common heritage for the benefit of mankind as a whole.

Art. 151 UNCLOS comprises *production policies*, for which the ISBA claims a decisive role with view to the fostering of the growth, efficiency and stability of markets for those commodities produced from the minerals derived from the Area, at prices remunerative to producers and fair consumers.

Activities in the Area are **organized, carried out and controlled by the ISBA** on behalf of mankind as a whole pursuant to Art. 153 para. 1 UNCLOS. The **ISBA** shall exercise such **control** over the activities as is necessary for the purpose of securing compliance with the relevant provisions of Part XI of UNCLOS and the Annexes relating thereto, and the rules, regulations and procedures of the ISBA, and the plans of work, which must be elaborated in accordance with Art. 153 para. 3 UNCLOS for activities in the Area (Art. 153 para. 4 UNCLOS). When doing so, State Parties shall assist the ISBA. Art. 153 para. 5 UNCLOS grants the **ISBA** an **enforcement power** to ensure compliance with the provisions of Part XI of UNCLOS and the exercise of the functions of control and regulation assigned to it thereunder or under any contract.

d) International Environmental Law with Regard to Marine Mining

Figure 7: International Environmental Law with Regard to Marine Mining

<i>Convention</i> • <i>global</i>	<i>Abbrevia- tion</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
United Nations Convention on the Law of the Sea	UNCLOS	Montego Bay, 10 December 1982	16 November 1994	<ul style="list-style-type: none"> • <i>Pollution by mining activities:</i> -Obligation of the States to take all measures necessary (Art. 194 para. 1 and 2): to prevent , reduce and control pollution of the marine environment; to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment; to ensure that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with UNCLOS. -These measures shall include: those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life (Art. 194 para. 5). • Obligation of the States: -to assess the potential effects of mining activities on the marine environment (see Art. 206). • Special in the Area (Art. 145): -Obligation to take necessary measures with respect to mining activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. -To this end the ISBA shall adopt appropriate rules, regulations and procedures for inter alia: the prevention, reduction and control of pollution and other hazards to the marine environment and of interference with the ecological balance of the marine environment, particular attention being paid to the need for protection from harmful effects of such activities as drilling, dredging and excavation; the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment.
Convention on the Conservation of Migratory Species of Wild Animals	CMS	Bonn, 23 June 1979	1 November 1983	<ul style="list-style-type: none"> • Obligation of the Parties that are Range States of a migratory species listed in Appendix I to endeavour: -to conserve and, where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from danger of extinction (Art. III para. 4 a)); -to prevent, remove, compensate for or minimize, as appropriate, the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species (Art. III para. 4 b)).

				<ul style="list-style-type: none"> • Obligation of the Parties that are Range States of migratory species listed in Appendix II to endeavour: <ul style="list-style-type: none"> -to conclude agreements where these would benefit the species (Art. IV para. 3); each agreement should provide for, but not be limited to inter alia: <ul style="list-style-type: none"> conservation and, where required and feasible, restoration of the habitats of importance in maintaining a favourable conservation status, and protection of such habitats from disturbance (Art. V para. 5 e)); elimination of, to the maximum extent possible, or compensation for activities and obstacles which hinder or impede migration (Art. V para. 5 h)).
Convention on Biological Diversity	CBD	Rio de Janeiro, 5 June 1992	29 December 1993	<ul style="list-style-type: none"> • Principle: States have (Art. 3): <ul style="list-style-type: none"> -the sovereign right to exploit their own resources pursuant to their own environmental policies, and -the responsibility to ensure that activities do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. • Special obligations of the Contracting Parties: <ul style="list-style-type: none"> -to identify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, and monitoring of their effects through sampling and other techniques (Art. 7 c)); -to introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to <i>avoiding</i> or <i>minimizing</i> such effects (Art. 14 para. 1 a)). • Obligation of the Contracting Parties to adopt in situ-measures, among which are: <ul style="list-style-type: none"> -to promote the protection of ecosystems and natural habitats (Art. 8 d)); -to rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies (Art. 8 f)); -to endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components (Art. 8 i)); -where a significant effect on biological diversity has been determined pursuant to Art. 7 c), to regulate or manage the relevant processes and categories of activities (Art. 8 l)).
<i>Convention</i> • <i>regional</i>				
Convention on	Berne	Berne,	1 June 1982	<ul style="list-style-type: none"> • Obligation of the Contracting Parties to

the Conservation of European Wildlife and Natural Habitats	Convention	19 September 1979		<p>protect habitats (Art. 4):</p> <ul style="list-style-type: none"> -to take appropriate and necessary legislative and administrative measures to ensure the conservation of the habitats of the wild flora and fauna species and the conservation of endangered natural habitats (para. 1); -in their planning and development policies to have regard to the conservation requirements of the areas protected under para. 1, so as to avoid or minimize as far as possible any deterioration of such areas (para. 2) -to give special attention to the protection of areas that are of importance for the migratory species specified in Appendix II and III and which are appropriately situated in relation to migration routes, as wintering, staging, feeding, breeding or moulting areas (para. 3). <ul style="list-style-type: none"> • Special obligation of the Contracting Parties to take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II, in particular: <ul style="list-style-type: none"> -to prohibit the deliberate damage to or destruction of breeding or resting sites (Art. 6 b)).
Convention for the Protection of the Marine Environment of the North-East Atlantic	OSPAR Convention	Paris, 22 September 1992	25 March 1998	<ul style="list-style-type: none"> • General obligation of the Contracting Parties: <ul style="list-style-type: none"> -taking into account the criteria set forth in Appendix 1 to define with respect to programmes and measures the application of best available techniques and <i>best environmental practice</i>, including, where appropriate, <i>clean technology</i> (Art. 2 para. 3 b i)); -in carrying out such programmes and measures, to ensure the application of best available techniques and <i>best environmental practice</i> as so defined, including, where appropriate, <i>clean technology</i> (Art. 2 para. 3 b ii)). • Special obligations of the Contracting Parties: <ul style="list-style-type: none"> -to undertake and publish regular assessments of the quality status of the marine environment and of its development, for the maritime area or for regions or sub-regions thereof in accordance with the provisions of the Convention, in particular as provided for in Annex IV (Art. 6 a)); -to take all possible steps to prevent and eliminate <i>pollution</i> from offshore sources in accordance with the provisions of the Convention, in particular as provided for in Annex III (Art. 5): the use on, or the discharge or emission from, offshore sources of substances which may reach and affect the maritime area shall be strictly subject to authorization or regulation by the competent authorities of the Contracting Parties (Art. 4 para. 1 of Annex III).
Agreement on the	AEWA	The Hague, 16 June 1995	1 November 1999	<ul style="list-style-type: none"> • Obligation of the Parties (Art. III para. 2 e)): <ul style="list-style-type: none"> -to investigate problems that are posed or are

Conservation of African-Eurasian Migratory Waterbirds				<p>likely to be posed by <i>human activities</i> and endeavour to implement remedial measures, including habitat rehabilitation and restoration, and compensatory measures for loss of habitats.</p> <ul style="list-style-type: none"> • Obligation of the Parties to undertake actions consistent with the general conservation measures specified in Art. III pursuant to an action plan which is appended as Annex 3 (Art. IV para. 1); under the heading "Management of Human Activities" (para. 4 of Annex 3) the following actions are listed inter alia: <ul style="list-style-type: none"> -to assess the impact of proposed projects which are likely to lead to conflicts between populations listed in Table 1 that are in the areas referred to in para. 3.2 of Annex 3¹³¹ and human interests, and to make the results of the assessment publicly available (para. 4.3.1 of Annex 3); -to endeavour to take measures to limit the level of threat to the conservation status of waterbirds listed in Table 1 by human disturbance. Appropriate measures might include, inter alia, the establishment of disturbance-free zones in protected areas where public access is not permitted (para. 4.3.6 of Annex 3).
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e) *European Community Law*

In its Memorandum on the Application of the Constitutive Treaty of the European Economic Community to the Continental Shelf of 18 September 1970¹³² the Commission declared Community law ipso facto applicable in the area of the continental shelf as far as no other special rules expressis verbis exclude the applicability. This legal view may be deemed as correct.¹³³

Community law though contains no special regulations on exploration and exploitation, conservation and management of non-living natural marine resources. In the first place the market freedoms do apply. In the second place two Community legislative acts are of relevance: the Directive 94/22/EC of the European Parliament and of the Council of 30 May 1994 on the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons¹³⁴ and the Council Directive 85/337/EEC of 27 June on the assessment of the effects of certain public and private projects on the environment¹³⁵.

aa) The Directive 94/22/EC

The Directive 94/22/EC clarifies in Art. 2 para. 1 that **Member States** retain the **right to determine** the areas **within their territory** (also with regard to their EEZ and continental

¹³¹ See above B. I. 1 a).

¹³² Bull. EC 11/1970, pp. 51 and 52.

¹³³ London High Court, judgement of 5 November 1999, file number: CO/1336/1999; D. Czybulka, NuR 1999, p. 562 et seq. (565).

¹³⁴ Official Journal L 164, 30/06/1994 p. 3.

¹³⁵ See above B. II. 3. f).

shelf¹³⁶) to be made available for the exercise of the activities of prospecting, exploring for and producing hydrocarbons. But they also must ensure that there is no discrimination between entities as regards access to and exercise of these activities (Art. 2 para. 2 subpara. 1 of the Directive 94/22/EC). The **Member States** are requested to take the necessary **measures** to ensure that **authorizations** are granted following a procedure in which all interested entities may submit applications (Art. 3 para. 1 of the Directive 94/22/EC). For such a procedure the Directive 94/22/EC provides for certain requirements, inter alia **Member States** may, to the extent justified by *protection of the environment* and *protection of biological resources*, impose **conditions and requirements** on the exercise of the activities of prospecting, exploring for and producing hydrocarbons (Art. 6 para. 2 of the Directive 94/22/EC).

bb) The Directive 85/337/EEC

Annex I of the Directive 85/337/EEC embraces projects, which shall be made subject to an **obligatory assessment** (Art. 4 para. 1 of the Directive 85/337/EEC). Point 14 of Annex I lists extraction of petroleum and natural gas for commercial purposes where the amount extracted exceeds 500 tonnes/day in the case of petroleum and 500 000 m³/day in the case of gas.

In point 2 c) of the Annex II extraction of minerals by marine dredging is listed. With regard to the projects listed in Annex II Member States shall determine through a case-by-case examination or thresholds or criteria set by the Member States whether the project shall be made subject to an assessment (Art. 4 para. 2 subpara. 1 of the Directive 85/337/EEC).

For the implementation of the tasks deriving from the Directive 85/337/EEC, the Member States determine the respective **competent authority or authorities** (Art. 1 para. 3 of the Directive 85/337/EEC).

7. The Exploration and Exploitation, the Conservation and Management of the Living Natural Resources – in Particular Fisheries

First it must be stressed that still many of the non-answered questions exist as to the relationship between the common fisheries rules described under g) and EC-nature protection law as well as between the basis of international law discussed below with regard to the exploration and exploitation, conservation and management of the living natural marine resources and international rules on nature conservation (protection of species and ecosystems).

a) The Exploration and Exploitation, the Conservation and Management of the Living Natural Resources in the EEZ

The EEZ régime of UNCLOS provides for rights and duties of coastal states with regard to an area beyond and adjacent to the territorial sea (Art. 55 UNCLOS). Therefore the EEZ régime is deemed as final regulation on the exclusive sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural living resources of the waters superjacent to the sea-bed in the sense of Art. 56 para. 1 a) UNCLOS also with view to the formerly established so-called fishery zones of the coastal States and the European Community.¹³⁷

¹³⁶ See above A. II. 4.

¹³⁷ Main school in literature, see *W. Burke*, *The New International Law of Fisheries*, 1994, p. 43 with further quotations in footnote 51.

The sovereign rights for the purpose of exploring and exploiting the living natural resources refer to all private and public functions regarding the living resources including all activities of the commercial sport fisheries like the exploration of fish populations, fishing practices, the taking aboard and the processing there, the transport, the landing etc.

The sovereign rights for the purpose of conserving and managing the natural resources comprise the judicious dealing with the resources by measures like the collecting and transferring of information, procedures for the determining of the allowable extent of its use, the co-ordination in respect of time, area, technique or other restrictions or regulations with regard to the means of the exploration and exploitation of the living resources and the economic aspect of fisheries like investment, state aids, taxes etc.¹³⁸

Art. 61 and 62 UNCLOS specifies the **sovereign rights of the coastal State** as to the living resources.

The *conservation of the living resources* lies **exclusively within the competence of the coastal State**: According to Art. 61 para. 1 UNCLOS the coastal State has the right and the obligation to determine **the (total) allowable catch** of the living resources in its EEZ. In this context the **coastal State** shall ensure through proper **conservation and management measures**:

- that the maintenance of the living resources is not endangered by over exploitation (Art. 61 para. 2 UNCLOS), and
- that populations of harvested species are maintained and restored at levels which can produce the maximum sustainable yield, as qualified by relevant *environmental* and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standard, whether subregional, regional or global (Art. 61 para. 3 UNCLOS),

however, when doing so, the coastal State shall take into consideration the effects on species associated with or dependent upon harvested species (Art. 61 para. 4 UNCLOS).

The competence of the **coastal State** as to the *use of the living resources* is provided for in Art. 62 UNCLOS: According to Art. 62 para. 1 UNCLOS the coastal State shall promote the objective of optimum utilization of the living resources in the EEZ. In order to achieve this aim the coastal State shall (Art. 62 para. 2 UNCLOS):

- determine its capacity to harvest the living resources of the EEZ and,
- through agreements or other arrangements and pursuant to the terms, conditions, laws and regulations referred to in para. 4, give other States access to the surplus of the allowable catch, where the coastal State does not have the capacity to harvest the entire allowable catch.

Thus the **coastal State** enjoys **priority** as to the *use of the living resources* in the EEZ but it has **no exclusive right of exploitation**. But as it has the right according to Art. 62 para. 1 in connection with Art. 61 UNCLOS to link its decision on its catch capacity with the determination of the total allowable catch (TAC) and with proper conservation and management measures, the coastal State has a very wide discretion in determining the surplus which should be assigned to other States.¹³⁹ Art. 62 para. 4 UNCLOS grants to the **coastal States** an extensive right to adopt **laws and regulations** on conservation measures and management conditions. These laws and regulations must be respected by the nationals of other States fishing in the EEZ.

¹³⁸ For these definitions see *W. Burke*, supra 137, p. 41.

¹³⁹ *K. Ipsen*, supra 11, p. 746.

Art. 64 to 67 UNCLOS contain special species-related provisions for the distribution of the rights as to certain species¹⁴⁰ among the States and for the specification of these rights. Finally special rules are provided for in Art. 63 UNCLOS for stocks occurring within the EEZs of two or more coastal States or both within the EEZ and in an area beyond and adjacent to it ("*straddling stocks*").¹⁴¹

The EEZ régime does not apply to sedentary species as defined in Art. 77 para. 4 UNCLOS (Art. 68 UNCLOS), i.e. to organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil. Here the continental-shelf-régime of Art. 76 et seq. UNCLOS applies.

b) The Exploitation of the Living Natural Resources of the Continental Shelf

The living natural resources of the continental shelf consist of the living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil (Art. 77 para. 4 UNCLOS).

According to Art. 77 para. 1 UNCLOS the **coastal State** exercises over the continental shelf **sovereign rights** for the purpose of *exploring* it and *exploiting* its natural resources. These rights:

- are **exclusive** in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the **express consent of the coastal State** (Art. 77 para. 2 UNCLOS);
- do not depend on occupation, effective or notional, or on any express proclamation (Art. 77 para. 3 UNCLOS).

c) The Conservation and Management of the Living Resources of the High Seas

Fishing belongs pursuant to Art. 87 para. 1 e) UNCLOS to the freedom of the high seas. **All States** have the **right** for their nationals to engage in fishing on the high seas subject to their treaty obligations and the rights and duties as well as the interests of coastal States provided for in the EEZ régime (Art. 116 a) and b) UNCLOS).

Art. 117 UNCLOS restricts the right of the States following from Art. 116 UNCLOS to the extent that it imposes on them the **duty** (meanwhile probably also deriving from international custom¹⁴²) 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. In doing so States shall according to Art. 119 para. 1 UNCLOS:

- take measures which are designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, and
- take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent

¹⁴⁰ Highly migratory species (Art. 64 UNCLOS); marine mammals (Art. 65 UNCLOS); anadromous stocks (Art. 66 UNCLOS), e.g. *salmon*; catadromous species (Art. 67 UNCLOS).

¹⁴¹ See for more to this below B. II. 7. d).

¹⁴² *K. Ipsen*, supra 11, p. 770.

species above levels at which their reproduction may become seriously threatened. Art. 119 para. 3 UNCLOS provides for a principle of non-discrimination as to the protection of fishermen of another State with regard to conservation measures and their implementation.

With view to the conservation and management of marine mammals in the high seas Art. 120 UNCLOS refers to the respective provisions of the EEZ régime.

d) In Particular: Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks

The so called straddling fish stocks and highly migratory species were not finally dealt with in the UNCLOS. Straddling fish stocks are those stocks of associated species which occur both within the EEZ and in an area beyond and adjacent to the zone (e.g. *cod* and *shell fish*). Highly migratory species are such which migrate long distances through the high seas and the EEZ of several States (z. B. *tuna* and *sword fish*).¹⁴³

The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1992 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks was one of the concrete results of the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil in 1992. The Agreement was adopted by the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks on 4 August 1995 but is not yet in force.¹⁴⁴

The objective of the Agreement is to ensure the *long-term conservation and sustainable use* of straddling fish stocks and highly migratory fish stocks through **effective implementation** of the relevant provisions of UNCLOS (Art. 2 of the Agreement). The Agreement elaborates on the fundamental principle, established in Art. 61 para. 2, Art. 63, Art. 64 para. 1 and Art. 118 UNCLOS, that States should co-operate to ensure conservation and promote the objective of the optimum utilization of fisheries resources both **within and beyond the EEZ**. Art. 5 of the Agreement obliges **coastal States** and **States fishing on the high seas**, inter alia:

- to adopt **measures** to ensure the *long-term sustainability* of straddling fish stocks and highly migratory fish stocks and promote the objective of their *optimum utilization*;
- to ensure that such measures are based on the best scientific evidence available and are designed to maintain or restore stocks at levels capable of producing *maximum sustainable yield*, as qualified by relevant environmental and economic factors and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global;
- to apply the *precautionary approach* widely to conservation, management and exploitation of said fish stocks;
- to *assess the impacts* of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks;
- to adopt, where necessary, **conservation and management measures** for species belonging to the same ecosystem or associated with or dependent upon the target stocks, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened;

¹⁴³ K. Ipsen, supra 11, p. 770.

¹⁴⁴ Source: "Oceans and Law of the Sea - Convention Overview" (<http://www.un.org/Depts/los/losconv2.htm>).

- to **protect biodiversity** in the marine environment (apparently an ecosystem approach);
- to take **measures to prevent or eliminate** *overfishing* and *excess fishing capacity* and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources;
- to implement and enforce conservation and management measures through effective **monitoring, control and surveillance**.

These general principles are specified by the following provisions in the Agreement.

Further, the provision in Art. 8 para. 4 of the Agreement is remarkable, which **for the first time** includes a **restriction by international law on the access to the freedom of fishing on the high seas**.¹⁴⁵ Accordingly *only* those States which are members of a subregional or regional fisheries management organization or participants in arrangements, taking into account the specific characteristics of the subregion or region, or which agree to apply the conservation and management measures established by such organization or arrangement, shall have **access** to the fishery resources to which those measures apply.

e) International Organizations and Commissions Relating to Certain Living Marine Resources

aa) The Food and Agriculture Organization (FAO)

The Food and Agriculture Organization (FAO) of the United Nations (UN) was founded in October 1945. It is the largest autonomous agency within the UN system with about 175 Member States plus the European Community (EC). A specific priority of the organization is encouraging sustainable agriculture and rural development, a long-term strategy for the conservation and management of natural resources, also of the living marine resources.¹⁴⁶

In this context FAO has adopted a Major Programme on Fisheries which aims to promote sustainable development of responsible fisheries and contribute to food security.¹⁴⁷

An important FAO instrument is the Code of Conduct for Responsible Fisheries which was adopted by the Twenty-eighth Session of the FAO Conference on 31 October 1995. The legal relevance of the Codes however is not clear. It sets out principles and international standards of behaviour for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for the ecosystems and biodiversity. In this respect the Code takes into account the biological characteristics of the resources and their environment. States and all those involved in fisheries are encouraged to **apply** the Code and **give effect** to it. Art. 4 of the Code requires the **FAO Committee on Fisheries (COFI)** to **monitor** the application and implementation of the Code.¹⁴⁸

The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the **High Seas** (Compliance Agreement) is an integral component of the Code of Conduct for Responsible Fisheries (Preamble of the Compliance Agreement). It is not yet in force. The European Community is also among the Contracting Parties.

¹⁴⁵ K. Ipsen, *supra* 11, p. 772.

¹⁴⁶ Source: "FAO: What it is, What it does" (<http://www.fao.org/UNFAO/WHATITIS.HTM>).

¹⁴⁷ Source: "FAO Fisheries Department - Homepage" (<http://www.fao.org/fi/default.asp>).

¹⁴⁸ Source: "FAO Fisheries Department Code of Conduct for Responsible Fisheries" (<http://www.fao.org/fi/agreem/codecond/codecon.asp>).

Art. III of the Compliance Agreement establishes the responsibilities of the **Parties in their capacity as flag States**, among which are:

- to take **measures** as may be necessary to ensure that fishing vessels entitled to fly its flag do not engage in any activity that undermines the effectiveness of international conservation and management measures (para. 1 a));
- **not to allow** any fishing vessel entitled to fly its flag to be used for fishing on the high seas unless it has been **authorized** to be so used **by the appropriate authority or authorities of that Party**. A fishing vessel so authorized shall fish in accordance with the conditions of the authorization (para. 2);
- **not to authorize** any fishing vessel entitled to fly its flag to be used for fishing on the high seas **unless** the Party is satisfied that it is able, taking into account the links that exist between it and the fishing vessel concerned, to exercise effectively its responsibilities under the Compliance Agreement in respect of that fishing vessel (para. 3);
- in principle **not to authorize** any fishing vessel previously registered in the territory of another party that has undermined the effectiveness of international conservation and management measures to be used for fishing on the high seas (para. 5)
- to take **enforcement measures** in respect of fishing vessels entitled to fly its flag which act in contravention of the provisions of the Compliance Agreement, including, where appropriate, making the contravention of such provisions an offence under national legislation. Sanctions applicable in respect of such contravention shall, for serious offences, include **refusal, suspension or withdrawal of the authorization** to fish on the high seas (para. 8).

Furthermore the Compliance Agreement requires Parties to exchange information on vessels authorized by them to fish on the high seas, and obliges FAO to facilitate this information exchange (Art. VI in connection with Art. IV of the Compliance Agreement).

bb) The International Council for the Exploration of the Sea (ICES) and the North East Atlantic Fisheries Commission (NEAFC)

The International Council for the Exploration of the Sea (ICES) currently operates under the terms of its 1964 Convention. ICES is the oldest intergovernmental organization in the world concerned with marine and fisheries science. Since its establishment in Copenhagen in 1902, ICES has been a leading scientific forum for the exchange of information and ideas on the sea and its living resources, and for the promotion and co-ordination of marine research by scientists within its member countries. Since the 1970s, a major area of ICES work is to provide **information and advice** to Member Country governments and international regulatory commissions (including the European Commission) for the *protection of the marine environment* and for *fisheries conservation*.¹⁴⁹

The North East Atlantic Fisheries Commission (NEAFC), which was established in 1953, acts under the terms of the Convention on Future Multilateral Co-operation in North-East Atlantic Fisheries¹⁵⁰ (NEAFC Convention) as a forum for the commissioning and dissemination of **scientific advice** on the state of fish stocks in the North-East Atlantic. The Advisory Committee on Fisheries Management (ACFM) of ICES supplies NEAFC with scientific advice and, on the basis of this advice, NEAFC establishes **conservation and management**

¹⁴⁹ Source: "ICES Community" ([wysiwyg://7/http://www.ices.dk.informat/about/htm](http://www.ices.dk.informat/about/htm)).

¹⁵⁰ Entry into force: 17 March 1982.

measures.¹⁵¹ NEAFC adopted on 20 November 1998 **recommendations limiting** the catches of *redfish* in the Convention Area and introducing **minimum notification and reporting requirements** for catches of *redfish* and *Norwegian spring-spawning (Atlanto-Scandian) herring* for 1999.

cc) The North Atlantic Salmon Conservation Organization (NASCO)

The North Atlantic Salmon Conservation Organization (NASCO) is an international organization established under Art. 3 of the Convention for the Conservation of Salmon in the North Atlantic Ocean which was adopted by a diplomatic conference held in Reykjavik from 18 to 22 January 1982 and entered into force on 1 October 1983.¹⁵²

The objective of NASCO is to contribute through **consultation and co-operation** to the conservation, restoration, enhancement and rational management of salmon stocks subject to the Convention taking into account the best scientific evidence available to it (Art. 3 para. 2 of the Convention). The **Council of NASCO** shall have the authority to make **recommendations** to the Parties (among which is the EC) and the three regional commissions of NASCO on matters concerning salmon stocks subject to the Convention, including the **enforcement of laws and regulations**, provided that no recommendation shall be made concerning the management of salmon harvest within the area of fisheries jurisdiction of a Party (Art. 4 para. 2 of the Convention).

The Convention applies to the salmon stocks which migrate beyond areas of fisheries jurisdiction of coastal States of the Atlantic Ocean north of 36° N latitude throughout their migratory range (Art. 1 para. 1 of the Convention). According to Art. 2 of the Convention fishing of salmon is **prohibited**:

- beyond areas of fisheries jurisdiction of coastal States;
- within the areas of fisheries jurisdiction of coastal States beyond 12 nautical miles from the baselines from which the breadth of the territorial sea is measured, *except*:
 - in the West Greenland Commission area, up to 40 nautical miles from the baselines; and
 - in the **North-East Atlantic Commission area**, within the area of fisheries jurisdiction of the Faroe Islands.

dd) The International Commission for the Conservation of Atlantic Tunas (ICCAT)

The International Commission for the Conservation of Atlantic Tunas (ICCAT) is an inter-governmental fishery organization responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and its adjacent seas.¹⁵³ The organization was established in 1969, at a Conference of Plenipotentiaries, which prepared and adopted the **International Convention for the Conservation of Atlantic Tunas** signed in Rio de Janeiro, Brazil, in 1966. The Convention is open for signature, or may be adhered to, by any government which is a member of the United Nations or of any specialized agency of the United Nations (Art. XIV para. 1 of the Convention). The European Community is among the Contracting Parties.

The Convention applies to all waters of the Atlantic Ocean (Art. I of the Convention). The objective of the Convention is to co-operate in maintaining the populations of tuna and tuna-

¹⁵¹ Source: "North East Atlantic Fisheries Commission" (<http://www.marine.gov.uk/neafc.htm>).

¹⁵² Source: "About NASCO" (http://www.nasco.org.uk/html/about_nasco.html).

¹⁵³ Source: "What is ICCAT?"-Introduction (<http://www.iccat.es/wiccat.htm>).

like fish at levels which will permit the *maximum sustainable catch* for food and other purposes (Preamble of the Convention). In order to carry out this objective ICCAT shall be responsible for the study of the populations of tuna and tuna-like fish and such other species of fish exploited in tuna fishing in the Convention area as are not under investigation by another international fishery organization (Art. IV para. 1 of the Convention). ICCAT may, on the basis of scientific evidence, make recommendations designed to maintain the populations of tuna and tuna-like fish that may be taken in the Convention area at levels which will permit the sustainable catch (Art. III para. 1 a) of the Convention). These recommendations shall according to Art. VIII para. 2 and 3 of the Convention be applicable to the Contracting Parties (Art. VIII para. 1 a) of the Convention).

ee) The International Whaling Organization (IWC)

The International Whaling Commission (IWC) was established by the International Convention for the Regulation of Whaling (ICRW) of 2 December 1946¹⁵⁴ (Art. III para. 1 ICRW). The Commission may, inter alia:

- encourage, recommend, or if necessary, organize studies and investigations relating to whales and whaling (Art. IV para. 1 a) ICRW);
- adopt **regulations with respect to conservation and utilization** of whale resources, fixing e.g. (Art. V para. 1 ICRW):
 - protected and unprotected species;
 - open and closed seasons;
 - open and closed waters, **including the designation of sanctuary areas**;
 - size limits for each species;
 - time, methods, and intensity of whaling; and
 - types and specifications of gear and apparatus and appliances which may be used.
- make **recommendations** to any or all Contracting Governments on any matters which relate to whales or whaling and to the objectives and purposes of the Convention (Art. VI ICRW).

The **Contracting Governments** are obliged to take appropriate **measures** to ensure the application of the provisions of ICRW and the punishment of infractions against the said provisions in operations carried out by persons or by vessels under their jurisdiction (Art. IX para. 1 ICRW).

¹⁵⁴ Entry into force: 10 November 1948.

f) International Environmental Law with Regard to Living Marine Resources

Figure 8: International Environmental Law with Regard to Living Marine Resources

<i>Convention</i> • <i>global</i>	<i>Abbrevia- tion</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
United Nations Convention on the Law of the Sea	UNCLOS	Montego Bay, 10 December 1982	16 November 1994	<ul style="list-style-type: none"> • Obligation of the States: -to take all measures to prevent, reduce and control pollution of the marine environment including those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life (Art. 194 para. 1 and 5).
Convention on International Trade in Endangered Species of Wild Flora and Fauna	CITES	Washington, 3 March 1973	1 July 1975	<ul style="list-style-type: none"> • Introduction from the sea of any specimen of a species included in Appendix II (among which are forms of <i>acipenseri</i> and <i>salmonidae</i>): -shall require the prior grant of a certificate from a Management Authority of the State of introduction (Art. IV para. 6). • <i>Certificates</i> (Art. IV para. 6): -shall only be granted when following conditions have been met: a Scientific Authority of the State of introduction advises that the introduction will not be detrimental to the survival of the species involved; and a Management Authority of the State of introduction is satisfied that any living specimen will be so handled as to minimize the risk of injury, damage to health or cruel treatment.
Convention on the Conservation of Migratory Species of Wild Animals	CMS	Bonn, 23 June 1979	1 November 1983	<ul style="list-style-type: none"> • General obligation of the Contracting Parties: -to endeavour to provide immediate protection for migratory species included in Appendix I (Art. II para. 3 b)), among which are certain forms of <i>cetacea</i> and <i>pisces</i> (forms of <i>siluri</i>). -to endeavour to conclude agreements covering the conservation and management of migratory species included in Appendix II (Art. II para. 3 c)), among which are certain forms of <i>cetacea</i> and <i>pisces</i> (forms of <i>acipenseri</i>). • Obligation of the Parties that are Range States of migratory species listed in Appendix I: -to prohibit in principle the <i>taking</i> of animals belonging to such species (Art. III para. 5) • Obligation of the Parties that are Range States of migratory species listed in Appendix II to endeavour: -to conclude agreements where these would benefit the species (Art. IV para. 3); each agreement should provide for, but not be limited to inter alia: at a minimum, the prohibition, in relation to a migratory species of the Order <i>cetacea</i>, of any taking that is not permitted for that migratory

				<p>species under any multilateral agreement (Art. V para. 4 f));</p> <p>co-ordinated conservation and management plans (Art. V para. 5 b));</p> <p>measures based on sound ecological principles to control and manage the taking of the migratory species (Art. V para. 5 j));</p> <p>procedures for co-ordinating action to suppress illegal taking (Art. V para. 5 k)).</p>
Convention on Biological Diversity	CBD	Rio de Janeiro, 5 June 1992	29 December 1993	<ul style="list-style-type: none"> • Principle: States have (Art. 3): <ul style="list-style-type: none"> -the sovereign right to exploit their own resources pursuant to their own environmental policies, and -the responsibility to ensure that activities do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. • Special obligations of the Contracting Parties: <ul style="list-style-type: none"> -to identify components of biological diversity important for its conservation and sustainable use having regard to the indicative list of categories set down in Annex I (Art. 7 a)); -to integrate consideration of the conservation and sustainable use of biological resources into national decision-making (Art. 10 a)); -to adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity (Art. 10 b)); • Obligation of the Contracting Parties to adopt in-situ measures, in particular: <ul style="list-style-type: none"> -to regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use (Art. 8 c)); -to promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings (Art. 8 d)); -to rehabilitate and restore degraded ecosystems and to promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies (Art. 8 f)); -to endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components (Art. 8 i)). • Obligation of the Contracting Parties to adopt ex-situ measures predominantly for the purpose of complementing in-situ measures (Art. 9)
<i>Convention/ Agreement</i> • <i>regional</i>				
Convention on the	Berne Convention	Berne, 19 September	1 June 1982	<ul style="list-style-type: none"> • Obligation of the Contracting Parties to take appropriate and necessary legislative and

Conservation of European Wildlife and Natural Habitats		1979		<p>administrative measures to ensure the special protection of the wild fauna species specified in Appendix II, in particular to prohibit (Art. 6):</p> <p>all forms of deliberate capture and keeping and deliberate killing (Art. 6 a)); the deliberate destruction or taking of eggs from the wild (Art. 6 d)).</p> <ul style="list-style-type: none"> • Obligation of the Contracting Parties to take appropriate and necessary legislative and administrative measures to ensure the protection of the wild fauna species specified in Appendix III (Art. 7 para. 1), e.g.: -by closed seasons and/or other procedures regulating the exploitation (Art. 7 para. 3 a)); -by temporary or local prohibition of exploitation, as appropriate, in order to restore satisfactory population levels (Art. 7 para. 3b)).
Agreement on the Conservation of Small Cetaceans of the Baltic and North Sea	ASCO-BANS	New York, 9 April 1992	29 March 1994	<ul style="list-style-type: none"> • Obligation of the Parties to apply the conservation, research and management measures prescribed in the Annex (Art. 2.2.), e.g. to establish: -the prohibition under national law of the intentional taking and killing of small cetaceans (Art. 4 subpara. 1 a) of the Annex) and -the obligation to release immediately any animals caught alive and in good health (Art. 4 subpara. 1 b) of the Annex).
Convention for the Protection of the Marine Environment of the North-East Atlantic	OSPAR Convention	Paris, 22 September 1992	25 March 1998	<ul style="list-style-type: none"> • Obligation of the Contracting Parties (Art. 2 of Annex V): -to take the necessary measures to protect and conserve the ecosystems and biological diversity of the maritime area; -to <i>co-operate</i> in adopting programmes and measures for the purposes for the control of the human activities identified by the application of the criteria in Appendix 3, which are: the extent, intensity and duration of the human activity under consideration; actual and potential adverse effects of the human activity on specific species, communities and habitats and on specific ecological processes; irreversibility or durability of these effects. • Obligation of the OSPAR Commission (Art. 3 para. 1 of Annex V): -to draw up programmes and measures for the control of the human activities and their effects on ecosystems by the application of the criteria in Appendix 3.
Agreement on the Conservation of African-Eurasian Migratory Waterbirds	AEWA	The Hague, 16 June 1995	1 November 1999	<ul style="list-style-type: none"> • Obligation of the Parties: -to accord the same strict protection for endangered migratory waterbird species in the Agreement Area as is provided for under Art. III CMS (Art. III para. 2 a)); -to ensure that any use of migratory waterbirds is based on an assessment of the best available

				<p>knowledge of their ecology and is sustainable for the species as well as for the ecological system that support them (Art. III para. 2 b)).</p> <ul style="list-style-type: none"> • Obligation of the Parties to undertake actions consistent with the general conservation measures specified in Art. III pursuant to an action plan which is appended as Annex 3 (Art. IV para. 1); under the heading "Species Conservation" (para. 2 of Annex 3) the following actions are listed, inter alia: <ul style="list-style-type: none"> -Parties with populations listed in column A of Table 1 shall: <ul style="list-style-type: none"> prohibit the <i>taking</i> of birds and eggs of those populations occurring in their territory (para. 2.1.1 a)); prohibit the <i>possession</i> or <i>utilization</i> of, and trade in, birds or eggs of those populations which have been taken in contravention of the prohibitions laid down pursuant to subpara. a), as well as the <i>possession</i> or <i>utilization</i> of, and trade in, any readily recognizable parts or derivatives of such birds and their eggs (para. 2.1.1 c) of Annex 3). -Parties with populations listed in Table 1 shall regulate the <i>taking</i> of birds and eggs of all populations listed in column B of Table 1 by legal measures with the objective: <ul style="list-style-type: none"> to maintain or contribute to the restoration of those populations to a favourable conservation status and to ensure, on the basis of the best available knowledge of population dynamics, that any taking or other use is sustainable (para. 2.1.2 of Annex 3). -Parties may grant under certain conditions exemptions to the prohibitions laid down in para. 2.1.1 and 2.1.2 of Annex 3 (para. 2.1.3 of Annex 3)
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g) *European Community Law of Fisheries*

Based on Council Resolution of 3 November 1976 on certain external aspects of the creation of a 200-mile fishing zone in the Community with effect from 1 January 1977¹⁵⁵ the coastal Member States of the North Sea and of the North Atlantic proclaimed in a concerted action exclusive fishery zones of 200 sm. With effect from 1 January 1977 thus the so-called "Community waters" were established, in which the Community acts within the Common Fisheries Policy (CFP). The Community itself was not capable of establishing such a zone as it is no coastal state capable to such proclamations.¹⁵⁶

Art. 2 para. 1 subpara. 1 of the Council Regulation (EEC) No 3760/92 of 20 December 1992 establishing a Community system for fisheries and aquaculture¹⁵⁷ describes the general objective of the **common fisheries policy** to the end to protect and conserve available and

¹⁵⁵ Official Journal C 105, 07/05/1981 p. 1.

¹⁵⁶ M. Schröder, supra 43, para. 63.

¹⁵⁷ Official Journal L 389, 31/12/1992 p. 1.

accessible living marine resources, and to provide for rational and responsible exploitation on a sustainable basis, in appropriate economic and social conditions for the sector, taking account of its *implications for the marine ecosystems*, and in particular taking account of the needs of both producers and consumers. To that end a Community system for the management of exploitation activities was established by Regulation 3760/92/EEC which should enable a *balance* to be achieved, *on a permanent basis*, between resources and exploitation in the various fishing areas (Art. 2 para. 1 subpara. 2 of the Regulation 3760/92/EEC).

The Regulation 3760/92/EEC is the **core legislative instrument for the conservation and management of fishery resources in the Community**. Its purpose is to establish a framework for the conservation and protection of resources (Art. 2 para. 2 subpara. 1 of the Regulation 3760/92/EEC). To that end, and in order to ensure sustainable exploitation activities Regulation 3760/92/EEC establishes a framework for the regulation of access, management and monitoring of exploitation activities, as well as the requisite means and procedures (Art. 2 para. 2 subpara. 2 of the Regulation 3760/92/EEC).

The Commission established with Decision of 19 November 1993¹⁵⁸ a **Scientific, Technical and Economic Committee for Fisheries**. The Committee shall be consulted at regular intervals and shall draw up an annual report on the situation with regard to fishery resources and developments concerning fishing activity, with reference to biological and technical factors (Art. 16 of the Regulation 3760/92/EEC).

aa) Powers of the Council and the Commission to Regulate the Access to Waters and Resources

The **Council**, acting, except otherwise provided, in accordance with the procedure laid down in Art. 43 EC-Treaty, shall establish **Community measures** laying down the conditions of access to waters and resources and of the pursuit of exploitation activities (Art. 4 para. 1 of the Regulation 3760/92/EEC). These provisions may, in particular, include measures for each fishery or group of fisheries (Art. 4 para. 2 of the Regulation 3760/92/EEC):

- **to establish zones in which fishing activities are prohibited or restricted;**

In particular **regions** can be **defined** in which fishing activity by specific fishing vessels must be regulated for species of special importance in that region which are *biologically sensitive* by reason of their exploitation characteristics. This is done by a **licensing system** managed by the **Commission** on behalf of the Community and by procedures for the transmission, to the **competent monitoring authorities**, of entries into and exits from the region concerned, in accordance with the conditions laid down in Annex II (Art. 7 in connection with Art. 18 of the Regulation 3760/92/EEC);

- **to limit exploitation rates;**
- **to set quantitative limits on catches;**

According to Art. 8 para. 4 i) and ii) of the Regulation 3760/92/EEC it falls to the **Council** to determine for each fishery or group of fisheries, on a case-by-case basis, the **total allowable catch (TAC)**¹⁵⁹ together with the conditions linked to these restrictions of catches and to distribute the fishing opportunities between Member States in such a way as to assure each Member State's relative stability of fishing activities for each of the stocks concerned. On this basis the Council Regulation (EC) No 48/1999 of 18 December 1998¹⁶⁰ fixes for 1999, for

¹⁵⁸ Commission Decision of 19 November 1993 relating to the institution of a Scientific, Technical and Economic Committee for Fisheries, Official Journal L 297, 02/12/1993 p. 25.

¹⁵⁹ See above B. II. 7. a).

¹⁶⁰ Council Regulation (EC) No 48/1999 of 18 December 1998 fixing, for certain fish stocks and groups of fish

certain fish stocks and groups of fish stocks, TACs per stock or group of stocks, the share of these catches available to the Community, the allocation of that share among Member States and the specific conditions under which these stocks may be fished (Art. 1 subpara. 1 of the Regulation 48/1999/EC).

Certain fish quotas for 1999 were increased or reduced by Commission Regulation (EC) No 1619/1999 of 23 July 1999¹⁶¹. Such a change of fish quotas can be adopted on the basis of Council Regulation (EC) No 847/96 of 6 May 1996 introducing additional conditions for year to year management of TACs and quotas¹⁶². Its Art. 4 para. 2 subpara. 1 provides that for stocks subject to analytical TAC¹⁶³ a Member State to which a relevant quota has been allocated may ask the Commission, before 31 October of the year of application of the quota, to withhold a maximum of 10% of its quota to be transferred to the following year. In this case the Commission shall add to the relevant quota the quantity withheld (Art. 4 para. 2 subpara. 2 of the Regulation 847/96/EC). For the stocks, as determined by the Council in respect of their biological status, overfishing of permitted landings shall lead to deduction from the corresponding quota in the following year (Art. 5 para. 2 subpara. 1 in connection with the third indent of Art. 2 of the Regulation 847/96/EC).

With Council Regulation (EC) No 49/1999 of 18 December 1998¹⁶⁴ the Community implements the recommendations of the International Commission for the Conservation of Atlantic Tunas (ICCAT)¹⁶⁵. ICCAT has recommended the setting of catch limitations for *bluefin tuna* and *swordfish* in the Atlantic. These recommendations are binding on the Community as contracting party (grounds of consideration of the Regulation 49/1999/EC). Therefore Regulation 49/1999/EC – by derogating from Art. 5 para. 2 of the Regulation 894/97/EC – fixes for these stocks the TACs for each stock for 1999, the share of these catches available to the Community, the allocation of that share among Member States in the form of fish quotas for fish, and the specific terms and conditions on which these stocks may be fished (Art. 1 of the Regulation 49/1999/EC);

- **to lay down technical measures regarding fishing gear and its method of use;**

Technical measures regarding fishing gear and its methods of use were first provided for in Council Regulation (EEC) No 3094/86 laying down certain technical measures for the conservation of fishery resources¹⁶⁶. With Council Regulation (EC) No 894/97 of 29 April 1997 laying down certain technical measures for the conservation of fishery resources¹⁶⁷ a consolidated version of Regulation 3094/86/EEC which has been amended often and essentially was adopted. However, also Regulation 894/97/EC was replaced except for few provisions by Council Regulation (EC) No 850/98 of 30 March 1998 for the conservation of fishery resources through technical measures for the protection of juveniles of marine

stocks, the total allowable catches for 1999 and certain conditions under they may be fished, Official Journal L 13, 18/01/1999 p. 1.

¹⁶¹ Commission Regulation (EC) No 1619/1999 of 23 July 1999 adapting certain fish quotas for 1999 pursuant to Council Regulation (EC) No 847/96 introducing additional conditions for year-by-year management of TACs and quotas, Official Journal L 192, 24/07/1999 p. 14.

¹⁶² Official Journal L 115, 09/05/1996 p. 3.

¹⁶³ Analytical TACs are such which are adopted on the basis of scientifically-based evaluation of fishing possibilities; precautionary TACs shall apply otherwise (see Art. 1 para. 1 Council Regulation (EC) No 847/96).

¹⁶⁴ Council Regulation (EC) No 49/1999 of 18 December 1998 fixing, for certain stocks of highly migratory fish, the total allowable catches for 1999, their distribution in quotas to Member States and certain conditions under which they may be fished, Official Journal L 13, 18/01/1999 p. 54.

¹⁶⁵ See above B. II. 7. e) dd).

¹⁶⁶ Official Journal L 288, 11/10/1986 p. 1.

¹⁶⁷ Official Journal L 132, 23/05/1997 p. 1.

organisms¹⁶⁸ (second ground of consideration of the Regulation 850/98/EC). Regulation 850/98/EC aims at ensuring the protection of marine biological resources and the balanced exploitation of fishery resources in the interests of both fishermen and consumers. It lays down **technical conservation measures** specifying inter alia the mesh sizes and combinations thereof appropriate for the capture of certain species and other characteristics of fishing gear, and the minimum sizes of marine organisms, as well as limitations of fishing within certain areas and time periods and with certain gears and equipment (tenth ground of consideration of the Regulation 850/98/EC);

furthermore:

- to limit time spent at sea;
- to fix the number and type of fishing vessels authorized to fish;
- to set a minimum size or weight of individuals that may be caught.

bb) Powers of the Member States with Regard to Conservation and Management of Resources and Stocks

Art. 10 para. 1 of the Regulation 3760/92/EEC empowers the **Member States** to take **measures for the conservation and management of resources** in waters under their sovereignty or jurisdiction provided:

- they involve strictly local stocks which are only of interest to fishermen from the Member States concerned, or
- they apply solely to the fishermen from the Member States concerned,
- they are compatible with the objectives set out in Art. 2 para. 1 and 2 of the Regulation 3760/92/EEC and are no less stringent than the measures adopted to Art. 4 of the Regulation 3760/92/EEC.

The Commission shall be informed, in time for it to present its observations, of any plans to introduce or amend national conservation and resource management measures (Art. 10 para. 2 of the Regulation 3760/92/EEC).

Similarly Art. 46 para. 1 of the Regulation 850/98/EC allows the **Member States** to take **measures for the conservation and management of stocks:**

- in the case of strictly local stocks which are of interest solely to the fishermen of the Member States concerned; or
- in the form of conditions or detailed arrangements designed to limit catches by technical measures:
 - supplementing those laid down in the Community legislation on fisheries; or
 - going beyond the minimum requirements laid down in the said legislation;

provided that such measures apply solely to the fishermen of the Member States concerned, are compatible with Community law, and are in conformity with the common fisheries policy.

The Commission shall be informed, in time for it to present its observations, of any plans to introduce or amend national technical measures (Art. 46 para. 2 subpara. 1 of the Regulation 850/98/EEC). Where the Commission finds, by a decision which it shall communicate to all Member States, that a planned measure does not comply with the provisions of Art. 46 para. 1 of the Regulation 850/98/EEC, the Member State concerned may not bring it into force without making the necessary amendments thereto (Art. 46 para. 2 subpara. 2 of the Regulation 850/98/EEC).

¹⁶⁸ Official Journal L 125, 27/04/1998 p. 1.

cc) Fishing Licenses and Special Fishing Permits

In order to help improve the regulation of exploitation and its transparency (grounds of consideration of Regulation 3690/93/EC), the Council should establish a Community system laying down rules for the minimum information to be contained in fishing licenses, to be issued and managed by the Member States (Art. 5 para. 1 subpara. 1 of the Regulation 3760/92/EEC). This was effected by the Council with its Regulation (EC) No 3690/93 of 20 December 1993 establishing a Community system laying down rules for the minimum information to be contained in fishing licenses¹⁶⁹. According to Art. 3 of the Regulation 3690/93/EEC the flag **Member State** shall **issue and administer fishing licenses** for the fishing vessels flying its flag. All Community fishing vessels shall be required to have a fishing license for the vessel (Art. 1 para. 2 of the Regulation 3690/93/EEC). A fishing license for Community vessels shall contain at least a certification by the flag Member State of the information regarding the identification, technical characteristics, and equipment of the Community fishing vessel, set out to in the Annex (Art. 2 of the Regulation 3690/93/EEC).

The empowerment of the Council provided for in Art. 4 and 8 of the Regulation 3760/92/EEC to determine certain conditions for access by Community fishing vessels to waters and resources may include the need for special fishing permits (grounds of consideration of the Regulation 1627/94/EC). According to Art. 9 of the Regulation 3690/93/EEC the Council had to adopt the general provisions on special fishing permits applicable to Community fishing vessels and to vessels flying the flag of a third country and operating in Community fishing waters. The Council complied with this obligation by adopting its Regulation (EC) No 1627/94 of 27 June 1994 laying down general provisions concerning special fishing permits¹⁷⁰.

Art. 4 para. 1 of the Regulation 1627/94/EC empowers the **flag Member State** to **issue and manage the special fishing permits** of vessels *flying its flag* in accordance with the relevant provisions of Community law. A special fishing permit in this sense means a prior fishing authorization issued to a Community fishing vessel to supplement its fishing license, thereby enabling it to carry out fishing activities during a specified period, in a given area, for a given fishery, in accordance with the measures adopted by the Council (Art. 2 para. 1 a) of the Regulation 1627/94/EC). **Issue and Management of fishing licenses and special permits** of vessels *flying the flag of a third country* however belongs to the tasks of the **Commission** in accordance with the relevant provisions contained in fisheries agreements concluded with the country concerned or adopted in the framework of those agreements (Art. 4 para. 2 of the Regulation 1627/94/EC). Detailed rules for applying Council Regulation 1627/94/EC contains Commission Regulation (EC) No 2943/95¹⁷¹.

dd) Special: North-East Atlantic Fisheries

The Convention on Future Multilateral Co-operation in North-East Atlantic Fisheries (NEAFC Convention) was approved by the Council in Decision 81/608/EEC of 13 July 1981¹⁷² and entered into force on 17 March 1982. The **North-East Atlantic Fisheries Commission (NEAFC)**¹⁷³ adopted on 20 November 1998 recommendations **limiting** the

¹⁶⁹ Official Journal L 341, 31/12/1993 p. 93.

¹⁷⁰ Official Journal L 171, 06/07/1994 p. 7.

¹⁷¹ Commission Regulation (EC) No 2943/95 of 20 December 1995 setting out detailed rules for applying Council Regulation (EC) No 1627/94 laying down general provisions concerning special fishing permits, Official Journal L 308, 21/12/1995 p. 15.

¹⁷² Official Journal L 227, 12/08/1981 p. 21.

¹⁷³ As to NEAFC see above B. II. 7. e) bb).

catches of *redfish* in the Convention Area and introducing minimum notification and reporting **requirements** for catches of *redfish* and *Norwegian spring-spawning (Atlanto-Scandian) herring* for 1999. Council Regulation (EC) No 67/1999 of 18 December 1998¹⁷⁴ **implements** these NEAFC recommendations at Community level (grounds of consideration of the Regulation 67/1999/EC).

The Annex of the Regulation 67/1999/EC sets out **quotas** for catches in 1999 of *redfish* by Community fishing vessels (Art. 1 of the Regulation 67/1999/EC). Art. 2 para. 1 of the Regulation 67/1999/EC required Member States to notify to the Commission a list of the vessels flying their flags and registered within the Community which are granted the right to fish *oceanic-type redfish* no later than 20 January 1999. **Only** the vessels **named in this list** shall be deemed to be **authorized** to fish *oceanic-type redfish* (Art. 2 para. 1 of the Regulation 67/1999/EC). Further Member States shall report weekly to the Commission both the quantities of *oceanic-type redfish* caught by their vessels as well as the number of their vessels engaged in this fishery (see Art. 2 para. 2 of the Regulation 67/1999/EC).

These provisions apply *mutatis mutandis* to *Norwegian spring-spawning (Atlanto-Scandian) herring*, Art. 3 of the Regulation 67/1999/EC.

h) Protection of Species by Means of the Habitats Directive

The Directive 92/43/EEC (Habitats Directive) contains on one side provisions for the protection of habitats, which in the end should serve the protection of species.¹⁷⁵

But the Directive 92/43/EEC contains also rules directed immediately to the protection of species. First Art. 12 para. 1 of the Directive 92/43/EEC obliges the **Member States** to take the **requisite measures** to establish a **system of strict protection** for the animal species listed in Annex IV a) (animal species of Community interest in need of strict protection) in their natural range, **prohibiting**:

- all forms of *deliberate capture or killing* of specimens of these species in the wild;
- deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration;
- deliberate destruction or taking of eggs from the wild;
- deterioration or destruction of breeding sites or resting places;

For these species, **Member States** shall also in principle **prohibit** the *keeping, transport* and sale or exchange, and offering for sale and exchange, of specimens taken from the wild (Art. 12 para. 2 of the Directive 92/43/EEC). Moreover **Member States** shall establish a **system to monitor** the *incidental capture and killing* of the animal species listed in Annex IV a). In the light of the information gathered, **Member States** shall take **further research or conservation measures** as required to ensure that *incidental capture and killing* does not have a significant negative impact on the species concerned (Art. 12 para. 4 of the Directive 92/43/EEC).

If, in the light of the surveillance of the conservation status of natural habitats and of wild flora and fauna species of Community interest (Art. 11 in connection with Art. 2 of the Directive 92/43/EEC), **Member States** deem it necessary, they shall take **measures** to ensure that the *taking* in the wild of specimens of species of wild fauna and flora listed in Annex V

¹⁷⁴ Council Regulation (EC) No 67/1999 of 18 December 1998 laying down for 1999 certain conservation and management measures for fishery resources in the Convention Area as defined in the Convention on future Multilateral Co-operation in North-East Atlantic Fisheries, Official Journal L 13, 18/01/1999 p. 145.

¹⁷⁵ See as to the protection of habitats above B. I. 2. b).

(animal and plant species of Community interest whose taking in the wild and exploitation may be subject to management measures) as well as their *exploitation* is compatible with their being maintained at a favourable conservation status (Art. 14 para. 1 of the Directive 92/43/EEC). These measures may include, inter alia (Art. 14 para. 2 of the Directive 92/43/EEC):

- **regulations** regarding *access* to certain property;
- temporary or local **prohibition** of the *taking* of specimens in the wild and *exploitation* of certain populations;
- **regulation** of the periods and/or methods of *taking* specimens;
- application, when specimens are *taken*, of **fishing rules** which take account of the conservation of such populations;
- establishment of a **system of licenses** for *taking* specimens **or of quotas**;
- **regulation** of the purchase, sale, offering for sale, *keeping* for sale or *transport* for sale of specimens.

Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, **Member States** are entitled by Art. 16 para. 1 of the Directive 92/43/EEC to **derogate** from the said provisions of Art. 12 and 14 of the Directive 92/43/EEC:

- in the interest of protecting wild fauna and flora and conserving natural habitats;
- to prevent serious damage, in particular to crops, livestock, *fisheries* and water and other types of property;
- in the interest of public health and public safety, or for other imperative reasons of overriding public interest, including those of social and economic nature and beneficial consequences of primary importance for the environment;
- for the purpose of *research* and education, of repopulating and re-introducing these species and for the breeding operations necessary for these purposes;
- to allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species listed in Annex IV in limited numbers specified by the competent national authorities.

In respect of the capture or killing of species of wild fauna listed in Annex V a) and in cases where, in accordance with Art. 16 of the Directive 92/43/EEC, the said derogations are applied to the taking, capture or killing of species listed in Annex IV a), **Member States** shall **prohibit** the use of certain *means and forms of capture and killing* and certain *modes of transport*, in particular those referred to in Annex VI (see Art. 15 of the Directive 92/43/EEC). Derogations hereof are possible pursuant to Art. 16 of the Directive 92/43/EEC.

8. Aquaculture

The modern term "aquaculture" is not found in the so far identified and described international conventions in this study.

Aquaculture within the convention area of OSPAR might be considered in particular in form of raising of fish, in particular of *salmonidae*, of *crustaceans* and *molluscs*. The environmental risks of this use for the marine ecosystem is eutrophication or the in-put of antibiotics and for the populations of species the deficiency of oxygen and the destruction of their natural habitats. Aquaculture is actually practised primarily in proximity to the coast entailing in general the application of national laws.

a) International Law

Accordingly it can be referred to the respective international environmental regulations with regard to the living marine resources; in particular the following regulations with relevance for aquaculture can be cited from international environmental law:

Figure 9: International Environmental Law with Regard to Aquaculture

<i>Convention</i> • <i>global</i>	<i>Abbrevia- tion</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
United Nations Convention on the Law of the Sea	UNCLOS	Montego Bay, 10 December 1982	16 November 1994	<ul style="list-style-type: none"> • Obligation of the States: -to take all measures to prevent, reduce and control pollution of the marine environment including those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life (Art. 194 para. 1 and 5).
Convention on Biological Diversity	CBD	Rio de Janeiro, 5 June 1992	29 December 1993	<ul style="list-style-type: none"> • Special obligations of the Contracting Parties: -to identify processes and categories of activities which are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, and monitor their effects through sampling and other techniques (Art. 7 c)); -to introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to <i>avoiding</i> or <i>minimizing</i> such effects (Art. 14 para. 1 a)). • Obligation of the Contracting Parties to adopt in-situ measures, in particular: -to rehabilitate and restore degraded ecosystems and to promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies (Art. 8 f)); -to endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components (Art. 8 i)). -where a significant effect on biological diversity has been determined pursuant to Art. 7 c), to regulate or manage the relevant processes and categories of activities (Art. 8 l)).
<i>Convention</i> • <i>regional</i>				
Convention for the Protection of the Marine Environment of the North-East Atlantic	OSPAR Convention	Paris, 22 September 1992	25 March 1998	<ul style="list-style-type: none"> • Obligation of the Contracting Parties (Art. 2 of Annex V): -to take the necessary measures to protect and conserve the ecosystems and biological diversity of the maritime area; -to <i>co-operate</i> in adopting programmes and measures for the purposes for the control of the human activities identified by the application of the criteria in Appendix 3, which are:

				<p>the extent, intensity and duration of the human activity under consideration; actual and potential adverse effects of the human activity on specific species, communities and habitats and on specific ecological processes; irreversibility or durability of these effects.</p> <ul style="list-style-type: none"> • Obligation of the OSPAR Commission (Art. 3 para. 1 of Annex V): -to draw up programmes and measures for the control of the human activities and their effects on ecosystems by the application of the criteria in Appendix 3.
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The term "aquaculture" expressly is mentioned in the Agenda 21, a comprehensive political action programme (and as such at best "soft law"), the implementation of which first and foremost is the responsibility of Governments, to which, however, other international, regional and subregional organizations and institutions including non-governmental organizations should contribute (Preamble 1.3). In the context of international co-operation the key role is to play by the United Nations system (Preamble 1.3). Agenda 21 was adopted by more than 178 governments at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3 to 14 June 1992.

In Chapter 17, programme area D, which provides for guiding principles in relation to the sustainable use and conservation of living marine resources under national jurisdiction, the **coastal States** are requested, individually or through bilateral and/or multilateral co-operation and with the support, as appropriate by **international organizations**, to **implement mechanisms to develop mariculture and aquaculture** within areas under national jurisdiction where assessments show that marine living resources are potentially available (17.79 c) Agenda 21). As instruments for the implementation the Agenda 21 suggests the following scientific and technological means, inter alia:

- to accord special attention to mechanisms for transferring resource information and improved fishing and aquaculture technologies to fishing communities at the local level (17.92 b) Agenda 21);
- to establish sustainable aquaculture development strategies, including environmental management in support of rural fish-farming communities (17.94 c) Agenda 21).

b) European Community Law

Relevant legal documents as to aquaculture are Council Directive 78/659/EEC of 18 July 1978¹⁷⁶ and Council Directive 79/923/EEC of 30 October 1979¹⁷⁷ The first Directive concerns the quality of fresh waters (Art. 1 para. 1 of the Directive 78/659/EEC), the second applies to coastal and brackish waters (Art. 1 of the Directive 79/923/EEC). For this very reason these EC legal acts are not applicable to the **EEZ**.

¹⁷⁶ Council Directive 78/659/EEC of 18 July 1978 on the quality of fresh waters needing protection or improvement in order to support fish life, Official Journal L 222, 14/08/1978 p. 1.

¹⁷⁷ Council Directive 79/923/EEC of 30 October 1979 on the quality required of shellfish waters, Official Journal L 281, 10/11/1979 p. 47.

Moreover intensive fish farming is mentioned in point 1 f) of Annex II of the Directive 85/337/EEC¹⁷⁸. As to such projects Member States shall determine through a case-by-case examination or thresholds or criteria set by the Member States whether the project shall be subject to an **environmental impact assessment** (Art. 4 para. 2 subpara. 1 of the Directive 85/337/EEC). The Member States determine the respective **competent authority/ -ies** for the implementation of the tasks deriving from the Directive 85/337/EEC (Art. 1 para. 3 of the Directive 85/337/EEC).

Regulation 3760/92/EEC¹⁷⁹ includes the term "aquaculture" in its title, but no further corresponding specific rules.

9. Marine Scientific Research

UNCLOS dedicates an individual Part XIII to marine scientific research. First Art. 238 UNCLOS grants to **all States** and **competent international organizations** the **right** to *conduct*, and imposes correspondingly in Art. 239 UNCLOS the **duty** to *promote* and *facilitate* the development and conduct of marine scientific research.

Art. 240 UNCLOS provides for general principles for the conduct. Marine scientific research shall:

- be conducted exclusively for peaceful purposes;
- be conducted with appropriate scientific methods and means compatible with UNCLOS;
- not unjustifiably interfere with *other legitimate uses of the sea compatible with UNCLOS* and shall be duly respected in the course of such uses;
- be conducted in compliance with all relevant regulations adopted in conformity with the UNCLOS including those for the *protection and preservation of the marine environment*.

Furthermore marine scientific research activities shall not constitute the legal basis for any claim to any part of the marine environment or its resources (Art. 241 UNCLOS).

Art. 242 to 244 UNCLOS oblige the States and the competent international organizations to adopt various measure for the promotion of international co-operation (e.g. exchange of information).

a) Marine Scientific Research in the EEZ and on the Continental Shelf

Art. 246 para. 1 UNCLOS grants to **coastal States**, in the exercise of their jurisdiction, the **right to regulate, authorize and conduct** marine scientific research in their EEZ and on their continental shelf in accordance with the relevant provisions of UNCLOS. Subject to obligatory authorization are both pure research as well as economically orientated research.¹⁸⁰

Art. 246 para. 2 UNCLOS submits the marine scientific research projects by other States or competent international organizations in the EEZ and on the continental shelf to the **consent of the coastal State**, which, however, under normal circumstances **must** be granted, if the project to be carried out in accordance with UNCLOS is exclusively for peaceful purposes and in order to increase scientific knowledge of the marine environment (Art. 246 para. 3 UNCLOS). According to Art. 246 para. 5 UNCLOS **coastal States** may however **in their discretion withhold** their consent if that project, inter alia:

- is of direct significance for the *exploration and exploitation of natural resources, whether*

¹⁷⁸ See above B. II. 3. f).

¹⁷⁹ See above B. II. 7. g).

¹⁸⁰ *K. Ipsen*, supra 11, p. 748.

living or non-living. This is not valid for marine scientific research projects to be undertaken in accordance with the provisions of Part XIII of UNCLOS on the continental shelf, beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, outside those specific areas which coastal States may at any time publicly designate as areas in which exploitation or detailed exploratory operations focused on those areas are occurring or will occur within reasonable period of time (Art. 246 para. 6 UNCLOS);

- involves *drilling* into the continental shelf, the use of explosives or the *introduction of harmful substances into the marine environment*;
- involves the construction, operation or use of *artificial islands, installations and structures* referred to in Art. 60 and 80 UNCLOS.

The listing in Art. 246 para. 5 UNCLOS is enumerative, the grounds on which the consent can be denied are interpreted broadly.¹⁸¹

A **coastal State** which is a member of or has bilateral agreement with an international organization, and in whose EEZ or on whose continental shelf that organization wants to carry out a marine scientific research project shall **be deemed** according to Art. 247 UNCLOS **to have authorized** the project to be carried out in conformity with the agreed specifications **if** the State:

- approved the detailed project when the decision was made by the organization for the undertaking of the project, or
- is willing to participate in it, and has not expressed any objection within four months of notification of the project by the organization to the coastal State.

Art. 248 and 249 UNCLOS requires **States** and **competent international organizations** which intend to undertake marine scientific research in the EEZ or on the continental shelf of a coastal State to comply for its performance with certain **conditions**, among which are:

- not less than six months in advance of the expected starting date of the marine scientific research project, to provide that coastal State with full description of the project (Art. 248 UNCLOS);
- to ensure the right of the coastal State, if it so desires, to participate or be represented in the project (Art. 249 para. 1 a) UNCLOS);
- to provide the coastal State, at its request, with preliminary reports, as soon as practicable, and with final results and conclusions after the completion of the research (Art. 249 para. 1 b) UNCLOS);
- to ensure that the research results are made internationally available through appropriate national or international channels, as soon as practicable (Art. 249 para. 1 e) UNCLOS);
- to inform the coastal State immediately of any major change in the research programme (Art. 249 para. 1 f) UNCLOS);
- unless otherwise agreed, remove the scientific research installations or equipment once the research is completed (Art. 249 para. 1 g) UNCLOS).

A **coastal State** according to Art. 253 para. 1 UNCLOS shall have the **right to require the suspension** of any marine scientific research activities in progress within its EEZ or on its continental shelf if:

- the research activities are not being conducted in accordance with the information communicated as provided under Art. 248 UNCLOS upon which the consent of the coastal State was based; or

¹⁸¹ K. Ipsen, supra 11, p. 748.

- the State or competent international organization conducting the research activities fails to comply with the provisions of Art. 249 UNCLOS concerning the rights of the coastal State with respect to the marine scientific research project.

Such an **order of suspension** shall be **lifted** by the **coastal State** and the marine scientific research activities allowed to continue once the researching State or competent international organization has complied with the conditions required under Art. 248 and 249 UNCLOS (Art. 253 para. 5 UNCLOS).

A **coastal State** according to Art. 253 para. 2 and 3 UNCLOS shall even have the **right to require the cessation** of any marine scientific research activities

- in case of any non-compliance with the provisions of Art. 248 UNCLOS which amounts to a major change in the research project or the research activities;
- if any of the situations contemplated in Art. 253 para. 1 UNCLOS are not rectified within a reasonable period of time.

Finally the States are obliged:

- to seek to promote through **competent international organizations** the establishment of **general criteria and guidelines** to assist States in ascertaining the nature and implications of marine scientific research (Art. 251 UNCLOS);
- to endeavour to adopt **reasonable rules, regulations and procedures** to *promote* and *facilitate* marine scientific research conducted in accordance with UNCLOS **beyond their territorial sea** and, as appropriate, to promote, subject to the provisions of their laws and regulations, assistance for marine scientific research vessels which comply with the relevant provisions of Part XIII of UNCLOS (Art. 255 UNCLOS).

b) Marine Scientific Research in the Area

All States, irrespective of their geographical location, and **competent international organizations** have the **right**, in conformity with the provisions of Part XI of UNLOS, to conduct marine scientific research in the Area (Art. 256 UNCLOS).

Pursuant to Art. 143 para. 1 UNCLOS marine scientific research in the Area shall be carried out exclusively for peaceful purposes and for the benefit of mankind as a whole in accordance with Part XIII of the Convention. Art. 143 para. 2 UNCLOS **empowers** the **ISBA**:

- to carry out marine scientific research concerning the Area and its resources, and
- to enter into contracts for that purpose;

it is **obliged** (Art. 143 para. 2 UNCLOS):

- to promote and encourage the conduct of marine scientific research in the Area, and
- to co-ordinate and disseminate the results of such research and analysis when available.

Art. 143 para. 3 UNCLOS imposes on the State Parties the obligation to promote international co-operation in marine scientific research in the Area by adoption of various measures listed there.

c) Marine Scientific Research in the Water Column beyond the EEZ

All States, irrespective of their geographical location, and **competent international organizations** have the **right**, in conformity with UNCLOS, to conduct marine scientific research in the water column beyond the limits of the EEZ (Art. 257 UNCLOS).

d) *Scientific Research Installations or Equipment in the Marine Environment*

Special provisions in relation to scientific research installations and equipment are contained in Art. 258 et seq. UNCLOS.

According to Art. 258 UNCLOS the *deployment and use of any type of such installations and equipment* in any area of the marine environment shall be subject to the same **conditions** as are prescribed in the Convention for the conduct of marine scientific research in any such area.

Scientific research installations and equipment:

- do not possess the status of islands, and their presence does not affect the delimitation of the territorial sea, the EEZ or the continental shelf (Art. 259 UNCLOS);
- may be surrounded by safety zones of a reasonable breadth not exceeding a distance of 500 meters which must be respected by the vessels of all States (Art. 260 UNCLOS);
- shall have adequate internationally agreed warning signals to ensure safety at sea and the safety of air navigation, taking into account rules and standards established by competent international organizations (Art. 262 UNCLOS).

e) *Marine Scientific Research and International Environmental Law*

Most of the international environmental conventions mentioned so far include provisions with regard to marine scientific research.

- First they require the Contracting Parties for the carrying out of scientific research to promote the objectives and purposes of the respective convention:

Figure 10: Marine Scientific Research and International Environmental Law

<i>Convention</i> • <i>global</i>	<i>Abbreviation</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
Convention on the Conservation of Migratory Species of Wild Animals	CMS	Bonn, 23 June 1979	1 November 1983	<ul style="list-style-type: none"> • suggests to the Parties: -to promote, co-operate in and support research relating to migratory species (Art. III para. 3 a)).
Convention on Biological Diversity	CBD	Rio de Janeiro, 5 June 1992	29 December 1993	<ul style="list-style-type: none"> • Obligation of the Contracting Parties: -to promote and encourage research which contributes to the conservation and sustainable use of biological diversity (Art. 12 b)).
<i>Convention</i> • <i>regional</i>				
Convention on the Conservation of European Wildlife and Natural Habitats+	Berne Convention	Berne, 19 September 1979	1 June 1982	<ul style="list-style-type: none"> • Obligation of the Contracting Parties: -to undertake to encourage and co-ordinate research related to the purposes of the Convention (Art. 11 para. 1 b)).
Convention for the Protection of the Marine Environment of the North-East Atlantic	OSPAR Convention	Paris, 22 September 1992	25 March 1998	<ul style="list-style-type: none"> • To further the aims the Contracting Parties are obliged: -to establish complementary or joint programmes of scientific research and to transmit to the OSPAR Commission the results of such complementary, joint or other relevant research and the details of other relevant programmes of

				scientific research (Art. 8 para. 1).
Agreement on the Conservation of African-Eurasian Migratory Waterbirds	AEWA	The Hague, 16 June 1995	1 November 1999	<ul style="list-style-type: none"> • Obligation of the Parties: -to initiate or support research into the biology and ecology of migratory waterbirds including the harmonization of research and monitoring methods and, where appropriate, the establishment of joint or co-operative research and monitoring programmes (Art. III para. 2 h)). • Obligation of the Parties to undertake actions consistent with the general conservation measures specified in Art. III pursuant to an action plan which is appended as Annex 3 (Art. IV para. 1); under the heading "Research and Monitoring" (para. 5 of Annex 3) certain actions are listed

- Secondly they grant exceptions from prohibitions and protection measures in favour of scientific research:

<i>Convention</i> • <i>global</i>	<i>Abbreviation</i>	<i>Done</i>	<i>Entry into force</i>	<i>Regulations</i>
Convention on the Conservation of Migratory Species of Wild Animals	CMS	Bonn, 23 June 1979	1 November 1983	<ul style="list-style-type: none"> • Obligation of the Parties that are Range States of a migratory species listed in Annex I in principle shall prohibit the <i>taking</i> of animals belonging to such species (Art. III para. 5). • Exceptions may be made to this prohibition only if: -the taking is for scientific purposes (Art. III para. 5 a)), <i>provided that</i> this exception is precise as to the content and limited in space and time
<i>Convention</i> • <i>regional</i>				
Convention on the Conservation of European Wildlife and Natural Habitats	Berne Convention	Berne, 19 September 1979	1 June 1982	<ul style="list-style-type: none"> • allows each Contracting Party to make exceptions for the purposes of research and education from the provisions of: -Art. 4 (protection of habitats), -Art. 5 to 7 (protection of species) and -from the prohibition of the use of the means mentioned in Art. 8 <i>provided that:</i> -there is no other satisfactory solution and -the exception will not be detrimental to the survival of the population concerned (Art. 9 fourth intent of para. 1).
Agreement on the Conservation of African-Eurasian Migratory Waterbirds	AEWA	The Hague, 16 June 1995	1 November 1999	<ul style="list-style-type: none"> • Parties may grant exemptions to the prohibitions laid down in para. 2.1.1 and 2.1.2 of Annex 3, irrespective of the provisions of Art. III para. 5 CMS, for the purpose of research and education (para. 2.1.3 c) of Annex 3) <i>provided that:</i> -there is no other satisfactory solution; -such exemptions are precise as to content and limited in space and time and -are not operate to the detriment of the

				populations listed in Table 1.
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Such provisions of exceptions in favour of *real* marine scientific research must be interpreted in a restricted way. In particular marine scientific research activities and projects must not be carried out in a way which is contrary to the objectives and purposes of the respective convention.

f) European Community Law

aa) The Directive 79/409/EEC (Birds Directive)

The Birds Directive **requires** the **Member States** to **encourage** research and any work required as a basis for the *protection, management and use* of the population of all species of naturally occurring birds in the wild state in the European territory of the Member States to which the EC-Treaty applies (Art. 10 para. 1 in connection with Art. 1 of the Directive 79/409/EEC). At the same time particular attention shall be paid to research on the subjects listed in Annex V (Art. 10 para. 2 of the Directive 79/409/EEC), among which are:

- national lists of species in danger of extinction or particularly endangered species, taking into account their geographical distribution;
- assessing the influence of methods of taking wild birds on population levels;
- determining the role of certain species as indicators of pollution;
- studying the adverse effect of chemical pollution on population levels of bird species.

Art. 9 para. 1 b) of the Directive 79/409/EEC grants to the **Member States** the **right to derogate** from the provisions of Art. 5 (obligation to establish a general system of protection for all species of naturally occurring birds in the wild state), Art. 6 (prohibition of trade for all species of naturally occurring birds in the wild state), Art. 7 (hunting permission with regard to species listed in Annex II) and Art. 8 (prohibition of certain capture methods), where there is no other satisfactory solution, *for the purposes of research and teaching*.

bb) The Habitats Directive

The Habitats Directive obliges the **Member States** and the **Commission** to **encourage** the necessary research and scientific work having regard to the objectives of the Habitats Directive and the obligation to undertake surveillance of the conservation status of the natural habitats and species of wild flora and fauna in the European territory of the Member States to which the EC-Treaty applies (Art. 18 para. 1 in connection with Art. 2 and 11 of the Directive 92/43/EEC). According to Art. 18 para. 2 of the Directive 92/43/EEC particular attention shall be paid to scientific work necessary for the implementation of Art. 4 (procedure for the designation and notification of protection areas) and Art. 10 (promoting of landscape elements) of the Directive 92/43/EEC, and transboundary co-operative research between Member States shall be encouraged.

Art. 16 para. 1 d) of the Directive 92/43/EEC entitles the **Member States** to **derogate** from the provisions of Art. 12 (obligation of Member States to establish a system of strict protection for the animals listed in Annex IV a) in their natural range), Art. 13 (obligation of the Member States to establish a system of strict protection for the plant species listed in Annex IV b)), Art. 14 (obligation of the Member States to adopt certain measures on the protection of species of wild fauna and flora listed in Annex V) and Art. 15 (prohibitions on

capture and transport) *for the purpose of research and education*

- provided that there is no satisfactory alternative and
- the derogation is not detrimental to the maintenance of the populations of species concerned at a favourable conservation status in their natural range.

cc) Council Decisions 1999/167/EC and 1999/170/EC Adopting Specific Programmes for Research, Technological Development and Demonstration

In connection with marine scientific research reference should be made to the Council Decisions 1999/167/EC and 1999/170/EC adopting specific programmes for research, technological development and demonstration on:

- quality of life and management of living resources (1998 to 2002)¹⁸², and
- energy, environment and sustainable development (1998 to 2002)¹⁸³.

These specific programmes serve for the implementation of the fifth framework programme of the European Community for research, technological development and demonstration activities, adopted with Decision No 182/1999/EC of the European Parliament and of the Council¹⁸⁴. This fifth framework programme lists the structures and scientific and technological aims which should be performed in the aforesaid fields. The specific programmes prescribe the details for the implementation, timetable and the means deemed necessary.

Annex II of the Decision 1999/167/EC provides for the general outlines, scientific and technological objectives as well as the priorities of the specific programmes for research, technological development and demonstration on quality of life and management of living resources (1998 to 2002). Under key action v) the Community adopts the aim of sustainable fishery and aquaculture and by doing so prescribes the following priorities:

- for fisheries:
 - to support the integrated fisheries with due regard to the *conservation of stocks*, fishing methods, mutual effects with the ecosystem, requirements of the market as well as socio-economic considerations; to determine and characterize the quality of fish and other marine living resources and of technologies; to develop *new concepts for sustainable use of marine and aquatic bio-resources*;
- for aquaculture:
 - sustainable production systems with little effects on the ecosystem* and with support of diversified breeding; improved production techniques; genetic improvements; resistance to illnesses and their control.

Annex II of the Decision 1999/170/EC contains the general outlines, the scientific and technological objectives as well as the priorities of the specific programmes for research, technological development and demonstration on energy, environment and sustainable development (1998 to 2002).

Aim of the key action iii) "Sustainable marine ecosystems" is to foster the development of a sustainable integrated management of the marine resources and to contribute to the marine aspects of environment and sustainable development policies of the EU. Research objectives are inter alia:

- to develop the scientific knowledge on marine processes, ecosystems and interactions;

¹⁸² Council Decision (EC) No 1999/167 of 25 January 1999, Official Journal L 64, 12/03/99 p. 1.

¹⁸³ Council Decision (EC) No 1999/170 of 25 January 1999, Official Journal L 64, 12/03/99 p. 58.

¹⁸⁴ Official Journal L 26, 01/02/1999 p. 1.

- objective: sustainable use of the marine environment and resources while fully *respecting its overall integrity and functioning*;
- to *reduce the anthropogenic impact* on biodiversity and the sustainable functioning of marine ecosystems through analysis of its causes, consequences and possible solutions and through development of safe, economic and sustainable exploitation technologies;
 - objective: to *reduce the impact* of human activity on the biodiversity and sustainable functioning of marine ecosystems and to develop the technologies required to facilitate safe and profitable economic yet sustainable exploitation of marine resources.
 - to enable operational forecasting of **environmental constraints on offshore activities**;
 - objective: to facilitate safe, sustainable offshore operations within the given environmental constraints and to develop the necessary components of an appropriate marine observation system.

10. Tourism

So far tourism – as far as apparent – is subject to special provisions only in one of the conventions on international environmental law listed in this study: Para. 4.2.1 of Annex 3 of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) **obliges the Parties to encourage**, where appropriate but *not* in the case of core zones of the **protected areas** referred to in Art. IV para. 1 b) in connection with para. 3.2.1 of Annex 3 AEWA, the elaboration of co-operative programmes between all concerned to develop sensitive and appropriate *eco-tourism* at wetlands holding concentrations of populations listed in Table 1. In doing so the Parties, in co-operation with competent international organizations, shall endeavour to evaluate also benefits and other consequences that can result from eco-tourism at selected wetlands with concentrations of populations listed in Table 1 (para. 4.2.2 of Annex 3 AEWA).

Otherwise special rules on tourism as such are not provided for in international environmental law. Instead, to the term tourism *a variety of human activities* can be subsumed for which the existing rules of international environmental law and the legal instruments have already been identified and described in this study. Among such activities in connection with tourism are in particular navigation but also certain forms of fishing or perspectively the use of artificial islands, installations and structures ("floating structures").

Such touristic projects like marinas and theme parks which can also be imagined on artificial islands, are listed in point 12 of Annex II of the Directive 85/337/EEC. Member States shall determine through a case-by-case examination or thresholds or criteria set by the Member States whether these projects shall be made subject to an **environmental impact assessment** (Art. 4 para. 2 subpara. 1 of the Directive 85/337/EEC).