

Tackling pollution of the Mediterranean Sea from land-based sources by an integrated ecosystem approach and the use of the combined international and European legal regimes

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1. Introduction

The pollution of marine regions from land-based sources is a serious threat to the protection of the marine environment, including marine protected areas. It is difficult to tackle because of the diverse pressures and impacts that cause the pollution. Indeed, around 80% of the pollution of the marine environment comes from land-based sources, mainly municipal, industrial and agricultural wastes and run-off. One may think of the discharge of synthetic substances, non-synthetic substances and nutrient or organic matter enrichment in river basins¹ and in the marine environment. Land-based pollution reaches the marine environment either from rivers or from direct discharges into coastal waters. The pollution of rivers and consequently of the sea affects both human health and ecosystems. Since these effects can be irreversible, prevention is all the more important.

Several legal regimes have been developed to regulate and solve this kind of pollution on the international level as well as on the European level. On the international level, relevant regulation includes the main global treaties in both international water law and the law of the sea: the UN Watercourses Convention and the UN Convention on the Law of the Sea respectively. Each of these treaties provides a global framework, to be specified at the regional level, for instance for the Mediterranean Sea area, in the Barcelona Convention and its protocols, in particular the Athens Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol). On the European level, the pollution of marine regions is regulated by several directives within and outside the field of environmental law. The most important directives are, first, the Water Framework Directive (2000/60/EC)² with its two daughter directives: the Groundwater Directive (2006/118/EC)³ and the Directive on

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1 See in general on freshwater resources the biennial reports on *the World's Waters* by P. Gleick, Island Press: Washington.

2 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Action in the Field of Water Policy, *OJL* 327, 22.12.2000, p. 1.

3 Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration, *OJL* 372, 27.12.2006, pp. 19-31.

environmental quality standards in the fields of water policy (2008/105/EC),⁴ and second, the Marine Strategy Framework Directive (2008/56/EC).⁵

The question is whether these legal regimes are sufficiently coherent to provide an effective legal protection regime for the Mediterranean, including the protected areas within the Mediterranean. An effective and coherent legal protection regime should provide clear goals and clear responsibilities and take into account the specific characteristics of the protected areas, the relevant impacts and pressures, the transboundary elements of most of the protected areas, the need for cooperation because of this transboundary aspect, and the need for an integrated approach that enables the regulation of all impacts and pressures that could influence the attainment of the goals and targets for the specific protected areas. Integrated programmes of measures and a mix of instruments are necessary and so is a dispute settlement system. Furthermore, the international and European legal protection regime should be closely connected in the way they manage the protection of the marine environment, concerning both the aspects mentioned above and the way international courts, arbitral tribunals, the European Court of Justice, and national courts deal with the combined obligations following from the different legal regimes. They should sail together in one flotilla instead of each party following its own course.

In this article we analyze the legal protection of the Mediterranean Sea as an example of the integrated ecosystem approach required to protect marine protected areas, with a focus on pollution caused by land-based sources. It will be seen that an integrated approach is taken, despite the establishment of marine protected areas. For the Mediterranean Sea, action is urgently needed considering its geographically almost enclosed feature that contributes to the comparatively slow full renewal of its waters – estimated to take over a century. First, the complexity of combined rights and obligations under European law and international law are illustrated by the *Etang de Berre* cases. Then we analyze existing legal protection regimes for marine regions and river basin catchment areas in both international and European law in order to identify the promises and challenges for an effective and coherent legal regime for the protection of the Mediterranean Sea – including its marine protected areas – from pollution by land-based sources.

2. An example: L'Etang de Berre

Two cases concerning the protection of the salt lake L'Etang de Berre and the Mediterranean Sea demonstrate some of the questions that arise when marine waters are affected by pollution from land-based sources and the complexity of the intertwining international and European protection regimes. The Etang de Berre is an area worth protecting, although it is not an area with a formal protected status under national, European or international law. It consists of salt-marshes and salinas around the Berre lagoon. It is a wetland and the site is particularly important for breeding waders. Species breeding in the lagoon are the Black-winged Stilt (*Himantopus himantopus*), the Pied Avocet (*Recurvirostra avosetta*), the Common Tern (*Sterna hirundo*), and the Little Tern (*Sterna albifrons*).⁶ The site is threatened by urban and industrial development, tourism and

4 Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council, *OJ L* 348, 24.12.2008, pp. 84-97.

5 Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for Community action in the field of marine environmental policy, *OJ L* 164, 25.6.2008, p. 19.

6 See *BirdLife International 2008*, BirdLife's online World Bird Database: the site for bird conservation. Version 2.1. Cambridge, UK: BirdLife International. Available at: <<http://www.birdlife.org>> (accessed 29.1.2009).

hunting. Water pollution from industry is also a problem. But it is not only birds and ecosystems that suffer from damage by land-based sources.

A group of fishermen complained before a French domestic court against discharges by an electricity company that was polluting the Etang de Berre with fresh water and sediments from the river Durance. The fishermen stated that the discharges were in violation of the obligations under Article 6(3) of the Athens Protocol to the Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution, to which not only France but also the European Union are Parties. The French *Cour de Cassation* stayed the proceedings and requested a preliminary ruling from the European Court of Justice (ECJ) on the question of whether or not Article 6(3) of the Protocol has direct effect. The ECJ applied the same criteria as those it had developed to determine the direct effect of provisions of international agreements and decisions of international organisations, stating that the wording of the provision must be clear, precise and unconditional, as well as the purpose and nature of the agreement.⁷ In this specific case, the ECJ ruled that Article 6(3) of the Protocol lays down clear, precise and unconditional obligations as to discharges of certain substances and that a permit for the discharges is needed.⁸

Moreover, the ECJ ruled against France for failing to implement the same Convention and Protocol, but this case was based on the argument that Article 6(1) and Article 6(3) had been violated.⁹ Article 6(1) obliges Parties to rigorously reduce pollution, which the Commission sees as an obligation of result. France considered the obligation to be an obligation of means. The ECJ followed another approach: the Protocol requires a ‘rigorous reduction’ and ‘appropriate measures’. A considerable effort had been made to reduce the pollution, but there was still a great deal of pollution remaining, therefore no ‘rigorous reduction’ had taken place and France had failed to fulfil its obligations. Article 6(3) stipulates that permits are required for the discharge of certain substances into the Mediterranean Sea. The ECJ established that the lack of implementation legislation at the Community level did not release the Member States from their obligation to implement the relevant provisions of the Protocol.

In these cases, the ECJ ruled that France had not properly implemented the provisions of the Barcelona Convention and the Protocol in its national legislation. The ECJ was of the opinion that its jurisdiction covers these disputes and that France had infringed its obligations under Community law, because the Community is a Party to the Barcelona Convention and its protocols and is competent to legislate in this area. Therefore the Convention and the Protocol became part of the Community legal order, even though they had not (yet) been implemented into European law. The ECJ even allowed individuals to rely on provisions of the Barcelona Convention (in so far as they have direct effect) before the national courts of the Member States. The ECJ thus created a coherent legal system. It also enhanced the effectiveness of the system by allowing both the Commission and individuals to enforce compliance by the Member States in the implementation of the Barcelona Convention and its protocols.

3. The general international law regime for land-based pollution in the Mediterranean

The *Etang de Berre* cases illustrated how the European and other legal regimes come together in this age of integrated water management and regulation. To further reveal how and whether

⁷ Case C-2/86, *Demire*, [1987] ECR 3719.

⁸ Case C-213/03, *L'Etang de Berre*, [2004] ECR I-7357.

⁹ Case C-239/03, *Commission v France*, [2004] ECR I-9325. See P.J. Kuijper, ‘Case note to Case C-239/03, *Commission v French Republic*, Judgement of 7 October 2005 (Etang de Berre)’, 2005 *Common Market Law Review* 42, pp. 1491-1500.

the various fields of international law could provide required coherence in tackling land-based pollution of the sea both international (fresh)water law and the law of the sea will now be surveyed. This includes in particular the UN Watercourses Convention and the United Nations Convention on the Law of the Sea (UNCLOS).¹⁰

Watercourses Convention

Under international law, pollution caused by human conduct should be limited, but it is not prohibited as such. Within international water law, three main principles for water management can be identified: the principle of equitable and reasonable utilization, the no-harm principle, and the principle of cooperation.¹¹ These principles can be found in the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses (Watercourses Convention).¹² The Watercourses Convention has not (yet) entered into force, but many of its provisions are nonetheless binding since they codify principles of customary international law. The Watercourses Convention can be argued to lay down the minimum standards for freshwater management. It provides for a framework, thereby encouraging further details at the regional level.

The Watercourses Convention lays down the principle of equitable and reasonable utilization and the no-harm principles in Articles 5 and 7. These principles and the principle of cooperation are further elaborated in Article 21, which states that watercourse States have to act individually and, where appropriate, jointly, to prevent, reduce and control the pollution of an international watercourse that may cause significant harm to other watercourse States or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse. It commits watercourse States to take steps towards harmonizing their policies and to cooperate with other watercourse States. Article 21(3) states that if any of the watercourse States so request, they have to consult with a view to arriving at mutually agreeable measures and methods to prevent, reduce and control pollution. For example, by establishing joint water quality objectives and criteria, techniques and practices to address pollution and by compiling lists of substances whose discharge has to be prohibited or regulated.

The pollution of international watercourses entering the sea contributes to the pollution of the marine environment. The connection between the pollution of international watercourses and the marine environment is expressly acknowledged in Article 23 of the Watercourses Convention, which states that watercourse States have to take all measures, individually or in cooperation with other states with respect to an international watercourse, that are necessary to protect and preserve the marine environment, taking into account generally accepted international rules and standards. This obviously includes the rules formulated under the United Nations Convention on the Law of the Sea.

10 Parts of this article relating to international law and land-based pollution are based upon the paper by A. Hilderling (2007), *Protection by International Law of the Marine Environment from Land-based Pollution*, presented at the 57th Pugwash Conference on Science and World Affairs. For a further elaboration of international water law, see: A. Hilderling, *International Law, Sustainable Development and Water Management*, 2004 (this can be downloaded free of charge on <www.eburon.nl>); S. McCaffrey, *The Law of International Watercourses*, 2007; A. Tanzi & M. Arcari, *The United Nations Convention on the Law of International Watercourses*, 2001. On the law of the sea, as laid down in UNCLOS, see: M. Nordquist *et al.*, *United Nations Convention on the Law of the Sea 1982 – A Commentary*, 1991.

11 The principle of equitable and reasonable utilization is laid down in Art. 5 Watercourses Convention and was underlined in the ICJ case on the Danube river, in which the Court notably also referred to the concept of sustainable development, see International Court of Justice 25 September 1997, *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, <www.icj-cij.org>; the obligation to take all appropriate measures to prevent the causing of significant harm to other watercourse States can be found in Art. 7 Watercourses Convention; Art. 8 of the Watercourses Convention contains the general obligation to cooperate and it encourages regional cooperation.

12 UN Convention on the Law of the Non-Navigational Uses of International Watercourses, New York, 21 May 1997, adopted by the UN General Assembly by resolution A/RES/51/229, UN Doc. A/51/869, and 36 *ILM* (1997), 719. Not yet in force: 16 Parties – 35 required; also open to regional economic integration organizations, in addition to states. See <www.un.org or www.internationalwaterlaw.org>.

United Nations Convention on the Law of the Sea

The interrelated provisions of the 1982 United Nations Convention on the Law of the Sea (UNCLOS)¹³ dealing with pollution of the marine environment and especially with land-based pollution can be found in Articles 1, 192, 194, 207 and 213. Similar to the UN Watercourses Convention, UNCLOS aims to tackle pollution caused by human conduct.¹⁴ Article 192 UNCLOS lays down the general obligation of States to protect and preserve the marine environment. Article 194 UNCLOS elaborates measures to prevent, reduce and control pollution of the marine environment. It obliges the Parties to take all measures that are necessary to prevent, reduce or control pollution of the marine environment from any source, adding that the best practical means at their disposal should be used to minimize to the fullest possible extent the release of toxic, harmful or noxious substances. Just like the Watercourses Convention, the Law of the Sea creates an obligation of best effort, but one that is not to be taken lightly. It also contains the no-harm principle and it encourages an integrated approach by addressing all sources of pollution, explicitly referring to pollution from land-based sources.

Article 207 UNCLOS specifically elaborates upon pollution from land-based sources. It commits Parties to adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internationally agreed rules, standards and recommended practices and procedures. It repeats the obligation under Article 194 to take all necessary measures and it encourages States to harmonize their policies at the appropriate regional level and to cooperate in the context of international organizations. This obviously refers to the principles and provisions of the Watercourses Convention. It is remarkable that the Law of the Sea also pays attention to enforcement. Article 213 obliges States to enforce the laws and regulations they have adopted in accordance with Article 207 and to adopt laws and regulations and take other measures necessary to implement the applicable international rules and standards. Within the framework set out above, regional instruments are considered to be the appropriate way to make further arrangements.

4. The European legal regime for land-based pollution in the Mediterranean

The legal regime established through cooperation in the European region and in the Mediterranean Sea area in particular provides an example of a regional regime that elaborates the global framework outlined above. Again, we will look at both fresh and salt water and in particular at the provisions on land-based pollution. It will become clear why the ECJ referred to the Barcelona Convention in the *Etang de Berre* cases and why it did not refer to the other two international Conventions analyzed above, or to the Helsinki Convention, which is analyzed below.

Relating to the freshwater regime in the Mediterranean region, the relevant regional instruments that elaborate the international law principles of the Watercourses Convention are the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki Convention)¹⁵ and the European Water Framework Directive (see below). Both take a progressive and integrated approach and include many countries which have a Mediterranean Sea coastline. The Helsinki Convention came into existence under the auspices of the

13 *UNTS*, Vol. 1833, p. 3.

14 Art. 1(4) UNCLOS.

15 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki, 17 March 1992, entry into force: 6 October 1996, 31 *ILM* (1992), 1312, and UN Doc. ENVWA-R.53 and Add. 1.

United Nations Economic Commission for Europe (UNECE), but it might become open to non-European states as well. According to Article 2 relating to water and pollution and use, all Parties to the Helsinki Convention are obliged to prevent, control and reduce any transboundary impact. The same Article refers to catchment areas and sustainable development as well as to the principle of reasonable and equitable use, the precautionary principle, and the polluter pays principle. The measures to be taken to prevent, control and reduce transboundary impact (Article 3) include regulation of the emission of pollutants.

The relevant regional instruments relating to the sea water regime are, on the one hand, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)¹⁶ and its Mediterranean action plan, and, on the other, the European Marine Strategy Framework Directive (see below). The GPA, adopted in 1995, includes the identification of forms and ways of polluting entire catchment areas, addressing both freshwater and the coastal environment. Its Parties are committed to protect and preserve the marine environment from the adverse environmental impacts of land-based activities through the GPA, with the help of a Coordination Office led by UNEP.

Within the Mediterranean Action Plan (MAP),¹⁷ 21 states bordering the Mediterranean Sea – Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Morocco, Serbia and Montenegro, Slovenia, Spain, Syria, Tunisia, Turkey – and the European Union cooperate to protect the marine and coastal environment and contribute towards sustainable development. The MAP directs their focus concerning the implementation of the 1976 Barcelona Convention and its protocols (see below), to which they – and the European Community – are Parties as well.¹⁸ The first action plan was adopted in 1975, the second in 1995 and the third in 2005. Over the years, cooperation within MAP has increasingly focused on a sustainable development strategy for the Mediterranean Sea area.¹⁹

The Barcelona Convention

The international rules relating to salt water have been elaborated for the Mediterranean Sea area in the Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention), which was adopted on 16 February 1976 and entered into force on 12 February 1978.²⁰ Among the protocols to the Barcelona Convention are the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA & Biodiversity Protocol) (see below). The Barcelona Convention, as amended in 1995, was renamed the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and entered into force on 9 July 2004.

In the Preamble to the Barcelona Convention, the Contracting Parties express their awareness of their responsibility to preserve the marine environment of the Mediterranean Sea area. The geographical coverage (Article 1.1) of the Mediterranean Sea area is defined as the maritime waters of the Mediterranean Sea proper, including its gulfs and seas, bounded to the west by the meridian passing through Cape Sparte lighthouse, at the entrance of the Straits of

16 <<http://www.gpa.unep.org/>>.

17 <<http://www.unepmap.org/>>.

18 An observer status is allowed for NGOs with a stated interest and third party governments.

19 The implementation of MAP components takes place under the responsibility of the six Regional Activity Centres (RACs) and is supervised by the Coordinating Unit (MEDU). The Mediterranean Commission on Sustainable Development (MCSDD) was established in 1996 as an advisory body defining a regional sustainable development strategy.

20 <<http://www.unep.ch/regionalseas/legal/conlist.htm>>.

Gibraltar, and to the east by the southern limits of the Straits of the Dardanelles between the Mehmetcik and Kumkale lighthouses. But the Parties to the Convention can choose to extend its application to the coastal areas within their territory (Article 1.2).

Article 2 of the Barcelona Convention defines pollution as ‘the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results, or is likely to result, in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of seawater and reduction of amenities’. Under Article 4.1 the Parties are under the obligation to ‘take all appropriate measures’, both individually or jointly, ‘to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area and to protect and enhance the marine environment in that Area so as to contribute towards its sustainable development.’ This again refers to an obligation of best effort.

The Barcelona Convention elaborates the principle of cooperation. Under Article 4.5, the Parties have the obligation to cooperate in the formulation and adoption of protocols, ‘prescribing agreed measures, procedures and standards for the implementation of this Convention.’ Other references to cooperation are made in the context of pollution emergencies (Article 9); pollution monitoring (Article 12); innovation in science and technology and the exchange of data and other scientific information and in providing technical and other possible assistance, giving priority to the special needs of developing countries in the Mediterranean region (Article 13). In addition, cooperation is mentioned regarding the formulation and adoption of procedures on liability and compensation for damage resulting from pollution of the marine environment in the area (Article 16). The United Nations Environment Programme (UNEP) is to carry out certain secretariat functions (Article 17), which could ease coordination with other institutions and treaties within the UN system. The settlement of disputes is arranged in Article 28, which refers to negotiation or any other peaceful means and, if unsuccessful, to arbitration upon common agreement.

Concerning pollution from land-based sources, Article 8 of the Barcelona Convention contains the familiar phrase that the Contracting Parties have to take ‘all appropriate measures to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area and to draw up and implement plans for the reduction and phasing out of substances that are toxic, persistent and liable to bioaccumulate arising from land-based sources.’ It continues by stating that these measures have to apply to pollution from land-based sources originating within the territories of the Parties, and reaching the seas directly from outfalls discharging into the sea or through coastal disposal or indirectly through rivers, canals or other watercourses or through run-off. It also includes pollution from land-based sources transported through the atmosphere. At first sight, this does not seem to go a big step further than the framework of UNCLOS. Yet, the Barcelona Convention has a number of protocols that further elaborate these rules. The most relevant of these protocols, the Protocol on land-based pollution and the Protocol on protected areas and biodiversity, will be analyzed below.²¹

The Protocol on land-based pollution

The Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources (LBS Protocol) was adopted in Athens on 17 May 1980 and entered into force on

²¹ The Protocol on Integrated Coastal Zone Management is also important, but it will not be analyzed here because it does not specifically address pollution from land-based sources or protected areas and is therefore outside the scope of this article.

17 June 1983.²² It was amended in 1996 into the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities, which entered into force on 11 May 2008. Similar to the amendment of the Barcelona Convention, the modification of this Protocol added the possible elimination of pollution and priority in phasing out certain substances. It also added activities to sources in its title and in the articles.

In the Preamble to the Protocol, Parties state their desire to implement Article 4, Paragraph 5, and Articles 8 and 21 (on the adoption of additional protocols) of the Barcelona Convention. Article 1 LBS Protocol states that the Parties take ‘all appropriate measures to prevent, abate, combat and eliminate to the fullest possible extent pollution of the Mediterranean Sea Area caused by discharges from rivers, coastal establishments or outfalls, or emanating from other land-based sources and activities within their territories, giving priority to the phasing out of inputs of substances that are toxic, persistent and liable to bioaccumulate’.

This means that tackling pollution caused by internal waters such as rivers and other freshwater resources falls within the scope of the Protocol. Polluting substances to be eliminated are subject to Article 5 (and Annex I), which requires the elaboration and implementation of national and regional action plans and programmes. Polluting substances or sources listed in Annex II are to be strictly regulated (Article 6). Common guidelines, such as on pipelines for coastal outfalls, are to be formulated and adopted (Article 7). Reference to the pollution monitoring under Article 12 of the Barcelona Convention is made in Article 8 of the Protocol, further specifying monitoring activities. Article 9 of the Protocol further specifies the obligation to cooperate under Article 13 of the Convention.

Article 10 of the Protocol deals with cooperation to formulate and implement assistance programmes for developing countries. Article 11.1 of the LBS Protocol states in this regard that if discharges from a watercourse that flows through the territories of two or more Parties are likely to cause pollution of the Mediterranean Sea, these Parties have to respect the provisions of the Protocol and are called upon to cooperate with a view to ensuring its full application. This provides a direct link to the legal regime for international watercourses, but the wording of this provision is not very strong. Article 11.2 of the Protocol states that Parties are not responsible for pollution originating on the territory of a non-contracting state, but it does contain an obligation for the Party to endeavour to cooperate with such a state to enable the full application of the Protocol. It therefore aims to influence water management by non-Parties as well.

The SPA & Biodiversity Protocol

The establishment and regulation of protected areas in the Mediterranean is regulated by the 1995 Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA & Biodiversity Protocol) to the Barcelona Convention, which entered into force on 12 December 1999. The establishment of specially protected areas is intended to protect and improve the state of the Mediterranean’s natural and cultural heritage. Under Article 3, State Parties are obliged to take the necessary measures to protect, preserve and manage, in a sustainable and environmentally sound way, areas of biological or ecological value, notably by the establishment of specially protected areas and to protect, preserve and manage threatened or endangered species of flora and fauna.

Among the protection measures is strengthening the application of the LBS Protocol to the Barcelona Convention (Article 6). The Parties are encouraged to cooperate with each other and

²² UNTS, no. 22281, see <www.un.org>.

with states that are not Party to the Protocol or Convention where necessary (Article 5). The Protocol leaves it to the Parties to establish a procedure for the establishment of marine protected areas, which should also be used for changes or removal. It only obliges the Parties to draw up a List of Specially Protected Areas of Mediterranean Importance (SPAMI List; Article 8). These lists will include marine protected areas based on other conventions as well, for example, the 1971 Convention on Wetlands of International Importance especially as Waterfowl Habitat and the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage.

5. The EC regime

For those states that are Member States of the European Union, the international obligations flowing from the international conventions described above are complemented by European obligations. These obligations are found in particular in two water directives: the Water Framework Directive (WFD) and the Marine Strategy Framework Directive (MSFD). Indeed, these water directives are meant to implement the obligations following from several international obligations (Preamble 21 WFD and 16 MSFD). It will be seen below to what extent the involvement of the European Union enhances the coherence of the legal regime for the protection of the marine environment.

Implications of EC law

The role of water law with an EC law character differs from the role of international water law without that specific EC law character. The main reason for this is the fact that EC law and the national law of the EC Member States constitute one composite legal order. Because of the principle of Community loyalty, enshrined in Article 10 EC, Member States are obliged to do everything necessary in order to give full effect to EC Law and to refrain from opposing the full effect of EC Law in any way. Ultimately, this can be enforced through infringement proceedings brought by the Commission before the European Court of Justice (ECJ) and through preliminary ruling procedures brought by national courts in the course of settling disputes over Community law.²³ In its case law, the ECJ has established that the Member States must interpret their national law in accordance with the EC law that it implements and that in a case of conflict, EC law takes precedence over the national laws of the Member States.²⁴

The developments in the case law of the ECJ on the relationship between international law and European law – as can be seen in the *Etang de Berre* cases above – affect the relationship between the EC and its Member States and relations with non-Member States. Especially in the field of marine protection this is important because most of the time seas and oceans are not only surrounded by EC Member States, so cooperation with non-Member States will be necessary. The involvement of the EU affects, for instance, the possibility to be a party to or conclude international agreements and treaties; the possibility for Member States to choose a court or tribunal themselves if there is a dispute between two Member States which are Parties to the same international treaty; and the possibility to take more stringent measures than prescribed under European law.²⁵

23 Respectively Art. 226-228 EC and Art. 234 EC.

24 See *inter alia*: J. Jans *et al.*, *Europeanisation of Public Law*, 2007, pp. 35 and 36.

25 See J. Jans & H. Vedder, *European environmental law*, 2008, pp. 61 *et seq.*; N. Lavranos, 'Concurrence of Jurisdiction between the ECJ and other International Courts and Tribunals', 2005 *European Environmental Law Review*, pp. 213-225; M. Bronckers, 'The relationship of the EC Courts with other international tribunals: non-committal, respectful or submissive?', 2007 *Common Market Law Review* 44, pp. 601-627; E. Hey & H. Van Rijswick, 'Transnational water management, the Water Framework Directive and international treaties',

Like international law, European law does not prohibit pollution. Instead, European environmental law provides for a protection regime, based on preserving, protecting and improving the quality of the environment; as well as the protection of human health, a prudent and rational utilisation of natural resources and promoting measures at the international level to deal with regional or worldwide environmental problems (Article 174 EC). The main principles in European law are the principle of specific competences (Article 5 EC), the subsidiarity principle (Article 5 EC), the proportionality principle (Article 5 EC), the integration principle (Article 6 EC) and the concept of sustainable development. Environmental principles in EC environmental law are the high level of protection principle, the precautionary principle, the prevention principle, the polluter pays principle and the source principle (rectifying damage at source). It is remarkable that in the light of a prudent and rational utilisation of natural resources, EC environmental law is not based on the user pays principle. This may change in the future, for example when the use of scarce clean fresh water becomes increasingly problematic.

An important European principle is the integration principle. This principle enhances the coherence of the Community legal order. It is reflected in the WFD, as it aims at an integrated and combined approach to protect fresh waters and coastal waters choosing river basin management as an approach and stating explicitly that measures also have to be taken in other policy areas to meet its objectives (Preamble 16 WFD). With the entry into force of the MSFD a next link is made between the protection regimes under international and European water law (Preamble 7, 17, 18 and 19 MSFD) and between the protection regimes for river basins and marine regions, on the one hand, and those for other policy fields like fisheries, agriculture and product policy (Preamble 9 MSFD) on the other (see below). It must be noted, however, that although external integration is of the utmost importance, the practical implementation of this obligation in other EC policy fields is still poor.²⁶

The Water Framework Directive

The WFD was established in 2000. While previous European water legislation was a mixture of different kinds of directives, the WFD was created to provide a transparent, effective, and coherent legislative framework. It was intended to coordinate, integrate and, from a long-term perspective, further develop the overall principles and structures for the protection and sustainable use of water in the EU in accordance with the principles of subsidiarity. The Directive also makes a contribution towards enabling the EU and the Member States to meet obligations arising from various international agreements on the protection of marine waters from pollution and on water protection and management, notably the Helsinki Convention. The WFD, like the Helsinki Convention, opts for a river basin approach to water management. A river basin district is described as ‘the area of land and sea, made up of one or more neighbouring river basins with their associated groundwater and coastal waters (...)’ (Article 2(15) WFD). For the protection of marine waters also the definition of coastal waters is important: coastal waters are the ‘surface waters on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of the territorial waters is measured, extending where appropriate up to the outer limit of transitional waters’ (Article 2(7) WFD). Transitional water is ‘a body of surface water in the vicinity of a river

in: O. Jansen & B. Schöndorf-Haubold (eds.), *The European Composite Administration*, Intersentia (forthcoming).

²⁶ See N. Dhondt, *Integration of Environmental Protection into other EC Policies*, 2003; J. Jans & H. Vedder, *European environmental law*, 2008, p. 18; L. Krämer, ‘Thirty years of EC Environmental Law’, in: H. Somsen (ed.), *Yearbook of European Environmental Law*, Vol. 2, 2002, p. 163.

mouth, which is partly saline in character as a result of its proximity to coastal waters, but which is substantially influenced by freshwater flows' (Article 2(6)WFD). River basin districts therefore consist of an entirety of associated waters, including surface waters, groundwater and coastal waters, and can extend up to a kilometre from the baseline into the marine area or to where the marine waters are substantially influenced by freshwater flows.

The aim of the WFD is to create an integrated and coherent water policy within the EU. Its purpose is the protection and improvement of all waters within the EU, including surface, ground, transitional, and coastal waters. This protection takes place by managing the entire water system, specifically for each river basin. Because river basins often extend over several countries, modern water management needs to have a strongly international transboundary dimension, which calls for a greater role for international cooperation.²⁷ As the chosen approach is based on river basins and the protection of surface waters as well as groundwater, the protection of the soil and ground also fall within the scope of the Directive. That is the most important contribution of the WFD in dealing with the protection of the marine environment against land-based pollution.

Another important feature of the WFD is that it is strongly purpose-oriented, in the sense that achieving the aims of the Directive takes priority, and this also includes its further legal elaboration. The goals are defined more concretely in the environmental objectives of Article 4 in the WFD. The final objective is to achieve the 'good status' of European waters by 2015. The legally vague concept of 'good status' is defined further in the annexes to the Directive. A distinction is made between the good status of groundwater and that of surface waters. Good status can be divided into a chemical component, which applies to both groundwater and surface waters, and an ecological component, which refers to just surface waters. Protected areas are listed separately in the environmental objectives although they are not designated under the WFD, but rather on the basis of other EU regulations, such as the Nitrates or Habitats Directive. The WFD only requires that all these areas are listed in a register and it further stipulates that the most stringent protection regime is applicable. This makes it clear that the WFD protects ecosystems in their entirety, instead of giving protection to specifically designated protected areas.

Good status is the ultimate goal of the WFD and is further defined by way of environmental quality standards. The elaboration of good status must be laid down in the form of quality standards in statutory provisions. These standards are nothing new in water law; older directives already laid down many of the quality requirements, both for waters with a specific function (drinking, bathing, fishing, or shellfish) and for certain substances.²⁸ It may be inferred from the case law from the ECJ that quality standards must be regarded as obligations to achieve a particular result, which Member States have to meet under all circumstances, except when the Directive makes exemptions possible. This does not detract from the fact that quality requirements may be formulated as both limit and guidance or target values. If legal measures such as permit procedures are not effective, then additional measures must be taken, especially when limit values are concerned. In case of guidance or target values Member States have more discretionary powers to decide whether measures are necessary and if they do not exceed

27 See G. Reichert, 'The European Community's Water Framework Directive: A Regional Approach to the Protection and Management of Transboundary Water Resources?', in: L. Boisson de Chazournes & S. Salman (eds.), *Water Resources and International Law*, 2005, pp. 429-472 and A. Keessen, J. Van Kempen & H. Van Rijswick, 'Transboundary river basin management in Europe', 2008 *Utrecht Law Review*, no. 3, pp. 35-56.

28 Based on the Drinking Water Directive (75/440/EEC), amended by Directive 79/869/EEC; the Bathing Water Directive (76/160/EEC); the Fishing Waters Directive (2006/44/EC); the Shellfish Water Directive (2006/113/EC); Directive 76/464/EEC, republished as Directive 2006/11/EC.

acceptable costs or give rise severe social stress.²⁹ The WFD wants the Member States to achieve good status for all waters by 2015, but it contains a number of possibilities for setting less stringent objectives or postponing the deadline by which they have to be achieved, albeit under strict conditions.

Marine pollution is also influenced by activities in states that are not situated near a sea or ocean. The fact that a river basin approach is often transnational means that if cooperation does not work in practice, pollution coming from abroad must be tackled by states situated at the end of the river basin. The WFD does not have a proper mechanism for dealing with transboundary pollution. Article 12 WFD offers the possibility to request the European Commission for help, but it is unclear whether such a request leads to the fact that a Member State is no longer liable for not meeting the goals. The river basin approach leads to the situation that not only illegal upstream pollution but also an understandable and correct use of the WFD exemptions in upstream states will result in more difficulties for downstream states in reaching the goals and standards that follow from the Water Framework Directive, and last but certainly not least, in reaching the goal of a proper protection of the marine environment.

The lack of a proper instrument for liability for transboundary pollution is partly solved by Article 6 of the Directive on environmental quality standards in the fields of water policy (a daughter directive of the WFD), which states that a Member State shall not be in breach of its obligations under this Directive as a result of exceeding environmental quality standards if it can demonstrate that exceeding these standards was due to a source of pollution outside its national jurisdiction; it was unable, as a result of such transboundary pollution, to take effective measures to comply with the relevant environmental quality standards; and it had applied the coordination mechanisms set out in Article 3 of the WFD and, as appropriate, taken advantage of the provisions of Articles 4(4), (5) and (6) of that Directive for those water bodies affected by transboundary pollution. To rely on this exemption, Member States have to use the mechanism laid down in Article 12 of the WFD to provide the Commission with necessary information in the circumstances that cause the exceedance of the quality standards and with a summary of the measures taken in relation to transboundary pollution in the relevant river basin management plan in accordance with the reporting requirements under Article 15(1) of the WFD.

Before one can take appropriate measures to reach the goals set, it must be clear what the characteristics of the river basin district are and which environmental impacts of human activities there are. Finally, an economic analysis of water use is necessary. The WFD obliges Member States to make these analyses and reviews and to update them regularly (Article 5 WFD). The ensuing appropriate measures by which the objectives must be realized include both integrated river basin management plans, preferably for the entire transboundary river basin, and programmes setting out the steps and measures which the Member States intend to take to achieve the aims. These measures should include all those necessitated by a number of existing directives.³⁰ The WFD distinguishes between the measures for diffuse and point-source pollution. Measures and instruments need to be derived not only from water legislation, but also from other fields of policy. Here again, intensive international cooperation is usually necessary because of

29 ECJ 18 June 2002, Case C-60/01; ECJ 8 March 2001, Case C-266/99; ECJ 14 July 1993, Case C-56/90; ECJ 12 February 1998, Case C-92/96; ECJ 25 November 1992, Case C-337/89; ECJ 14 November 2002, Case C-316/00. Where water directives are involved, the case law often concerns those that have the protection of public health as an objective.

30 Art. 10 WFD and Part A of Annex VI; at least the measures from the Bathing Water Directives (76/160/EEC and 2006/7/EC), Birds Directive (79/409/EEC), Drinking Water Directive (80/778), Seveso Directive, EIA Directive (85/337/EEC), Sewage Sludge Directive (86/278/EEC), Urban Waste Water Treatment Directive (91/271/EEC), IPPC Directive (96/61/EEC), Nitrate Directive (91/676/EEC), and Habitats Directive (92/43/EEC).

the transboundary character of most river basins. The WFD also contains the obligation to recover the costs of water services in accordance with the polluter pays principle. Finally, the Directive pays a great deal of attention to public participation and has opted for a combination of source and effect-oriented policy. The effect-oriented policy will eventually determine whether the requirements of the WFD have been met.

The Marine Strategy Framework Directive

The MSFD, adopted in June 2008, establishes a framework for the protection of the marine environment by achieving or maintaining good environmental status in the marine environment by 2020 at the latest (Article 1). By applying an ecosystem-based approach to the management of human activities while enabling a sustainable use of marine goods and services, priority should be given to achieving or maintaining good environmental status in the Community's marine environment, to continuing its protection and preservation, and to preventing subsequent deterioration. The Directive applies to all marine waters, the seabed and subsoil, seaward of the baselines from which the territorial sea is measured up to the outmost reach of the area where a member state exercises jurisdiction (Article 3(1)(a) MSFD). As far as coastal waters are concerned, the MSFD applies to coastal waters only to the extent that activities are not covered by the WFD or other Community legislation. Marine internal waters like the Etang de Berre are regulated by the Water Framework Directive.

In implementing the obligations flowing from the MSFD, Member States are to take due account of the various marine regions or sub-regions located within the European Union (Article 4(1) MSFD). These regions and sub-regions are in accordance with those employed in relevant regional sea conventions. The Mediterranean Sea constitutes a marine region (Article 4(1) MSFD), which is further divided into sub-regions: the Western Mediterranean Sea, the Adriatic Sea, the Ionian Sea and the Central Mediterranean and Aegean-Levantine Sea. By reason of the transboundary nature of the marine environment, Member States should cooperate to ensure the coordinated development of marine strategies for each marine region or sub-region. Since marine regions or sub-regions are shared both with other Member States and with non-Member States (also called third countries), Member States should make every effort to ensure close coordination with all Member States and third countries concerned. Existing institutional structures established in marine regions or subregions, in particular regional sea conventions, should be used to ensure such coordination. For the Mediterranean Sea, this refers to the Barcelona Convention (see above).

Just like under the WFD, Member States should determine the characteristics for good environmental status at the level of the marine (sub-)region. An initial assessment of the status of marine waters has to be made (Article 8 MSFD). Such assessments have to define environmental targets and associated indicators 'so as to guide progress towards achieving good environmental status' (Article 10(1) MSFD). For each marine region a marine strategy has to be made, by each Member State for its own waters, but all Member States have to ensure that, within each marine (sub-)region the measures are coherent and coordinated across that marine (sub-)region. In addition, due to the fact that pollution from land-based sources originates not only from Member States which have marine waters, the MSFD obliges all Member States of the European Community that could influence the pollution of the marine regions to take all necessary measures to avoid such pollution.

The marine strategy must have an ecosystem-based approach to the management of human activities and consist of an initial assessment (Article 8), the determination of good environmental status (Article 9), environmental targets (Article 10), a monitoring programme (Article 11)

and a programme of measures (Article 13). The programmes of measures, to be developed by individual Member States, shall include those measures which are required to attain or achieve a good environmental status and shall be based on the initial assessments with reference to the environmental targets set at the level of the marine region or sub-region. The programmes of measures have to take into account relevant measures required under Community legislation, in particular the Water Framework Directive, the Urban Waste-Water Treatment Directive and the Bathing Water Quality Directive as well as the European legislation on environmental quality standards in the field of water policy, or international agreements (Article 13(2) MSFD).

It is remarkable that measures which are obligatory under the Nitrates Directive do not have to be part of the MSFD's programme of measures, now that pollution of the marine environment is seriously threatened by pollution by nitrates or agriculture.³¹ This again proves that agricultural policy occupies a special position in European environmental law. Measures to combat pollution from agriculture are however part of the programme of measures based on the Water Framework Directive. It is nevertheless uncertain if the contribution of agriculture to the pollution caused by land-based sources will be sufficiently tackled, since the ECJ is of the opinion that the system for protecting waters from pollution from livestock effluent at the Community level is purely based on Directive 91/676 (Nitrate Directive) and not on other water directives like the Ground Water Directive (Directive 80/68/EEC). This special position for agriculture may lead to an unbalanced approach and a lack of a fair distribution of measures that should be taken by all stakeholders and polluters.³²

The legal regime established by the MSFD is comparable with the WFD in many respects. Contrary to the WFD, the MSFD uses environmental targets instead of environmental quality standards. The legal obligation following from the MSFD is therefore an obligation of best effort. In line with the regime of the WFD, the MSFD provides the possibility to rely on exceptions in their programme of measures (Article 14). The system of the MSFD, however, is more realistic than that of the WFD, since it offers the possibility to invoke an exemption when action or inaction is concerned for which the Member State in question is not responsible. Article 15 lays down the procedure that should be followed. Where a Member State identifies an issue which has an impact on the environmental status of its marine waters and which cannot be tackled by measures adopted at the national level, or which is linked to another Community policy or international agreement, it shall inform the Commission accordingly and provide necessary grounds to substantiate its view. The Commission has to respond within a period of six months. Where action by Community institutions is needed, Member States shall make appropriate recommendations to the Commission and the Council for measures regarding those issues. Unless otherwise specified in relevant Community legislation, the Commission has to respond to any such recommendation within a period of six months and, as appropriate, reflect the recommendations when presenting related proposals to the European Parliament and to the Council. With this procedure the responsibilities of the Member States and the European Commission are clearer than under the WFD (*cf.* Article 12 WFD).

31 See also: Communication from the Commission to the European Parliament and the Council, *Towards Sustainable Water Management in the European Union, First stage in the implementation of the Water Framework Directive 2000/60/EC*, COM(2007) 128 final, SEC(2007) 363 and Commission Staff Working Document (SEC(2007) 362 final), *First report on the implementation of the Water Framework Directive 2000/60/EC*.

32 ECJ 8 September 2005, Case C-416/02, see also Case C-121/03 and on the protection of water against pollution from agriculture: H. Van Rijswijk, 'The relationship between the Water Framework Directive and other environmental directives, with particular attention to the position of agriculture', 2007 *Journal of Water Law*, pp. 193-203.

In the more recent European environmental directives there is a greater understanding of the economic and social effects of environmental measures that have to be taken. The role of a cost-benefit analysis is increasing in European environmental law, although it is not yet clear how environmental benefits and costs should be taken into account in the comparison with economic costs and benefits. Disproportionate economic and social costs may nevertheless lead to less stringent measures or a longer period is granted to achieve the prescribed goals. Any further deterioration is however not allowed (Article 4(4) WFD, Article 4(5) WFD, and Article 14(4) MSFD). Member States – relying on an exemption – are bound to take *ad hoc* measures in order to continue pursuing the environmental targets, preventing further deterioration of the environmental status of the waters and mitigating adverse impacts at the level of the marine (sub-)region.

The chosen instruments – coordinated marine strategies for marine regions, coordinated programmes of measures, environmental targets instead of environmental quality standards and a clear procedure for dialogue when a Member State cannot achieve the MSFD goal – make it clear that the MSFD is a step forward towards shared responsibilities between the European institutions and the Member States when protecting ecosystems and natural resources. That is – especially when it concerns marine regions and transnational river basins – a more pragmatic and perhaps more realistic attitude. Nevertheless, the new approach towards multi-level and multi-actor governance and a strong focus on flexibility and proceduralization carries a great risk that at the end of the day environmental goals will not be achieved or will only be achieved much later or that the burden of measures and investments will not be fairly shared.³³

This might give rise to nostalgic feelings towards more old-fashioned instruments, like emission standards, which are easier for Member States to implement and to enforce by the European Commission and the ECJ. However, emission standards do not offer a solution for all pollution from land-based diffuse sources, especially not from diffuse sources of pollution like agricultural pollution. It should also be noted that an extensive use of exemptions leads to the undesirable situation that other states in the same marine region will have greater difficulties in fulfilling their goals and ambitions, with the final result that the marine environment will lack proper protection and that the goals will not be met. It would therefore be advisable to think about a system which would make the parties involved jointly responsible for achieving the goals laid down in the new European water directives. This will be difficult to realize as far as non-Member States are concerned, but within the European Community it is worth thinking about regional responsibility within river basins.

From the protection of specific areas towards an integrated ecosystem approach

Marine protected areas are not new in European law. The European Member States already have to establish marine protected areas on the basis of the Birds Directive and the Habitats Directive (Preamble 6 to the Marine Strategy Framework Directive) and of their international commitments, which includes the SPA and the Biodiversity Protocol to the Barcelona Convention (see

33 See on this development J. Scott, 'Flexibility, proceduralization and environmental governance in the EU', in: G. de Búrca & J. Scott (eds.), *Constitutional change in the EU. From uniformity to flexibility?*, 2000; J. Scott & D. Trubeck, 'Mind the gap: law and new approaches to governance in the European Union', 2002 *European Law Journal* 8, pp. 1-18; L. Krämer, 'Better regulation for the EC environment: on the quality of EC environmental legislation', 2007 *Milieu en Recht*, pp. 70-74. The new approach is part of the *Common Implementation Strategy* that aims to address the challenges in a co-operative and coordinated way. Relevant documents are the Strategic Document (May 2001): *Common Strategy on the Implementation of the Water Framework Directive*; the Strategic Document (June 2003): *Carrying forward the Common Implementation Strategy for the Water Framework Directive – Progress and Work Programme 2003/2004*; the Strategic Document (December 2004): *Moving to the next stage in the Common Implementation Strategy for the Water Framework Directive – Progress and Work Programme 2005/2006*; the Strategic Document (December 2006): *Improving the comparability and the quality of Water Framework Directive implementation – Progress and Work Programme 2007-2009*. See <http://ec.europa.eu/environment/water/water-framework/objectives/implementation_en.htm>.

above). This is reflected in the MSFD, which obliges the Member States to establish marine protected areas and report their progress in the establishment of marine protected areas to the Commission and the general public in 2013. The Commission will issue a progress report in 2014 (Articles 13 and 21). The establishment of and the ensuing programmes of measures should lead to the establishment of coherent and representative networks of marine protected areas, which adequately cover the diversity of the constituent ecosystems (Article 13(4) MSFD). Specific protection measures for protected areas are not envisaged by the MSFD, with one exception. Under Article 13(5) MSFD, Member States are obliged to inform the competent authority or international organization concerned when they consider that the management of a human activity at Community or international level is likely to have a significant impact on the marine environment, particularly in the marine protected areas. The purpose of this notification duty is that the marine environment, and in particular the marine protected areas, are taken into account in the consideration and possible adoption of measures that may be necessary in order to achieve good status of the marine waters by 2020 at the latest.

In addition to this special regime for protected areas, European water law plays a large role in protecting valuable but vulnerable areas in the Mediterranean. Due to the fact that fresh waters as well as marine waters are flowing and moving and interfere with each other, the approach in the Marine Strategy Framework Directive is that of an integrated protection of marine waters based on an ecosystem approach. The MSFD does not have a specific regime for protected areas. Instead, it states that the marine environment as a whole should be protected. The MSFD states in general that the marine environment is a precious heritage that must be protected, preserved and, where practicable, restored with the ultimate aim of maintaining biodiversity and providing diverse and dynamic oceans and seas which are clean, healthy and productive. Therefore the integration of environmental considerations must be promoted in all relevant policy areas (Preamble 3). The establishment of a thematic strategy is aimed at the conservation of the marine ecosystems and should include protected areas and address all human activities that have an impact on the marine environment. Nevertheless, the MSFD states in the Preamble that the establishment of marine protected areas is an important contribution to the achievement of a good environmental status of marine waters (Preamble 6 MSFD).

The MSFD is in line with the approach that was all ready taken in the WFD. Before the coming into force and the full implementation of the Water Framework Directive there were many directives which all protected several kinds of waters, like water used for the abstraction of drinking water, shellfish waters, fresh-fish waters, bathing water *et cetera*. Most of these specific protection regimes will disappear in the near future. As far as the WFD regulates protected areas, it is an obligation for each Member State to compile a register of all protected areas that lie within a river basin district and to protect them properly. The protected areas concerned are based on other EC environmental legislation except for the drinking water regime. The Water Framework Directive requires a register with protected areas including areas designated for the abstraction of water intended for human consumption; areas designated for the protection of economically significant aquatic species; bodies of water designated as recreational waters; nutrient-sensitive areas; and areas designated for the protection of habitats or species where the maintenance or improvement of the status of the water is an important factor in their protection. This integrated ecosystem approach will lead, in our view, to a better protection of the marine environment, since it considers the whole ecosystem in relation to neighbouring systems and in relation to all threats and possible measures to avoid negative impacts on the ecosystem.

Environment strategy for the Mediterranean

On 5 September 2006, the Commission issued a Communication entitled: 'Establishing an environment strategy for the Mediterranean'.³⁴ According to the Commission, the Mediterranean environment is fragile and continues to deteriorate in spite of all the efforts made. For several of the countries bordering the Mediterranean Sea, this deterioration costs billions of euros per year. The initiatives and strategies which have been developed over the last thirty years are not being properly implemented, or are not being implemented at all. The Commission stated that strengthening (inclusive) environmental action in the Mediterranean calls for a coordinated strategy between the EU and various Mediterranean countries, with a focus on those covered by the European Neighbourhood Policy,³⁵ and the application of EU environment legislation by EU Member States and the accession countries.

The Commission considers the Barcelona Convention organization to be the cornerstone of cooperation efforts in the region. This is reflected in the connection between its own work programme and the 2005 Mediterranean Action Plan (MAP; see above). It thus aims to ensure greater coherence between the activities of the Member States and the Barcelona Convention Parties in particular as regards the implementation of the European Marine Strategy and meeting targets related to pollution prevention.³⁶ The environment strategy for the Mediterranean Sea states that the European Union wants to assist partner countries in various ways: to create appropriate institutions, develop an effective policy and establish a legal framework that enables environmental concerns to be integrated into other sectors of activity; reducing levels of pollution and the impact of uncontrolled activity; preparing local administrations to react to emergencies as well as to one-off and long-term issues; making more sustainable use of land and sea areas; increasing information, awareness and the participation of the public; and encouraging regional cooperation amongst partner countries.

To achieve these objectives, financial aid is foreseen from, *inter alia*, the European Neighbourhood and Partnership Instrument (ENPI) and the thematic programme entitled 'Environment and Sustainable Management of Natural Resources including Water'. Because of the limited scope of the financial resources available the Commission has chosen to target these funds on sites which give the greatest cause for concern.

The dialogue required to implement the environment strategy for the Mediterranean Sea between the EU and third countries does not only take place in the context of the Barcelona Convention. It can also be developed in the context of the Euro-Mediterranean Partnership, or at the international level with the New Partnership for African Development and the African Union. The Commission also plans to support the creation of networks of non-governmental organisations (NGOs) and contacts between NGOs, because all appropriate partners should be involved in the development and implementation of the environment policy.

34 COM(2006) 475 final.

35 Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, the Palestinian Authority, Syria and Tunisia.

36 Another priority area is the implementation of the European Strategy for Integrated Coastal Zone Management. See also: the Commission proposal for a European Parliament and Council recommendation concerning the implementation of integrated coastal zone management in Europe, COM(2000) 545, adopted 8 September 2000. The Integrated Coastal Zone Management Strategy is not analyzed here, because it does not specifically address pollution from land-based sources or marine protected areas and therefore falls outside the scope of this article.

6. Dispute settlement: the right court

If the European Court of Justice has to adjudicate a dispute concerning a convention that is somehow linked to the WFD or the MSFD,³⁷ the Court will include the convention, and the decisions taken on the basis of that convention, in its considerations. Due to the primacy of European law, situations could develop in which the ECJ will conclude that an internationally adopted measure is in conflict with European law. However, such a situation is unlikely to develop. Much more likely is the situation where the ECJ will provide judicial means to enforce internationally agreed rules and standards within the European Union, as occurred in the *Etang de Berre* cases. One can see a development in which the ECJ interprets European law in the light of international convention obligations.³⁸

Problems may arise, however, in situations in which Member States submit their mutual disputes concerning a convention that is related to European law to an international court or to an Arbitral Tribunal. The problem that arises is the fact that, due to the relationship between the treaty and European law, in interpreting the treaty in question the court or tribunal may have to interpret European law. In such cases, the obligation imposed on Member States by virtue of Article 292 EC would be at issue. This provision imposes an obligation on Member States to submit disputes concerning the interpretation and application of European law to the European courts.³⁹ This situation actually occurred in the dispute between Ireland and the United Kingdom in the *MOX Plant* case.^{40, 41} It must be concluded that the ECJ has exclusive jurisdiction with respect to disputes between Member States that arise from a mixed agreement such as the United Nations Convention on the Law of the Sea, to the extent that such an agreement is part of the Community legal order.⁴²

Although there is a great deal of discussion on these developments, we do not think that this case law is ultimately very problematic, but more a consequence of being a member of the EU. Moreover, regarding the protection of the marine environment in the Mediterranean Sea area, we consider that this as a positive development, because the European water legislation is easier to enforce than the international water conventions from the point of view of legal protection for individuals. The situation is different if a dispute occurs between one or more Member States and/or the Community and a non-Member State. This kind of dispute can only be submitted to an international court or an Arbitral Tribunal, since non-Member States may not appear before the European courts, and international law applies to legal relationships between one or more non-Member States and one or more Member States.

37 Compare the case of *Peralta* (C-379/92, ECR I-3453) where the Court ruled that the connection between the Marpol Convention of 2 November 1973 (with Protocols and Annexes and Appendices (*UN Treaty Series* 1975, 147) and with the Protocol to that Convention of 17 February 1978 with Annex and Appendix (*UN Treaty Series* 1978, 188)), and the European legal order was insufficient, because the Community was neither competent with regard to pollution from shipping activities nor was it party to this convention.

38 Judgment in Case C-308/06 (3 June 2008) and in Case C-249/07 (4 December 2008).

39 The Protocol of Signature agreed upon under the Rhine Convention includes the explicit stipulation that disputes that do not involve non-Member States should be resolved in accordance with Art. 292 EC [219 old].

40 Permanent Court of Arbitration, press release, 14 November 2003, available at <<http://www.pca-cpa.org>>.

41 These proceedings relate to proceedings of the European Commission against the United Kingdom, concerning the nuclear systems that are part of the MOX Plant. The discussion concerned the inadequate access allowed to Community inspectors, as a result of which the inspection of certain storage facilities for nuclear waste was not possible. See N. Lavranos, 'The MOX Plant judgement of the ECJ: How exclusive is the jurisdiction of the ECJ', 2006 *European Environmental Law Review*, pp. 291-296; N. Lavranos, 'The MOX Plant and IJzeren Rijn Disputes: Which Court is the Supreme Arbiter?', 2006 *Leiden Journal of International Law*, pp 223-246 and P. Cardwell, 'Who decides? The ECJ's Judgement on Jurisdiction in the MOX Plant Dispute', 2007 *Journal of Environmental Law*, no. 1, pp. 121-129.

42 ECJ Case C-459/03.

7. Comparison and conclusion: mutually supporting legal regimes?

The international and European legal regimes for both fresh water and the seas share many common features when it comes to addressing land-based pollution. The framework is provided by international law, as established in common principles and in the Watercourses Convention and the Law of the Sea Convention. This has been given further shape at the regional level by the Helsinki Convention, the Barcelona Convention and its protocols and – for EU Member States – by the European Water Framework Directive and Marine Strategy Framework Directive. The image of European water legislation is that of a funnel full of measures leading into the next funnel of measures and then into another funnel of such measures and so on. Each funnel takes care of a part of the necessary measures to protect the water system: measures to regulate activities in the field of agriculture, industry, waste water treatment and direct and indirect discharges within the river basin district towards the seas and oceans.

This picture should be considered from the point of view of the marine environment.

For the marine environment, measures have to be taken based on international law as described above and measures which are laid down in the Marine Strategy Framework Directive. The latter include all the measures laid down in the Water Framework Directive, the Birds and Habitats Directive, measures which are necessary due to international obligations and measures directly following from the Marine Strategy Framework Directive.

The Water Framework Directive concentrates on the protection of river basins including surface water, ground water and coastal and transitional waters. It regulates activities within river basin districts or catchment areas and provides for measures laid down in the Water Framework Directive itself, but also many other measures mentioned in various EC environmental directives and measures that have to be taken due to international obligations. The most important measures follow from the Directive on urban waste water treatment,⁴³ the Directive concerning the management of bathing water quality,⁴⁴ but also the Birds Directive,⁴⁵ the Habitats Directive,⁴⁶ the Nitrates Directive,⁴⁷ the IPPC Directive,⁴⁸ REACH⁴⁹ and the regulation and directives on the use of pesticides and biocides.⁵⁰

The resulting obligations for Parties and Member States are likely to reinforce each other in preventing and combating land-based pollution of the marine environment, which in its turn provides another reason to protect freshwater resources. Both freshwater and seawater fall within the more integrated approach regimes laid down in the WFD and the MSFD. Even when all those legal regimes would be coherent and coordinated, a focus on solely their specific regulation

43 Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment, *OJ L* 135, 30.5.1991, pp. 40-52.

44 Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC, *OJ L* 64, 4.3.2006, pp. 37-51.

45 Directive 2008/102/EC of the European Parliament and of the Council of 19 November 2008 amending Council Directive 79/409/EEC on the conservation of wild birds, as regards the implementing powers conferred on the Commission, *OJ L* 323, 3.12.2008, pp. 31-32.

46 Council Directive 97/62/EC of 27 October 1997 adapting to technical and scientific progress Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, *OJ L* 305, 8.11.1997, pp. 42-65.

47 Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources, *OJ L* 375, 31.12.1991, pp. 1-8.

48 Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control (Codified version) (Text with EEA relevance), *OJ L* 24, 29.1.2008, pp. 8-29.

49 Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, *OJ L* 396, 30.12.2006, pp. 1-854.

50 EC 396/2005 amended by EC 299/2008; and the proposal from the Commission for a directive of the European Parliament and of the Council establishing a framework for Community action to achieve a sustainable use of pesticides (COM(2006) 373 final). Earlier legislation on pesticides was Directive 91/414/EEC. Biocides are regulated in Directive 98/8/EC.

cannot be successful without taking into account the main causes behind the degradation of the Mediterranean Sea. Being the main cause of degradation, land-based pollution has in this article been reviewed as to its integrated approach, with a specific focus on the Mediterranean Sea area.

Land-based pollution poses a significant threat to both fresh and salt water resources and their ecosystems. Moreover, rivers end up in the seas and thereby become a source of marine pollution themselves. International legal regimes were created to combat such pollution, and in a wider scope, to protect and preserve the marine environment. Having reviewed the global legal settings and the regional cooperation in the Mediterranean Sea area, the preliminary conclusion would be that both the fresh and salt water regimes and the global and regional regulation in principle seem to be compatible. The definitions of pollution as well as the application of the no-harm principle in the regimes basically overlap. All regimes underline the importance of and encourage cooperation. Within the bigger picture of the need for sustainable development, the regimes seem to acknowledge the balance to be found between social, economic and ecological interests – referring both to elements of social and economic development and the necessity of environmental protection and an integrated ecosystem approach.

Coherence seems to be furthermore feasible in that both the international and European legal regimes require the protection of river basins, marine regions and ecosystems. They share the possibility to use natural resources in a sustainable manner and refer to similar principles and stimulate cooperation by means of the other conventions and in a regional context. That cooperation is facilitated by the similarity between the underlying principles. For instance, the international no-harm principle and the principle of good neighbourliness can also be found in the European water conventions and water directives.

At both the international and regional level, especially the more recent legal instruments reflect an increased awareness of the need for an integrated approach and mutually stimulating regimes when it comes to water management, emphasising a catchment area or river basin approach. This is clear from the scope of application of the Barcelona Convention, but it also appears in more subtle ways. For instance, the MSFD obliges the Member States to consider the implications of their programmes of measures on waters beyond their marine waters in order to minimise the risk of damage to those waters.⁵¹

Nevertheless, as becomes clear from the Commission Communication on the Mediterranean Sea, these approaches have to be implemented in order to be successful. Obstacles to mutually reinforcing water management regimes can especially be expected in the application of the instruments and provisions that often require various interests to be balanced, for example, in applying the principle of equitable and reasonable utilization of freshwater resources. Moreover, it remains to be seen in what cases ‘all necessary measures’ are considered to have been taken. Another limitation is that the instruments first and foremost address states, and often even only watercourse states or coastal states, while it is increasingly acknowledged nowadays that many actors need to be involved. Furthermore, the complexity of water systems does not limit itself to international watercourses and also the effects on the marine environment are not only in the interest of the coastal states, but are a concern to the whole international community. The cooperation through and the involvement of (international) organizations is promising but requires effective coordination among them and a thorough mandate in order to be effective, including in the implementation of the legal regimes. In other words, the regimes may provide

⁵¹ The Floods Directive states in Art. 7(4) that measures should not lead to increased risks in other Member States within the same river basin district. The solidarity principle is mentioned in Preamble (15).

the needed flexibility and are basically compatible, but at the same time they carry the risk of leaving too much room for unsustainable implementation.

All in all, the greatest challenge to the international community may be to do justice to the aim of sustainable development whenever interests need to be balanced and water management provisions need to be implemented. If the commitment to sustainable development – for reasons both in the longer-term self-interest and because of a common and shared responsibility for the Earth's resources – is genuine and is put into practice, there is sufficient reason to be optimistic. The increasingly integrated approach towards water management and coordination among institutions such as within the GPA is indeed promising.