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ENVIRONMENTAL LIABILITY AND THE PROTECTION OF BIODIVERSITY
AN ANALYSIS OF EUROPEAN UNION AND UNITED STATES LEGAL REGIMES

by

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Environmental Liability and the Protection of Biodiversity

An Analysis of European Union and United States Legal Regimes

Eléonore Maitre*

I. Introduction

Biodiversity is the Earth's greatest richness and the need to protect it is widely recognised. Measures of conservation are adopted everywhere to halt the current rapid loss of biodiversity. Avoiding and preventing injuries to the environment must be the main objectives of all policies and legislation. Yet, our economy and lifestyles are essentially based on a harmful relationship towards nature.¹ The need to give a proper response to these environmental damages and the logical conclusion that the person who caused damage should be the one to pay for it led to the formulation of the 'polluter-pays' principle.

First set as an economic principle of allocation of costs,² the polluter-pays principle rapidly became a mean of support of environmental policies.³ Its main function is nevertheless economic as it seeks the internalisation of the costs born by public authorities responsible for inspection, monitoring and control of pollution created by certain activities.⁴ Critics of the principle were made due to the perceived granting of a 'right to pollute' rather than bringing about reduction of pollution. But, supplemented by the prevention principle, the polluter-pays principle induces the polluter to avoid creating a damage which it would have to pay for afterwards.

The interpretation of the polluter-pays principle into legal regimes took the form of environmental liability legislation. Specific civil and criminal liability regimes were designed to respond to environmental damages. The present analysis will focus on the civil liability legislation.

Whether existing legal instruments concerning environmental liability are adequate to protect biodiversity is the topic of this thesis. In a first chapter, I will define the concept of biodiversity, in a general context and then in accordance with the European and American legal frameworks (II). Using the *Erika* oil spill as a case reference, I will review the adequacy of environmental liability

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¹ Sometimes, the pollution is even permitted by the law. For example, under the IPPC Directive, Member States grant emission permit to industrial installations. Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control (Codified version) (IPPC), OJ L 24, 29.1.2008, p. 8

² Recommendation of the Council on Guiding Principles concerning International Economic Aspects of Environmental Policies, OECD, 26 May 1972, Doc. No. C(72)128. See also Declaration of the Council of the European Communities and of the representatives of the Governments of the Member States meeting in the Council of 22 November 1973 on the programme of action of the European Communities on the environment, OJ C 112, 20.12.1973, p.1, and Council of the European Communities Recommendation 75/436/Euratom, ECSC, EEC of 3 March 1975 regarding cost allocation and action by public authorities on environmental matters, OJ L 194, 25.7.1975, p. 1.

³ Declaration of the United Nations Conference on Environment and Development (Rio, 1992), UN Doc.A/CONF.151/26/Rev.1, principle 1. See also Patricia Birnie, Alan Boyle and Catherine Redgwell, *International Law and the Environment*, 3rd ed. (New York: Oxford University Press 2009), p. 322.

⁴ Nicolas de Sadeleer, 'Polluter-Pays, Precautionary Principles and Liability', in Gerrit Betlem and Edward H.P. Brans (eds), *Environmental Liability in the EU. The 2004 Directive compared with U.S. and Member State Law*, (London: Cameron May, 2006), p. 90.

schemes to the purpose of protecting biodiversity in EU law (III). In a next step, I will look at U.S. law and draw a comparison with the European legal regime (IV).

II. An Introduction to Biodiversity

1. Introduction

In this chapter, I will firstly introduce the emergence of the concept of biodiversity in the environmental discourse which laid down the foundations of later legal definitions. Secondly, I will focus on the definition set out in the Convention on biological diversity. How this concept is regulated in the European and American legal regimes will be briefly analysed, with the argument that while the concept is directly used in the European legal discourse, the American regime lacks a common legal notion of biodiversity. Finally, I will establish the link between the protection of biodiversity and liability schemes.

2. Emergence of the concept

The concept of biodiversity appeared in the mid-1980s and replaced the more vague and outdated term of 'nature' in environmental policies around the world.⁵ Biodiversity is a contraction of 'biological' and 'diversity' and refers to the variety of life forms on Earth such as animal, plants and micro-organisms, as well as to the interaction between them and link with their physical environment.⁶ Three main concepts are attached to this notion: the genetic diversity within each species, the diversity of species, and the diversity of ecosystems.⁷

Environmental protection laws and policies often focus on single species rather than looking at the global picture, including its interdependence with other species and influence on the overall ecosystem. This is particularly unsatisfying regarding the little knowledge we have of all existing biodiversity. It is estimated that there are about 10 million species on our planet of which we know about 15%.⁸ The primary concern relating to protection of biodiversity is based on the 'use-value' of species and ecosystems.⁹ Ecosystems provide for a number of services including “provisioning services such as food, water, timber, and fibre; regulating services such as the regulation of climate, floods, disease, wastes, and water quality; cultural services such as recreation, aesthetic enjoyment, and spiritual fulfilment; and supporting services such as soil formation, photosynthesis, and nutrient cycling.”¹⁰ In contrast, preservation of the nature for its own sake is more difficult because it does not look at its value or economic benefit, but is driven by moral reasons.

⁵ E.O. Wilson and F.M. Peter (eds), *Biodiversity* (National Academy Press: Washington DC, 1998), p. 521. Nicolas de Sadeleer and Charles-Hubert Born, *Droit international et communautaire de la biodiversité* (Daloz: Paris, 2004), p. 7.

⁶ Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook*, Montreal, 2006, p. 9.

⁷ Lakshman D. Guruswamy and Kevin L. Doran, *International Environmental Law in a Nutshell*, 3rd Edition (Thomson/West, Saint-Paul: 2007), p. 144.

⁸ Thomas E. Lovejoy, 'What Is Biodiversity, Why Do We Care, and What Is the Importance of Regional, State, Local, and Private Policies and Programs', in Robert McKinstry, Jr, Coreen Ripp and Emily Lisy (eds), *Biodiversity Conservation Handbook. State, Local, and Private Protection of Biological Diversity*, (Environmental Law Institute: Washington DC, 2006), p. 20.

⁹ Guruswamy and Doran, note 7 above, p. 144.

¹⁰ Millennium Ecosystem Assessment, *Ecosystems and Human Well-Being: Biodiversity Synthesis*, World Resources Institute, Washington DC, 2005, available at <http://www.millenniumassessment.org/documents/document.354.aspx.pdf>, p. 1. (emphasis added)

3. *Legal Approaches to biodiversity*

i) *The Convention on Biodiversity*

The United Nations Convention on Biological Diversity (CBD), adopted on 5 June 1992, seeks three main objectives: the conservation of biodiversity, the sustainable use of the components of biodiversity, and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.¹¹ The term 'biological diversity' is defined as “*the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.*”¹² The scope of application *ratione materiae* does not seem to exclude any species or organisms, and even includes aspects like cultural and regional diversity of landscapes.¹³ The quality of air, water and soils is determinant for the maintaining of living species and other living organisms and vice versa. In this view, the CBD put in place the 'ecosystem approach', a “*strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.*”¹⁴

The recognition of the intrinsic value of biodiversity and of its elements was one of the main purposes for the adoption of the CBD.¹⁵ A distinction is however made between 'natural resources' and the 'other elements' of biodiversity, the first being characterised by its anthropocentric nature as it refers to “*genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity.*”¹⁶

ii) *A European perspective*

As a contracting party to the CBD – along with its Member States – the EU recognises both the intrinsic and services value of biodiversity. It is considered to form an integral part of “*sustainable development by providing vital goods and services, such as food, carbon sequestration, and seas and water regulation that underpin economic prosperity, social well-being and quality of life.*”¹⁷

One of the main priorities of the Sixth EU Environmental Action Programme was to halt biodiversity loss, using the ecosystem approach developed under the CBD.¹⁸ A specific Biodiversity Action Plan¹⁹ was adopted which sets the ten priority objectives and four supporting measures for the purpose of halting biodiversity loss by 2010.²⁰

¹¹ Article 1 of the Convention on Biological Diversity (CBD), Rio, 5 June 1992, U.N. Doc. DPI/1307.

¹² Article 2 of the CBD, note 11 above.

¹³ De Sadeleer and Born (2004), note 5 above, p. 101.

¹⁴ Decision V/6 of the COP 5 of the CBD, note 11 above, Section A(1).

¹⁵ This value had been previously recognised in the 1979 Bern Convention on the Conservation of European Wildlife and Natural Habitats, the 1982 United Nations World Charter for Nature and the Convention for the Protection of the marine Environment of the North-East Atlantic. De Sadeleer and Born (2004), note 5 above, p. 96.

¹⁶ Article 2 of the CBD, note 11 above.

¹⁷ Communication from the European Commission, *Options for an EU vision and target for biodiversity beyond 2010*, Brussels, 19 January 2010, COM(2010) 4 final, p. 2.

¹⁸ Decision 1600/2002/EC of the European Parliament and the Council laying down the Sixth Environmental Action Programme, OJ L242, 10.9.2002, p.1, Articles 1(4) and 2(2).

¹⁹ Annexes to the Communication from the European Commission, *Halting Biodiversity Loss by 2010 and Beyond: Sustaining Ecosystem Services for Human Well-Being*, Brussels, 22 May 2006, SEC(2006) 621.

²⁰ An ambitious target for 2010 was agreed among the parties to the CBD with the adoption of the Strategic Plan's mission statement in 2002 (See decision VI/26 adopted by the Conference of the Parties (COP) which comprises the

Although the EU is bound by the definition of biodiversity contained in the CBD, so far EU laws only cover a small portion of it. The two main legislative texts on nature conservation, Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive)²¹ and Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora (Habitats Directive),²² concern endangered species and habitats. The *Natura 2000*, a network of sites of highest nature value to be created pursuant to the Directives, was acknowledged to leave outside much of the biodiversity.²³

iii) An American approach

In spite of their participation in the negotiations for and their signature of the CBD in 1993, the United States (U.S.) is among the few States who have never ratified it.²⁴ They are therefore neither bound by it nor by the obligation of establishing a Strategic Plan of Action at national level. There are also no federal laws referring to or defining the term 'biodiversity'.

In accordance with “*the Tenth Amendment of the Constitution, states have all powers not expressly delegated to the federal government.*”²⁵ In the absence of any specific constitutional provision, the Commerce Clause has been the basis for the adoption of environmental statutes at federal level. In 1973, the U.S. Government adopted the Endangered Species Act (ESA), which provides for measures of conservation of endangered and threatened species, as well as the ecosystems they depend on.²⁶ Due to its limited scope, the ESA fails to address fully the issue of biodiversity, but remains a significant instrument in that respect.²⁷

The Supreme Court expressly recognised the states' role regarding environmental law already in 1896 in its decision *Geer v. Connecticut*.²⁸ The states indeed retain the most responsibility for managing wildlife within their borders. Definitions of 'biodiversity' will therefore have to be searched for in every state's legislation, case-law or in the practice of the public administrations. It might therefore considerably vary from one state to another.

4. Biodiversity and liability

Biodiversity is faced with a major crisis due to human activities. Landscapes have been radically transformed, and the intensive use of natural resources is clearly considerably affecting the biodiversity.²⁹ Animal and plant species are suffering an unprecedented rate of extinction as a result

Strategic Plan for the CBD). They committed to the achievement of a significant reduction of the current rate of biodiversity loss at the global, regional and national level by 2010 and to the adoption of National Strategic Plans to reach their goal.

²¹ Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, OJ L 103, 25.4.1979, p. 1.

²² Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, OJ L 206, 22.7.1992, p. 7.

²³ Communication, COM(2006), note 19 above, p. 6.

²⁴ To date, there are 193 contracting parties to the CBD. See <http://www.cbd.int/convention/parties/list/>.

²⁵ Susan George, 'The State of the States: An Overview of State Biodiversity Programs', in Robert McKinstry, Jr, Coreen Ripp and Emily Lisy (eds), *Biodiversity Conservation Handbook. State, Local, and Private Protection of Biological Diversity*, (Environmental Law Institute: Washington DC, 2006), p. 52-53.

²⁶ Endangered Species Act (ESA), 16 U.S.C. § 1531.

²⁷ For a comprehensive analysis of the role ESA for the protection of biodiversity, see Federico Cheever, 'The Road to Recovery: A New Way of Thinking About the Endangered Species Act', 23 *Ecology Law Quarterly* 1 (1996), p. 1-78

²⁸ *Geer v. Connecticut*, 161 U.S. 519 (S.C. 1896).

²⁹ De Sadeleer and Born (2004), note 5 above, p. 15.

of the destruction, fragmentation and isolation of their habitats.³⁰ A number of additional dangers are threatening biodiversity, such as climate change, depletion of the ozone layer, or the introduction of genetically modified organisms and invasive species.³¹

Civil liability schemes have flourished to respond to this ecological decline. They establish the obligation for the polluters to bear the costs of their harmful conduct towards the environment. So far however, none of these texts have been able to halt today's unprecedented loss of biodiversity.³² In the following chapters, I shall therefore review the civil liability regimes put in place within the EU and the U.S. legal regimes and identify the reasons for this failure.

III. Environmental Liability in the European Union

1. Introduction

In the EU, discussions around the adoption of an environmental civil liability scheme began long ago but only succeeded recently with the adoption, in 2004, of the Environmental Liability Directive (further referred to as 'ELD' or 'Directive 2004/35'). In this chapter, I shall review the main features of this Directive and comment on their ability to protect biodiversity. I will also introduce the case of the *Erika* oil tanker. Although the ELD is not applicable in this case, it contributes nonetheless to highlighting the effects and shortcomings of the legislation.

i) Introductory comments on the ELD

The adoption of the Directive 2004/35/EC on Environmental liability with regard to the prevention and remedying of environmental damage³³ in April 2004 put an end to about twenty years of discussions and attempts around the adoption of an environmental liability scheme at EU level.³⁴

³⁰ Nicolas De Sadeleer, 'The Birds, Habitats, and Environmental Liability Directives to the Rescue of Wildlife under Threat', *7 Yearbook of European Environmental Law* (2007), p. 37.

³¹ The International Union for Conservation of Nature (IUCN) established that 16,928 species, out of the 44,838 they have so far listed worldwide, are threatened. See Jean-Christophe Vié, Craig Hilton-Taylor and Simon N. Stuart (eds), *Wildlife in a Changing World – An Analysis of the 2008 IUCN Red List of Threatened Species*. IUCN, Gland, 2009, available at <http://data.iucn.org/dbtw-wpd/edocs/RL-2009-001.pdf>, p. 15.

³² In May 2010, the Secretariat to the CBD noted that “*despite an increase in conservation efforts, the state of biodiversity continues to decline, according to most indicators, largely because the pressures on biodiversity continue to increase.*” Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 3*, Montreal, 2010, available at <http://www.cbd.int/doc/publications/gbo/gbo3-final-en.pdf>, p. 17.

³³ Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, OJ L 143, 30.04.2004, p. 56.

³⁴ Pursuant to an invitation to act contained in Directive 84/361/EEC on transfrontier shipment of hazardous waste (Council Directive 84/631/EEC of 6 December 1984 on the supervision and control within the European Community of the transfrontier shipment of hazardous waste, OJ L 326, 13.12.1984, p. 31.), the Commission proposed, in 1989, a directive addressing the reparation of damage caused by waste through civil liability (Commission proposal for a directive on damage caused by waste (1989) OJ C 251, p. 3) but eventually withdrew it (Communication of the Commission on the withdrawal of obsolete Commission proposals, OJ C 5, 9.1.2004, p. 19).

In the meantime, the Commission had adopted a Green Paper (Communication from the Commission to the the Council and Parliament and the Economic and Social Committee, Green Paper on Remedying Environmental Damage, COM(93) 47 final of 14 May 1993), followed by a White paper on environmental liability (White Paper on environmental liability, COM/2000/0066 final of 9 February 2000).

Finally, the proposition of environmental liability directive was presented to the Council and the Parliament, Commission Proposal for a Directive of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage of 23 January 2002, COM(2002) 17

The ELD was finally adopted at third reading. According to its Article 1, Directive 2004/35 seeks the prevention and remediation of environmental damage and is based on the 'polluter-pays' principle. Directive 2004/35 is based on Articles 192(1) and 193 of the TFEU³⁵ which allow Member States to maintain or introduce more stringent protective measures than those contained in the directive.³⁶

Contrary to what its title suggests, the directive on 'environmental liability' is not establishing a liability scheme *per se* given that compensation for private parties is expressly excluded,³⁷ and the provisions are straddled between civil and administrative law.³⁸ The regime centres on the state's obligation to impose measures of prevention and clean-up on the polluter or to take the necessary measures itself and impose the costs on the defaulting polluter.³⁹ Furthermore, no allocation of damages is provided, the aim of the directive being to ensure a quick response in case of threat or occurrence of environmental damage and to cover all related costs.

ii) A French tragedy: the case of Erika

On 12 December 1999, the oil tanker *Erika* sunk off the coast of Brittany causing considerable damage to the environment, the population and the local economy. The Italian electricity company ENEL had signed an agreement with Total International Ltd for the shipment of heavy fuel oil from the port of Dunkerque in France to Milazzo in Italy. For the purpose of this agreement, Total France SA sold the oil to Total International Ltd, which chartered the *Erika*, flying the Maltese flag.⁴⁰ The tanker contained 30'000 tons of heavy fuels.

The Commune de Mesquer, one of the municipality affected by the oil spill, brought separate proceedings against the Total companies. The municipality sought to hold the companies jointly and severally liable for the consequences of the damage caused in its territory and to bear the costs of cleaning and anti-pollution measures. The case was referred to the European Court of Justice (ECJ) in April 2007 by the *Cour de Cassation*, but the questions essentially referred to the definition of waste and the role to be played by Total as producer, seller, and carrier such waste.⁴¹ This last aspect exceeds the scope of this thesis but some discussions that arose in the judgement relating to Directive 2004/35 will be pertinent for my analysis. The *Cour d'appel* of Paris to which the parties

final, JO C 151 E, 25.06.2002, p. 132.

³⁵ Ex-Articles 175(1) and 176 of the Consolidated Version of the Treaty Establishing the European Community, OJ C 325, 24.12.2002, p. 33.

³⁶ Article 193 Consolidated Version of the Treaty on the Functioning of the European Union (TFEU), OJ C 115, 9.5.2008, p. 47, and 16(1) of Directive 2004/35/EC, note 33 above.

³⁷ Ludwig Krämer, 'Discussions on Directive 2004/35 Concerning Environmental Liability', 4 *JEEPL* 2 (2005), p. 250.

³⁸ Nicolas de Sadeleer, 'La directive 2004/35/CE relative à la responsabilité environnementale: avancée ou recul pour le droit de l'environnement des Etats membres?', in Geneviève Viney and Bernard Dubuisson (eds), *Les Responsabilités environnementales dans l'espace européen* (Schulthess, Bruylant, L.G.D.J., Paris, Bruxelles: 2006), p. 732.

³⁹ Lucas Bergkamp, 'The Proposed Environmental Liability Directive', *European Environmental Law Directive* (2002), p. 295.

⁴⁰ Cour of Justice of the EU, *Press Release N° 39/08 on the Judgement of the Court of Justice in Case C-188/07, Commune de Mesquer v Total France SA, Total International Ltd*, Luxembourg, 24 June 2008, available at <http://curia.europa.eu/en/actu/communiqués/cp08/aff/cp080039en.pdf>.

⁴¹ Case C-188/07, *Commune de Mesquer v. Total France SA*, 24 June 2008, [2008] ECR I-4501, para. 28. The municipality seeks the application of Council Directive 75/442/EEC of 15 July 1975 on waste, OJ 1975 L 194, p. 39, as amended by Commission Decision 96/350/EC of 24 May 1996, OJ 1996 L 135, p. 32 ('Waste Directive').

lodged an appeal delivered its judgement on 10 March 2010.⁴²

Given the fact that the ELD only applies to damage that occurred after the 30 April 2007, *Erika* could not fall under this liability scheme. As we will see, Directive 2004/35 excludes, in principle, oil pollution damage from its scope but, for the purpose of this thesis, I will nevertheless examine the case under the light of the ELD. I will also come back to this exclusion which, in my opinion, should not be absolute.

2. The concept of environmental damage

The definition on environmental damage is particularly important to determine whether biodiversity is actually protected and to what extent. In general, the term 'damage' is defined as “*a measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly.*”⁴³ No specific causation is targeted and air, which is not as such protected in the ELD, can become a source of damage where air pollution fallout affects the other resources caught by Directive 2004/35.⁴⁴ The notion includes impairment of the natural resource itself but also of the 'services' performed by this resource “*for the benefit of another natural resource or the public.*”⁴⁵

Directive 2004/35 expressly excludes 'traditional damage' (personal injury, damage to goods and private property, and pure economic loss)⁴⁶ and covers pure ecological damage only.⁴⁷

Although the recourse to the ecological approach is to be positively welcomed, the scope of Directive 2004/35 was greatly limited to damages to certain species and natural habitats, as well as water and soil contamination. For the purpose of defining the scope of the ELD, the European legislator uses the technique of legislation by reference, be there national or European, to clarify these terms.⁴⁸

i) Damage to protected species and natural habitats

The European Commission's proposal for a directive contained the term of 'biodiversity damage', which included natural habitats and species covered by the Birds and Habitats Directives, as well as

⁴² Judgement of 11th Chamber, N° 08/02278, 30 March 2010. Total decided to bring the case to the *Cour de Cassation* and most of the plaintiffs, local communities and associations, have decided to fall in behind. The *Cour de Cassation* is the Highest Court of the French legal system. If it were to decide that some issues are relevant in terms of EU law, it would have to refer the case to the ECJ (Article 267(3)TFEU). This case will not be discussed in this paper. For more information, see Karine Le Couviour, 'Erika: décryptage d'un arrêt peu conventionnel', 16 La Semaine Juridique (2009), pp. 804-807.

⁴³ Article 2(2) of Directive 2004/35/EC, note 33 above.

⁴⁴ “*Environmental damage also includes damage caused by airborne elements as far as they cause damage to water, land or protected species or natural habitats.*” Recital 4 of Directive 2004/35/EC, note 33 above. See also Laure Demez, 'Directive 2004/35/CE du Parlement européen et du Conseil du 21 avril 2004 sur la responsabilité environnementale', CEDRE (sous la dir. de), *La responsabilité environnementale. Transposition de la directive 2004/35 et implications en droit interne*, (Athemis: Louvain-la-Neuve, 2009), p. 17.

⁴⁵ Article 2(13) of Directive 2004/35/EC, note 33 above.

⁴⁶ Paragraph 14 of the Preamble of Directive 2004/35/EC, note 33 above.

⁴⁷ The 'ecological approach' identified in the context of CBD is fully followed by the European legislator. The protection of the environment for itself is significant but the importance of the use-value of the environment should not be neglected. The economic, social and cultural benefits of ecosystems form an integral part of the many aspects of biodiversity that must be protected. Additional comments on this issue in De Sadeleer, *Responsabilité environnementale* (2006), note 38 above, p. 745.

⁴⁸ Article 3(1)(a) of Directive 2004/35/EC, note 33 above.

other habitats and species for which protection and conservation areas have been designated under national law.⁴⁹ The term 'biodiversity' was considerably criticised and considered misleading in comparison with the international definition.⁵⁰ Its scope was limited to damage to *Natura 2000* network, constituted by Special Protected Areas (SPAs under the Birds Directive) and Special Areas of Conservation (SACs under the Habitats Directive).⁵¹ This geographical limitation was considered by many as an unacceptable restriction of the scope of protection.⁵² The Parliament argued in favour of incorporating a notion more in line with the CBD referred to as 'European biodiversity'.⁵³

In the final version, the word 'biodiversity' was deleted and the mention of *Natura 2000* was dropped. Although this last aspect was considered by the majority of the doctrine as having enlarged the scope of protection,⁵⁴ only 'protected species and natural habitats' which suffer damage that “*has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats and species*” are finally covered.⁵⁵

Article 2(3) of Directive 2004/35 defines 'protected species and habitats' by reference to some provisions contained in the Birds and Habitats Directives. The definition of the liability scheme is however not exactly comparable to the ones contained in the nature protection legislation.⁵⁶ Protected species and habitats as designated by the Member States under the two Directives are also covered by the ELD.⁵⁷ The term 'habitat', specific to the EU, is defined as “*terrestrial or aquatic areas distinguished by geographic, abiotic and biotic features, whether entirely natural or semi-natural.*”⁵⁸

⁴⁹ Article 2(1.2) of the Commission Proposal (2002), note 34 above, p. 36.

⁵⁰ Ludwig Krämer, 'Directive 2004/35/EC on Environmental Liability', in Gerrit Betlem and Edward H.P. Brans (eds), *Environmental Liability in the EU. The 2004 Directive compared with U.S. and Member State Law*, (London: Cameron May, 2006), p. 39.

⁵¹ Article 2(1)(2) of the Commission Proposal (2002), note 112 above.

⁵² Opinion of the Economic and Social Committee on the Proposal for a Directive of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage, 18 July 2002, COM(2002) 17 final, 2002/0021 (COD), para. 3.2 and 3.3.1. See also Gerrit Betlem and Edward H.P. Brans, 'The Future Role of Civil Liability for Environmental Damage in the EU', 2 *YEEL* (2002), p. 192-3.

⁵³ The proposed definition was the following: “*European biodiversity' means all species and the protected sites they live in and habitats protected under Community legislation and - if the Member State decides so - national and regional law, covering both existing law, any subsequent amendments to the laws, as well as future legislation*”. See Report of the Parliament on the proposal for a European Parliament and Council directive on environmental liability with regard to the prevention and remedying of environmental damage (Enhanced cooperation between committees - art. 162 bis) - Committee on Legal Affairs and the Internal Market, 2002/0021(COD), p. 18.

⁵⁴ Charles Pirotte, 'La Directive 2004/35/CE du 21 avril 2004 sur la responsabilité environnementale: Premiers commentaires', in Geneviève Viney and Bernard Dubuisson (eds), *Les Responsabilités environnementales dans l'espace européen* (Schulthess, Bruylant, L.G.D.J, Paris, Bruxelles: 2006), pp. 655-730; Edward H.P. Brans, 'Liability for Damage to Public Natural Resources under the 2004 EC Environmental Liability Directive – Standing and Assessment of Damages', in Gerrit Betlem and Edward Brans (eds), *Environmental Liability in the EU. The 2004 Directive compared with U.S. and Member State Law*, (Cameron May, London: 2006); De Sadeleer (2007), note 30 above.

⁵⁵ Article 2(1)(a) of Directive 2004/35/EC, note 33 above.

⁵⁶ Indeed, species protection under the liability regime is given a narrower definition than the conservation regime of the Birds Directive. Indeed, only migratory species, and endangered, vulnerable or rare species (Article 4(2) and Annex I of the Birds Directive) are protected under Directive 2004/35 (As opposed to “*all species of naturally occurring birds*” as referred to in Article 1(1) of the Birds Directive). In addition, the Habitats Directive only covers species of Community interest – i.e. endangered, vulnerable, rare or endemic species (Article 1(g) and Annexes II and IV).

⁵⁷ Article 2(3)(c) of Directive 2004/35/EC, note 33 above.

⁵⁸ Article 1(b) of the Habitats Directive, note 22 above.

Any damage to protected habitats or species must be 'significant' to allow the application of the ELD. The European Commission and the ECJ have contributed to clarifying the concept in the context of the Habitats Directive.⁵⁹ Annex I of Directive 2004/35 specifies that “*damage with a proven effect on human health must be classified as significant damage.*” It also stipulates that “*negative variations due to natural causes or resulting from intervention relating to the normal management of sites, as defined in habitat records or target documents or as carried on previously by owners or operators*” need not to be classified as significant damage. This exception seems first inappropriate in that it puts natural causes and human intervention on a same footing.⁶⁰ Moreover, it appears to give a *carte blanche* to owners or operators who were carrying an environmentally damaging activity before the entry into force of the Directive to keep on doing so.⁶¹

The conservation status of habitats and species, defined in Article 2(4) of the Directive,⁶² enables “*to determine, by means of scientific data, the appropriate means to be implemented in order to guarantee the maintenance of the habitat [or species].*”⁶³ Some authors question the appropriateness of the threshold for the purpose of a liability regime.⁶⁴ First of all, the concept of 'conservation status' refers to the maintenance of a certain quality of habitats and species on a long-term basis whereas pollution resulting from an activity as defined in the Directive will probably have a limited spatial impact. Thus, the threshold for intervention of public authorities within the framework of Directive 2004/35 might not be met even in the event of a severe pollution. Secondly, the species and habitats identified under the Directive are being protected because their conservation status is considered unfavourable. In case of pollution of such site, the appropriate means of remediation might not be identifiable or actually implementable because of the multiple causes of the unfavourable status. Finally, the Directive refers to the 'European territory' or 'natural range' of the habitat or species but does not clearly establish at what level the conservation status must be assessed (local, national or biogeographical⁶⁵). The scale is important as it may greatly affect the assessment of the conservation status.⁶⁶

In general, the limitation of application to *protected* species and habitats and the requirement of knowledge of their conservation status conflicts the complex character of biodiversity. It is recognised that the majority of all living species on Earth is not known, and particularly those living

⁵⁹ See European Commission, *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*, Luxembourg, April 2000, available at

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf:

“*The notion of what is 'significant' needs to be interpreted objectively. At the same time, the significance of effects should be determined in relation to the specific features and environmental conditions of the protected site concerned by the plan or project, taking particular account of the site's conservation objectives.*” (para. 4.4.1); Case C-127/02, *Waddenzee*, 7 September 2004, [2004] ECR I-07405.

⁶⁰ Pål Wennerås, 'A Progressive Interpretation of the Environmental Liability Directive', 4 *JEEPL* (2005), p. 262.

⁶¹ Wennerås, note 61 above, p. 262.

⁶² The term “*conservation status' means [...] the sum of the influences acting on a natural habitat and its typical species [respectively on the species] that may affect the long-term natural distribution, structure and functions of [the habitats] as well as the long-term survival of its typical species [respectively the distribution and abundance of its populations] within the European territory of the Member States*”. Article 4 of Directive 2004/35/EC, note 33 above.

⁶³ De Sadeleer (2007), note 30 above, p. 72.

⁶⁴ De Sadeleer, *Responsabilités environnementales* (2006), note 38 above, p. 750-753.

⁶⁵ The Habitats Directive identified five biogeographical regions: Alpine, Atlantic, Continental, Macaronesian and Mediterranean. Article 1(c)(iii).

⁶⁶ De Sadeleer, *Responsabilités environnementales* (2006), note 38 above, p. 750-753.

in the seas. The extent to which habitats influence a particular species is also very difficult to measure. A pollution incident such as *Erika* is likely to bring additional knowledge as a result of the clean-up and restoration measures that must be taken but, due to its circumscribed scope, the ELD does not allow to consider the reality of damage caused by such pollution.

ii) Water damage

Directive 2004/35 refers to the Water Framework Directive (WFD) which has a particularly wide scope, including inland surface waters, transitional waters, coastal waters and groundwater.⁶⁷ Nonetheless, damage to waters is only covered if it “*significantly adversely affects the ecological, chemical and/or quantitative status and/or ecological potential [...] of the waters concerned*”.⁶⁸ The notions of ecological, chemical and quantitative status, as well as the ecological potential are defined in the WFD. These references to numerous Annexes require a high level of expertise and complicate the effective implementation of the protection.⁶⁹

The public authorities will not have to demonstrate, prior to the implementation of preventive or remedial measures, that the pollution modified the administrative classification of the waters.⁷⁰ But they will have to prove that the damage has 'significantly adversely affected' the water status, a standard that is not defined by the ELD nor by the WFD.

iii) Land damage

The European legislator has not yet adopted a law on protection of soils and the definition of 'land damage' is not given by reference to another piece of legislation. By contrast with the ecological approach followed for the protection of the other resources, land damage is approached exclusively from an anthropogenic point of view. Indeed, land pollution damage is only recoverable if it “*creates a significant risk of human health being adversely affected*”.⁷¹

The proof of risks to human health might be difficult to demonstrate, especially as a risk assessment shall be made prior to the adoption of preventive or remedial measure.⁷² Given the length and costs linked to the preparation of such assessment, an application of the precautionary principle should allow overriding this requirement.

A wide range of sources of pollution are covered by the Directive, including direct or indirect, introduced from the land, water or air, and from any substances, preparations, organisms or micro-organisms.⁷³ It could therefore apply in case of release of GMOs or biocidal products, or else to the transport and disposal of waste.⁷⁴

⁶⁷ Article 1 of the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, OJ L 327, 22.12.2000, p. 1.

⁶⁸ Article 2(2) of Directive 2004/35/EC, note 33 above.

⁶⁹ Demez, note 44 above, p. 25.

⁷⁰ Indeed, under the WFD, waters are classified according to their chemical, ecological and physical properties as 'very good status', 'good status' and 'average'. See De Sadeleer, *Responsabilités environnementales* (2006), note 38 above, p. 756.

⁷¹ Article 2(1)(c) of Directive 2004/35/EC, note 33 above.

⁷² Recital 7 of Directive 2004/35/EC, note 33 above. See also De Sadeleer, *Responsabilités environnementales* (2006), note 38 above, p. 757.

⁷³ Article 2(1)(c) of Directive 2004/35/EC, note 33 above.

⁷⁴ See Annex III of Directive 2004/35/EC, note 33 above.

3. Main features of the Liability Regime

i) Channelling

The liability is channelled to the operator of an occupational activity. The term 'operator' is however broadly defined as “any natural or legal, private or public person who operates or controls the occupational activity or [...] to whom decisive economic power over the technical functioning of such an activity has been delegated, including the holder of a permit or authorisation for such an activity or the person registering or notifying such an activity.”⁷⁵ Although the holder of the permit will generally be the operator, any delegation of powers, even *de facto*, could allow a person to be qualified of operator under the Directive.⁷⁶

Certain authors bewail the conversion of “an operator liability scheme into a producer-parent-notifier corporation-manager-operator liability” which creates an inefficient regime dominated by legal uncertainty.⁷⁷ On the contrary, I agree with those authors who maintain that, in order to ensure the preventive effect of the liability scheme, the operator must be the person that is actually in control and able to influence the conduct of the activity.⁷⁸

Having criticised the channelling of liability in the previous chapter, I regret that the European legislator chose the same principle but welcome the broad definition given to the term 'operator'. In *Commune de Mesquer*, the claimant sought the recognition of the liability of both Total companies as producer and charterer of the oil. In my opinion, Total International should be considered to have had the 'decisive economic power over the technical functioning of the activity' pursuant to Article 2(6) of the ELD. Indeed, its role of *vetting* was determinant for the carrying of the oil on this particular tanker.

Given that the ELD expressly allows Member States to provide for a joint liability, in particular between the producer and the user of a product,⁷⁹ the liability of Total France, the producer of oil should seriously be considered.

ii) Strict and fault-based liability

Directive 2004/35 provides for two types of liability, strict and fault-based, for damage caused by certain occupational activities.⁸⁰ The notion of 'occupational activities' is broadly defined as “any activity carried out in the course of an economic activity, a business or an undertaking, irrespectively of its private or public, profit or non-profit character.”⁸¹ Liability is strict for activities listed in Annex III of the Directive which covers a large number of activities defined either by direct reference to other EU laws or by giving specific content to the notion,⁸² and applies

⁷⁵ Article 2(6) of Directive 2004/35/EC, note 33 above. This definition is very close to that provided in Article 2(12) of the IPPC Directive.

⁷⁶ Pirotte (2006), note 54 above, p. 667.

⁷⁷ Bergkamp (2002), note 33 above, p. 306.

⁷⁸ Bernard Dubuisson, 'Conclusions: les responsabilités environnementales dans l'espace européen', in Geneviève Viney and Bernard Dubuisson (eds), *Les Responsabilités environnementales dans l'espace européen* (Schulthess, Bruylant, L.G.D.J, Paris, Bruxelles: 2006),, p. 843.

⁷⁹ Recital 22 of the Preamble and Article 9 of Directive 2004/35/EC, note 33 above.

⁸⁰ Articles 1 and 3 of Directive 2004/35/EC, note 33 above.

⁸¹ Article 2(7) of Directive 2004/35/EC, note 33 above.

⁸² For example, 'waste management operations' are defined in accordance with Council Directive 75/442/EEC of 15 July 1975 on waste, OJ L 194, 25.7.1975, p. 39, and Council Directive 91/689/EEC of 12 December 1991 on hazardous waste, OJ L 377, 31.12.1991, p. 20. On the other hand, the transport of genetically modified organisms is expressly

to all above-mentioned types of harm.

On the other hand, a fault-based liability applies for non-listed activities which are limited to damage to protected species and habitats.⁸³ This distinction made between damage caused to species and habitats and those caused to water and land is difficult to understand. It may seriously threaten biodiversity as a result of the exclusion of protection itself as well as by reason of interdependence between all aspects of the biodiversity.

iii) Causal link

According to Recital 13 of the ELD, “*not all forms of environmental damage can be remedied by means of the liability mechanism*” but there needs to be, *inter alia*, a causal link established between the damage and the identified polluter. This causal link has not been further defined in Directive 2004/35 and its interpretation falls within the competence of the Member States. The ECJ found however that, “*in accordance with the polluter-pays principle, the obligation to take remedial measures is imposed on operators only because of their contribution to the creation of pollution or the risk of pollution.*”⁸⁴ Such causal link could be presumed if the competent authorities have 'plausible evidence'. A geographical proximity between an installation and the location of the pollution and a correlation between the substances that caused the pollution and those used by the operator would allow the establishment of a causal link between an operator's activity and a 'diffuse pollution'.⁸⁵

The reference of the ECJ to diffuse pollution, which includes, in the context of the ELD, *inter alia*, air pollution or pollution by nitrates that are found in 'fertilisers and sanitary waste-water discharges',⁸⁶ is particularly interesting as it is a ground of exoneration of liability.⁸⁷ This exclusion was severely criticised because pollution is rarely caused by only one source and proof can be particularly difficult to provide.⁸⁸ The Court's case is therefore particularly remarkable as it provides for a particularly weak causal link. Competent authorities are allowed to act, in line with Directive 2004/35, on the basis of a rebuttable presumption based solely on plausible evidence.

4. Preventive and Remedial Measures

The preventive aspect contained in the Directive is positive in terms of biodiversity protection. Indeed, it tackles the need for a liability regime that not only to intervene once 'it is too late' but also when the damage is about to occur and might still be avoided or significantly lessened.⁸⁹ The

excluded from the scope of application of Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms, OJ L 106, 17.4.2001, p. 1 (Article 3(2)). See also Pirotte (2006), note 54 above, p. 669.

⁸³ Article 3 of Directive 2004/35, note 33 above. See also Edward H.P. Brans, 'Liability for Damage to Public Natural Resources under the 2004EC Environmental Liability Directive – Standing and Assessment of Damages', 7 *Environmental Law Review* (2005), p. 91.

⁸⁴ Case C-378/08, *Raffinerie Mediterranée*, 9 March 2010, [2010] ECR I-0000, para. 57. See also Case C-188/07, *Commune de Mesquer*, note 40 above, para. 77.

⁸⁵ C-378/08, *Raffinerie Mediterranée*, note 84 above, para. 57-8.

⁸⁶ Questions and Answers Environmental Liability Directive, Brussels, 1 April 2004, MEMO/04/78.

⁸⁷ Article 4(5) of Directive 2004/35/EC, note 33 above.

⁸⁸ Pascale Steichen, 'La directive 2004/35 sur la responsabilité environnementale en ce qui concerne la prévention et la réparation des dommages environnementaux – Un droit de compromis pour une responsabilité nouvelle', in Xavier Thunis and François Tulkens (eds), *Entreprises, responsabilités et environnement* (Kluwer, Belgium: 2004), p. 118.

⁸⁹ Preventive measures under the liability scheme should be seen as reinforcement of preventive measures under existing schemes, such as Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention

adoption of preventive actions is subject to the existence of an 'imminent threat'. This notion is defined as “a sufficient likelihood that environmental damage will occur in the near future”⁹⁰ and shall be interpreted in the light of the precautionary principle.⁹¹

If the operator does not take actions, the competent authorities may take the necessary measures themselves. This is important to ensure an effective protection of the biodiversity because, facing an imminent threat, time is an important factor.

In my opinion, this means that in the case of *Erika*, considering the age of the oil tanker,⁹² the French public authorities could have performed a *vetting* and ultimately forbid the carrying of the heavy fuel in that particular ship. All costs incurred as a result of this procedure would have had to be reimbursed by Total. However, given the fact that Total International had actually performed a *vetting* and that the ELD sets a high threshold of intervention link to the occurrence of an 'imminent threat', it is unlikely that such intervention would actually happen in reality.

Where damage has actually occurred, the operator must inform the competent authorities, take measures to prevent further damage and remedy it.⁹³ A more detailed analysis will be in the next chapter where I shall compare this regime to that of the U.S.

5. *Facultative exclusions: A Member States' choice*

Article 8(4) of Directive 2004/35 contains two defences. As we shall see, the European Commission had proposed to have them as firm exonerations, but the European Parliament strongly opposed to it and the Council eventually turned both provisions into exemptions from the costs of remedial actions.

On the one hand, the *permit defence* is when “an emission or event [was] expressly authorised by [...] an authorisation conferred upon by [...] national laws.”⁹⁴ Such defence is seen by some authors to reduce the function of liability to an instrument for sanctioning non-compliance with environmental regulation and to add a burden on the claimants who must demonstrate a breach of the permit.⁹⁵ The Parliament successfully amended this proposed provision to ensure that only emissions or activities that have been specifically addressed and authorised can be exempted.⁹⁶ The express transfer of responsibility to the issuing authority in case of damage was deleted however.⁹⁷

On the other hand, the *state of the art defence* applies when “an emission or activity [...] was not considered likely to cause environmental damage according to the state of scientific and technical

and control (IPPC), OJ L 257, 10.10.1996, p. 26 (Article 3(a)) or Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances, OJ L 010, 14.01.1997, p. 13 (Article 11(2)).

⁹⁰ Article 2(9) of Directive 2004/35/EC, note 33 above.

⁹¹ Article 191(2) of the TFEU. See also ECJ *Waddenzee* case, note 135 above, which interpreted this concept in the light of Article 6(3) of the Habitats Directive.

⁹² It had been built in 1975.

⁹³ Article 6 of Directive 2004/35/EC, note 33 above.

⁹⁴ Article 8(4)(a) of Directive 2004/35/EC, note 33 above.

⁹⁵ Pål Wennerås, 'Permit Defences in Environmental Liability Regimes – Subsidizing Environmental Damage in the EC', *YEEL* (2005), p. 162.

⁹⁶ Proposed amendment 37 to Article 9(1)(c): “an emission or activity specifically and explicitly allowed in applicable laws and regulations, or in the permit or authorisation issued to the operator, so far as the usual risks within the framework of the authorisation are concerned. In such case the responsibility then lies with the competent authority.” (modifications are emphasised). See Report of the Parliament, note 129 above, p. 30-31.

⁹⁷ Amendment 39 to Article 10, Report of the Parliament, note 129 above, p. 32-33.

knowledge at the time when the emission was released or the activity took place.”⁹⁸ The Parliamentary Committee on Environment, Public Health and Consumer Policy firmly opposed to a rule that contravenes the precautionary principle⁹⁹ and would result in the absolution of any responsibility for the GMOs and nanotechnology industries.¹⁰⁰

6. Exonerations

A number of exonerations are provided for in the ELD among which the issue of diffuse pollution that was examined above. Another category includes traditional exceptions linked to the occurrence of an exceptional natural phenomenon and armed conflict, or imperatives of national defence and national security.¹⁰¹ Some authors raise the problem of exclusion of climatic accidents when these disasters are increasingly frequent and less and less natural, as a result of man-made climate gases.¹⁰² The decision of excluding these damages from the scope of the Directive was due to the concerns about incurring costs for the Member States because the polluter would be very difficult to identify.¹⁰³

A third category of exclusions concerns damage covered by international conventions providing for liability and compensation scheme.¹⁰⁴ The European legislator assumed that those texts provide for satisfactory liability schemes to which most Member States are parties.¹⁰⁵ But most of these conventions actually contain important limitations.

For example, the definition of environmental damage in the Convention on Civil Liability for Oil Pollution Damage (hereafter “the CLC”) is considerably limited.¹⁰⁶ Foreseeing the gap of protection, the Parliament proposed to have the European Commission make an analysis of the issue and, five year after the entry into force of the Directive, develop proposals to apply the Directive in such circumstances.¹⁰⁷ The proposition was not followed, but nuclear and oil pollution

⁹⁸ Article 8(4)(b) of Directive 2004/35/EC, note 33 above.

⁹⁹ Amendment 53 to Article 9(1)(d), Report of the Parliament, note 129 above, p. 109-110.

¹⁰⁰ Opinion of the Committee on the Environment, Public Health and Consumer Policy for the Committee on Legal Affairs and the Internal Market on the proposal for a European Parliament and Council directive on environmental liability with regard to the prevention and remedying of environmental damage, in Report of the Parliament, note 129 above, p. 74. See also Friends of the Earth, *Briefing on the Environmental Liability Directive: Ask the government to make polluters pay for damage to the environment*, London, January 2007, available at http://www.foe.co.uk/resource/briefings/eld_campaigner_briefing.pdf, p. 2.

¹⁰¹ Article 4(1)(a-b) and (6) of Directive 2004/35/EC, note 33 above.

¹⁰² Gerd Winter, Jan H. Jans, Richard Mcrory and Ludwig Krämer, 'Weighing Up the EC Environmental Liability Directive', 20 *J. Envtl. L.* (2008), p. 169.

¹⁰³ Winter, Jans, Mcrory and Krämer (2008), note 178 above, p. 169.

¹⁰⁴ Article 4(2) and (4), and Annex IV of Directive 2004/35/EC, note 33 above. Damage relating to oil pollution and transport of hazardous substances, as well as nuclear damage (including the Euratom Treaty) are excluded for the scope of application of the Directive.

¹⁰⁵ Winter, Jans, Mcrory and Krämer (2008), note 178 above, p. 169.

¹⁰⁶ The Convention on Civil Liability for Oil Pollution Damage (IMO, London, 27 November 1992, BGBl. 1996 II S. 671; BGBl. 2002 II 943) defines 'pollution damage' as “(a) loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken; (b) the costs of preventive measures and further loss or damage caused by preventive measures.” (emphasis added). Moreover, compensation for loss of profit is expressly excluded.

¹⁰⁷ Report of the Parliament, note 129 above.

damage could arguably be covered by the Directive to the extent that environmental damages are excluded from the CLC.¹⁰⁸

In addition, the CLC set a maximum amount of compensation.¹⁰⁹ Directive 2004/35 does not set any such ceiling and a cumulative approach could therefore be considered to overcome that problem. The risk linked to priority of claims of having environmental damage pushed into the background would be mitigated, in particular with the Directive applying only to those damages.

The case of *Erika* clearly falls into this exception and both the French court, applying the CLC, and the ECJ, justifying the application of the Waste Directive by opposing it to the ELD,¹¹⁰ acknowledged that situation. Following the reasoning above, the ecological damage not covered by the CLC would have to be paid under Directive 2004/35 by both Total companies. Such application would clearly be in favour of the protection of biodiversity.

A final category relates to damage that occurred before the entry into force of Directive 2004/35, i.e. 30 April 2007, or when the activity ended before that date.¹¹¹ Although justified by reasons of legal certainty, the exclusion of 'historical' damage causes serious threat to the environment in general, and biodiversity in particular and establishes *de facto* a “*vested right to pollute, at least until the 20 April 2007*”.¹¹² The European Commission has identified about 300,000 contaminated sites in Europe which fall thereof outside of the scope of the Directive.¹¹³ Environmental associations suggested the European Commission to opt for a transitional solution comparable to that contained in the Waste Directive. “*According to the 'polluter-Pays' principle, it is a matter of fairness that those who made profits alongside causing damage in the past, also contribute to the restoration. It would not be acceptable for the public to have to bear the full cost.*”¹¹⁴ Having occurred in 1999, the *Erika* oil spill was not covered by the Directive.

Another specific exemption is worth mentioning. Pursuant to Article 8(3) of the Directive, where operators can be exempted of bearing the costs of remedial measures if they can prove that the damage or threat “*was caused by a third party and occurred despite the fact that appropriate safety measures were in place or resulted from compliance with a compulsory order or instruction emanating from a public authority.*”¹¹⁵ The ECJ maintained that, in line with the ‘polluter pays’

¹⁰⁸ De Sadeleer, *Responsabilités environnementales* (2006), note 38 above, p. 754.

¹⁰⁹ The Parliament also identified that risk. It considered that “*Limitation of liability is at the expense of the environment. In order to secure reasonable and proportionate levels of liability, the U.S. decided to withdraw from the IMO Treaty immediately after the 1989 Exxon Valdez disaster and subsequently introduced the 1990 Oil Pollution Act. Where the liability in the 1999 Erika disaster was, under the IMO Convention, limited to only 11 million euro, the financial compensation with respect to liability in the Exxon Valdez catastrophe amounted to four billion dollars.*” See Report of the Parliament, note 129 above, p. 10.

¹¹⁰ ECJ *Commune de Mesquer*, note 40 above, para. 87-8.

¹¹¹ Article 17 of Directive 2004/35/EC, note 33 above. The ECJ recently asserted that “*activities which were carried out before but not finished before that date*” would fall under the scope of the Directive. See para. 41 of Case C-378/08, *Raffinerie Mediterranée*, note 160 above.

¹¹² Michel Prieur, 'La responsabilité environnementale en droit communautaire', 2 *Revue européenne de droit de l'environnement* (2004), p. 137.

¹¹³ EEA, *Management of contaminated sites in Western Europe*, Copenhagen, June 2000. The European Parliament wanted to include that fact in the recital 1 of the ELD. See Report of the Parliament, note 129 above, p. 6.

¹¹⁴ BirdLife International, EEB, FOE Europe and WWF European Policy Office, *Common Comments on the Commission Working Paper on the “Prevention and Restoration of Significant Environmental Damage”*, 13 September 2001, available at http://ec.europa.eu/environment/legal/liability/pdf/wrkdcc_comments.pdf, section 2.4.

¹¹⁵ The European Parliament obtained that the words “*with intent to*” be deleted from the point (a), making the third

principle, it is justified that operators do not bear the costs of pollution to which they have not contributed.¹¹⁶

7. *Intermediate conclusions*

After many years of gestation, the EU has finally adopted an embryonic environment liability scheme. Directive 2004/35 is clearly inadequate to ensure biodiversity protection. The main obstacle concerns the content of environmental damage, with the restriction of application to protected species and habitats being especially problematic for protection of biodiversity. In addition, the high threshold linked to the requirement of 'significant adverse effects' added to a vague notion of 'favourable conservation status' raises the question to the actual applicability of the ELD.

On the other hand, the rather large definition of who the operator is and the possibility of joint and several liability which is positive in two respects. First, it promotes the prevention principle by favouring the identification of the polluter as the person who actually has the control of the activity. Second, it secures the actual payment for damage caused.

The number of exonerations of liability offered by the Directive is another weak point. In particular, the exoneration of all damage caused before 30 April 2007 clearly lessens the interest of the liability scheme and fails to recognise that damages caused to the environment do not necessarily appear immediately. In the next chapter, I will explain how the U.S. regime responded to the problematic of historical damages.

IV. Comparative Analysis of U.S. and European Environmental Liability

1. *Introduction*

The U.S. liability regime for environmental harm is covered by a variety of statutes, at both federal and state level and contains a mixture of administrative, civil and criminal provisions. Traditional harm is dealt with under common law, which also varies from state to state.¹¹⁷ The main federal statutes are the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund)¹¹⁸ and the Oil Pollution Act (OPA).¹¹⁹ In addition, most of the 50 states have implemented these federal provisions, either directly or through separate laws.¹²⁰ This creates a complicated picture, involving multiple jurisdictions, important variations in the law and in enforcement practices, resulting in a quite unpredictable legal climate.¹²¹

party being responsible also in case of negligence. See Report of the Parliament, note 129 above, Amendment 25 to Article 9(3)(a), p. 67.

¹¹⁶ Case C-378/08, *Raffinerie Mediterranee*, note 84 above, para. 57-8; See also Case C-293/97, *Standley and Others*, 29 April 1999, ECR I-2603, para. 51.

¹¹⁷ Chris Clarke, *Update Comparative Legal Study*, Study prepared for the European Commission, London, 2001, available at http://ec.europa.eu/environment/legal/liability/pdf/legalstudy_full.pdf, p. 68.

¹¹⁸ Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) 42 U.S.C. §§ 9601 ff.

¹¹⁹ Oil Pollution Act (OPA) 33 U.S.C. §§ 2701 ff.

¹²⁰ Clarke, note 117 above, p. 69.

¹²¹ Clarke, note 117 above, p. 70.

In a first part, I will present one of the most important oil pollution cases in the U.S., *Exxon Valdez*, which was ruled before the adoption of OPA. In this chapter, I will compare the *Erika* case in the EU context, including the suggestions made under the ELD, to a potential *Erika* case occurring in the U.S. and to which OPA would apply. I will also make comments on the recent spill from the *Deepwater Horizon* oil rig.

For the purpose of the comparison, I will only analyse CERCLA and OPA, two particularly famous texts which largely inspired the debates at EU level. First, I shall make a rapid presentation of the two statutes, including the context of their adoption, their general scope of application and objectives. I will turn then to the examination of the damage covered, looking in particular at the definition of environmental damage, and comparing the scope of the U.S. laws with that of Directive 2004/35. I will finally examine the type of liability opted for by the different regimes, and the restoration measures and damage assessment.

2. An American disaster: the reference case of Exxon Valdez

The oil tanker *Exxon Valdez* ran aground on Bligh Reef in Alaska in March 1989, creating what was, until recently, the largest oil spill in the history of the U.S. The climate, as well as the geography of the region, composed of many islands, bays and fjords, contributed to worsen the damage and complicated the clean-up.¹²² Many thousands of migratory birds, otters and other wildlife died and the consequences for the local economy, including loss of income for the commercial fisheries and the tourism industry, and loss of subsistence for the native villages, were catastrophic.

At the time of the incident, the OPA did not exist and public suits were filed by the federal government and the State of Alaska against Exxon on the basis on Section 311(f)(5) of the CWA and Section 107(f)(1) of CERCLA.¹²³ The first assessment of the damage focused almost exclusively on the economic value of the destroyed resources and the market value of lost services. Following the judgement of *Ohio v. DOI*, mentioned earlier, the assessment was reviewed to include a wider range of natural resources' values and the scope of liability extended to the total of damaged natural resources.¹²⁴

An agreement was reached in October 1991, providing that the U.S. and the State of Alaska released Exxon from further civil and criminal charges. In return, Exxon had to pay U.S. \$900 million for the restoration and rehabilitation of natural resources.¹²⁵ The sum sought to cover loss and injury of use value, non-use value, consumer surplus, economic rent, or any similar value of natural resources.¹²⁶ The broader meaning of the value of natural resources was eventually retained for the calculation of the damages.

¹²² Samuel K. Skinner (Department of Transportation) and William K. Reilly (EPA), *The Exxon Valdez Oil Spill. A Report to the President*, Prepared by the National Response Team, May 1989, available at <http://www.uscg.mil/history/webshipwrecks/ExxonValdezNRT1989Report.pdf>, p. 25-6.

¹²³ Deborah Bardwick, 'The American Tort System's Response to Environmental Disaster: The Exxon Valdez Oil Spill as a Case Study', 19 *Stanford Environmental Law Journal* (2000), p. 264.

¹²⁴ These damage "included contingent value of recreational activities and intrinsic values of lost subsistence uses and of assessing damages of natural resources use values." Bardwick, note 198 above, p. 271.

¹²⁵ See Case *Exxon 1*, 270 F.3d (9th Cir. 2001) § 1223. See also Aaron T. Duff, 'Punitive Damages in Maritime Torts: Examining Shipowners' Punitive Damage Liability in the Wake of the *Exxon Valdez* Decision', 39 *Seton Hall Law Review* (2009), p. 959.

¹²⁶ Bardwick, note 198 above, p. 271-2.

3. *Main features of CERCLA and OPA*

i) *Comprehensive Environmental Response, Compensation, and Liability Act*

There are over 450'000 abandoned and contaminated sites in the U.S. The clean-up costs are estimated to several hundred billion dollars. The application of the polluter-pays principle is complicated in this case because the polluter may be difficult to identify or unable to bear the costs of clean-up. Following in particular the Love Canal environmental tragedy,¹²⁷ the Congress realised that pollution from uncontrolled dumpsites was a real issue. Where the ELD expressly exonerates past damage, the U.S. specifically deals with this problem. CERCLA seeks to give the authorities to power to respond to release or threat of release of hazardous substances into the environment from abandoned or uncontrolled hazardous waste sites.¹²⁸ The U.S. Environmental Protection Agency (EPA) has the authority under CERCLA to take legal action to force parties responsible for causing the contamination to take actions.¹²⁹

Diffuse pollution can exclude the application of Directive 2004/35 if the causal link cannot be established. Under CERCLA, the standard of causation is minimal, the plaintiff merely having to show a connection between the release and response costs.¹³⁰ A direct link to the substances released by the specific defendant does not need to be established.¹³¹

CERCLA is designed to complement RCRA which applies to hazardous waste generated and managed by active facilities.¹³² The scope of application of CERCLA is nevertheless wider and encompasses hazardous substances, defined by reference to other environmental statutes,¹³³ as well as pollutant and contaminant,¹³⁴ but excludes petroleum.

CERCLA was extensively amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA).¹³⁵ The Superfund, based on taxes imposed on the petroleum and chemical industries, environmental tax on corporation and general tax on revenue, is used to pay for EPA's clean-up and enforcement costs, certain damages, and also certain private claims.¹³⁶ A second amendment was adopted in 2002 with the Small Business Liability Relief and Brownfields Revitalization Act.¹³⁷ The

¹²⁷ The Love Canal, situated near the Niagara Falls, New York, was turned in the 1920s into a municipal and industrial chemical dumpsite. In 1953, the canal was covered with earth and a city built on top and, in 1978, it exploded as a result of enormous rainfall. The contaminants contained in the landfill leached and poisoned the area. More info on the EPA website: <http://www.epa.gov/history/topics/lovecanal/01.htm>.

¹²⁸ U.S. Environmental Protection Agency, *CERCLA/SUPERFUND Orientation Manual*, EPA/542/R-92/005, Washington, October 1992, p. I-1.

¹²⁹ CERCLA 42 U.S.C. § 9607, note 118 above

¹³⁰ Ronald E. Cardwell, 'Comprehensive Environmental Response, Compensation, and Liability Act', in Thomas F.P. Sullivan (ed.), *Environmental Law Handbook*, 20th Ed. (Government Institutes: Maryland, 2009), p. 531.

¹³¹ Also referred to as 'fingerprinting'. See Clarke, note 117 above, p. 74.

¹³² David R. Case, 'Resource Conservation and Recovery Act', in *Thomas F.P. Sullivan (ed.), Environmental Law Handbook*, 20th Ed. (Government Institutes: Maryland, 2009), p. 142.

¹³³ CERCLA 42 U.S.C. § 9601(14), note 118 above, refers to RCRA, CWA and CAA. EPA has made a list of these substances that is available at 40 C.F.R. Part 302 (Table 302.4).

¹³⁴ These terms cover about everything it includes, but is "not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure [...] will or may reasonably be anticipated to cause" harmful health effects. CERCLA 42 U.S.C. 9601(33), note 118 above.

¹³⁵ Public Law 99-499, 17 October 1986.

¹³⁶ Cardwell, note 130 above, p. 511-2.

¹³⁷ Public Law 107-118 (H.R. 2869), 11 January 2002.

issue of 'brownfield sites', defined as "*real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant*",¹³⁸ remains as one of the top environmental priority.¹³⁹

ii) Oil Pollution Act

Prior to the adoption of OPA in 1990, clean-up and compensation for damage caused by discharges of oil were mainly regulated by section 311 of the Clean Water Act.¹⁴⁰ A specific regime for oil spill cases was discussed for about twenty years. The U.S. had participated in the negotiations of the CLC and Fund Convention but the Senate opposed to the ratification considering insufficient the maximum amount of liability.¹⁴¹ In the wake of the Exxon Valdez oil spill, a remarkably comprehensive and stringent law was adopted. OPA expanded the existing liability scheme, added new provisions on prevention, increased penalties and strengthen the response capabilities.¹⁴² It "*has forced the industry to be more careful because legal and financial consequences of spills, including the threat of criminal prosecution, are so severe.*"¹⁴³ An additional compensation fund was set up, based on the taxation of each barrel on the receipt of imported crude oil and petroleum products.¹⁴⁴

OPA established a liability scheme for release into the U.S. waters of oil from vessels and facilities.¹⁴⁵ Contrary to the CLC which is limited to tankers, vessels is defined broadly in OPA to include all oil spill from recreational boats to cargo vessels.¹⁴⁶ The scope of protection covers the navigable waters or adjoining shorelines and the exclusive economic zone.

An Oil Spill Liability Trust Fund (OSLTF) is also set up and include various sources of funding, including a five-cent-per-barrel tax on oil received at U.S. refineries and petroleum products entering the U.S., and transfers from other pollution funds.¹⁴⁷ It is designed to cover clean-up and response costs and pay for claims that would not otherwise be paid due to successful defences or limit to liability.¹⁴⁸

¹³⁸ CERCLA 42 U.S.C. § 9601(39), note 118 above.

¹³⁹ EPA estimates that there are more than 450'000 brownfields in the U.S. More info on EPA Website: <http://www.epa.gov/brownfields/about.htm>. See also Cardwell, note 130 above, p. 579.

¹⁴⁰ Clean Water Act, 33 U.S.C. §§ 1251-1387.

¹⁴¹ Austin P. Olney, 'Oil Pollution Act', in Thomas F.P. Sullivan (ed.), *Environmental Law Handbook*, 20th Ed. (Government Institutes: Maryland, 2009), p. 388-9.

¹⁴² Cynthia M. Wilkinson, Lisa Pittman and Rebecca F. Dye, 'Slick Work: An Analysis of the Oil Pollution Act of 1990', 12 *Journal of Energy, Natural Resources and Environmental Law* (1992), p. 189.

¹⁴³ Olney, note 141 above, p. 386.

¹⁴⁴ The Fund was capped to U.S. \$1 billion on the basis of the 26 U.S.C. § 4611, but the tax expired in 1994. The tax was reinstated with the adoption of the 2005 Energy Policy Act (Public Law 109-58) and the ceiling of the Fund raised to U.S. \$2,7 billion. See Olney, note 141 above, p. 387 and 418.

¹⁴⁵ 'Facilities' include "*any structure, group of structures, equipment, or device (other than a vessel) which is used for one or more of the following purposes: exploring for, drilling for, producing, storing, handling, transferring, processing, or transporting oil. This term includes any motor vehicle, rolling stock, or pipeline used for one or more of these purposes.*" OPA 33 U.S.C. § 2701 (9), note 119 above.

¹⁴⁶ The term 'vessels' is defined as "*every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, other than a public vessel.*" OPA 33 U.S.C. § 2701 (37), note 119 above.

¹⁴⁷ Olney, note 141 above, p. 418.

¹⁴⁸ OPA 33 U.S.C. § 2712, note 119 above.

4. The concept of environmental damage

Whereas CERCLA covers only damages in the form of injury or loss of natural resources,¹⁴⁹ OPA applies to “damages for injury to, destruction of, loss of, or loss of use of, natural resources, including the reasonable costs of assessing the damage” to natural resources and to five other categories of compensatory damages: real or personal property; subsistence use; governmental revenues; profits and earning capacity; and public services.¹⁵⁰ In OPA, damages to natural resources are, unlike the other types of damages, treated under a specific section patterned after the CERCLA provisions.¹⁵¹

i) Natural resources damage

The term 'natural resources' is similarly defined in both CERCLA and OPA. It encompasses “land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States [...], any State or local government, any foreign government, any Indian tribe”¹⁵² Recreational use and cultural resources have been recognised as recoverable losses.¹⁵³ Following this definition, it is clear that the U.S. has a much more comprehensive regime than the EU¹⁵⁴ and biodiversity much better embraced.

Contrary to the EU regime, neither CERCLA nor OPA require the damage to be 'significantly adversely affecting' the resources. There is also no reference to a conservation or ecological status of the natural resources. The potential of application of the U.S. laws is far greater than the Directive.

ii) Retroactive effect

Under CERCLA, whereas the liability for clean-up benefits has retroactive effects, actions for recovery of damage to natural resources are only prospective.¹⁵⁵ Damage to natural resources cannot be recovered where both the release of hazardous substances and the resulting damage have occurred wholly before 11 December 1980.¹⁵⁶ In spite of the discretion left to the judges, this

¹⁴⁹ CERCLA 42 U.S.C. 9601(6), note 118 above.

¹⁵⁰ OPA 33 U.S.C. § 2702(b)(2), note 119 above.

¹⁵¹ OPA 33 U.S.C. § 2706, note 119 above, and CERCLA 42 U.S.C. 1 9607(f), note 118 above. See also Onley, note 141 above, p. 400-1.

¹⁵² CERCLA 42 U.S.C. 9601(16), note 118 above, and OPA 33 U.S.C. 2701(20), note 119 above.

¹⁵³ *United States v. Amity Products Carriers, Inc.*, 65 Fed. Reg. 3738 (24 January 2000); 2000 EPA Consent LEXIS 18 (7 January 2000).

¹⁵⁴ Indeed, wildlife and habitats do not need to benefit from a specific protection status, air is included and the definition is even left open with the use of 'other such resources'.

¹⁵⁵ Brans (2001), note 54 above, p. 81.

¹⁵⁶ 42 U.S.C. § 9607(f). Courts have confirmed that retroactive costs are not recoverable (*United States v. NEPACCO*, 579 823 (W.D. Mo. 1984), *aff'd in part, rev'd in part and remanded*, *United States v. NEPACCO*, 810 F.2d 726 (8th Cir. 1986)), unless the damages continue after the entry into force of CERCLA (*United States v. Shell Oil Co.*, 605 F.Supp.1064 (D. Colo. 1985)).

In Coeur d'Alene Tribe v. Asarco, Inc., the court interpreted this provision largely, stating that the existence of an action was not a determining factor and that the “passive movement and migration of hazardous substances by mother nature (no human action assisting in the movement) is still a “release” for purposes of CERCLA.” In addition, as 'damages' are defined as the monetary quantification of the injury to natural resources, they would not occur when the injury occurred but when the claimant has incurred expenses due to the injury to natural resources (*Coeur d'Alene Tribe v. Asarco, Inc.*, 280 F.2d 1094 (D. Idaho 2003), § 1113-1114). *On the contrary*, in *Montana v. Atlantic Richfield Co.*, the judge held that

limitation is clearly regrettable in terms of biodiversity protection. It is however striking that 27 years separate the entry into force, and hence the application of the liability regime, of CERCLA and of Directive 2004/35.

iii) Ownership of natural resources

The U.S. regime contains a limitation of ownership that does not appear in the ELD. According to the U.S. public trust doctrine, the ‘public’ has the legal right to utilise certain resources, such as seashore, foreshore and navigable waters for fishing and commerce, as well as for recreational purposes, without restriction by private owners.¹⁵⁷ The doctrine also encompasses environments that provide food, shelter and habitats for birds and marine life, as well as parks, land and wildlife.¹⁵⁸ Thereby, the government, as the trustee, has the duty to actively protect these resources and manage them “to benefit both current and future beneficiaries”.¹⁵⁹ The recovery of compensation in case of damage to trust resources is also part of the obligations of the government.¹⁶⁰ The scope is nevertheless not limited to natural resources owned by the government, but also includes resources that it manages or control.¹⁶¹ Thus, although privately owned resources are normally excluded from the scope of CERCLA and OPA, some may nevertheless be covered. In addition, laws like the ESA, which provides for measures of conservation of endangered and threatened species, as well as the ecosystems which they depend on, typically allow governments to act.¹⁶²

In contrast, Directive 2004/35 covers damage to natural resources regardless of their legal status and hence does not make liability depend on ownership of the resource. Property owners were not awarded a right to sue for damages, but only to request actions from the public authorities.¹⁶³

5. Types of Liability and Defences

i) Strict, Joint and Several Liability

CERCLA and OPA provide for a regime of strict, joint and several liabilities.¹⁶⁴ This last aspect is the main difference with Directive 2004/35 which channels the liability to only one person.

“damages accrue or occur, including restoration costs, when the underlying injury occurs” but not when the expenses and costs are quantified (*Montana v. Atlantic Richfield Co.*, 266 F.2d 1238 (D. Mont. 2003), § 1242). See also Allan Kanner and Mary E. Ziegler, 'Understanding and Protecting Natural resources', 17 *Duke Environmental Law and Policy Forum* (2006-2007), p. 150-1.

¹⁵⁷ Jedidiah Brewer and Gary D. Libecap, 'Property rights and the public trust doctrine in environmental protection and natural resource conservation', *The Australian Journal of Agricultural and Resource Economics* 53 (2009), p. 4; Brans (2001), note 54 above, p. 51.

¹⁵⁸ William H. Rodgers, *Environmental Law. Air and Water*, Vol. 1, (Saint-Paul, 1986), p. 158-161. The courts have contributed to clarify this issue. In *Artesian Water Co. v. Government of New Castle County*, 851 F.2d 643 (3rd Cir. 1988), the court, applying CERCLA, stated that the state had a clear interest in water conservation.

¹⁵⁹ Jack H. Archer et al., *The Public Trust Doctrine and the Management of America's Coast*, (The University of Massachusetts Press, 1994), p. 39.

¹⁶⁰ *State of New Jersey v. Jersey Central Power & Light Co.*, 308 A.2d 674 (N.J. Super. Ct. Law Div. 1973). In this case, the court awarded the state of New Jersey damages for the loss of fish caused by the discharge of a harmful substance by an electric plant into its tidal waters. See also Brans (2001), note 54 above, p. 52-3.

¹⁶¹ *State of Ohio v. U.S. Department of the Interior*, 880 F.2d 432 (D.C. Cir. 1989), p. 460-1.

¹⁶² 16 U.S.C. § 1531. See also Brans (2001), note 54 above, p. 85.

¹⁶³ Article 12(1) of Directive 2004/35/EC, note 33 above.

¹⁶⁴ Although the Act itself does not contain any provisions on the liability standards, courts have generally admitted them. See Brans (2001), note 54 above, p. 80.

Under CERCLA, the parties to which liability is imposed are: 1) the current owners and operators of a vessel or a facility, (2) past owners and operators (at the time of the release or disposal), (3) the generators (i.e. persons who arranged for the disposal or treatment of hazardous substances), and (4) the transporters.¹⁶⁵ The liability is joint which means that the “*claimant can hold any single party liable for all of the clean-up expenses, irrespective of that party's actual contribution in the aggregate contamination.*”¹⁶⁶

The OPA also contains a wide definition of 'responsible party', according to the origin of the oil spills. In the case of a vessel, the owner, operator or charterer of the vessel is liable. In the case of an onshore or offshore facility, it is the owner or operator of the facility, the lessee or permittee of the area in which the facility is located, or the holder of a right of use.¹⁶⁷

Thus, under OPA, Total International, as the charterer of the tanker, would have been held jointly liable with the ship owner for the damage caused by the *Erika* oil spill. The producer of the oil is not covered by the definition.

ii) Defences

Only three statutory defences are provided in both CERCLA and OPA regimes, namely an act of God, an act of war, an act or omission of a third party not connected with the defendants, or a combination of the three.¹⁶⁸ This aspect greatly differs from the several defences offered in the EU regime.

If the sinking of the *Erika* had occurred with the U.S. territory, OPA would have applied without any possible exoneration.

6. Restoration, restoration and restoration

i) Primary, complementary and compensatory restoration measures

Restoration is the preferred means of compensation for injury to natural resources due to oil spills or hazardous substances¹⁶⁹ and plays the central role in both CERCLA and OPA.¹⁷⁰ The U.S. regime directly inspired the European legislator, who merely replaced the term 'restoration' by 'remediation'.¹⁷¹

Primary restoration (or 'remediation') encompasses any measures aiming to restore the environment to its baseline state.¹⁷² The ELD also provides for 'complementary' remediation which seeks the

¹⁶⁵ 42 U.S.C. § 9607(a).

¹⁶⁶ Eric Thomas Larson, 'Why Environmental Liability Regimes in the United States, the European Community, and Japan Have Grown Synonymous With the Polluter Pays Principle', 38 *Vanderbilt Journal of Transnational Law* (2005), p. 552. See also *United States v. Chem-Dyne Corp.*, 572 F.2d 802, 810 (S.D. Ohio 1983).

¹⁶⁷ OPA 33 U.S.C. § 2701(32), note 119 above. Other parties are also addressed in that provision, including the licensee of a deepwater port, the owner or operator of a pipeline or the last responsible party in case of abandonment.

¹⁶⁸ CERCLA 42 U.S.C. § 9607(b), note 118 above, and OPA 33 U.S.C. § 2701(a), note 119 above.

¹⁶⁹ *Ohio v. United States DOI*, 880 F.2d 432 (D.C. Cir. 1989), § 444 and 459.

¹⁷⁰ Marisa J. Mazzotta, James J. Opaluch and Thomas A. Grigalunas, 'Natural Resource Damage Assessment: The Role of Resources Restoration', 34 *Natural Resources Journal* (1994), p. 153.

¹⁷¹ Remedial measures are defined as “any action, or combination of actions, including mitigating or interim measures to restore, rehabilitate or replace damaged natural resources or impaired services, or to provide an equivalent alternative to those resources or services as foreseen in Annex II.” See Article 2(11) of Directive 2004/35/EC, note 33 above.

¹⁷² The U.S. regime refers more specifically to the cost of any action, or combination of actions, to restore, rehabilitate,

compensation of the damage that could not be remedied in accordance to the first measure.¹⁷³ The U.S. regime does not make the distinction and the taking of off-site measures is considered to be primary restoration. Compensatory restoration (or 'remediation') is provided for the compensation of lost functions and services of the injured resources between the time of the discharge or release and the time the resources are fully returned to their baseline conditions ('compensatory remediation').¹⁷⁴

Under the CLC, the owner of the ship is bound to pay up to U.S. \$25'955'000¹⁷⁵ of traditional damages. The IOPC Fund is then liable for exceeding damages, up to U.S. \$315 million, and the Supplementary Fund raises that limit to U.S. \$1'165 million. Pure ecological damages are excluded from this compensation.¹⁷⁶ If the ELD was to be found applicable to *Erika* case, the 'operator' would be required to pay the difference between the damage covered by the CLC and the actual damage covered by the Directive. Under Directive 2004/35, the liability of the operator is not limited and it is therefore not possible to estimate what will be due but, given the limited scope of environmental damage, it is unlikely that the actual costs of all damage suffered by the biodiversity will be repaid.

If the *Erika* had wrecked in the U.S. waters, OPA would impose the payment of a maximum of U.S. \$22 million to Total International.

Following the explosion of the oil rig Deepwater Horizon in the Mexican Gulf in April 2010, about 210,000 gallons of oil a day were spewed into the ocean for more than a month. This oil spill, which is now the worst that occurred in the U.S., falls under OPA. In this case, as the lessee of the facility,

replace, or acquire the equivalent of the injured natural resources and services in a 'baseline state', i.e. that would have existed without the contamination. See Code of Federal Regulations, Title 43, § 11.83. See also Allan Kanner, 'Tribal Sovereignty and Natural Resources Damages', 25 *Public Land and Resources Law Review* (2004), p. 102.

According to Article 2(14) of Directive 2004/35/EC, note 33 above, “‘baseline condition’ means the condition at the time of the damage of the natural resources and services that would have existed had the environmental damage not occurred, estimated on the basis of the best information available”.

¹⁷³ Similarly to what is provided in the Habitats directive (Article 6(3)), these compensatory measures are designed to offset the negative effect of an activity and ensure that a compensation corresponding to the negative effects on the natural resources. See De Sadeleer and Born (2004), note 5 above, p. 531.

¹⁷⁴ For the U.S. Regime, see Code of Federal Regulations, Title 43, § 11.83. See also, Allan Kanner and Mary E. Ziegler, 'Understanding and Protecting Natural Resources', 17 *Duke Environmental Law & Policy Forum* (2006-2007), p. 145.

Directive 2004/35 refers to 'interim losses' which are the loss of performance of the ecological function of the natural resources or the supply of services to other resources as a result of the damage. (Annex II(1)(d)).

¹⁷⁵ The CLC provides that, for a ship 5,000 to 140,000 gross tonnage, the liability is limited to 4.51 million SDR (U.S. \$5.78 million) plus 631 SDR (U.S. \$807) for each additional gross tonne over 5,000. *Erika* transported 30'000. So 5.78 million + (25'000 x 807) = 25'955'000.

¹⁷⁶ In its *Erika* judgement, the *Cour d'appel* condemned Total to an overall amount of 200,6 million Euros, including pure ecological damage. The damage were awarded following the criminal proceedings but it does not lessen the importance of this finding. The Court first recalled that humans cannot be looked in isolation from their natural environment and recalled that the ECHR has recognised that environmental harm could affect the well-being of mankind (See ECHR Case *López Ostra v. Spain*, 9 December 1994, Serial A n° 303-C, para. 51; ECHR Case *Băcilă v. Romania*, no. 19234/04, 30 March 2010, *not yet published*, para. 59.) It also cites the French Code of Environment and the 2008 Law on Environmental Liability. Finally, it decided to extend the award of pure ecological damage to all plaintiffs and not only to the League for Protection of Birds (LPO) and one Commune, who expressly required it. The fact that the pollution had touched the territory of community was sufficient to justify the payment of direct and indirect damage. Moreover, the Court considered that such harm affects each community in its own way for their environmental objectives may vary significantly. See Judgement of 11th Chamber, N° 08/02278, 30 March 2010m note 12 above. See also Karine Le Couviour, 'Erika: décryptage d'un arrêt peu conventionnel', 16 *La Semaine Juridique* (2009), p. 806.

BP shall be held strictly liable for clean-up costs and, up to U.S. \$75 million, for other damages.¹⁷⁷ Typically, these damages include loss of natural resources, loss of recreational use of beaches and waters. The intervention of the OSLTF is now set to U.S. \$1 billion per incident for covering governmental and private claims, and U.S. \$500 millions for natural damage assessment and claims.¹⁷⁸

An exception to the limit is provided where the responsible party is found to have engaged in gross negligence, wilful misconduct, or a violation of safety rules.¹⁷⁹ It is arguable that the lack of care of Total for the *vetting* of the *Erika* gives a good ground for removing the limit. In the case of *Deepwater Horizon*, discussions around the guilty conduct of BP and leniency of the authorities are likely to arise. Following the federal government request, BP already agreed to set U.S. \$20 billion aside.

The ELD does contain a financial limitation, but the CLC provides for a similar exception to the limit of liability where “*the pollution damage resulted from [the shipowner] personal act or omission*” with the intention to cause the damage or the knowledge of such risk.¹⁸⁰

ii) Damage assessment

Damage assessments procedures are clearly regulated in the U.S. The DOI promulgated two types of assessments regulations under the framework of CERCLA.¹⁸¹ The regulations on natural resources damage assessment (NRDA) under OPA were adopted by the National Oceanic and Atmospheric Administration (NOAA).¹⁸² Trustees are primarily required to conduct the assessment, but they are recommended to cooperate with the responsible party.¹⁸³ Such cooperation may overcome the difficulty for public authorities to gather information and the burden in terms of time, human resources and technology equipment. Under Article 7 of the ELD, it is for the operators to identify potential remedial measures, while the competent authority retains the last word over the choice of the measures to be implemented in accordance with guidelines contained in Annex II.

The determination of the appropriate scale of the compensatory measures under Directive 2004/35 is clearly based on NRDA rules, but less detailed. Scaling seeks “*to ensure that the identified*

¹⁷⁷ OPA 33 U.S.C. § 2704(a)(3) and (c)(3), note 119 above.

¹⁷⁸ Internal Revenue Code 26 U.S.C. § 9509(c)(2)(A).

¹⁷⁹ OPA 33 U.S.C. § 2704(c)(1), note 119 above.

¹⁸⁰ Article V(2) of the CLC, note 106 above. NB. The CLC does not apply to oil pollution from an offshore installation.

¹⁸¹ Type A are designed for assessing damage resulting from minor release in coastal and marine environment only; Type B apply to individual cases of damage caused by more serious discharges. Both regulations require four phases: i) *Pre-Assessment Screen*; ii) *Assessment Plan*; iii) *Assessment Implementation*; iv) *Post-Assessment*.

See 59 Fed. Reg 63300 (December 1994) (Type A regulations) and 59 Fed. Reg. 14262 (25 March 1994), *codified as* 40 C.F.R Part 11.

¹⁸² They require only three phases:

- i) *Pre-Assessment* is a preliminary determination of the competence of the trustees and of the injuries caused to natural resources;
- ii) *Restoration Planning* requires a complete assessment of the injury and select restoration alternatives;
- iii) *Restoration Implementation* is the selection phase which must be based upon several factors.

Finally, the most cost effective of several equally preferable alternatives must be selected and implemented. Compensatory restoration measures can be calculated with the help of certain contingent valuation or other valuation methodologies. See Natural Resource Damage Assessment 15 C.F.R. § 990. See also Olney, note 141 above, p. 406.

¹⁸³ 15 C.F.R § 990(14).

restoration alternatives appropriately compensate for interim losses.”¹⁸⁴ Some natural resources and services may be particularly difficult to value. Methods of valuing are therefore essential to ensure that their adequate recovery, in particular where they cannot be restored to their previous state.

7. *Intermediate conclusions*

In the perspective of biodiversity protection, it seems that the U.S. liability regime is generally better equipped to face the numerous challenges arising in case of pollution. The scope of application is significantly wider, all types of release of contaminants, as well as oil pollution, are covered by federal laws. Abandoned or uncontrolled sites are also tackled in the U.S., while the full application of the ELD will be limited to pollution that occurred or continued after 30 April 2007.

Moreover, biodiversity is better addressed under CERCLA and OPA, with a broad definition of 'natural resources', than under Directive 2004/35, which covers only otherwise protected species and habitats. Likewise, the threshold of application of liability under the ELD is regrettably high where U.S. statutes also apply to 'minor' release.

It is however doubtful whether the limit of liability contained in both CERCLA and OPA is sufficiently high to restore biodiversity and, above all, to encourage the adoption of sufficient preventive measures.

V. Conclusion

In my view, neither the EU nor the U.S. liability regimes adequately cater for protection of biodiversity. The existing limitations seriously hinder the polluter-pays principle as emphasised by analysing the *Erika* case.

The European environmental liability regime has adopted an ecological approach, but the scope of the definition of biodiversity, as set out in the CBD and to which the EU and its Members States are parties, is far from being covered. Only a limited array of natural resources is covered and the threshold of intervention is set extremely high. The ELD clearly falls short of addressing the issue of biodiversity protection through a liability scheme that neither prevents nor remedies ecological decline. A revision of the scope of Directive 2004/35 is particularly recommended in light of the gaps of protection offered by CLC. A supplementary application of the ELD to cases falling under the scope of such international convention is an imperative.

In spite of the U.S. not having ratified the CBD, biodiversity is much better addressed in the federal

¹⁸⁴ Brans (2005), note 83 above, p. 102.

Two main approaches are used. First the *service-to-service approach* (or 'resource-to-resource' approach) requires the lost and restored natural resources or services to have the same type and quality so as to simplify the determination of the scale of restoration action. Second, the *valuation approach* usually applies when the injured and restored resources and services are not of the same type, quality, and value, and provides for two options: value-to-value or value-to-cost scaling. The first option scales an action by adjusting the size of restoration to ensure that the value of action gains equals the value of the interim losses the value of gains from the proposed restoration actions and the value of the interim losses. The second scales an action by equating the cost of the restoration plan to the value (in dollar terms) of losses due to the injury. See Annex II (1.2) of Directive 2004/35/EC, note 33 above, and Natural Resource Damage Assessment 15 C.F.R. § 990.53(d)(2) and (3). See also Tony Penn, *A Summary of the Natural Resource Damage Assessment Regulations Under the United States Oil Pollution Act*, publication available at http://nctc.fws.gov/CSP/Resources/Advanced_NRDAR/NOAA_Penn_paper.pdf (U.S. National Conservation Training Center) and http://ec.europa.eu/environment/legal/liability/pdf/tp_enveco.pdf (European Commission Website), p. 5.

liability schemes I have examined. Indeed, the scope of damage is more broadly defined than in the other schemes. Moreover, the liability is not channelled but joint and several which not only gives incentives to all the participants in an activity to adopt preventive measures, but also ensures that polluters will actually bear the costs of the damage for which they are liable. Clearly inspired from the U.S. liability scheme, the EU eventually adopted a law that is clearly below the U.S. standards.

Because of the subsidiarity principle which governs the relations between the EU and its Member States, the success of Directive 2004/35 is dependant on the national authorities interpreting and enforcing the legislation. Effective protection against environmental damages from the ELD will therefore vary from one region to another putting at risk the coherence of the system. On the other hand, the EPA that has received powers to take direct actions against those causing damages to the environment, thus giving the U.S. laws some teeth that the ELD never got.

Only a strong liability schemes, in the vein of OPA and CERCLA, could contribute to protect the biodiversity but has so far failed to do so. The real challenge is to ensure that it is always more cost-efficient to take preventive measures to avoid environmental damages than having to clean them. But our dependency to the black gold makes it still more interesting for oil companies to take the risk of digging ever deeper than to convert to another activity. Recent events such as the Mexican Gulf and North Sea oil spills proved yet again that causing extreme environmental damages remains both too easy and cheap.

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