Environmental liability in the offshore sector with special focus on conflict of laws (part 1)

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This article provides an overview of the legal regimes on environmental liability related to offshore activities with special focus on the choice of law. As oil and gas exploration, exploitation and production activities are increasing globally the questions of liability and compensation become increasingly topical. The *Deepwater Horizon* accident in the Gulf of Mexico in 2010 illustrated the possible impact on the marine environment and on the coastal communities. This article reviews the applicable legal regimes and substantive rules governing environmental liability; the need for a unifying international liability instrument is assessed and the main rules and principles on the choice of law regarding the issues are studied. From an EU law perspective the main focus will be on the Rome II Regulation on the law applicable to non-contractual obligations.

I. Introduction

This article deals mainly with the choice of law issues related to the liability for environmental damage caused by offshore activities. Oil and gas exploration, exploitation and production activities are taking place increasingly offshore.[1] Since the early days of exploration in the North Sea in the late 1960s and early 1970s, offshore production has expanded enormously[2] and occurs increasingly also in the Mediterranean, the Black and even the Baltic Seas.[3] Furthermore, such activities also

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[1] 'Offshore' is usually taken to mean areas covering the territorial seas, the Exclusive Economic Zone (EEZ) and the continental self. Cf art 2(2) of Directive 2013/30/EU of the European Parliament and of the Council on safety of offshore oil and gas operations and amending Directive 2004/35/EC. In art 2(3) 'offshore oil and gas operations' are described as 'all activities associated with an installation or connected infrastructure, including design, planning, construction, operation and decommissioning thereof, relating to exploration and production of oil or gas, but excluding conveyance of oil and gas from one coast to another'.

[2] In 2010, there were over 1100 offshore installations operating in the North-East Atlantic region. In the North Sea area, offshore installations are active in the waters or within the exclusive economic zones of six states, namely Denmark, Germany, Ireland, the Netherlands, Norway and the United Kingdom. Together, the EU and Norway represent the fourth largest oil and gas producer in the world. In 2009, oil production in the EU and Norway amounted to 196 million tons, while gas production totalled 269 million tons of oil equivalents. The market for offshore activities is rather diversified, eg there are some major companies and a substantial number of smaller operators. See Commission staff working document SEC(2010) 1193 final and accompanying document to the Communication from the Commission to the European Parliament and the Council 'Facing the challenge of the safety of offshore oil and gas activities' COM(2010) 560 final 3–10.

[3] See Proposal for a Regulation of the European Parliament and of the Council on safety of offshore oil and gas prospection, exploration and production activities COM(2011) 688 final 10–11. For more details of the activities in the Mediterranean and Black Seas see SEC(2010) 1193 final 5–6, 8. In addition to the gradual development of the offshore oil and gas sector, there is a growing trend towards developing renewable energy offshore. Several offshore wind farms have been commissioned over recent years and a number of others are in the pipeline. See Knut Erling Øyehaug 'Nordisk offshore and energy – an overview' *Nordisk Medlemsblad* Membership Circular – Offshore Edition (2012) 6271.

occur to a large extent outside EU waters, inter alia, in Australia, Brazil[4] and the US.[5] In addition, within the last few years a significant amount of interest has developed in the Arctic areas,[6] especially offshore Norway and in the Barents Sea.[7] This is due to the melting ice,[8] technological advances and the increasing importance of the polar resources to the world economy.[9]

The international legal basis of offshore activities is to be found in the UN Convention on the Law of the Sea (UNCLOS), adopted in 1982 and effective since 1994.[10] This Convention provides a global framework for the rational exploitation and conservation of the resources in seas and oceans and the protection of the environment.[11] In the exclusive economic zone (EEZ)[12] and on the continental shelf[13] the UNCLOS grants the coastal state sovereign rights over activities related to the exploration and exploitation of natural resources above and on the seabed and in the subsoil.[14]

Offshore oil and gas operations comprise all activities related to exploring for, producing or processing oil and gas offshore. In addition to extraction of oil and gas from the underground strata of the seabed, these activities include transport of oil and gas by vessels and through offshore

[4] Brazil has in the last few years identified significant new offshore reserves located in the so-called Sub-Salt area, which is an oil bearing zone located off the shore of Rio de Janeiro and São Paulo states, lurking beneath a large, subterranean layer of salt several thousand feet thick in places. Exploitation of the area is likely to place Brazil in the top five oil producing countries in the world. For more details see eg *Gard News* (May/July 2012) 6–7.

[5] There are currently over 6500 offshore installations worldwide (not including floating and sub-sea structures) with more than half of these being in the Gulf of Mexico. See Callum Falconer 'Preface' to *Oil and Gas Decommissioning: Law, Policy and Comparative Practice* consulting editor Marc Hammerson (2013) 5.

[6] There is no agreed definition of the geographical extent of the Arctic. On this see *Arctic Ocean Review* Phase I Report (2009–2011) 3–4.

[7] An enormous amount of oil, natural gas and other resources are thought to be held within the Arctic Ocean's floor. The US Geological Survey estimated in 2008 that up to 30% of the world's undiscovered gas reserves and 13% of the world's undiscovered oil reserves might be held within the area north of the Arctic Circle. See Sébastien Pelletier, Frédéric Lasserre 'Arctic shipping: future polar express seaways? Shipowners' opinion' *Journal of Maritime Law and Commerce* (2012) 554.

[8] Since about 1995, climate change has begun to mark the Arctic region. There is an accelerating summer melt of sea ice in the Arctic Ocean. See Pelletier and Lasserre (2012) 553, 559. The United Nations Environment Programme (UNEP) released a report on 22 February 2013 that warns of the environmental threats to the Arctic ecosystem. The UNEP Yearbook 2013 cited a record low 2012 summer ice cover of 1.3 million square miles in the Arctic. The 2012 record was 18% below the previous recorded minimum in 2007. See http:// www. lexology.com/library/detail.aspx?g=db7edd24-860c-4a. The warming of the climate system is further confirmed by the Working Group I Contribution to the IPCC Fifth Assessment Report *Climate Change 2013: The Physical Science Basis: Summary for Policymakers*. The atmosphere and oceans have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.

[9] This importance stems from the need for new sources of oil, natural gas and minerals, faster shipping routes, new fish stocks and the possibility of further developing tourism. See Monique Andrée Allain 'Canada's claim to the Arctic: a study in overlapping claims to the outer continental shelf' *Journal of Maritime Law and Commerce* (2011) 5, and H Edwin Anderson III 'Polar shipping, the forthcoming Polar Code and implications for the polar environment' *Journal of Maritime Law and Commerce* (2012) 59. According to COM(2011) 688 final 11, the value of the EU offshore sector is very high in terms of national economies (revenues and employment) and its contribution to security of supply. Furthermore, the offshore sector generates relatively high revenues for the companies involved.

[10] As of 20 September 2013 it had 166 contracting states, including the European Union (1 April 1998).

[11] For the development of international law leading to the adoption of UNCLOS see eg Patricia Birnie, Alan Boyle and Catherine Redgwell *International Law and the Environment* (2009) 379–84. and Ulrich Beyerlin, Thilo Marauhn *International Environmental Law* (2011) 115–19. UNCLOS, which in large parts is a mere codification of the then existing rules of relevant customary and conventional international law, provides for a balance of power between coastal states and flag states. The emphasis of UNCLOS is strongly on the protection and preservation of the marine environment, rather than on compensating for environmental losses. On this see eg Jonathan I Charney 'The marine environment and the 1982 United Nations Convention on the Law of the Sea' *The International Lawyer* (1994) 879–901.

[12] According to UNCLOS art 57, the EEZ shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.

[13] The outer limits of the continental shelf on the seabed either shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2500 metre isobath, which is a line connecting the depth of 2500 metres (art 76.5). For more details on the delimitation of the continental shelf see eg Allain (2011) 13–19.

[14] See UNCLOS arts 56, 60, 77, 80 and 81. While a coastal state's sovereign rights in the EEZ embraces also living natural resources (eg fish) and the production of energy from the water, currents and winds, a coastal state's jurisdiction on the continental shelf relates mainly to mineral and non-living resources of the seabed and subsoil.

structures (pipelines or other installations above or below the water surface) to other installations, onshore processing or storage facilities.[15] All these highly technical processes and complex stages of the operations involve many different drilling, storage and support units: mobile and non-mobile drilling rigs and production installations,[16] floating storage and offloading units, offshore pipelines, construction and support vessels, service and maintenance units, oil and gas tankers etc.[17]

The increasing offshore activities also mean growing risks for oil spills and other accidents[18] causing a great variety of harm and damage to the environment. The socio-economic impact on the environment and on the ecosystem and communities could be extensive: loss and damage could hit coastal populations, commercial fisheries, marine and coastal tourism, coastal mangroves, migratory species and biodiversity.[19] The *Deepwater Horizon* accident in the Gulf of Mexico in 2010 serves as an illustrative example. The largest accidental marine oil spill in the history of the petroleum industry stemmed from a sea-floor oil gusher that resulted from the 20 April 2010 explosion and fire on the *Deepwater Horizon*, a mobile offshore drilling unit (MODU) situated about 41 miles off the southeast coast of Louisiana, in which 11 lives were lost. The drilling unit had no legs or anchors to connect it to the seabed, but it was stationary and physically attached to a wellhead by means of 5000 feet of drill pipe. The gushing wellhead was not capped until 15 July 2010, resulting in a total spill of crude oil into the Gulf estimated at 4.9 million barrels, affecting 350–450 km of the US coast.[20] The damage and losses caused to the marine environment and the fishing and tourism sectors were extensive.[21]

[15] Cf note 1.

[16] According to SEC(2010) 1193 final 4–5, some of these installations are fixed to the seabed (eg platforms), others are mobile (eg rigs, drilling vessels). In Europe, mobile units are usually but not exclusively used for drilling new wells. The majority of installations in the North Sea are fixed platforms or sub-sea installations (eg they are located fully under sea level); less than 8% of them are mobile.

[17] See eg Øyehaug (2012) 6271–73. There has been increased activity related to LNG projects resulting in a number of new building orders for LNG vessels. Floating production/liquefaction (FLNG) and storage and regasification (FSRU) projects 'have become the name of the game'. See 'Offshore and energy group activities' *Nordisk Skibsrederforening (Nordisk Defence Club) Annual Report* (2011) 18.

[18] The most significant environmental effects of exploration drillings and subsequent exploitation occur in connection with blow-outs, resulting in large oil spills, and in connection with accidents in relation to the storage and transportation of oil. According to a report published by the EU Commission's Joint Research Centre (JRG), the main hazards related to offshore oil and gas operations include: fire, after ignition of released hydrocarbons; explosion, after gas release, formation and ignition of an explosive cloud; oil release on sea surface or sub-sea. See Michalis Christou, Myrto Konstantinidou *Safety of offshore oil and gas operations: Lessons from past accident analysis* (2012) Report EUR 25646 EN 8. It may be added that draining and cleaning of an installation's process systems may also give rise to discharges and effluent streams.

[19] IMO LEG 99/13/2 Annex 1. It is interesting to note that based on frequency analysis of industry performance in Europe to date and on documented costs of past accidents, the estimated average annual economic losses and damage from offshore oil and gas accidents in the EU range from €205 million to €915 million COM(2011) 688 final 3. Continuous efforts to effectively manage the risks have resulted in a significant reduction of the number of incidents. See SEC(2010) 1193 final 9. For data on offshore incidents, their reasons, costs and accident category see Kristel De Smedt, Michael Faure, Jing Liu, Niels Philipsen and Hui Wang *Civil Liability and Financial Security for Offshore Oil and Gas Activities. Final Report* METRO (2013) 34–61.

[20] Communication from the Commission to the European Parliament and the Council 'Facing the challenge of the safety of offshore oil and gas activities' Brussels (12 October 2010) COM(2010) 560 final 2. For more details of the accident see eg Kyriaki Noussia 'Environmental pollution liability and insurance law ramifications in light of the *Deepwater Horizon* oil spill' in the Hamburg Lectures on Maritime Affairs 2009 and 2010 (eds) Jürgen Basedow, Ulrich Magnus and Rüdiger Wolfrum (2012) 141–43, 154. Investigation reports reveal that the underlying cause of the accident was a bad safety culture of the operator (BP) and its contractors (Transocean, Halliburton). For more details see Christou and Konstantinidou (2012) 20.

[21] According to Stephen Tromans 'Pollution from offshore rigs and installations: UK law', paper presented at the Ninth Annual International Colloquium Maritime Law: 'Offshore contracts and liabilities' (9–10 September 2013) at Swansea University, by April 2013 BP had, it appears, spent or paid out about US$25 billion of the US$42 billion set aside to respond to and pay for the damage caused by the accident (at p 1). It should be noted that the litigation growing out of this accident is the first big case under the US OPA (Oil Pollution Act) 1990. The pending *Deepwater Horizon* case, which is now at an early stage in the US district court in Louisiana, may last many years and may provide landmark rulings on many controversial and important issues, such as liability for pure economic loss, damage and for damage to natural resources. See Thomas J Schoenbaum 'Liability for damages in oil spill accidents: evaluating the USA and international law regimes in the light of *Deepwater Horizon*' *Journal of Environmental Law* (2012) 395–416. Further, in the wake of the accident calls were immediately made in the US Congress for sweeping changes in the laws and regulations relating to offshore oil drilling and exploration and pollution liability. For a discussion on reform proposals see Charles B Anderson 'Proposals for legislative reforms following the *Deepwater Horizon*

The growing interest in offshore activities in the Arctic area also increases the risks of environmental disasters. Deep water drilling[22] in the cold, icy and windy climatic conditions is quite challenging.[23] The exploration and exploitation of natural resources require highly developed and sophisticated technical methods placing highest priority on protection of the marine environment.[24]

However, when it comes to *liability* for environmental damage,[25] there is no international legal framework in force specifically dealing with liability and compensation for cross-border damage caused by oil and gas exploitation or other offshore activities. The lack of an international (or regional[26]) regime to regulate such liability can be seen as a deficiency in international law.[27] A uniform liability instrument, also embracing provisions for financial guarantees, would be desirable.[28] As the scale of the *Deepwater Horizon* incident demonstrates, accidental blowouts and spills from

oil spill' in *Pollution at Sea: Law and Liability* (eds) Baris Soyer and Andrew Tettenborn (2012) 82–93, and Tullio Scovazzi 'Maritime accidents with particular emphasis on liability and compensation for damage from the exploitation of mineral resources of the seabed' in Andrea Guttry, Marco Gestri and Gabriella Venturini (eds) *International Disaster Response Law* (2012) 291–97. It may also be noted that on 15 November 2012 the US Attorney General announced an agreed settlement of the criminal proceedings against BP as the well operator, including a series of payments, made over a five-year period, of a sum of US$4.5 billion. See *Gard News* (February/April 2013) 10.

[22] It is interesting to note that according to SEC(2010) 1193 final, there is no direct correlation between the sea depth and the risk of drilling; the latter is also influenced, inter alia, by the temperature and the pressure in the reservoir. However, the document further states: '[n]evertheless, it is certainly true that the deeper the sea is, the more difficult it becomes to intervene in case of a critical event like a blow-out. While in relatively shallow waters human intervention is feasible (divers can operate safely in a maximum depth of 200–250 metres), in deeper waters the operators have to resort to remotely operated underwater vehicles. In shallow waters it is also possible to fix the installations to the sea bottom, thereby eliminating the risk of sinking. In contrast, deepwater installations like the ill-fated *Deepwater Horizon* rig are typically floating' (at p 6).

[23] In addition, according to researchers, energy exploration in Arctic waters could be hampered by communication systems' ability to operate in the far north. Scientists at MARINTEK in Norway say projects they have completed show that conventional communications systems on which vessels rely in other parts of the world do not work properly in the Arctic region. On these problems and efforts to solve them see Fairplay Solutions (December 2012/January 2013) 10–11.

[24] Also the EU emphasises the need to protect the Arctic waters. In Directive 2013/30/EU it is stated: 'The Arctic waters are a neighbouring marine environment of particular importance for the Union, and play an important role in mitigating climate change. The serious environmental concerns relating to the Arctic waters require special attention to ensure the environmental protection of the Arctic in relation to any offshore oil and gas operation, including exploration, taking into account the risk of major accidents and the need for effective response' (recital (52)). Further, it should be noted that the International Maritime Organization (IMO) is in the process of drafting a mandatory international code of safety for *ships* operating in polar waters (Polar Code), which would cover the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to ships operating in the waters surrounding the two poles. See eg Anderson III (2012) 60, 69–83, and Peter Kikkert 'Promoting National interests and fostering cooperation: Canada and the development of a Polar Code' *Journal of Maritime Law and Commerce* (2012) 319–34.

[25] The notion of 'environmental damage' is difficult to define. The international instruments and national laws dealing with liability for environmental impairment embrace differing specifications of 'environmental damage' (see section II). Therefore, it is not possible in this article to use a specific definition.

[26] 'Regional' means that an instrument applies in the marine environment of more than two countries.

[27] It should be noted that Part XII of UNCLOS contains numerous provisions aiming at the protection and preservation of the marine environment. Regarding the obligations of state parties see eg arts 192, 194, 197, 204, 206 and 235. Section 5 contains provisions on the obligation of states to adopt international rules and national legislation to prevent, reduce and control pollution of the marine environment. Regarding pollution from seabed activities and from vessels, reference is made especially to arts 208 and 211. For details see eg Beyerlin and Marauhn (2011) 126–27, 130–31. As an example of a regional seas agreement for the protection of the marine environment the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean 1976 (the Barcelona Convention, amended in 1995) may be mentioned, with related Protocols (especially the Protocol Concerning Pollution Resulting from Exploration and Exploitation of the Continental Shelf, the Seabed and its Subsoil 1994). See Tullio Scovazzi 'The international protection of the Mediterranean marine environment: the Barcelona system' in *The Protection and Sustainable Development of the Mediterranean-Black Sea Ecosystem* (eds) Amedeo Postiglione (2008) 49–68. Other regional seas agreements are the Convention for the Protection of the Marine Environment of the North-East Atlantic 1992 (OSPAR Convention), and the Convention on the Protection of the Marine Environment of the Baltic Sea Area 1992 (Helsinki Convention). The EU is a contracting party to these conventions through Council Decisions 77/585/EEC, 98/249/EC and 94/157/EC.

[28] See eg Baris Soyer 'Compensation for pollution damage resulting from exploration for and exploitation of seabed mineral resources' in *Pollution at Sea. Law and Liability* (eds) Baris Soyer and Andrew Tettenborn (2012) 72–79. It should also be noted that art 235 of UNCLOS requires states to cooperate in the development of international law relating to responsibility and liability for compensation for damage caused by pollution of the marine environment, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.

production activities in the exclusive economic zones and on the continental shelves and high seas of the world may have serious cross-border impacts.[29] I will return to this issue (see section II.1).

The only international convention specifically addressing liability for offshore exploration and exploitation is the Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources 1977 (CLEE Convention), which has not entered into force.[30] There are, however, regional agreements regulating offshore oil platforms, such as the Offshore Pollution Liability Agreement 1974 (administered by OPOL[31]), effective in the North Sea area.[32] This is a voluntary contractual regime[33] entered into by a group of major oil companies involved in the exploitation and production of seabed mineral resources.[34] In addition, two new regional regimes are likely to come into effect in the near future, that is, one under the convention-based system for the protection of the Mediterranean Sea against pollution[35] and the other under EU law.[36]

[29] See also Schoenbaum (2012) 398–99. For instance, as states in the North Sea area are small and close to each other, the possibility of cross-border pollution is relatively high. In addition to oil spills gas leaks may also occur. As an example, following a natural gas leak in March 2012 the French oil company Total was forced to shut down production on the company's Elgin-Franklin field for almost a year. Total had to evacuate 238 workers from the Elgin platform, about 150 miles from Aberdeen, Scotland, when the leak was discovered. At the time of the shutdown, Elgin-Franklin was producing the equivalent of 140,000 barrels of oil a day in gas and liquids, making it a very large field. For more details see *International Herald Tribune* (16–17 February 2013) 12. Another example is the Adriatic IV blowout off Port Said in the Mediterranean. On 10 August 2004 the rig was drilling a natural gas well when a gas blowout occurred. There was an explosion followed by a fire, which was initially contained on the jack-up. The fire then spread to the Petrobel-run platform where it continued to rage for over a week before being brought under control. The platform was damaged beyond repair and Egypt's petroleum minister ordered its destruction. On this and other offshore oil and gas accidents see Christou and Konstantinidou (2012) 16–20.

[30] The CLEE Convention sets out detailed rules on liability standards and limitation amounts and applies to offshore installations including all fixed and mobile drilling units, storage facilities and most pipelines. See Soyer (2012) 61.

[31] The Offshore Pollution Liability Association Ltd, which is an oil industry body set up in the UK.

[32] According to Tabetha Kurtz-Shefford 'Liability for offshore facility pollution damage after the *Deepwater Horizon*? What happened to the global solution?' *Journal of International Maritime Law* (2012) 458, OPOL originally only covered escapes or discharges of oil from offshore facilities within the UK jurisdiction but has now extended this to the jurisdictions of Denmark, France, Germany, Ireland, the Netherlands, Norway, the Isle of Man, the Faroe Islands and Greenland.

[33] According to Nigel Howorth and James Shepherd 'Closer to an EU-wide safety and liability regime for offshore oil and gas', Briefing note, Clifford Chance (June 2013) 4, membership is mandatory in order to obtain licences to engage in offshore oil and gas activities in the UK, and some other, waters.

[34] OPOL has established a rather well-functioning liability regime that contains a wide definition of offshore facilities including oil and gas wells, drilling units, sub-sea installations, platforms, mobile installations used for treating and storing oil, and pipelines. The pollution liability of the operator is strict (with exceptions for war, natural phenomenon, act or omission of a third party etc) up to US$250 million per incident. Financial responsibility must be shown, and payment of claims is guaranteed by the other participating operators. Claims can be brought both for remedial measures and for property damage and other losses caused by the contamination. It remains unclear, however, to what extent so-called pure economic losses (see note 55) and damage to the environment per se (see section II.1) are covered under the liability regime. For more details of the OPOL regime see Soyer (2012) 60–64, Kurtz-Shefford (2012) 458–63 and Tromans (2013) 11–12.

[35] See note 27. Regarding the development of a liability and compensation regime in the Mediterranean area see eg Schoenbaum (2012) 399.

[36] Following the *Deepwater Horizon* incident, the EU has focused on measures to minimise the risk of major offshore oil and gas accidents occurring, to minimise the impacts when accidents occur and to ensure that appropriate compensation and liability regimes are in place. See Proposal COM(2011) 688 final. The EU Commission has favoured a single new piece of specific legislation for offshore oil and gas activities, and stated that clear provisions are needed as to the responsibility for clean-up as well as the ultimate liability for any damage caused. Consequently, new legislation, eg Directive 2013/30/EU (see note 1), was approved by both the Parliament and the Council. The objective of the directive 'is to reduce as far as possible the occurrence of major accidents relating to offshore oil and gas operations and to limit their consequences, thus increasing the protection of the marine environment and coastal economies against pollution, establishing minimum conditions for safe offshore exploration and exploitation of oil and gas and limiting possible disruptions to Union indigenous energy production, and to improve the response mechanisms in case of an accident' (recital (2)). The directive applies to existing and future installations, and offshore oil and gas operations will be conducted only by operators appointed by licensees or licensing authorities. Landlocked Member States and those without offshore oil and gas operations under their jurisdiction, have to transpose and implement only a limited number of the directive's provisions. Member States will have until 19 July 2015 to transpose the directive into national law. For existing installations, the final deadline is 19 July 2018 (see arts 41–42). On the development leading to the directive see Barbara Cooreman 'The Macondo oil spill: a blessing in disguise for an environment-friendly future for European waters?' *Environmental Liability* (2012) 186–87, 193–94 and 196. Alongside the development of the directive the Commission is examining civil liability regimes and financial security mechanisms to ensure that compensation for offshore oil and gas incidents is available in a comprehensive and harmonised way across the EU. See Howorth and Shepherd (2013) 3–4.

Shipping involved in offshore activities is on the other hand rather well covered by international instruments. We find conventions on liability and compensation for environmental damage (and also limitation of liability) which have been acceded to by different states to a varying extent: the International Convention on Civil Liability for Oil Pollution Damage 1992 (CLC), together with the Fund Conventions,[37] the International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (Bunker Convention), the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea 2010[38] (HNS Convention, not yet in force) and the Convention on Limitation of Liability for Maritime Claims 1976/1996 (LLMC).[39] Furthermore, although they are not conventions, the EU Directive 2004/35 on environmental liability with regard to the prevention and remedying of environmental damage (ELD) and the Waste Framework Directive 2008/98/EC[40] apply to both shipping and offshore activities.

However, as major parts of offshore activities are still not covered by international liability instruments, interest is directed towards national rules and solutions. Legal regimes and rules covering issues of liability and compensation related to these activities vary considerably in different countries and regions. The variations embrace issues such as the notion of environmental damage, basis and extent of liability, person(s) liable, damage and losses that are to be compensated, the extent of remedying obligations, financial security requirements etc.[41]

Examples of two rather modern environmental liability laws concerning offshore activities are the Norwegian Act No 72/1996 relating to Petroleum Activities (Petroleum Act) and the US Oil Pollution Act of 1990 (OPA). The former Act imposes unlimited strict liability on the licensee for pollution damage caused in connection with exploration or exploitation of petroleum resources. If it is demonstrated that a *force majeure* event has contributed to a considerable degree to the damage or its extent, the liability may be reduced to the extent it is reasonable (Section 7–3). 'Pollution damage' is defined as 'damage or loss caused by pollution as a consequence of effluence or discharge of petroleum from a facility, including a well, and costs of reasonable measures to avert or limit such damage or such loss, as well as damage or loss as a consequence of such measures' (Section 7–1).[42] The US OPA imposes strict, joint and several liability on all 'responsible parties' for a vessel or facility from which oil is discharged or threatened to be discharged (33 USC Section 2702). Responsible parties include, among others, any person owning, operating or demise chartering a vessel, and a holder of a drilling permit in relation to offshore facilities (33 USC Section 2701).

[37] International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992, and Protocol of 2003 to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1992.

[38] The original HNS Convention was adopted in 1996, but was amended by a Protocol in 2010. See eg Måns Jacobsson 'The HNS Convention and its 2010 Protocol' in *Pollution at Sea: Law and Liability* (eds) Baris Soyer and Andrew Tettenborn (2010) 50–54.

[39] The LLMC was adopted in 1976, but it was amended in 1996 by a Protocol, which entered into force in May 2004. Furthermore, on 19 April 2012 IMO's Legal Committee adopted a 51% increase in the current liability limits. The increased limits will enter into force on 19 April 2015.

[40] Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain directives.

[41] See eg De Smedt, Faure, Liu, Philipsen and Wang (2013) 82–154, 374–80. Cf also Peter Wetterstein 'Remedying of environmental damage caused by shipping' in the Hamburg Lectures on Maritime Affairs 2009 and 2010 (eds) Jürgen Basedow, Ulrich Magnus and Rüdiger Wolfrum (2012) 179–92.

[42] Damage or loss incurred by fishermen as a consequence of reduced possibilities for fishing is also included in pollution damage. It should be noted that the provisions of the General Pollution Act (Act No 6/1981 Relating to Protection against Pollution and Relating to Waste) on compensable losses and clean-up have no equivalent in the Petroleum Act, and apply even in the petroleum sector. Furthermore, pollution from some offshore activities involving vessels and floating oil platforms is regulated by the Maritime Code (Maritime Code No 3/1994). However, the provisions of the Maritime Code yield for the provisions of the Petroleum Act, even in cases where the provisions of the Maritime Code implement Norwegian obligations under international treaties. On the Norwegian Petroleum Act see Ulf Hammer 'Liability' in Ulf Hammer, Anne-Karin Nesdam, Dagfinn Nygaard, Knut Kaasen, Jan B Jansen and Joachim M Bjerke *Articles in Petroleum Law*, Marlus nr 404 (2011) 214–25, and Erik Røsaeg 'Norwegian perspective with regard to liability regimes concerning oil rigs and installations', paper presented at the Ninth Annual International Colloquium Maritime Law: 'Offshore contracts and liabilities' (9–10 September 2013) at Swansea University.

According to OPA, compensation to the ecosystem covers not only the costs of removal (that is, the costs of cleaning up spilled oil) but also 'the cost of restoring, rehabilitating, replacing, or acquiring the equivalent of, the damaged natural resources'. Also 'the diminution in value of those natural resources pending restoration' is recoverable (33 USC Section 2706). Further, there are some exceptions to and limits on liability and a supplementary compensation fund, the Oil Spill Liability Trust Fund.[43]

Thus, as environmental damage caused by offshore activities may concern more than one state, for instance, oil pollution can affect many states, the question of the applicable substantive law becomes topical. The outcome of a matter concerning liability for environmental damage is dependent on the legal norms applied by the court seized with the case. This article will outline the main rules and principles on the choice of law regarding the issues studied. From an EU law perspective the main focus will be on the Rome II Regulation on the law applicable to non-contractual obligations.[44]

However, in order to illustrate the significance of the conflict of law issues in the present context, the article first reviews some of the applicable legal regimes and substantive rules governing environmental liability. This will also serve as a general background in order to assess the need for a unifying international liability instrument.

II. Legal regimes and rules on environmental liability

II.1 Civil liability conventions

Under the 1992 CLC there is *strict* but limited liability[45] of the registered owner[46] of a sea-going vessel and seaborne craft of any type whatsoever constructed or adapted for the carriage of *persistent* oil[47] as bulk cargo, which causes pollution damage in a contracting state or within its economic zone (or within an area corresponding to such a zone up to 200 nautical miles from the coastline). In respect of a vessel capable of carrying both oil and other cargoes (so-called combination carriers or oil/bulk/ore ships, OBOS), the Convention shall be applicable only when the vessel is carrying persistent oil as bulk cargo and to a voyage following such carriage, unless it is shown that the vessel has no residue on board from the carriage of persistent oil in bulk. Thus, *bunker* spills from a laden tanker or from a tanker on a subsequent voyage with oil residue from a transport on board, also come within the Convention regime.[48] The CLC contains provisions on compulsory insurance and direct action.[49]

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[43] The federal OPA does not pre-empt state law. For more details on the OPA regime and its application see eg Robert Force 'Damages recoverable for injury or destruction of natural resources caused by pollution' *Benedict's Maritime Bulletin* (Second Quarter 2010) 71–80, Schoenbaum (2012) 397–416, Kurtz-Shefford (2012) 463–74 and Peter Wetterstein *Environmental Impairment Liability in Admiralty: A Note on Compensable Damage under US Law* (1992) 75–92, 145–56.

[44] Regulation (EC) No 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations. The regulation was adopted on 11 July 2007 and entered into force on 20 August 2007. It entered into application on 11 January 2009 (with the exception of art 29, which applied from 11 July 2008) and applies to events which occurred after the date of its entry into force.

[45] Liability is limited to a minimum amount of 4,510,000 SDRs (Special Drawing Rights), which increases thereafter in accordance with the ship's tonnage to a maximum amount of 89,770,000 SDRs. *Exceptions* to liability are acts of war, an exceptional and irresistible natural phenomenon, and damage caused wholly by a third party acting with intent to cause damage or by the fault or negligence of any government or other authority responsible for the maintenance of lights or other navigational aids in the exercise of that function. For more details, also on limitation of liability see eg Peter Wetterstein 'Redarens miljöskadeansvar' (2004) 77–82, 316–19.

[46] If the vessel is not registered, liability falls on the person who owns the vessel. Thus there is no requirement that the shipowner be actively engaged in the vessel's operation in order to be subject to liability.

[47] Persistent hydrocarbon mineral oils are eg crude oil, fuel oil, heavy diesel oil and lubricating oil (art I.5). Transportation of *non-persistent* oil and other substances (gases, gasolines, kerosenes, distillates, chemicals etc) is thus not covered under the CLC.

[48] Once a vessel comes within the rules, it is not necessary for the spilled persistent oil to have been part of the cargo. See Thor Falkanger, Hans Jacob Bull and Lasse Brautaset *Scandinavian Maritime Law: The Norwegian Perspective* (2011) 209.

[49] See section III.2.2.2.

There are identical or similar liability provisions in the 2001 Bunker Convention.[50] However, this Convention is applicable to 'any seagoing vessel and seaborne craft, of any type whatsoever' (Article 1.1),[51] and the liable person for bunker spills[52] is the 'shipowner', who is defined as 'the owner, including the registered owner, bare boat charterer, manager and operator of the ship' (Article 1.3). Where more than one person is liable, their liability is joint and several.[53]

With regards to compensable damage, there are corresponding rules in both Conventions. 'Pollution damage' is defined in the CLC (Article I.6, cf Article 1.9 of the Bunker Convention) as follows:

(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.[54]

In addition to personal injury, property damage and economic losses,[55] damage to the environment per se, that is, the 'unowned' environment (natural habitats, species of flora and fauna, air, water and soil etc),[56] is thus covered by the definition – although the coverage is rather restricted. Compensation for damage to the environment (other than loss of profit) is expressly limited to 'costs of reasonable measures of reinstatement actually undertaken or to be undertaken'.[57] In other words, compensation shall be based on *actual* costs of restoration, that is, speculative costs are not compensated. In addition, the undertaken (or planned) measures shall be *reasonable*.[58]

Both the CLC and the Bunker Convention have entered into force and most EU Member States have ratified them and implemented their rules into national law.[59] However, the 2010 HNS Convention has not yet entered into force. Like the CLC, the HNS Convention imposes *strict* but limited liability on the registered owner of a vessel, but the latter Convention applies to 'any sea-going vessel and seaborne craft, of any type whatsoever' (Article 1.1) carrying HNS substances (in the main, such substances are chemicals, oil, LNG and LPG).[60] Thus the HNS Convention covers oil transports not

[50] The Bunker Convention expressly excludes pollution damage as defined in the CLC, 'whether or not compensation is payable in respect of it under that Convention' (art 4.1). The Bunker Convention thus governs mainly dry cargo vessels and vessels that transport HNS-cargo.

[51] The intention has been to include every type of floating craft with bunker oil on board. See Jannecke Hoftvedt 'Bunkersoljekonvensjonen: En sammenligning med sjøloven § 208', Marlus nr 289 (2002) 19.

[52] Bunker oil is defined as 'any hydrocarbon mineral oil, including lubricating oil, used or intended to be used for the operation or propulsion of the ship, and any residues of such oil' (art 1.5).

[53] On the 'shipowner's' liability see Wetterstein (2004) 116. As to the duty to insure see section III.2.2.2.

[54] The Conventions apply to damage and costs caused by preventive measures, wherever they are taken, designed to prevent or mitigate such damage through pollution, which owing to the incident constitutes a threat to a contracting state or its economic zone. On preventive measures and recoverable costs see Wetterstein (2004) 208–23.

[55] The wording of the definition cited above makes it clear that loss of profit from impairment of the environment is recoverable – also when the loss is unrelated to damage to the claimant's property (pure economic loss). Consequently, in the case of a pollution incident affecting a coastline, both fisheries, mariculture and fish processing sectors losing income and hoteliers, restaurateurs and shopkeepers who obtain their income from tourists at seaside resorts are in principle able to recover – provided that they are able to prove a sufficient causal link between the contamination and the loss of profit. On the criteria for compensating pure economic loss see Wetterstein (2004) 135–55.

[56] On this see Peter Wetterstein 'A proprietary or possessory interest: a *conditio sine qua non* for claiming damages for environmental impairment?' in Peter Wetterstein (ed) *Harm to the Environment: The Right to Compensation and the Assessment of Damages* (1997) 30–32, 46–54.

[57] The main purpose of this specification was to promote a uniform interpretation of the oil pollution damage concept. See Wetterstein (2004) 178.

[58] On the criteria for awarding compensation see Wetterstein (2004) 179–86.

[59] See Henrik Ringbom 'Elefanten i glashuset? Om EU:s roll i regleringen av sjöfart' *Det 25 nordiske sjørettsseminar* Marlus nr 417 (2013) 48. For example, Finland has implemented the rules of the Conventions into Chapters 10 and 10a of the Finnish Maritime Code (674/1994).

[60] The substances covered are defined by reference to existing lists of hazardous substances in IMO Conventions and Codes, designed to ensure maritime safety and prevention of pollution (art 1.5). As these lists and codes are amended, the HNS Convention will be tacitly amended as well. Currently there are more than 6500 HNS substances. It is interesting to note that the HNS Convention covers the dangerous and polluting goods included in the same IMO codes to which the ELD (see section II.2.1) refers, eg the IMDG Code, the IBC Code, the IGC Code, the BC Code and Annexes I–III of MARPOL (1973/78). On the codes see Malgorzata Nesterowicz 'The application of the Environmental Liability Directive to damage caused by pollution from ships' *LMCLQ* (2007) 109.

falling under the CLC, but as that Convention only applies to loss or damage caused by *contamination*, the HNS Convention covers also loss or damage caused by oil fires and explosions. However, it does not cover pollution damage resulting from bunker emissions.

The HNS Convention defines 'damage' as including loss of life or personal injury, loss of or damage to property outside the ship carrying HNS substances, loss or damage by contamination of the environment, and the costs of preventive measures as well as further loss or damage caused by them. The definition makes it clear that claims for damage to the environment are admissible, but they are restricted, as under the CLC, to 'costs of reasonable measures of reinstatement actually undertaken or to be undertaken' (Article 1.6).

The civil liability conventions mentioned above were developed in order to establish a more comprehensive legal framework and better harmonisation of national laws, specifically in relation to pollution liability. However, they target *shipping* accidents, and not generally environmental damage caused by offshore activities. Thus the legal relevance of these conventions for the offshore sector is restricted. But, as highlighted in the introduction (see section I), these activities involve many different floating production, storage and transport units, including also different types of vessels and seaborne crafts. Provided that the criteria for the application of the conventions (type of vessel or craft, harmful substances, geographical area etc) are fulfilled, their liability rules and provisions may be applicable.

The crafts designed to store, process and offload natural resources obtained from the seabed play an important role in offshore oil production. According to Soyer:[61] '[s]uch crafts, known as floating production storage and offloading (FPSO) units, are usually designed to receive hydrocarbons from wellheads, process them and store oil until it can be offloaded onto a tanker or transported through a pipeline. A vessel which is essentially used for storing oil but has no facility to process it is known as the floating storage and offloading (FSO) vessel. An old oil tanker can be modified to function as an FPSO or FSO vessel but it is also common to see crafts specifically built for this purpose'.

In case of a spill of persistent oil from a FPSO or FSO unit/vessel, questions may arise whether the CLC liability regime (and the Fund system) is applicable. In October 1999, the Assembly of the Fund endorsed the conclusions of a Working Group, according to which offshore craft should be regarded as 'ships' under the 1992 Conventions (CLC and Fund) only when they carry oil as cargo on a voyage to or from a port or terminal outside the oil field in which they normally operate.[62] However, as the Assembly's view on the position of offshore craft[63] does not bind national courts, the approaches to this issue may differ in different jurisdictions.[64]

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[61] Soyer (2012) 69.

[62] Furthermore, offshore craft would fall outside the scope of the 1992 Conventions when they leave an offshore oil field for operational reasons or simply to avoid bad weather. See 92FUND/A.4/32 10–11.

[63] In an analysis, commissioned by the IOPC Funds in 2011, Professor Vaughan Lowe concluded that the term 'ship' in the 1992 Conventions does not include FSO vessels. See note 64. Further, it should be noted that, in 2012, the Seventh Intersessional Working Group was asked to consider, inter alia, whether floating storage and offloading units fall within the definition of 'ship' within art I.1 of the 1992 CLC. See eg IOPC/OCT13/4/3/5 2.

[64] For example in the *Slops* decision (2006) the Greek Supreme Court held that the CLC liability (and Fund) regime was applicable: The *Slops* had originally been constructed for the carriage of oil in bulk, but later she was converted into a facility for receiving and processing oily waste. The propeller was removed and the engine was deactivated. The oil residues were offloaded from her and carried to oil refineries by barges. The *Slops* was permanently at anchor and was never involved in carrying oil to the refineries. On 15 June 2000, when the *Slops* was laden with 5000 cubic meters of oily water and at anchor in the port of Piraeus, she suffered an explosion and caught fire, resulting in extensive pollution. For the court proceedings see Soyer (2012) 70–71. However, following the *Slops* incident, the 1992 Fund Executive Committee, at its October 2006 session, confirmed the view that *Slops* was not included within the definition of 'ship' under art I.1 of the 1992 CLC: see 92FUND/EXC.34/12. See also legal opinion of Professor Lowe in IOPC/OCT11/4/4, concluding that it is clear from the available evidence that the definition of the term 'ship' was 'deliberately linked to the carriage of oil in bulk as cargo, and that such carriage was understood to involve the navigation of the ship on a voyage' (at p 4). It may be added that the Norwegian Petroleum Act (see section I) provides that ships used for stationary drilling are regarded as a facility and that ships used for storage of petroleum in conjunction with production facilities are regarded as part of the facility. The same applies to ships for transport of petroleum during the time when loading from the facility takes place (Section 7–1). Directive 2013/30/EU addresses

The unifying effect on national laws of the briefly outlined international legal framework on liability and compensation for pollution damage has without a doubt been significant. However, states have to a varying extent acceded to these conventions and implemented them into national law. In addition there may be nationally differing interpretations and applications of national laws based on uniform law conventions. Besides problems with FPSOs and FSOs, differing interpretations may concern, inter alia, the channelling provisions,[65] exceptions to liability,[66] compensable damage and losses[67] and the loss of limitation of liability.[68] Thus the choice of law issues remain relevant.

The right of shipowners and others involved in the operation of ships to limit their liability *financially* is laid down in the 1996 LLMC. The statutory limit, which determines the maximum total liability for claims arising from a particular casualty, is calculated on the basis of the tonnage of the ship that has caused the damage. The result is that in any particular case the limitation amount is distributed among the claimants in proportion to their established claims and the shipowner is relieved from liability for the portion of the claims not so covered.[69]

Since the Bunker Convention, contrary to the CLC and the HNS Conventions, lacks provisions on limitation of liability, the LLMC is of significance for bunker claims.[70] However, also more generally the LLMC has been acknowledged as being important for shipping. In the present context it is interesting to note that the LLMC also covers offshore activities in accordance with the provisions for its scope of application.[71] However, the LLMC contains some express specifications and exclusions:

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mobile offshore drilling units when they are stationed in offshore waters for drilling, production or other activities associated with offshore oil and gas operations: see recital (32) and art 2(19). Furthermore, as was mentioned in the introductory part (section I), the *Deepwater Horizon* was a MODU and according to Kurtz-Shefford (2012) 464 n 67, a MODU will usually be treated as a tank vessel, but if the clean-up costs and damages exceed the amount for which the responsible party is liable, then the MODU is treated as an offshore facility under OPA (33 USC Section 2704(b)(2)).

[65] It may be noted that in the criminal proceedings following the sinking of the oil tanker *Erika* (note 83) the French Court of Cassation on 25 September 2012 held that the classification society RINA and the de facto charterer Total SA were covered by the channelling provisions of the 1992 CLC (art III.4). However, they lost their 'immunity' because of reckless conduct ('*faute inexcusable* '): see note 68. Regarding the proceedings see Vincent Rebeyrol 'The *Erika* case: an incitement to rewrite the CLC' *European Energy and Environmental Law Review* (February 2013) 33–41.

[66] In the Swedish *Tsesis* decision (ND 1983 p 1) the Supreme Court held that the expression 'maintenance of lights or other navigational aids' (see note 45) also covered a nautical chart, whereas the Svea Court of Appeal held in *M/T José Marti* (ND 1987 p 64) that a pilot could not be considered as 'a navigational aid'. See Wetterstein (2004) 77–82. In the *Volgoneft 139* incident the Arbitration Court of Saint Petersburg and Leningrad Region rejected the insurer's (Ingosstrakh – Russian Federation) argument that the incident was caused by *force majeure*, eg a severe storm and heavy seas. For more details see IOPC Funds (2012) 26.

[67] In the *Erika* proceedings (note 65) the Court of Cassation confirmed the decision of the Court of Appeal which had accepted not only material damages (property damage, clean up and restoration measures) and economic losses but also compensation for moral damage, including loss of enjoyment, damage to reputation and brand image and moral damage arising from damage to the natural heritage. See International Oil Pollution Compensation Funds. Incidents involving the IOPC Funds 2012 8–11. Arguably, the French courts thereby went beyond the definition of 'pollution damage' in the 1992 CLC. Cf also Rebeyrol (2013) 34–42, who states regarding the compensation of environmental harm that the decisions in the *Erika* case awarded 'lump-sum damages disconnected from environmental needs, and which are not even necessarily allocated to the restoration of the environment' (at p 42). Furthermore, national courts have taken differing views on the criteria for the admissibility of claims for pure economic losses under the CLC. See eg Wetterstein (2004) 146–53 with references.

[68] According to art V.2 of the 1992 CLC, the shipowner shall not be entitled to limit his liability if it is proved that the pollution damage resulted from his 'personal act or omission, committed with the intent to cause such damage, or recklessly and with knowledge that such damage would probably result'. On the interpretation of this provision see Wetterstein (2004) 288–309, 317 with references. It should be added that the right to protection under the channelling provisions contained in art III.4 of the CLC is lost under the same circumstances. In the *Erika* proceedings both Total SA and RINA lost this protection (note 65).

[69] Erling Selvig 'Limitation of shipowners' liability and forum shopping in EU/EEA states' *SIMPLY, Scandinavian Institute of Maritime Law Yearbook* (2010) 361. Regarding claims subject to limitation, including claims for damage to the environment and pure economic losses see Wetterstein (2004) 260–70 with references.

[70] The 1996 LLMC is explicitly mentioned in the Bunker Convention (in addition to any applicable national or other international regime) (art 6). And the maximum amount of the compulsory insurance under the Convention is tied to the 1976 LLMC, as amended (art 7.1).

[71] See art 15.

Article 15 (4): 'The Courts of a State Party shall not apply this Convention to ships constructed for, or adapted to, and engaged in, drilling:

(a) when that State has established under its national legislation a higher limit of liability than that otherwise provided for in Article 6; or

(b) when that State has become party to an international convention regulating the system of liability in respect of such ships.

. . .

(5) This Convention shall not apply to:

. . .

(b) floating platforms constructed for the purpose of exploring or exploiting the natural resources of the seabed or the subsoil thereof'.

Drilling ships are thus prima facie covered under the Convention, while the real exclusion is written into Article 15(5)(b). This provision may cause varying implementations and interpretations in contracting states and hence emphasise the significance of the applicable national law.[72] The importance of this issue is further stressed by the fact that the LLMC Convention exists in various earlier versions from 1924, 1957 and 1976. The limit of liability and the type of claim that qualifies for limitation varies under the particular convention.[73] In most EU Member States the law on limitation of shipowners' liability is based either on the 1996 LLMC or on its earlier version from 1976.[74]

Before turning to EU law, I will briefly comment on the issue already touched upon in the introduction of this article, namely the need for an international liability and compensation regime specifically dealing with offshore activities. As the above survey of existing conventions reveals, such a harmonising instrument would be desirable.

Soyer discusses the viability of two options to achieve an international solution: either by extending the existing international regimes to cover liability for offshore installations, or by devising a new international regime dealing with the issue.[75] However, the Legal Committee of the IMO has recognised that bilateral/regional agreements or arrangements are the most appropriate way to address this matter. According to the Committee, there is no compelling need to develop an international convention on this subject.[76] The Committee also wishes to analyse further the liability and compensation issues connected with cross-border pollution damage resulting from offshore oil exploration and exploitation activities, with the aim of developing guidance to assist states interested in pursuing bilateral/regional agreements or arrangements.[77]

Considering that offshore activities are more tied to regions and certain areas than shipping, which operates globally, I am inclined to agree with the views of the Legal Committee. The cross-border impact of offshore activities usually strikes certain geographical regions (for instance, the North and Mediterranean Seas and the Gulf of Mexico) that are in similar stages of economic, socio-cultural and legal development.[78] Thus it would seem to be easier to reach adequate solutions regarding

[72] See eg Soyer (2012), who comments on the situation in the UK as follows: 'It could be inferred from the explicit decision of the draftsmen to leave art 15(5) of the Limitation Convention out of the implementing legislation that, within the UK at least, it is intended that limitation is made available to any kind of craft, including floating platforms intended to be used in navigation. Pollution damage claims relating to floating platforms and payment of property clean-up expenses will certainly fall within art 2(1) of the Limitation Convention as they incur in direct connection with the operation of such platforms' (at p 68). In Finland the Maritime Code (1994/674) contains an explicit provision extending limitation of liability to floating platforms aimed at exploring or exploiting the natural resources of the seabed (Chapter 9, section 10.3).

[73] On the earlier versions see eg Peter Wetterstein 'Globalbegränsing av sjörättsligt skadeståndsansvar' (1980) 36–47. See also Barnabas W B Reynolds and Michael N Tsimplis *Shipowners' Limitation of Liability* (2012) 6–138.

[74] The 1996 LLMC has 47 contracting states, among them 20 EU Member States, together with the member states of the European Economic Area (EEA) Agreement, Norway and Iceland (28 November 2013).

[75] See Soyer (2012) 72–79. See also Steven Rares 'An international convention on offshore hydrocarbon leaks?' *LMCLQ* [2011] 361–71.

[76] Such an approach may reflect the wish of states not to surrender their sovereign rights regarding energy acquisition.

[77] See IMO LEG 100/13. For more details see also the comments by Kurtz-Shefford (2012) 454–74, especially at 472–74.

[78] Cf also notes 27, 29.

liability and compensation, than when acting on the global arena. Such a regional arrangement, for instance, a separate European regime,[79] ought to cover both private claims for personal injury, property damage and economic losses, and public claims for damage to the environment (cf the ELD: see section II.2.1).[80] Ensuring prompt and adequate compensation would be essential, and this could be achieved through effective insurance/fund/risk pooling arrangements.[81] The voluntary contractual compensation regime OPOL (mentioned above, see section I) may to some extent serve as an example when developing a workable solution.[82]

II.2 EU law

The European Union's interest in regulating maritime liability actually arose in the aftermath of the sinking of the *Erika* on 12 December 1999 off the French Atlantic coast.[83] Before that, the EU basically took the point of view that marine oil pollution was an international problem better solved at the international level. Hence, the EU counted on its Member States to ratify, inter alia, the civil liability conventions mentioned above (see section II.1).[84] Although still upholding this policy, the EU's regulatory attention to maritime liability and compensation since the turn of the millennium has had significant effects on maritime liability legislation – also outside the sphere of EU law.[85]

With regard to offshore activities, there are considerable disparities and fragmentation amongst Member States' laws and practices applying to such activities. Although the EU has rather limited sector specific offshore oil and gas legislation[86] – in addition to the recently adopted Directive 2013/30/EU[87] – there is broader Union *acquis* that, often only partially, applies to the offshore sector.[88] Of relevance in the present context is the Environmental Liability Directive 2004/35/EC

[79] See note 82. Considering the growing interest in offshore activities in the Arctic area, one would also recommend some kind of liability/compensation arrangement for this area. As regards this, some solutions might be possible to achieve through cooperation between the eight member states of the Arctic Council, eg Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Russian Federation, Sweden and the United States.

[80] Clear provisions on the responsibility for clean-up operations and on the ultimate liability for any damage caused may discourage the offshore operators from underestimating the risks or compromising on safety measures. See SEC(2010) 1193 final 13–14.

[81] Cf the text regarding *direct action* (see section III.2.2.2). Reference is also made to the following statement in recital (63) to Directive 2013/30/EU: 'Operators should ensure they have access to sufficient physical, human and financial resources to prevent major accidents and limit the consequences of such accidents. However, as no existing financial security instruments, including risk pooling arrangements, can accommodate all possible consequences of major accidents, *the Commission should undertake further analysis and studies of the appropriate measures to ensure an adequately robust liability regime for damages relating to offshore oil and gas operations, requirements on financial capacity including availability of appropriated financial security instruments or other arrangements. This may include an examination of the feasibility of a mutual compensation scheme. . .* ' (emphasis added). De Smedt, Faure, Liu, Philipsen and Wang (2013) 173–226, 380–82, examine and discuss the interesting question as to what extent risk pooling mechanisms could play an important role in compensating damage resulting from offshore incidents.

[82] Different options to expand the functioning and coverage of OPOL are discussed by De Smedt, Faure, Liu, Philipsen and Wang (2013) 385–86, who conclude that the only option to expand OPOL which was positively received by stakeholders (state regulatory authorities, industry organisations, insurance industry etc) was to create other regional risk pools for other sea areas than the North Sea along the lines of OPOL: a pooling agreement where members share the insolvency risk of their members. In addition, arrangements need to be developed to cover major accidents.

[83] The single-hull Maltese oil tanker *Erika*, built in 1975, was carrying 31,000 tons of heavy fuel oil when she broke in two and sank some 60 nautical miles off the coast of Brittany (French EEZ). No less than 19,800 tons of oil leaked into the sea and polluted more than 400 kilometres of France's west coast between Quimper and La Rochelle. The accident caused large-scale environmental damage and economic losses for the fishing and tourist sectors. See IOPC Funds (2012) 6–10.

[84] See also Noussia (2012) 149–50.

[85] On these effects see Henrik Ringbom 'Maritime liability and compensation in EU law' in *Pollution at Sea: Law and Liability* (eds) Baris Soyer and Andrew Tettenborn (2012) 155–71, and 'Elefanten i glashuset? Om EU:s roll i regleringen av sjöfart', *Det 25 nordiske sjørettsseminar*, Marlus nr 417 (2013) 33–64. See also the overview by Robert Coleman 'The EU: maritime safety and pollution control' in *BIMCO Bulletin* #4 (2012) 50–54.

[86] See De Smedt, Faure, Liu, Philipsen and Wang (2013) 78–79.

[87] See note 36.

[88] See COM(2011) 688 final 3–4. The Treaty on the Functioning of the European Union (TFEU) establishes a new provision on energy policy (art 194.2) and contains provisions for the protection of the environment, including the precautionary principle and the polluter pays principle (art 191.2).

(ELD),[89] which addresses liability for damage to the environment also in connection with oil and gas exploration, exploitation and production activities.

II.2.1 Directive 2004/35/EC

The objective of the ELD is 'to establish a common framework for the prevention and remedying of environmental damage at a reasonable cost to society' (recital (3)).[90] The ELD covers environmental damage and the imminent threat of such damage[91] caused by any of the occupational activities[92] listed in Annex III, which contains references to EU legislation. These activities include, inter alia, waste management operations, manufacture, use, storage, processing, filling, release into the environment and onsite transport of dangerous substances as defined in Article 2(2) of Council Directive 67/548/EEC (as last amended by Regulation 2008/1272 EC), and transport by sea of dangerous or polluting goods as defined in Council Directive 93/75/EEC (with later amendments).[93] Thus the ELD is of relevance also for *shipping* and *offshore* activities covered by this study.[94] If there is an emission or incident causing 'environmental damage', the provisions of the ELD (as transposed into EU Member State law) may be applicable.

The *operator*[95] of the activities listed in Annex III shall bear the costs for the preventive and remedial actions taken pursuant to the ELD (Article 8.1, strict liability with some exceptions[96]).[97] Occupational activities *other* than those mentioned in Annex III are subject to a fault-based regime

[89] The legal basis for the ELD is art 192 of the TFEU. The directive became fully binding on 30 April 2007 and the EU Member States were given time until that date to bring into force the legislation necessary to comply with the directive (art 19.1). Its implementation by all Member States was completed by July 2010.

[90] This objective should be implemented through the furtherance of the 'polluter pays' principle and in line with the principle of sustainable development. See recitals (2) and (18).

[91] According to art 2.9, 'imminent threat of damage' means 'a sufficient likelihood that environmental damage will occur in the near future'.

[92] In the directive 'occupational activity' means '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' (art 2.7).

[93] Regarding the activities listed in Annex III see Peter Wetterstein 'The EU Directive 2004/35 on environmental liability and its impact on shipping' in Sopimus, Vastuu, Velvoite. Juhlajulkaisu Ari Saarnilehto 1947–21/11–2007 (2007) 442–43.

[94] See also Cooreman (2012) 188. Obviously, the EU Member States are obliged to transpose the directive into national law, but also Norway is bound by the directive in accordance with its obligations under the EEA Agreement. The Directives 79/409/EEC (the Birds Directive) and 92/43/EEC (the Habitats Directive) are, however, not incorporated into the EEA Agreement. See EEA Agreement, Annex XX 4–5. See also *St.prp* nr 62 (2008–2009) 2, 4.

[95] In art 2.6 'operator' is defined as 'any natural or legal, private or public person who operates or controls the occupational activity or, where *this is provided for in national legislation* (my italics), 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'. On the writing 'operates or controls' see eg Statens offentliga utredningar (SOU) 2006: 39. Ett utvidgat miljöansvar. Delbetänkande av Miljöansvarsutredningen (2006) 103–108. Regarding specifically *offshore liability*, it should be noted that according to Directive 2013/30/EU, the licensee is liable for the prevention and remediation of environmental damage as defined in the ELD, caused by offshore oil and gas operations carried out by, or on behalf of, the licensee or the operator (art 7). 'Licensee' is defined as 'the holder or joint holders of a licence' (art 2(11)) and the 'operator' as 'the entity appointed by the licensee or licensing authority to conduct offshore oil and gas operations, including planning and executing a well operation or managing and controlling the functions of a production installation' (art 2(5)). Recital (11) further clarifies that holders of authorisations for offshore oil and gas operations pursuant to Directive 94/22/EC are also the liable 'operators' within the meaning of the ELD, and should not delegate their responsibilities in this regard to third parties contracted by them. Regarding standard forms of joint operating agreements (JOAs) and standard contracts for drilling services and well services used by the offshore industry see eg De Smedt, Faure, Liu, Philipsen and Wang (2013) 28–29.

[96] The directive does not cover environmental damage or an imminent threat of such damage caused by an act of armed conflict, hostilities, civil war or insurrection, or caused by a natural phenomenon of exceptional, inevitable and irresistible character. Furthermore, the operator is free from liability when he can prove that the environmental damage or imminent threat of such damage '(a) was caused by a third party and occurred despite the fact that appropriate safety measures were in place; or (b) resulted from compliance with a compulsory order or instruction emanating from a public authority other than an order or instruction consequent upon an emission or incident caused by the operator's own activities' (arts 4.1 and 8.3). There are also defences introduced via transposition, eg permit defence and state of the art defence (art 8.4).

[97] See from the practice of the Court of Justice of the European Union (CJEU) *Raffinerie Méditerranée (ERG) SpA and Others v Ministero dello Sviluppo Economico and Others (ENI Divisione Exploration and Production SpA, intervening)* (C–378/08).

(Article 3.1(b)).[98] However, such liability covers only damage and an imminent threat of damage to 'protected species and natural habitats' (see below). This restriction of fault liability is effective also in relation to damage caused by offshore activities not mentioned in Annex III.

The environmental liability under the ELD is *exclusively* a liability vis-à-vis the public, that is, it aims to protect public rights.[99] It gives the competent authorities power to require that the preventive actions and remedial measures[100] are taken by the operator[101] and, if needed, to take these measures themselves, and then recover all costs from the operator.[102] The directive does *not* apply to cases of personal injury, damage to private property or to any economic loss and does not affect any right regarding these types of damage. Thus, unlike the civil liability conventions, it does not grant private victims any right of compensation. This is a significant limitation of the ELD's scope.

The notion of *environmental damage* covers: (a) *damage to protected species and natural habitats*,[103] which is any damage that has significant adverse effects on reaching or maintaining the favourable conservation status[104] of such habitats or species;[105] (b) *water damage*, which is any damage that significantly adversely affects the ecological, chemical and/or quantitative status and/or ecological potential, as defined in Directive 2000/60/EC, of the waters concerned;[106] and (c) *land damage*, which is any land contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction in, on or under land of substances, preparations, organisms or micro-organisms.[107] In the directive *damage* has been defined as 'a measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly' (Article 2.2).[108]

'Preventive measures' and 'remedial measures' should be undertaken either by the operator or by competent authorities. The former notion is rather 'traditional', that is, it comprises all measures taken in response to an event, act or omission that has created an imminent threat of environmental damage, with a view to preventing or minimising that damage.[109] The latter term of 'remedial measures' is of greater interest. The definition reads:

> 'remedial measures' means any action, or combination of actions, including mitigating or interim measures to restore, rehabilitate or replace damaged natural resources and/or impaired services, or to provide an equivalent alternative to those resources or services as foreseen in Annex II.[110]

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[98] A number of Member States, eg Denmark, Finland, Latvia, Lithuania and Sweden, included further activities not mentioned in Annex III in the scope of strict liability. See Report from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions Under art 14(2) of Directive 2004/35/CE on environmental liability with regard to the prevention and remedying of environmental damage COM(2010) 581 final 4.

[99] Traditional liability rules are normally concerned with proprietary or other *private* (individual) rights, as opposed to *public* (collective) rights, eg fishing rights in the sea and the right to use recreational areas. On these rights see Wetterstein (1997) 30–43.

[100] According to recital (24): 'Competent authorities should be in charge of specific tasks entailing appropriate administrative discretion, namely the duty to assess the significance of the damage and to determine which remedial measures should be taken'. See also art 11.2. On the role and obligations of the authorities see eg Nesterowicz (2007) 113, 115–17.

[101] For the liability mechanism to be effective, there needs to be one or more identifiable polluters, the damage should be concrete and quantifiable and a causal link should be established between the damage and the identified polluter(s). See recital (13).

[102] See arts 5–6.

[103] 'Protected species and natural habitats' is explained in art 2.3. Reference is made to the Wild Birds Directive 2009/147/EC (codified version of Directive 79/409/EEC) and the Habitats Directive 92/43/EEC.

[104] For the concept of 'conservation status' see art 2.4.

[105] The significance of such adverse effects is to be assessed with reference to the baseline condition, considering the criteria set out in Annex I to the ELD. ''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' (art 2.14).

[106] With the exception of adverse effects covered by art 4.7 of Directive 2000/60/EC.

[107] See art 2.1.

[108] 'Natural resource' means protected species and natural habitats, water, and land (art 2.12) and according to art 2.13, ''services' and 'natural resource services' mean the functions performed by a natural resource for the benefit of another natural resource or the public'. On the conceptual issue 'impairment of a natural resource service'; see Wetterstein (1997) 48–50.

[109] See art 2.10.

[110] See art 2.11.

Remedying of environmental damage, in relation to *protected species and natural habitats* and *water*, is achieved through the restoration of the environment to its baseline condition.[111] Remediation is divided into 'primary remediation', 'complementary remediation' and 'compensatory remediation'.[112]

The ELD aims at fully restoring/compensating damage caused to natural resources and/or services. When primary remediation does not result in fully restoring the environment, complementary remediation will be undertaken. The purpose of the latter remediation is to 'provide a *similar level of natural resources and/or services, including, as appropriate, at an alternative site* (my italics), as would have been provided if the damaged site had been returned to its baseline condition'.[113] In addition to these explicit provisions on alternative restoration, compensatory remediation shall be undertaken to compensate for the *interim loss* of natural resources and services pending recovery.[114] This compensation 'consists of additional improvements to protected natural habitats and species or water at either the damaged site or at an alternative site'. However, it does not provide financial compensation to members of the public.[115]

Regarding the complex issue of the identification of complementary and compensatory remedial measures,[116] I will briefly mention that when determining the scale of these remedial measures, the use of *resource-to-resource equivalence approaches* shall be considered first.[117] If it is not possible

[111] Restoring the damaged natural resources is the best method of preserving the environment. Situations giving rise to claims for restoration might be exemplified by the discharge of toxic substances into watercourses and sea areas causing damage to fish and other wildlife. When possible, restoration can be made on the site where the resources were harmed. Restoration measures needed after such an incident might include restocking the waters with young fish, replanting new flora and cleaning the water and banks. However, there are also problems involved in restoring and replacing natural resources: the determination of the baseline to which resources are to be restored, the often huge expenses involved, the time it takes for the ecosystem to resemble superficially its original condition (if at all possible) etc. See Wetterstein (2004) 170–95 with references.

[112] These concepts are defined in Annex II as follows: '(a) "Primary" remediation is any remedial measure which returns the damaged natural resources and/or impaired services to, or towards, baseline condition; (b) "Complementary" remediation is any remedial measure taken in relation to natural resources and/or services to compensate for the fact that primary remediation does not result in fully restoring the damaged natural resources and/or services; (c) "Compensatory" remediation is any action taken to compensate for interim losses of natural resources and/or services that occur from the date of damage occurring until primary remediation has achieved its full effect'.

[113] If possible and appropriate, the alternative site should be geographically linked to the damage site, taking into account the interests of the affected population (Annex II, 1.1.2). Complementary remediation can be used when the environment is so badly damaged that it cannot be restored in the particular location, or if complete restoration would take a very long period of time. As an example, if the damaged environment provides an essential ecological service, such as serving as a breeding ground or a habitat for a species requiring protection or a resting place for migratory birds or animals, then the environmentally useful remedy would be to provide an equivalent environment nearby. This could involve the acquisition and modification of a specific area of land or sea. See Louise de la Fayette 'The concept of environmental damage in international liability regimes' in *Environmental Damage in International and Comparative Law – Problems of Definition and Valuation* (eds) Michael Bowman and Alan Boyle (2002) 187.

[114] According to Annex II 1(d), 'interim losses' means 'losses which result from the fact that the damaged natural resources and/or services are not able to perform their ecological functions or provide services to other natural resources or to the public until the primary or complementary measures have taken effect'. Harry Aiking, Edward H P Brans and Ece Ozdemiroglu 'Industrial risk and natural resources: the EU Environmental Liability Directive as a watershed?' *Environmental Liability* (2010) 7, mention as an example that if a spill of chemicals results in significant damage to a number of acres of wetland and natural recovery is the most appropriate option here, then during the recovery period some wetland services will be lost or impaired.

[115] Annex II 1.1.3.

[116] The Commission mentions in its report COM(2010) 581 final 5, that the competent authorities judged that the most difficult issues were the complex technical requirements linked to the *economic* evaluation of damaged natural resources/services and environmental remediation *methods*. See also notes 117, 118.

[117] These equivalence approaches are described in Annex II 1.2.2 as follows: 'Under these approaches, actions that provide natural resources and/or services of the *same type, quality and quantity* as those damaged shall be considered first. Where this is not possible, then alternative natural resources and/or services shall be provided. For example, a reduction in quality could be offset by an increase in the quantity of remedial measures' (my italics). For more information and details see eg Emil Waris 'Ennallistaminen korjaamalla – ympäristövastuudirektiivin mukainen uuden sukupolven ennallistamisvastuu' in *Ympäristöpolitiikan ja –oikeuden vuosikirja II* (2008) 11–76, Peter Wetterstein 'Ekonomiskt ansvar enligt EG:s miljöskadedirektiv' *Tidskrift utgiven av Juridiska Föreningen i Finland* (2007) 468–77 with references and Aiking, Brans and Ozdemiroglu (2010) 4–5.

to use these equivalence approaches, then *alternative valuation techniques* shall be used. The competent authority may prescribe the method, for instance, *monetary valuation*, to determine the extent of the necessary complementary and compensatory remedial measures.[118] With regard to the choice of the remedial options when applying the ELD,[119] I will cover the topic through references only.[120]

A comparison with the civil liability conventions mentioned above (see section II.1) reveals that the definition of 'pollution damage' in the conventions is more restricted than the remedying framework under the ELD. It is unclear whether, and to what extent, the CLC and the Bunker Convention (cf also 'damage' under the HNS Convention) have accepted the idea of so-called *alternative restoration*. The text of the 'pollution damage' definition does not oblige the shipowner to acquire 'equivalent resources and habitat'[121] when restoration of the environment is not possible (cf 'complementary' remediation under the ELD).[122] Hence, national courts may have differing interpretations of the shipowner's obligations in this respect – thereby stressing the choice of law issue.

Nor does the text require the shipowner to compensate for environmental values that are lost during the period of the restoration (*interim losses*, cf 'compensatory' remediation under the ELD), which can be very time-consuming. Thus there are differing remedying obligations under the conventions and the ELD.[123]

However, the ELD contains in Article 4.2 and in Annex IV exceptions for environmental damage (or the imminent threat thereof) arising from an incident in respect of which liability or compensation

[118] Further, according to Annex II 1.2.3: '[i]f valuation of the lost resources and/or services is practicable, but valuation of the replacement natural resources and/or services cannot be performed within a reasonable time-frame or at a reasonable cost, then the competent authority may choose remedial measures whose *cost is equivalent* to the estimated monetary value of the lost natural resources and/or services' (my italics). For more details see reference in note 117. It should also be noted that to help implement Annex II, the EU Commission sponsored research on economic evaluation methodologies that can be used. The REMEDE project (Resource Equivalency Methods for Assessing Environmental Damage in the EU) has developed a toolkit with methods for estimating remediation costs as well as case studies to be used as examples. Regarding case studies see also Aiking, Brans and Ozdemiroglu (2010) 7–10. The Commission will develop further interpretation guidance on the application of the ELD, in particular possible guidelines at EU level on its Annex II. Also Member States (eg the Netherlands, UK) have developed guidelines for environmental damage assessment and remediation methods.

[119] It should be noted that the guidelines in Annex II have been introduced to ensure, inter alia, that the liable operator is not confronted with disproportionately costly remediation measures. Only reasonable remediation measures are to be taken, thereby considering, eg the costs of implementing the various remediation options, the likelihood of success of the various options and the extent to which each option prevents future damage and avoids collateral damage as a result of implementing the option. Aiking, Brans and Ozdemiroglu (2010) 6.

[120] See Annex II 1.3 and further Wetterstein (2007) 468–80. The ELD appears to have been influenced by the legislation in the US, especially the Oil Pollution Act (OPA) of 1990. For an overview of the valuation problems and methods regarding US law see Force (2010) 71–80, and for more details see eg Carol A Jones, Theodore D Tomasi and Stephanie W Fluke 'Public and private claims in natural resource damage assessments' *Harvard Environmental Law Review* (1996) 111–63 and Hugh Parker and Gary Mauseth 'Approaches to environmental damage claims' *Gard News* (May/July 2009) 4–7.

[121] Regarding these concepts and the alternative restoration see Björn Sandvik *Miljöskadeansvar* (2002) 390.

[122] It may be noted, however, that the International Oil Pollution Compensation (IOPC) Fund has somewhat rewritten the requirements for compensation of restoration costs: 'In view of the fact that it is virtually impossible to bring a damaged site back to the same ecological state that would have existed had the oil spill not occurred, the aim of any reasonable measures of reinstatement should be to re-establish a biological community in which the organisms characteristic of that community at the time of the incident are present and are functioning normally. Reinstatement measures taken at *some distance from, but still within the general vicinity of, the damaged area may be acceptable, so long as it can be demonstrated that they would actually enhance the recovery of the damaged components of the environment* (italics added). This link between the measures and the damaged components is essential for consistency with the definition of pollution damage in the 1992 Conventions' *Claims Manual* (December 2008 edn) 35. This entails a minor extension in relation to the *Claims Manual*'s text from the year 2000, but a real improvement seems to require a specific redrafting of the pollution damage concept in the CLC. See note 123.

[123] Regarding problems with differing remedying obligations see Wetterstein (2012) 190–91, 200–205, who suggests that specifications should be made in the texts of the civil liability conventions to the extent that an explicit obligation should be imposed on the shipowner to effect alternative restoration when (primary) restoration of the environment is not fully possible, and that there should be a duty for the shipowner to compensate for the environmental values that are lost during the period of restoration. These amendments would bring the conventions closer to the compensation system under the US OPA (see section I). The writer also presents proposals for amendment of the ELD.

falls within the scope of, inter alia, the 1992 CLC, the 2001 Bunker Convention and the 2010 HNS Convention. The Conventions should be in force in the Member State concerned.[124] Thus, this exception considerably restricts the effects of the directive regarding pollution damage caused by shipping and will do it even more if and when the HNS Convention enters into force and is implemented into national law.

However, *all* environmental damage that may arise in connection with the operation of a vessel (outside the coverage of the CLC and the Bunker Convention) will not be covered by the HNS Convention, and fixing the borderline between that Convention and other liability in the case of, for instance, port functions, such as the loading and unloading of vessel's cargo, could be problematic.[125] Furthermore, for the HNS system to apply, the damage must be caused by HNS substances (according to Article 1.6, 'caused by the hazardous or noxious nature of the substances') which are carried as *cargo*. And there are harmful substances carried by sea which fall outside the HNS Convention (eg some radioactive materials and MHB goods, including coal, wood chips and metal sulphide concentrates). Nor is the HNS Convention applicable to warships and other public vessels used only on governmental non-commercial service (Article 4.4). Also, oil fires or explosions not covered under the Bunker Convention fall outside the HNS Convention.

The ELD may nevertheless be applicable to shipping and offshore accidents not covered by these liability conventions (transposed into national law). And as the ELD is a minimum directive,[126] actors fulfilling the *operator*-requisite[127] and carrying out activities covered by the directive could be subject to extensive,[128] and also *varying*, environmental liability in accordance with EU national laws.[129] Furthermore, as the ELD only aims to prevent and remedy environmental damage, and does not affect rights of compensation for traditional damage granted under relevant international conventions or national laws regulating civil liability,[130] the relevance of the choice of law issues remains.

The restriction of the ELD to cover water damage as defined in the Water Framework Directive (2000/60/EC) should also be noted (Article 2.1(b)). As the ELD only extends to the coastal strip and

[124] The EU legislator excluded *wholly* the application of the directive to any aspect of damage covered by these conventions. See Nesterowicz (2007) 108, 118.

[125] Cf Wetterstein (2004) 112–13.

[126] The ELD was not adopted to create uniform legislation across the EU, but to establish minimum standards with a high level of protection for the environment. Member States may maintain or enact more stringent provisions in relation to the prevention and remedying of environmental damage (recital (29) and art 16). The ELD has been transposed and implemented into national law in various ways. According to the study, Implementation challenges and obstacles of the Environmental Liability Directive (ELD), Executive summary (16 May 2013), funded by the EU Commission (DG Environment) and carried out by BIO Intelligence Service and Stevens & Bolton LLP, an analysis of the integration of the ELD into 16 existing EU national legal frameworks revealed that the transposition of the ELD has not resulted in a level playing field but a patchwork of liability systems for preventing and remedying environmental damage across the EU. The variations are of two kinds, ie procedural and substantive (eg standard of liability, scope of regime applying to environmental damage, level of causation, secondary liability etc); see 3–9, and note 98.

[127] It should be noted that both a *redare* in Nordic terminology, a bareboat charterer and a ship's manager may fulfil the 'operator'-requisite under the ELD. See Wetterstein (2007) 451. See also note 95.

[128] However, according to art 4.3, the ELD shall be without prejudice to the right of the operator to limit his liability in accordance with national legislation implementing the 1976 LLMC, including future amendments. Hence differing national implementations of the limitation rules emphasise the significance of the applicable law. Cf section II.1.

[129] However, so far there seems to be only a limited number of cases of environmental damage to which the ELD regime has been applied. The Commission with the support of government experts identified 16 cases treated under the directive at the beginning of 2010 and estimates that the total number of cases across the EU may be around 50. Some interesting findings: most cases related to damage to *water* and *land*, and only a limited number to protected species and natural habitats; in most cases *primary remediation* measures were applied immediately, whereas none of the cases reported included information about *complementary* or *compensatory* remediation; the total of known remediation costs ranged between €12,000 and €250,000; the duration of environmental recovery varied in the range of one week to three years; and the activities involved were almost exclusively listed in Annex III of the directive. See COM(2010) 581 final 5.

[130] It should be noted, however, that whilst claims for personal injury, property damage and economic loss fall outside the coverage of the ELD, it does not prevent a Member State from establishing a civil liability system that tracks the ELD.

territorial sea in relation to such damage,[131] an extension of the territorial applicability of the ELD to cover in full[132] territorial waters and the EEZ, as in the civil liability conventions, has been considered needed. Therefore, Directive 2013/30/EU[133] expands the applicability of the ELD to cover marine waters of Member States as defined under the Marine Framework Directive 2008/56 EC.[134] Such a widening of the coverage enhances the protection of the sea areas and strengthens the application of the 'polluter pays' principle.[135]

II.2.2 Other EU law

The European Waste Framework Directive 2008/98/EC[136] sets out the framework for the management of waste,[137] its recycling and recovery. Any original producer of waste or other holder is responsible for waste management[138] in accordance with the provisions of the directive. In addition, the costs shall be borne by the original waste producer or by the current or previous waste holders.[139]

Of interest in the present context is the judgment of the CJEU in Case C–188/07 *Commune de Mesquer v Total France SA, Total International Ltd*. This case concerned the sinking of the *Erika* outside Brittany on 12 December 1999.[140] The reference for a preliminary ruling concerned the interpretation of Articles 1 and 15 of and Annex I to Council Directive 75/442/EEC on *waste*.[141] In its decision the CJEU held that 'Hydrocarbons accidentally spilled at sea following a shipwreck, mixed with water and sediment and drifting along the coast of a Member State until being washed up on that coast, constitute waste within the meaning of Article 1(a) of Directive 75/442, as amended by Decision 96/350, where they are no longer capable of being exploited or marketed without prior processing'.

Concerning the interesting question of the persons liable for the cost of disposing of the waste, the CJEU referred to Article 15 of the Directive 75/442, which embraces the 'polluter pays' principle.[142] In addition to the owner of the ship carrying the oil (cf 'holder' under the directive[143]),[144]

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[131] In the Water Framework Directive 'coastal water' means 'surface water on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters' (art 2.7).

[132] It is to be noted, however, that the ELD already covers protected marine species and natural habitats (cf Natura 2000 sites) in waters under the jurisdiction of Member States.

[133] See notes 1 and 36.

[134] See art 38 of Directive 2013/30/EU. Thus all installations in waters of Member States (including their EEZs and continental shelves) are covered. See the definition of 'marine waters' in art 3.1 of Directive 2008/56/EC.

[135] Regarding the 'polluter pays' principle and shipping, reference is made to Peter Wetterstein 'Complete freedom of the seas or the polluter pays for everything – how far should we go in order to protect the environment?' *Environmental Liability* (2009) 86–101. It should also be noted, however, that the application of the ELD only to environmental damage has raised various concerns and criticisms. From the perspective of aiming at an adequate protection of victims of offshore-related incidents, the ELD has its obvious weaknesses. As stated above, it does not include an efficient civil liability mechanism, secured by financial guarantees (bank guarantees, insurances, compensation funds etc). For discussion and also criticism see eg De Smedt, Faure, Liu, Philipsen and Wang (2013) 333–37 and Wetterstein (2012) 203–205.

[136] This legislation replaces Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste.

[137] According to art 3.1, 'waste' means any substance or object which the holder discards or intends or is required to discard.

[138] '[W]aste management' is defined as 'the collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker' (art 3.9).

[139] See arts 14–15 and also Cooreman (2012) 188.

[140] The case involved a claim for compensation made by the municipality of Mesquer against Total France AS and Total International Ltd in respect of costs incurred for the removal of oil from the coastline of Mesquer following the sinking of the *Erika*, amounting to €69,232. See *Gard News* Issue 192 (November 2008/January 2009) 12–13.

[141] As amended by Commission Decision 96/350/EC.

[142] Article 15 reads as follows: 'In accordance with the "polluter pays" principle, the cost of disposing of waste must be borne by: the holder who has waste handled by a waste collector or by an undertaking as referred to in art 9, and/or the previous holders or the producer of the product from which the waste came'.

[143] 'Holder' is defined as 'the producer of the waste or the natural or legal person who is in possession of it' (art 1(c)).

[144] The CJEU stated in paragraph 74: '. . . in the case of hydrocarbons spilled by accident at sea, it must be held that the owner of the ship carrying those hydrocarbons is in fact in possession of them immediately before they become waste. In those circumstances, the shipowner may thus be regarded as having produced that waste within the meaning of art 1(b) of Directive

the CJEU held that the seller of the oil and the charterer of the ship may be liable for waste disposing costs:[145]

> . . . the national court may regard the seller of those hydrocarbons and charterer of the ship carrying them as a producer of that waste within the meaning of Article 1 (b) of Directive 75/442, as amended by Decision 96/350,[146] and thereby as a 'previous holder' for the purposes of applying the first part of the second indent of Article 15 of that directive, if that court, in the light of the elements which it alone is in a position to assess, reaches the conclusion that that seller-charterer contributed to the risk that the pollution caused by the shipwreck would occur, in particular if he failed to take measures to prevent such an incident, such as measures concerning the choice of the ship.

As seen, a prerequisite for liability is that the 'seller-charterer contributed to the risk that the pollution caused by the shipwreck would occur'.

Furthermore, the CJEU went on to state that in case the cost of disposing of the waste produced by an accidental spillage of oil at sea is not borne by the IOPC Fund nor the shipowner and/or charterer according to national law of a Member State (including the law derived from international agreements), such a national law must provide, in order to ensure that Article 15 of Directive 75/442 is correctly transposed, that the cost is to be borne by the producer of the product from which the waste thus spread came. However, in accordance with the 'polluter pays' principle, 'such a producer cannot be liable to bear that cost unless he has contributed by his conduct to the risk that the pollution caused by the shipwreck will occur'.[147] Consequently, as can be seen from this holding, the international conventions on civil liability (see section II.1) do not preclude the application of Article 15 of Directive 75/442.[148]

The *Commune de Mesquer* case concerned oil pollution from shipping but the Waste Framework Directive 2008/98/EC covers also offshore rigs and platforms operating not only within the territorial waters of any Member State but also in their EEZs and, where appropriate, continental shelves. In case of oil escaping from offshore installations, the operator would be regarded as the producer or holder of waste and would, in accordance with the polluter pays principle, bear the costs of waste management.[149] Thus, all the waste resulting from offshore activities will have to be taken back onshore for reuse, recycling or disposal. Further, operators could be responsible for cleaning up any contamination to soil or water in a Member State's territory, including its EEZ and continental shelf.[150]

75/442, and on that basis be categorised as a 'holder' within the meaning of art 1(c) of that Directive'. Cf also art 8, which reads: 'Member States shall take the necessary measures to ensure that any holder of waste: has it handled by a private or public waste collector or by an undertaking which carries out the operations listed in Annex II A or B, or – recovers or disposes of it himself in accordance with the provisions of this Directive'.

[145] The heavy fuel oil which leaked from the *Erika* (note 83), was produced by the French oil company Total France SA, and the charterer of the tanker was its subsidiary Total International Ltd.

[146] According to art 1(b), ' "producer" shall mean anyone whose activities produce waste ("original producer") and/or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste'.

[147] This writing seems a bit peculiar, considering that the 'polluter pays' principle normally embraces strict liability for the polluter. See Wetterstein (2009) 86–88. Cf also Ringbom (2012) 169.

[148] On the other hand, art 15 does not preclude the Member States from laying down, pursuant to their relevant international commitments, such as the CLC and Fund Conventions, that the shipowner and the charterer can be liable for the damage caused by the discharge of oil at sea only up to maximum amounts depending on the tonnage of the ship and/or in particular circumstances linked to their negligent conduct. Furthermore, compensation from the IOPC Fund may also be paid. See paragraph 81 of the CJEU judgment. It should be added that the EU is not bound by the CLC or the Fund Convention and that Directive 75/442 does not contain a similar provision to art 4.2 of the ELD, making exceptions for the international conventions listed in Annex IV. Consequently, Directive 75/442 (now Directive 2008/98) is applicable to waste produced by accidents covered by these conventions. See also Peter Pagh 'Affald og ansvar for forureningsskader ved skibsforlis – kommentar til EF-domstolens dom i sag C–188/07 Commune de Mesquer' 42 *Ugeskrift for Retsvaesen* (2008) 358.

[149] See also SEC(2010) 1193 final 14–15. The legal qualification of 'producer of waste or holder of waste' also relates to mother companies. Cf Case C–188/07 *Commune de Mesquer v Total France SA, Total International Ltd.*

[150] See Cooreman (2012) 188–89.

In addition to the EU waste legislation, rules on *product liability* based on Directive 85/374[151] are of interest in the present context. Defects in offshore drilling, production, storage and transport units may cause environmental damage, thereby making producers[152] (and suppliers[153]) of defective products[154] strictly liable for the damage.[155] Also, shipowners and offshore operators who import into the EU products 'for sale, hire, leasing or any form of distribution in the course of their business' shall be deemed to be producers within the meaning of the directive and shall be responsible as such (Article 3.2). Thus, if the imported vessels/offshore units are put into distribution, for instance, through hire or charter arrangements, product liability for the importers may arise.[156] However, with regard to environmental damage, liability is limited to damage to property that 'is of a type ordinarily intended for private use or consumption' and 'was used by the injured person mainly for his own private use or consumption' (Article 9).[157] This restriction means that basically only private property is covered, for instance, damage to private vessels, jetties, beaches and water areas that are mainly used for non-commercial purposes.[158]

Nevertheless, the conflict of law issue is also important in the product liability context, since the EU legislation has been implemented in various ways in the Member States.[159]

(Part 2 of this article will appear in the next issue of The Journal of International Maritime Law)

[151] Council Directive of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products. This directive has been amended by Directive 1999/34/EC of the European Parliament and of the Council of 10 May 1999.

[152] 'Producer' means 'the manufacturer of a finished product, the producer of any raw material or the manufacturer of a component part and any person who, by putting his name, trade mark or other distinguishing feature on the product presents himself as its producer' (art 3.1).

[153] On suppliers' liability see art 3.3.

[154] For the purpose of the directive, 'product' means 'all movables even if incorporated into another movable or into an immovable'. 'Product' includes electricity (art 2).

[155] Exceptions to the liability are listed in art 7.

[156] See Vibe Ulfbeck 'Maritime product liability' *SIMPLY, Scandinavian Institute of Maritime Law Yearbook* (2006) 76–77.

[157] See also *Henning Veedfald v Århus Amtskommune* (C–203/99).

[158] Loss of life and personal injury are generally covered by the directive (art 9(a)).

[159] Some differences are mentioned by Richard Plender and Michael Wilderspin *The European Private International Law of Obligations* (2009) 545–46.