# 1

# Introduction

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## 1.1 Background for This Book

The background for this research on civil liability and financial security for offshore oil and gas activities is the explosion of the mobile deepwater offshore rig Deepwater Horizon on 20 April 2010, in the Gulf of Mexico that spilled 3.19 million barrels of oil in the sea as a result.[1] Luckily, at the place where the Deepwater Horizon incident occurred, US law applies, in this particular case the US Oil Pollution Act of 1990 (OPA 90). OPA 90 does have a liability regime for offshore facilities. However, at the time, the international community realized that the international regime for oil spills focused largely on vessel-source pollution. Famous incidents with e.g. the *Torrey Canyon* (1976), *Amoco Cadiz* (1978), *Exxon Valdez* (1989) and *Erika* (1999) led to the development of an impressive international liability regime.[2] Indeed, at the international level, a compensation regime for vessel-source oil pollution was already established in 1969–1971 by the adoption of two international conventions, the International Convention on Civil Liability for Oil Pollution Damage of 1969 (also called the CLC of 1969) and the International Convention on the Establishment of an International Fund for Compensation for Oil

[1] The original estimate was that around 4.9 million barrels of oil was released to sea, with estimated damages ranging between US$1 billion and US$3.5 billion. Hearing, House of Representatives of the US, Committee on Transportation and Infrastructure, 8 June 2010, 15–16. Later cost estimates were increased and amounted to US$30 billion. It was considered the largest marine oil spill in American history. However, the court ruled in January 2015 that 4.0 million barrels of oil was released to the sea, and because 810,000 barrels of oil was recovered through the cleanup actions, the final amount was determined to be 3.19 million barrels discharged into the Gulf of Mexico. See judgment of the US District Court for the Eastern District of Louisiana, filed on 15 January 2015: *In re: Oil Spill by the Oil Rig 'Deepwater Horizon' in the Gulf of Mexico, on April 20, 2010*.

[2] For a discussion of this international liability regime, see, *inter alia*, Liu, *Compensating Ecological Damage*, pp. 195–207; Verheij, 'Shifts in governance'; and Wang, *Civil Liability*, pp. 53–187.

Pollution Damage of 1971 (the Fund Convention of 1971).[3] These conventions went through many evolutions (in particular, the 1992 Protocols and the 2000 Resolutions) as a result of which, most important, the amounts were increased after every incident that had again challenged the financial limits on the liability of the tanker owner. In principle, the European Union relied on its Member States to ratify various international maritime conventions, but given its dissatisfaction with the measures taken at the international level through the International Maritime Organization (IMO), the European Commission also started to take its own initiatives for legislation at the European level.[4] The European Commission subsequently adopted the so-called Erika I and Erika II packages in which it, *inter alia*, proposed to set up a European fund (referred to as the *Cope Fund*) with an updated ceiling of €1 billion (instead of the €200 million that was then applicable under international conventions).[5] Interestingly, this European activism led the IMO to increase the limits of the 1992 CLC and the Fund Convention by 50%, with effect from November 2003. This led to adoption of a supplementary fund for oil pollution damage, leading to a total amount of compensation (again, only in the case of vessel-source pollution) of 750 million special drawing rights (SDRs), which at the time of adoption corresponded to approximately US$ 1 billion. Hence, one could note that European activism led to action at the international level whereby the IMO basically took over the initiative proposed by the European Commission; this obviously made the European initiative in that domain no longer necessary.[6]

Although EU activism thus led to a widely satisfying liability and compensation regime in the case of vessel-source pollution, the incident with the Deepwater Horizon[7] again led to a shock and the realization that a huge amount of damage also could be caused by offshore facilities for which the liability and financial security largely was left to Member State law. More particularly, given the often trans-boundary character of spills and accidents taking place from offshore facilities, there was a strong

[3] The Civil Liability and Fund Conventions will be discussed in further detail in Chapter 3.
[4] See in this respect more particularly the publication on 24 February 1993 of the long-awaited Communication on Safe Seas, COM(1993) 66 final.
[5] See the amended proposal for a regulation of the European Parliament and of the council on the establishment of a fund for compensation of oil pollution damage in European waters and related measures, *Official Journal* C227 E/487 of 24 September 2002.
[6] For an outline of these developments, see Wang, 'Shifts in governments'.
[7] For a detailed analysis of the Deepwater Horizon case, see also Perry, 'The Deepwater Horizon oil spill'.

argument for transnational regulation of civil liability and financial security, at least for EU action and (perhaps following the example of vessel-source pollution) eventually for IMO action as well.

There are also, as far as Europe is concerned, a number of reasons for concern about damage which may be caused by offshore incidents. As this chapter will show, there is in fact, internationally, quite an impressive record of offshore incidents. In addition, the North Sea has experienced quite a few offshore platform accidents, including Alexander Kielland (1980), Piper Alpha (1988), Forties Alpha (2003), Gullfaks C (2010) and most recently Gannet Alpha (2011), all incidents that occurred in the North Sea and have increased concern about the consequences in Europe. Although until very recently (June 2013) there has been no formal European regime dealing specifically with offshore pollution issues, there has been relevant legislation that plays an important role, namely, the Marine Strategic Framework Directive.[8] This Directive 'requires addressing the cumulative impacts from all activities on the marine environment' and 'is relevant to offshore oil and gas operations as it requires linking the particular concerns from each economic sector with the general aim of a comprehensive understanding of the oceans, seas and coastal areas, with the objective to develop a coherent approach to the seas taking into account all economic, environmental and social aspects through the use of Maritime spatial planning and Marine knowledge'.[9]

When the Deepwater Horizon accident occurred in the Gulf of Mexico on 20 April 2010, the European Commission immediately launched a communication to assess the risks in the offshore oil and gas industry in European waters.[10] The Commission has explored a wide range of problems, including licensing, controls by public authorities and spill response. In particular, when it addressed the liability issue, the Commission considered the possibility of extending the Environmental Liability Directive (ELD)[11] to cover environmental damage to all marine waters as defined in the Marine Strategy Framework Directive[12] and the applicability of the Waste Framework Directive.[13] The Commission also realized that the possibility of a financial cap on liability and mandatory

[8] Directive 2008/56/EC. [9] COM(2011) 688 final, 14.
[10] COM(2010) 560 final, Communication from the Commission to the European Parliament and the Council Facing the Challenge of the Safety of Offshore Oil and Gas Activities, 12 October 2010.
[11] Directive 2004/35/EC. [12] Directive 2008/56/EC. [13] COM(2010) 560 final, 8.

financial security was worth further analysis.[14] The Commission was concerned not only with offshore activities in EU waters but also with the EU-based offshore industry operating in other parts of the world, and it called on the industry's international operators to be responsible.[15]

On 27 October 2011, the Commission initiated two proposals, one for a regulation on the safety of offshore activities[16] and the other for the accession of the EU to the Offshore Protocol of the Barcelona Convention.[17] The proposed regulation (COM[2011] 688 final) follows on the principal issues raised in the 2010 Communication and imposes stricter safety standards for offshore activities in Europe and gives national regulators more power to inspect such operations. It also extends sixteen-fold the zone in which companies will be held liable for environmental damage. It specifies that the licensee shall be held 'liable for the prevention and remediation of environmental damage' pursuant to the Environmental Liability Directive.[18] On 21 February 2013, MEPs and Member States reached an agreement on a Directive to improve the safety of offshore oil and gas activities in the European Union. The Directive was signed by the Council on 12 June 2013 and published in the Official Journal on 28 June 2013.[19]

The outline of the factual and legal evolutions so far clearly justifies a thorough examination of civil liability and financial security for offshore oil and gas activities, particularly in European waters. In summary:

- Many incidents with offshore facilities have taken place in European waters.
- The Deepwater Horizon incident of April 2010 showed the potentially enormous amount of damage which could result from such an incident.
- Many offshore incidents can have a trans-boundary character, thus justifying the need for European action.

[14] COM(2010) 560 final, 8. [15] COM(2010) 560 final, 13.
[16] COM(2011) 688 final, Proposal for a Regulation of the European Parliament and of the Council on Safety of Offshore Oil and Gas Prospection, Exploration and Production Activities, 27 October 2011.
[17] COM(2011) 690 final, Proposal for a Council Decision on the Accession of the European Union to the Protocol for the Protection of the Mediterranean Sea Against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and Its Subsoil, 27 October 2011.
[18] COM(2011) 688 final, art. 7.
[19] Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on Safety of Offshore Oil and Gas Operations and Amending Directive 2004/35/EC, *Official Journal* L 178/66–101, 28 June 2013. This Directive will be discussed in further detail in Section 3.4.6.

- Whereas an elaborate international (IMO founded) regime exists for vessel-source marine pollution, such a regime is absent for damage resulting from offshore facilities.
- This justifies the need to examine how a potential European liability and financial security regime for damage caused by offshore activities could be shaped.

Examining how a potential European liability and financial security regime for damage caused by offshore installations could be shaped is precisely the goal of this book.

## 1.2 Objective of This Book

Directive 2013/30/EU of 12 June 2013 holds that an operator of an offshore installation will have to show financial capabilities, including any financial security to cover liabilities potentially deriving from the offshore oil and gas operations.[20] The Directive, however, does not explain how these liabilities should be covered by financial security, nor what specific type or form this liability regime should take. Hence, this leads to a number of important questions which will be central throughout this book:

- To what extent can liability play a role in both preventing of accidents and compensating victims of accidental offshore oil and gas activities?
- How should such a civil liability regime be shaped to make civil liability efficient, effective and insurable?
- What options currently exist for liable operators to cover the costs resulting from such liabilities and which mechanisms (e.g. compensation funds, solvency guarantees, insurance or risk-sharing agreements) either exist or can be developed to reach that goal?
- How can mechanisms be developed to facilitate the early compensation of victims after an accident?

## 1.3 Methodology

Three different approaches will be used in this book: a traditional legal analysis (1.3.1), an economic analysis of law (1.3.2) and an empirical approach (1.3.3).

[20] Article 4(2)(c) of Directive 2013/30/EU.

### 1.3.1 *Legal Analysis*

The legal analysis will, in turn, consist of two approaches. The first and obvious one is legal desk research. This research requires a detailed analysis of primary legal sources that provides information on the goals and workings of the legal regimes that will be addressed in the chapters that follow. For every liability issue, a detailed literature study will take place. Many of the legal rules to be analyzed, for example, as far as environmental or nuclear liability is concerned, originate either from European rules (such as the Environmental Liability Directive) or from international conventions (such as the oil pollution conventions concluded within the framework of the IMO). In this respect, a vertical comparative legal approach is necessary to consider how some of the conventions are implemented in the national laws of some of the EU Member States, and this in particular will be analyzed.[21]

Within the legal analysis, particular attention will be paid to developments at the European level (which were briefly touched on in Section 1.1). In this respect, we, of course, refer to the Commission communication on the risks in the offshore oil and gas industry in European waters as well as the Directive on Safety of Offshore Oil and Gas Operations and in particular the impact assessment that took place in that respect. These European policy developments will be taken into account as background.

When various (national and regional) liability regimes are analyzed, this comparative analysis will take place on the basis of a particular framework. A tentative checklist will be developed so as to move towards a harmonized framework that can be used to analyze the liability and financial security mechanisms in the system under study. Questions that will be addressed include

- What is the basis of liability? Is it a negligence or strict liability rule and is the operator also liable for *force majeure* or are excuses allowed?
- How is the relationship with regulation handled? Will compliance with regulations (safety standards) excuse the operator from liability?
- Are specific rules in place relating to causation and causal uncertainty?
- How is liability attributed when multiple parties have contributed to the risk? Is a joint and several liability rule in place, or is the liability rather channelled to one particular operator?

[21] These legal regimes will be presented in Chapter 3.

- What types of damages can be compensated? Is compensation also awarded for pure economic loss, for ecological damage and for non-pecuniary losses? Is there a particular financial cap on liability, or is liability unlimited?
- Is the liability of the operator (compulsory) insured, or are other measures in place to provide financial coverage for liability?
- Are particular claims-management mechanisms in place, such as forcing the operator or the insurer to make an early offer to victims or advance payments?

These and other questions are worked out within a checklist that has been used as a common framework for the comparative analysis in order to guarantee the comparability of the results.[22]

A major offshore incident can give rise to a variety of different types of losses. To some extent, this will depend, as will be explained later, on the nature of the product involved (oil or gas) and obviously also on the location (deep or shallow water and close to the coast or not). Attention in the literature and at the policy level often has been paid mostly to pollution damage. However, in addition to pollution (usually resulting from an incident with oil), there can be equally large economic losses to the fishing and tourism industries. Given the primary attention that has often been paid to pollution damage, it is also important to focus on losses to businesses as a result of an offshore incident. From a legal perspective, it is often hard to separate those losses. Liability in most legal systems de facto will arise not only for pollution damage but also for personal injury, property damage and economic loss (to the extent that the legal system awards it). Hence, in the legal descriptions (mostly in Chapter 3), the focus will be on the compensation of damage generally without distinguishing between pollution damage and this more traditional damage. However, from the perspective of businesses that are affected by an offshore pollution incident (e.g. the fishing and tourism industries), it may be important to have mechanisms of rapid compensation available to prevent the failure of local businesses that are affected by the pollution during the civil litigation process. Hence, especially for this traditional damage, the question will be asked separately whether mechanisms of rapid claims management are in place or (to the extent that this is not the case) could be installed in order to guarantee advance payments to victims.[23]

[22] This checklist for the country studies is provided in Appendix 2.
[23] This will be addressed in Section 7.6.

As was already mentioned, there is now an EU-level Directive on Safety of Offshore Oil and Gas Operations (12 June 2013). For the purposes of this book, it is important to know that, as a result of this Directive, operators must show sufficient financial guarantees[24] and that offshore installations will be brought under the scope of application of the Environmental Liability Directive (ELD).[25] These are, however, only first steps, and as a result, many issues still need to be addressed. For example, the compulsory guarantees to be provided by operators have been stipulated in principle. But the question of how to create a mechanism that can better guarantee that operators can cover any liabilities arising from a major accident in the offshore oil and gas industry still has to be addressed.[26] Moreover, the fact that offshore installations have been brought under the ELD is perhaps more of a starting point than the final stage. First, the ELD applies only to a particular type of (pollution) damage,[27] which hence leaves unresolved the question of how more traditional damage, such as losses to the fishing and tourism industry, can be compensated and how a mechanism of rapid claims management could be installed to prevent the failure of local businesses affected by the accident while waiting for the civil litigation to be concluded.[28] Second, from a political/policy perspective, the decision to bring offshore installations under the ELD may be understandable, but from an academic/research perspective, serious questions could be asked as to whether that is the optimal solution. It could indeed lead to separate treatment of pollution damage, on the one hand (which would be, at least partially, covered under the ELD), and remaining losses, on the other. The question could be asked whether such a division of treatment is desirable.[29]

### *1.3.2 Law and Economics*

The second approach to be followed, in addition to the more traditional legal (comparative) approach, is a law and economics methodology.

[24] See Art. 4(2)(c) of Directive 2013/30/EU of 12 June 2013 on offshore oil and gas operations.
[25] Article 7 of Directive 2013/30/EU of 12 June 2013 on offshore oil and gas operations.
[26] This will therefore be addressed especially in Chapter 6.
[27] For the scope of application of the ELD, see Bergkamp and Van Bergeijk, 'Scope of the ELD regime', pp. 51–79; and De Smedt, *Environmental Liability in a Federal System*.
[28] This will be addressed in Section 7.6.
[29] This is an aspect that will be discussed in Chapter 7.

The law and economics methodology (also referred to as *economic analysis of law*) allows insights into the working of liability rules and the effects of particular elements of liability rules on the stakeholders involved and, more particularly, the operators exposed to liability. Hence, the law and economics approach is an extremely useful way to address the core issue of this study – how an effective and efficient liability regime for operators in the offshore industry can be designed.

An important part of the law and economics methodology, especially the economic analysis of accident law,[30] also addresses the scope of liability in light of the insurability of a liability regime. Precisely because the insurability of liability may be crucial for operators active in the offshore industry, this insurability aspect will be taken into account when addressing the scope of liability.

The law and economics methodology furthermore has the advantage of not only pointing to the potential dangers of certain activities but also to their benefits, the so-called positive externalities for society. These may play an important role in the case of the offshore industry. The positive externalities created by the safety industry may be a reason to limit liability, which is a crucial aspect of the research in this book.[31]

The law and economics methodology has the major benefit that it pays attention to the goals of liability and also addresses the potentially perverse effects of liability. It also addresses the effects of liability rules on stakeholders, especially the economic effects on industrial operators, and is thus well able to indicate to what extent a limitation on the scope of liability may be warranted. In addition, law and economics analysis has indicated the extent to which a liability regime can be shaped in such a way that liability can be kept to an insurable level. Hence, the economic analysis of law is not only useful to the development of best practices but also to the critical evaluation of the potentially wide range of policy options that could be implemented with respect to the liability of the offshore industry.

### *1.3.3 Empirics*

One of the questions that is central to this book – how an efficient and effective civil liability and financial security system for offshore oil

[30] As developed, *inter alia*, by Shavell, *Economic Analysis of Accident Law*.
[31] See Gilead, 'Tort law and internalization'.

and gas activities can be shaped – cannot be answered by theoretical research alone. Hence, an empirical approach also will be followed. This approach consists of semi-structured interviews. These interviews have been held with selected stakeholders who are experts in specific domains. An overview of these interviews is provided in Appendix I of this book.

### *1.3.4 Integration*

The three methodological approaches have a clear relationship that will be followed. Together these approaches guarantee in an integrated manner that the goal of formulating recommendations concerning a liability and financial security regime for the offshore industry can be reached. The comparative legal approach also allows a careful analysis of existing liability regimes both in Member States and also in other offshore states and in other high-risk sectors. The law and economics approach can analyze the efficiency and effectiveness of various liability regimes. Hence, the economic analysis of law provides a benchmark to test whether particular features of the liability regimes studied would be useful in a possible future EU liability regime for the offshore industry. The empirical approach is crucial for various reasons. First, it provides good insight into the scope of the problem posed by offshore oil and gas activities; second, empirics will allow us insight into existing compensation mechanisms and financial market instruments, and third, the empirics also allow insights into the feasibility of various potential compensation mechanisms that could be developed in the future.

## 1.4 Structure

This book will be structured as follows. First, Chapter 2 will provide an overview of the damage resulting from major offshore incidents; next, Chapter 3 will analyze the existing legal regimes arising from major offshore and oil and gas accidents. Then Chapter 4 will list and analyze the existing risk-pooling mechanisms for damage compensation following offshore accidents in place within the European Union and elsewhere. Chapter 5 will discuss the potential of financial market instruments to cover liabilities following a major offshore accident by looking at the status quo as far as liability cover is concerned. Following this, Chapter 6 will take a forward-looking approach to the potential of financial and