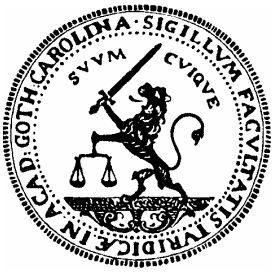

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The Nairobi International Convention on the Removal of Wrecks in light of existing marine liability regimes

- a study of recent trends within civil liability regimes addressing marine environmental damages

Master thesis
30 credits

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International environmental law, Law of the sea, Maritime law

Spring 2008

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Summary

The study presented herein analyses the Nairobi International Convention on the Removal of Wrecks (WRC) in light of existing civil liability regimes relating to the same area of environmental law, namely; protection of the marine environment from damages arising from maritime activities.

Through presentation and analysis of the most influential and exemplifying civil liability regimes for protection of the marine environment from damages arising from maritime activities, a coherent picture of this diversified body of norms is painted. The rather mechanical process whereby common characteristics of the treaties establishing such regimes provides the reader with descriptive introductions to such civil liability regimes and establishes a light in which the WRC is analysed.

The analysis of the WRC in light of existing civil liability regimes enlightens a difference in approach; the inclusion of obligations in the WRC to undertake response measures - thus a development where obligations to undertake response measures are included in treaties establishing civil liability regimes.

Since the group of treaties within which the WRC falls - treaties concerning protection of the marine environment from ship-source pollution - is uniform, and no treaty but the most recent, the WRC, deviates from this uniformity, the difference in approach is meant to be deliberate and signifies a development within international environmental law in a wider sense.

Since protection of the marine environment from damages arising from maritime activities is a particularly well-developed area of international environmental law, it is argued that the developments within this area of law are relevant and of significance for international environmental law generally.

Through examples from civil liability regimes relevant to the context within which the WRC exists, this development is exemplified and analysed.

Sammanfattning

Den studie som här presenteras analyserar Vrakborttagningskonventionen utifrån andra traktater som etablerar skadeståndsregimer rörande samma område inom internationell miljörätt; skydd och bevarande av den marina miljön från skador av maritima aktiviteter.

Genom studier av de mest inflytelserika och exemplifierande skadeståndsregimer som skyddar och bevarar den marina miljön från skador av maritima aktiviteter konstrueras en enhetlig bild av traktater som etablerar sådana skadeståndsregimer. I denna något mekaniska övning, vari likheter utskiljs hos sådana traktat, erbjuds läsaren beskrivningar av sådana traktat och det ljus i vilket Vrakborttagningskonventionen sedan analyseras etableras.

Då Vrakborttagningskonvention jämförs med äldre skadeståndsregimer framträder en skillnad i ansats; i Vrakborttagningskonventionen ingår inte bara normer som rör skadestånd, utan även normer som rör nödåtgärder.

Då den grupp av traktat till vilken Vrakborttagningskonventionen hänförs, traktat för skydd och bevarande av den marina miljön från skador av maritima aktiviteter, är relativt enhetlig och ingen traktat förutom den senast antagna, Vrakborttagningskonventionen, avviker från denna enhetlighet, hävdas denna skillnad i ansats vara ett uttryck för en allmän utveckling inom internationell miljörätt.

Då skydd och bevarande av den marina miljön från skador av maritima aktiviteter är ett rättsområde som är långt kommet i utveckling, anses trender inom detta område vara viktiga och angelägna för internationell miljörätt i allmänhet.

Genom studier av sådana skadeståndsregimer som Vrakborttagningskonventionen är jämförbar med hänförs, beskrivs och exemplifieras denna utveckling - att miljörättsliga förebyggande hänsyn införs i sådana traktat som tidigare enbart innehållit reaktiva kompensatoriska hänsyn.

Preface

I wish to,

Thank Professor Lars-Göran Malmberg, Faculty of Law, University of Lund, and Professor Max Mejia, World Maritime University, Malmö, for supervising and supporting me in the writing of this study.

Express my warmest thanks to Doctor Marie Jacobsson, principal legal adviser on international law at the Swedish Ministry for Foreign Affairs, and member of the United Nations International Law Commission (ILC), for having me as assistant during the sixtieth session of the ILC, and thereby providing me with invaluable insights in the exciting world of international law.

Pledge my most grateful appreciation to my dear friend Jena McGill, University of Ottawa, for invaluable help in the editing of this study.

Thank Signe och Olof Wallenius Stiftelse for financially helping me with this thesis.

Thank Alice o Helge Källssons Stiftelse för utbildning o forskning for financially helping me with this thesis.

As always last in formal situations, but always first in mind, my most sincere thanks and highest assurances of appreciation go to my dearly loved family, Karin and friends.

Abbreviations

art.	article
arts.	articles
Basel Convention	The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
Bunker Oil Convention	International Convention on Civil Liability for Bunker Oil Pollution Damage
CCALMR	Convention on the Conservation of Antarctic Marine Living Resources
CCAS	Convention for the Conservation of Antarctic Seals
CLC	International Convention on Civil Liability for Oil Pollution Damage
CRAMRA	Convention on the Regulation of Antarctic Mineral Resource
EC	European Community
EEZ	Exclusive Economic Zone
EU Liability Directive	Directive 2004/35/CE of the European Parliament and the Council of 21 April 2004 on Environmental Liability with Regard to the Prevention and Remedying of Environmental Damage
EU	European Union
Fund Convention	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage
HNS Convention	International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea
IAEA	International Atomic Energy Agency
ILC Responsibility articles	Draft Articles on Responsibility of States for Internationally Wrongful Acts
ILC	United Nations International Law Commission
IMCO	Intergovernmental Maritime Consultative Organization
IMO	International Maritime Organization
Intervention Convention	International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties
IOPC	International Oil Pollution Compensation Funds
ISA	International Seabed Authority

LOSC	United Nations Convention on the Law of the Sea
Lugano Convention	Council of Europe's Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment
Madrid Protocol	The Protocol on Environmental Protection to the Antarctic Treaty
MARPOL	International Convention for the Prevention of Pollution from Ships
OECD	Organization for Economic Co-operation and Development
P&I	Protection and Indemnity
Paris Convention	Convention on Third Party Liability in the Field of Nuclear Energy
Salvage Convention	International Convention on Salvage
SOLAS	International Convention for the Safety of Life at Sea
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
UK	United Kingdom
UN	United Nations
UNGA	United Nations General Assembly
USD	US dollar
Vienna Convention	Vienna Convention on Civil Liability for Nuclear Damage
WRC	Nairobi International Convention on the Removal of Wrecks

1. Introduction

In the best of worlds, environmental pollution does not occur. In a modern world, environmental regulation prevents environmental pollution from occurring. In the present world, environmental pollution occurs and victims might in some cases have opportunities to claim compensation for the damage suffered, sometimes even from the polluter.

Fundamental compensatory principles provide that victims who have suffered damage should be entitled to claim compensation from the person that is responsible for the damage. However, this basic compensatory principle is reflected only to a small extent in international environmental law. Some systems of norms reflect this compensatory principle by facilitating the bringing of compensation claims before municipal courts. Such systems are called, for the purpose of the present study, civil liability regimes.

Within environmental law the compensatory principle is in a developed version called the polluter-pays principle, which not only recalls the compensatory principle but further aims at preventing environmental damage from occurring, by establishing an incentive for operators to take measures to prevent pollution from occurring. Hence, civil liability regimes could be said to serve both a procedural purpose, in facilitating the bringing of compensation claims, and a material purpose, in aiming to prevent environmental pollution. The development of civil liability regimes as mechanisms for giving effect to environmental standards is an important issue not only for the drafting of new environmental treaties, but also for international law in general as a mechanism giving effect to international norms, which is of utmost concern within international law.

1.1 Topic and purpose

After a brief outline of the matters that form the focus of the present study, i.e. topic, the more narrowed purpose and the procedure through which this purpose is fulfilled is described.

Although the introductory chapter is divided into several sub-headings, the subchapters in the introductory chapter are closely related, making some of the headlines misleading. This interaction is a reflection of the inevitable interdependence of the different methodological questions at play here. Thus the chapters topic, purpose, method and material may be read as one discussion, but are separated under different headlines in order to facilitate orientation within this discussion.

1.1.1 Topic

International environmental law is a vast and diverse area of international law, subject to rapid evolution. It is thus not only difficult, but also commonly impractical to attempt to analyse this area of law in whole. With this in mind, and due to limits of time and resources, this study focuses on one specific area of international environmental law, however its importance extends to areas beyond that considered here. Its importance is broader than just for this certain area itself.

Protection of the marine environment from damages resulting from maritime activities is a highly developed, much analysed and important area of international environmental law. This is especially true concerning the use of civil liability regimes as means for giving effect to environmental standards. In fact, protection of the marine environment could be said to be the sole area of international environmental law that contains such long established and practically applicable civil liability regimes addressing environmental damages.

The aim of this study is not simply to undertake a descriptive excursion into the law related to the protection of the marine environment from damages arising from maritime activities, but through studies in this area to report on legal developments applicable to international environmental law more generally.

It is not my intention to suggest that protection of the marine environment from damages arising from maritime activities is a slice of international law that is representative of international environmental law in general, but instead that this particular area of law exemplifies certain trends within international environmental law in general. Dressed in methodological terms this study could be said to be qualitative, rather than quantitative in nature.

1.1.2 Purpose

The present study addresses questions related to the use of civil liability regimes for the protection of the marine environment from damages arising from maritime activities, in order to determine whether the recently adopted Nairobi International Convention on the Removal of Wrecks (WRC) differs in approach from the existing civil liability regimes for protection of the marine environment from damages arising from maritime activities, in order to analyse developments within such civil liability regimes.

In order to fulfil this purpose existing civil liability regimes are identified and analysed so to make comparisons possible.

1.2 Method and material

Although method and material are intimately related matters, for the purpose of clarity, they are separated in two subchapters here.

1.2.1 Method

In searching for general direction and common characteristics of discussions upon methodology in studies of international legal studies it is easy to end up fairly uncertain and confused. Discussions of content, form and motivation differ so greatly from author to author that it seems almost no general characteristics of methodology can be extracted from studies of international law. Whether this lack of uniformity is problematic or not is, however, unclear and apparently not within the scope of this study to address. Nevertheless, in observing the fragmented picture of methodology in international law I am encouraged to present my own discussion on methodology in a more explanatory manner, with the aim of furthering and strengthening the transparency of this study.

In spite of what is said above, one common characteristic of most methodological discussions within studies of international law is a tendency to focus on questions related to the sources of law. Within this trend, however the questions asked differ widely. Some attempt to answer fundamental questions, such as “does international law exists?” and “what is the content of international law?”, while others are concerned with questions only of interest for the particular discussion at hand, such as “in which archive have I found the doctrine being used?” and “has the internet has been used or not?”.

Since I am not an expert on international legal methodology I do not favour any of these approaches, but aim instead to answer both fundamental and specific methodological questions relevant to my study here.

A fundamental methodological statement is that in order to be more than just descriptive of a certain phenomenon, another phenomenon must be used, in relation to which the first phenomenon under study can be assessed. As will be seen, the basic structure and method employed in this study reflect this fundamental statement.

For my purposes here, a recently adopted instrument providing for civil liability international environmental law is analysed in light of existing civil liability regimes, in order to identify differences in approach. Through concise and targeted studies of the most important treaties concerned with protection of the marine environment from damages arising from maritime activities, common characteristics for existing marine civil liability regimes are extracted.

Since no single marine liability regime exists within international law, the characteristics of this regime are extracted from several treaties concerned with protection of the marine environment from damages arising from maritime activities.

The aim of this process is to paint a more coherent picture of existing marine civil liability regimes, in relation to which the recently adopted instrument can be assessed.

The description and extraction of characteristics are thus meant to establish the phenomenon from which another phenomenon may differ.

Since the characteristics of existing marine civil liability regimes are central for this study, as they represent the past from which the development has occurred, the selection of treaties from which these characteristics are extracted is of crucial importance for the validity of this study. Due to limitations of this study not every treaty concerned with protection of the marine environment from damages arising from maritime activities is analysed. A selection of treaties is thus made.

Several methods for making such selections exist and the relevant method may be fundamentally different depending on whether the study is quantitative or qualitative in nature. As this study is qualitative, the aim of selecting treaties is to choose those that are exemplifying, rather than representative of the whole group of treaties. As such, the randomness of the selection is not of utmost importance, but rather that the selected treaties exemplifies the group of treaties.

Although aware of difficulties with representative selections, I dare say that the selection of treaties in this study is fairly unproblematic, i.e. valid. Most treaties in force concerned with protection of the marine environment from damages arising from maritime activities and providing for civil liability, are taken as significant for this study. The selection of treaties is supported by several doctrinaires and occurring in major pieces of academic literature in the area.[1] It may however be stressed that this academic support does not certify the validity of the selection, but it does provide it with firm support.

In this study treaties are analysed both directly, by considering the treaty provisions themselves, and also by reference to doctrine concerning the relevant treaties. As is usual within studies of legal norms, doctrine has both positive features and disadvantages when used as data. Treaty provisions have the obvious advantage of being direct and precise reflections of law itself, but the associated disadvantage that the precise meanings of treaty provisions are often obscure and difficult to interpret without the helping hand of doctrine. Doctrine is thus used as an assistive tool for illuminating the meaning of treaties. An important fact to emphasise is that the meanings

[1] See e.g. De La Fayette "*New approaches for addressing damages to the marine environment*", Boyle "*Globalising environmental liability: the interplay of national and international law*" and Birnie & Boyle "*International law and the environment*".

of treaty provisions themselves are in this study given precedence over doctrine, following the accepted hierarchy among sources of international law.

Customary international law is an important source of international law[2], which as such might very well be included in any study of international law. However, since customary international law is often vague and more obscure as to its content than treaties, and because customary international law may not embody norms as detailed and contemporary as treaties, customary international law is not considered in this study to any significant extent. By this I do not wish to reject or disregard the importance of customary international law as a source of international law. It is, however, my conviction that the norms embodied in civil liability regimes are not expressed in customary international law. If customary international law does in fact include such norms, it is still my belief that this study benefits from its limited focus on norms embodied and expressed in treaties alone.

As previously stated, treaties are primary as sources of information in this study, and as such, only doctrine relevant to the analysed treaties is considered. Although this choice narrows the range of doctrine taken into consideration, the amount of doctrine relevant to each treaty remains too extensive to be analysed in whole. A selection among relevant doctrine is thus made, whereby some of the relevant doctrine is not taken into account. The goal in this study is to consider the most important relevant doctrine. Doctrinaires are considered and meanings of doctrinaires compared in order to take note of the interpretation that finds the most support in doctrine.

1.2.2 Material

Although this headline is broad and has broad application only one matter is considered hereunder, as a result of the fact that some discussion on material has taken place above and that the matter considered here is of particular importance to the study and as such benefits from a separate discussion.

In this study the WRC is given a great deal of attention and is of considerable relevance for the conclusions of this study, as it is the instrument assessed in relation to existing marine civil liability regimes as an expression of a new development in the area. As such, the WRC deserves some further elaboration.

The WRC is the result of a long-term project of the International Maritime Organization (IMO) and is regarded as filling a gap in the regulation of environmental damages arising from hazardous maritime activities. It is considered by the international community to be an important piece of legislation, and was prepared with the intention of establishing a modern international instrument - all reasons leading to the significance granted to the WRC in this study. The WRC could, without any need for further

[2] See the Statute of the International Court of Justice art. 38.1.b.

explanation, be accurately described as creating a significant civil liability regime designed to address damages to the marine environment arising from maritime activities. As a result of the attention given to this instrument within the IMO, the WRC is in this study regarded as important to the evolution of this area of international law in whole.

As will be recalled in the concluding chapter, the similarities and coherency of the existing marine civil liability regimes, against which the WRC will be analysed increase the significance of any deviation from this coherency in the WRC.

1.3 Additional remarks

The following sections aim to provide the reader with a map for the discussion to follow, by setting out the disposition of this study, explaining an important delimitation, and explaining some key terms used in the presentation of this study.

1.3.1 Outline

First the reader is provided with a brief introduction to the topic of secondary rules in international law in relation to international environmental law in particular, under the headline “General legal framework”. This part outlines the perspectives used in this study and provides the background upon which the study is based.

The WRC is presented and analysed, under the headline “Wreck Removal Convention”. Throughout the following chapters, concerning existing marine liability regimes, selected treaties are considered and common characteristics are extracted and compiled to establish a picture of the context within which the WRC was developed. The WRC is thus not only analysed in the chapter called “Wreck Removal Convention”, but is integrated in the chapters concerning the existing marine liability regimes. The concluding chapter presents results stemming from the previous chapters and personal opinions and thoughts upon the subject.

As is evident from the contents, existing treaty law is afforded much attention and space in this study. The discrepancy between the number of pages given to the relationship between the WRC and previously existing treaty law, and the central role of the WRC in this study, is not motivated exclusively by my personal interest in technical treaty law, but by the reality that a coherent picture of the existing civil liability regimes within this area of international law is a complex undertaking, and therefore demands considerable attention. The coherent picture of existing civil liability regimes, in relation to which the WRC is assessed is, as one of the two phenomena under study here, of major importance.

1.3.2 Delimitation

Although several limitations have been made in carving out the boundaries of this study, including for example, ignoring perspectives other than the legal, only one of these limitations is not self-explanatory and is therefore expressly addressed here, namely the view taken on European Community (EC) legislation.

EC legislation is in several ways similar to the body of norms referred to as international law, especially in its application to states and its precedence over national law. Nevertheless, EC legislation is not regarded as part of international law for the purposes of this study.

An important characteristic of international law is the lack of a centralised and superior legislator, as a result of the foundational principle of state sovereignty. As a result of the lack of central legislative body international law can be constructed in several different ways, and not always completely calculatedly. EC legislation has a centralised and regulated legislator, as well as a functioning mechanism for dispute settlement. As such EC legislation can be said to differ in many important aspects from international law.

Despite the provisos, an EC directive is analysed below, as an instrument telling of developments which might be of importance to the WRC, and exemplifying certain features of the WRC, rather than as an instrument directly comparable to the WRC as international law. As such, the delimitation between international law and EC law still stands, although EC legislation is analysed in this study.

1.3.3 Terminology

As some key terms used in the presentation that follows have meanings that may be obscure to some readers, relative to context or that are not familiar to a general international lawyer, these terms are explained here.

Strict liability is a form of liability where both *culpa* and *dolus* satisfy the subjective element of liability, or in other words, where neither culpa nor dolus must be proven on the side of the liable subject. Exceptions and qualifications to strict liability exist, such as distress or force majeure. Absolute liability is a form of liability that is identical to strict liability in that no subjective element must be demonstrated on the side of the responsible subject, but differs from strict liability in its lack of modes for exculpation.

As this presentation makes frequent use of the term liability, and in light of the fact that international lawyers often misinterpret this term as identical to responsibility, the fundamental term liability is here explained. The fundamental difference between the terms liability and responsibility is that responsibility occurs as a result of a wrongful act, thus presupposing a

breach of an existing obligation. Liability may arise in relation to either a wrongful or a lawful act, and as such does not presuppose a breach of an obligation.

2. The general legal framework

It is well established that views differ on whether international law is enforceable and whether states actually comply with international law or not. Some claim that compliance is "the Achille's heel of international regulation"[3] and others claim that nearly all international norms are generally complied with[4]. It seems just to conclude that scholarly opinions on how to ensure compliance with and give effect to international law are remarkably divergent.

Any body of norms referred to as law is, put drastic, quite meaningless unless accompanied by mechanisms for enforcement, compliance and dispute settlement, or in other words mechanisms for giving effect to norms. Examples of such mechanisms from domestic systems include resort to adjudication, some kind of state power imposing sanctions, such as executive and adjudicating powers, and social sanctions between individuals.

Conversely, a core element of international law is state sovereignty and thus a lack of, and a somewhat unwilling approach to establish such authority. Nevertheless, international law exists and is complied with by states. International law is thus accompanied by some mechanisms that provide for compliance.

This study does not focus on such mechanisms for compliance, but on secondary rules upon which such mechanisms are grounded. The theories, or approaches, to responsibility and liability thus form the focus of this study.

The traditional basis for giving effect to international law is state responsibility. As will become clear throughout the course of this study, state responsibility is not the sole ground for giving effect to international law. Civil liability established by international law is growing in importance as a basis for giving effect to norms of international law.

The Articles on Responsibility of States for Internationally Wrongful Acts by the United Nations International Law Commission (ILC Responsibility articles) were adopted in 2001[5]. The articles are a result of more than 50 years of codifying and progressively developing the customary legal regime for state responsibility, and their adoption is an important milestone within international law. The articles establish an important distinction between

[3] Breitmer, Young & Zürn, *"Analyzing international environmental regimes: From case study to Database"*, 2006, p. 63 ff.
[4] Henkin, *"How nations behave: Law and Foreign Policy"*, 1979, p. 47.
[5] Draft Articles on Responsibility of States for Internationally Wrongful Acts, *Report of the International Law Commission on Its Work of Its Fifty-Third Session*, 56 U.N. GAOR Supp. (No. 10) at 43, UN Doc. A/56/10 (2001).

two sets of legal rules: primary rules, which impose obligations on states, and secondary rules, which concern breaches of primary rules and the consequences of such breaches. Since the ILC Responsibility articles are widely appreciated and of fundamental value in international law, the terminology - primary and secondary rules - is employed in the course of this study.

The content of the ILC Responsibility articles is further commented upon below.

The evolution of international consciousness on environmental concerns, including international environmental law, can be described using a, somewhat normative, four step model. The model[6], which is reproduced below, is not empirical data within this study but is used for explanatory purposes by linking the development of views on law to the development of new environmental insights for humankind.

The first step in this model is called "the epistemological break" and marks the point in history when humankind came to the realisation that it is able to effect and shape nature in a lasting way, but continue to regard nature as an endless resource for humans to exploit.[7]

At the second stage, humankind's environmental knowledge counters the view that nature is an inexhaustible resource, and regards natural resources as rechargeable, but is of the view that some environmental wounds will not heal without a cure. This stage thus proposes reparative measures, called the curative approach.[8]

The next stage, the preventive approach, criticises the curative approach by economic arguments. Humankind has at this stage reached the conclusion that reparation of the environment is not as economically rational as preventing damages to the environment from occurring in the first place, and that some environmental damages may be irreparable. This approach thus aims at preventing damages from ever occurring or, when they do occur, attempts to prevent damages from spreading.[9]

At the fourth and final stage in this model, humankind criticises the preventive model for its reliance on scientific knowledge. Since it is difficult to take preventive measures against what you not know, or what you will not know until after the damage has appeared, the preventive model relies on a strong belief in science. Since scientific facts are constantly changing in the course of the development of science, it may be argued that what is true today may not be true tomorrow. The inherent uncertainty in science thus requires precautionary measures to be taken even in the

[6] Sadeleer, *"Environmental Principles: From Political Slogans to Legal Rules"*, 2002, pp. 13-19.
[7] Ibid.
[8] Ibid.
[9] Ibid.

absence of full scientific certainty about the environmental consequences of a given action. This stage relates closely to the precautionary principle, and is called the anticipatory stage.[10]

While one aim of international law addressing marine pollution is to prevent pollution from occurring, another aim is to facilitate the bringing of compensation claims by those who have suffered damage as a result of marine pollution. Through civil liability schemes, operators as eventual polluters are encouraged to refrain from polluting and take care in observing standards designed to prevent pollution. Hence, civil liability schemes for protection of the marine environment embrace a preventive approach to environmental damage.[11]

This chapter provides an overview of the two main sets of relevant secondary rules: state responsibility and civil liability, and touches upon the advantages and disadvantages of each approach.

2.1 State responsibility

The traditional approach to secondary rules within international law, and thus within international environmental law, is the bringing of interstate claims based on the principle of state responsibility, sometimes referred to as international liability. State responsibility can, in concise words, be said to consist of a principle by which states may be held accountable through the bringing of interstate claims before international tribunals and in arbitrations. In other words; when a state commits an internationally unlawful act against another state, international responsibility is established between the two. Although many questions concerning state responsibility remain unanswered, the existence of the principle is fundamental to international law, similar to the principles of state sovereignty and equality of states from which the principle of state responsibility can be said to stem from.[12]

State responsibility can be said to include three main aspects; an obligation in force as between the particular states in question, the occurrence of an act that violates that obligation by one state and is imputable to the responsible state and lastly, damage or loss that results from the breach of the obligation in question.[13]

As noted above, the ILC Responsibility articles codify the general regime of state responsibility in international law and as such are central for the application of state responsibility. Not every part of the ILC Responsibility articles can be presumed to reflect existing customary international law. Nevertheless, for the purpose of this study, which only concerns the main

[10] Ibid.
[11] Churchill & Lowe, "*The law of the sea*", 1999, p. 358.
[12] Birnie & Boyle, "*International law and the environment*", 2002, p. 181.
[13] Shaw, "*International law*", 2003, p. 696.

scheme of state responsibility, the ILC Responsibility articles are presumed to represent existing customary international law. Where serious doubt exists concerning whether the ILC Responsibility articles reflect customary international law, this is expressly noted.[14]

The complex and important nature of the ILC Responsibility articles, as the fundamental basis for primary rules of international law, is reflected in the fact that the topic of state responsibility was placed on the Commission's agenda immediately after the ILC was established in 1948, and remained there until 2001 when the articles were finally adopted. The complexity of the state responsibility regime is attributable, at least in some part, to the fact that the work on state responsibility is relevant for all primary rules of international law, while conversely, other work of the ILC have concerned particular sets of primary rules. Codification of the norms constituting state responsibility thus has broad impact not only upon secondary rules and state responsibility as such, but also upon primary rules, and therefore upon the structure of international law as a whole. Rules on state responsibility can thus be said to concern the other side of the coin of primary rules.[15]

As a result of their great importance, the ILC Responsibility articles are general in character and apply to all primary rules irrespective of the circumstances surrounding a specific primary rule. They apply to primary rules within every sphere of international law, including environmental law, human rights law, law of the sea and economic law. Thanks to this generality, the secondary rules on state responsibility can be considered individually, apart from the primary rules to which they correspond, as is evident from the ILC Responsibility articles.[16]

After this introduction to state responsibility, a description of the main scheme of the ILC Responsibility articles follows. Although the reader of this study is assumed to be familiar with state responsibility, a brief overview of the content of the ILC Responsibility articles is of benefit for the presentation of this study. The presentation of state responsibility here concludes with some comments on the criticism that has been levelled against state responsibility as it relates to international environmental law.

Part 1 of the ILC Responsibility articles establishes the "origin" of state responsibility; that is, the commission of an internationally wrongful act by a state or an act attributable to a state which is in breach of an international obligation (ILC Responsibility articles art. 2). Circumstances which preclude responsibility for such an act are evident in Chapter 5 Part 1, and include consent, self-defence, the act being a countermeasure, force majeure, distress, necessity and compliance with peremptory norms (ILC Responsibility articles arts. 20-27).[17]

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[14] Malanczuk, *"Akehurst's modern introduction to international law"*, 2002, p. 254.
[15] Ibid; and *"Report of the International Law Commission on Its Work of Its Fifty-Third Session"*, p. 32.
[16] Fitzmaurice, *"International Responsibility and Liability"*, 2007, p. 1016.
[17] Malanczuk, pp. 254-256.

Part 2 concerns the "content, forms and degrees" of state responsibility; in other words, the legal consequences of an internationally wrongful act, i.e. the issue of remedies. The available remedy, according to the ILC Responsibility articles, is reparation (ILC Responsibility articles art. 31), which can be accomplished in a number of ways, including restitution, compensation and satisfaction (ILC Responsibility articles arts. 34-37).[18]

Finally, Part 3 concerns the implementation of international responsibility of a state. The ILC Responsibility articles express this as "invocation" of responsibility, which addresses the standing of a state entitled to invoke responsibility of another state. An "injured" state may invoke the responsibility of another state for an internationally wrongful act (ILC Responsibility articles art. 42), but other states may also under certain circumstances invoke that responsibility (ILC Responsibility articles art. 48). An injured state may take counter-measures against a state that is responsible for an internationally wrongful act against it in order to induce that state to comply with its obligations of international law, and thus cease the internationally wrongful act (ILC Responsibility articles art. 49). Chapter II of Part 3 outlines rules concerning countermeasures (ILC Responsibility articles arts. 49-54).[19]

Although the impact of the state responsibility regime is of immense value to international law, the importance given to the general regime of state responsibility as secondary rules aiming to give effect to international law has been subject to much criticism, especially in relation to international environmental law. A brief overview of the most common, and possibly most serious, concerns is provided herein.

State responsibility is triggered by breaches of obligations imposed upon states, i.e. primary rules. Rules contained in environmental treaties may very well form such primary rules. However, since most international environmental norms are vague and subject to different interpretations, the outcome of interstate claims for breaches of environmental primary norms is often difficult to predict. Case law, which could help to resolve such vagueness and promote the predictability of the application of state responsibility, is as of yet scarce in the field of environmental law.[20]

Furthermore, since cases relying on the state responsibility regime may be brought only by states, the willingness of states to invoke the responsibility of another state is fundamental to the operation of primary rules in this context. The instrument of diplomatic protection does not resolve this matter, as the competence to offer diplomatic protection remains subject to state discretion[21]. States are and have been quite unwilling to disturb

[18] Ibid.
[19] Ibid.
[20] Fitzmaurice, p. 1017.
[21] See *Barcelona Traction, Light and Power Company, Limited (Belgium/Spain)*, paras. 78-79.

diplomatic relations by bringing interstate claims, which is of cause crucial to the proper functioning of state responsibility as a mechanism for giving effect to international law.[22]

Another problematic question, especially in relation to common areas, is the topic of representation of the environment. Although much effort has been spent by doctrinaires attempting to resolve this issue, it remains unclear under what circumstances a state can represent the environment of a common area. The question of standing arises both in relation to the invocation of state responsibility and to the availability of remedies. The conventional approach to the right to invoke the responsibility of another state is bilateral; that is an "injured" state may invoke the responsibility of another state responsible for the loss or damage suffered (ILC Responsibility articles art. 42)[23]. Since many environmental norms concern common areas or phenomena, such as the ozone layer, biodiversity or the climate, it is difficult to conclude which state may be seen as "injured" for an injury to a common interest.[24]

The concept of obligations *erga omnes* and *erga omnes partes* might help to resolve this issue. These concepts concern protection of such areas in which all states, or all parties to a certain treaty, have a legal interest. As such, all states (erga omnes), or all parties to a certain treaty (erga omnes partes), may be seen as "injured" and thus entitled to invoke the responsibility of the state that has committed the wrongful act in question. Although the ILC Responsibility articles recognise the concept (ILC Responsibility articles art. 48) and provides firm support, many aspects of the content and meaning of those concepts remain uncertain. Furthermore, it must be held in mind that art. 48, at least in part, presumably represents progressive development of international law rather than codification of existing customary international law. Nevertheless, art. 42 not only concerns breaches of bilateral obligations between states, but also of obligations erga omnes and erga omnes partes. However, a state may only invoke the responsibility of another state under art. 42 when it is directly affected by a breach. Art. 48 suggests a way for unaffected third states to seek remedy for breaches of obligations protecting common interests. It concerns erga omnes obligations set up by custom and multilateral treaties, for example, by regimes regulating the high seas or the earth's climate.[25]

However, even when states have standing under art. 48, problems arise when it comes to the remedies available for such breaches. Cessation, assurances and guarantees of non-repetition are available remedies for unaffected third states. Generally, these are all remedies of minor importance.[26]

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[22] Birnie & Boyle, pp. 199-200.
[23] See e.g. *South West Africa Cases (Ethiopia/South Africa; Liberia/South Africa).*
[24] Fitzmaurice, pp. 1020-1022.
[25] Ibid.
[26] Ibid.

This leads to the last point of criticism on the general law of state responsibility considered in this study, namely that none of the available remedies under the ILC Responsibility articles are satisfactory for the reparation of damages as a result of breaches of international environmental law. The main forms of reparation available under the ILC Responsibility articles - restitution and compensation - both raise certain problems in relation to international environmental law.[27]

While restitution has certain advantages in relation to environmental damages, such as the lack of need to undertake a valuation of the environmental damage since the remedy relates to the factual situation prior to the damage, some environmental damages may be irreversible, including for example, the complete exhaustion of a species. In other situations restitution may result in unreasonable burdens upon the liable state, due to the inherent complexity of the environment. A generally agreed understanding of compensation is that it is appropriate only in the case of financially assessable damages.[28]

The ILC has observed in its commentary to the ILC Responsibility articles that state practice generally supports a definition of compensation under which costs reasonably incurred in preventing or remedying pollution or the diminished value of polluted property are recoverable. The ILC further states that some environmental values, such as biodiversity, are as a matter of principle, no less real and compensable than damage to property, though they may be more difficult to quantify.[29]

It seems that the general understanding that only quantifiable damages are recoverable under the state responsibility regime stands, and thus that some environmental damages may not be recoverable under the regime of state responsibility.

Even though international environmental law has developed rapidly in recent decades many topics remain unregulated. One such area of crucial importance relates to the standard of due diligence and the question of fault. The lack of clear subjective elements has the effect that even if a certain act is sanctioned, it is not sanctioned as such but can in some circumstances be excused if the standard of due diligence has been met. The standard of due diligence is thus of crucial importance for the predictability of claims for environmental damages.[30]

In light of the above considerations it is reasonable to conclude that state responsibility is a regime with serious deficiencies for giving effect to international environmental law. A large part of this inadequacy relates to

[27] Ibid.
[28] Fitzmaurice, pp. 1018-1020.
[29] *"Report of the International Law Commission on Its Work of Its Fifty-Third Session"*, p. 101.
[30] Fitzmaurice, pp. 1018-1022.

the lack of willingness by states to bring forward interstate claims for damages to the environment.[31]

The criticisms against state responsibility as secondary rules for international environmental law are grave and convincing. The critical debate and subsequent insights concerning state responsibility have certainly played a significant role in the development of an alternative regime of secondary rules designed to operationalise accountability for environmental damages; namely civil liability regimes. The criticisms of state responsibility in relation to international environmental law provide important background context to the assessment of civil liability regimes within international environmental law. Civil liability can apparently be seen as a complement, rather than as an alternative, to state responsibility in establishing secondary rules required for the operation of primary rules. The criticisms referred to in this study - that primary environmental rules are vague which makes it difficult to determine when a primary rule has been breached, that states are the sole actors entitled to invoke state responsibility, that states traditionally are unwilling to disturb diplomatic relations with other states by bringing such claims, that only directly affected states are entitled to invoke such responsibility leading to the main remedies and that unaffected third states are only entitled to bring claims resulting in remedies of minor importance and, that the remedies under the state responsibility regime are insufficient as remedies for environmental damages, are important to be aware of when considering civil liability regimes within international environmental law, both as an explanation for the large increase in the number of such regimes in recent years, and as an explanation of the kinds of problems which civil liability regimes should address in order to be more efficient than the state responsibility regime.

2.2 Civil liability

The following presentation of civil liability regimes is not summary, critical or concise as the above analysis of state responsibility. The presentation of civil liability regimes comprises this chapter, and also the following chapter where characteristics of civil liability regimes addressing damages to the marine environment are extracted and the concluding chapter where the WRC is analysed in the light of lessons learned in the previous chapters.

The complexity of assessing civil liability regimes relates to the non-existence of a general code of civil liability, so that several treaties establishing civil liability are summarised and merged here to form a comprehensive picture of civil liability regimes. In addition to the variety among civil liability regimes, especially in comparison to the more coherent regime of state responsibility, the fact that civil liability is a modern appearance in international law explains, at least in part, difficulties in providing a complete presentation of civil liability regimes.

[31] Ibid.

This introductory chapter links the previous presentation of state responsibility, where the need for alternative approaches to secondary rules giving effect to environmental norms was highlighted, with the more focused chapters that follows upon civil liability regimes addressing damages to the marine environment. This chapter sets out the general context of civil liability regimes, and contains an overview of the motivation for the development of civil liability regimes, as well as some broad remarks on the nature of civil liability regimes and some critical comments concerning their actual operation in the context of international environmental law.

Principle 22 of the Stockholm Declaration of the 1972 UN Conference on the Human Environment calls on states to

> "co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction"[32]

Principle 13 of the Rio Declaration adopted at the UN Conference on Environment and Development in 1992 calls on states to

> "develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also co-operate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction"[33]

LOSC art. 235.3 calls on states to develop international law on liability to ensure prompt and adequate compensation for pollution of the marine environment. As a singular example, the Bunker Oil Convention recalls this provision in its preamble. Furthermore, all of the conventions adopted under the United Nations Environment Programme Regional Seas Programme and the 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area call on their parties to develop civil liability regimes concerning the pollution regulated by each treaty.

Calls for the development of civil liability regimes are common in areas other than in protection of the marine environment. For example, the 1992 Convention on Biological Diversity, its Cartagena Protocol on Biosafety and the 1991 Protocol to the Antarctic Treaty on Environmental Protection call upon states to develop such mechanisms.

Although these calls are not always answered they represent expressions of the generally positive position taken by the international community on civil liability regimes addressing environmental damages. As will be noted,

[32] The Declaration of the United Nations Conference on the Human Environment, Stockholm 1972 principle 22.
[33] The Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro 1992 principle 13.

however, the approach of states to negotiating civil liability regimes is one thing, while adherence to such regimes is quite another.[34]

Civil liability has its roots in elementary compensatory principles, that one who has suffered damage is entitled to claim compensation from the one who has caused the damage. Civil liability regimes therefore include a reactive mechanism, to provide the victim of pollution with adequate and prompt compensation for the damage suffered as a result of the pollution. In addition, civil liability regimes calling on the polluter to pay for the pollution he/she causes provide an incentive for the polluter to refrain from polluting. As a theoretical advantage, civil liability regimes strengthen the position of the polluter-pays principle, which is a cornerstone of international environmental law, by including both reactive and proactive provisions.[35]

Treaties establishing civil liability regimes can be categorised into two groups - those that deal with damages caused by a particular activity, called sectoral treaties, and those that apply generally to all activities that are potentially harmful to the environment. Only two treaties have been concluded in the latter group; the Lugano Convention and the EU Liability Directive. Both are discussed further below. Sectoral treaties address activities such as carriage of dangerous goods by various means of transport, nuclear activities and pollution from ships. As is apparent, this study focuses on civil liability regimes for protection of the marine environment from damages arising from maritime activities, thus falling within the group of sectoral treaties.[36]

A common characteristic of civil liability regimes, which is significant from both a specific and a general perspective, is the status of civil liability treaties at international law, which is commonly problematic. Several major civil liability treaties are not in force, and do not seem likely to become so, as a result of lack of ratifications by states.[37] In light of the many calls for civil liability regimes, and the low number of ratifications, it seems as if states are currently more willing to make rhetorical appeals for the development of civil liability regimes, and far less eager to actually ratify and operationalise such regimes. In addition to the fact that negotiating civil liability regimes is a lengthy and costly procedure, the low numbers of ratification have led some commentators to question the appropriateness of undertaking any developments of such schemes. Some have argued further that the major deficiency in existing civil liability regimes is their unratified status, and that the world community should now focus its efforts on

[34] Churchill, "*Facilitating (Transnational) Civil Liability Litigation for Environmental Damages by Means of Treaties: Progress, Problems, and Prospects"*, 2001, pp. 29-32.
[35] Churchill, pp. 3-4.
[36] Churchill, pp. 6 ff.
[37] See presentations below, e.g. of the Lugano Convention and the Basel Convention and Protocol.

promoting adherence to existing regimes, rather than developing new regimes or undertaking further development of such regimes.[38]

Following these brief comments on the general relevance of civil liability regimes, the following section describes the WRC, followed by descriptions of some of the most important and influential civil liability regimes relevant for the protection of the marine environment from pollution by maritime activities. Although the major part of the analysis in this study is contained in the ending chapters, the descriptions of the WRC and other civil liability regimes hold some analysis, and as such form part of the descriptive analysis that is employed in this study.

[38] Daniel, "*Civil Liability Regimes as a Complement to Multilateral Environmental Agreements: Sound International Policy or False Comfort"*, 2001, pp. 12 and 17; and Churchill, pp. 31-32.

3. Wreck removal convention

As the Wreck Removal Convention (WRC) was recently adopted, the reader is not assumed to be familiar with this document, and so a brief introduction to the WRC and its context is provided herein.

Very little doctrine exists concerning the WRC, and so the major part of the following analysis is based upon my own conclusions from study of the WRC. To some extent, preparatory documents from the IMO Legal Committee have also been considered.

3.1 General overview

Although the number of maritime accidents resulting in shipwrecks has decreased dramatically in recent times, it is still a fact that ships occasionally sink and may end up as wrecks. Wrecks are problematic for at least three reasons: (1) they hinder the navigation of other ships; (2) they are both a source of pollution and are pollution themselves; and (3) the costs of removal and marking of wrecks are substantial.

Traditionally, wrecks have been regarded mainly as hindrances to navigation. However, due to the fact that the fleet of wrecks resting on the sea-bed is rusting, increasing the risk of leakage of harmful substances, and as a result of increased environmental awareness, wrecks are nowadays the subject of environmental concerns as well.

It goes without saying that dealing with wrecks incurs immense costs. To have a ship removed from the sea-bed is a costly venture, even by shipping standards. Nevertheless, removal of wrecks can in some cases be undertaken for economic reasons, due to the values of the ship itself and of its cargo. However, most wreck removal endeavours cost more than the value of the ships and cargo themselves.

As no general rescue authority or mechanism operates at sea, the willingness of private parties to perform rescue operations is of great importance for the safety of shipping. In order to promote the participation of private parties, the law of salvage presents salvage awards to salvors as incentive for private parties to perform rescue operations at sea. Briefly, the salvor earns a salvage award for undertaking salvage operations, though in general only for successful operations, as embodied in the self-explanatory principle, “no cure no pay”.

As the law of salvage relates to emergency situations that sometimes lead to ship wrecks, it is not surprising that the ground scheme of the law of salvage

has influenced the law of wreck removal.[39] However, since a wreck is in most cases more costly to save than is a ship in distress, and given that a wreck is generally of less value than a ship that has not yet sunk, a salvage award calculated on the basis of the value of the salvaged object is generally not as appealing with respect to wrecks as in relation to ships afloat. It could thus be argued that a direct transfer of the principles governing the law of salvage to the law of wreck removal is not suitable, since most often a wreck is not an economic treasure chest, as ships afloat are often considered to be. The suitableness of relying on positive measures within the law of wreck removal, like salvage awards, is doubtful. It may be argued that negative measures, like sanctions, need to be used for promotion of wreck removal.

The presentation of the WRC in this study may be accused of being inappropriately short and cursory, since the WRC is the instrument at the core of this study. However, it is my belief that the following presentation of the WRC, although not stretching over a great number of pages, is sufficient for the purpose of this study and gives the reader the required knowledge of the WRC. It must be borne in mind in considering the following presentation of the WRC that several of its features find equivalents in other regimes that are presented elsewhere in this study, and thus comparable features within the WRC need simply to be noted, since they are explained elsewhere.

The following presentation of the WRC comprises a general description of the WRC and an extraction of its core characteristics. As the main instrument under consideration in this study, the WRC is further addressed in the course of presenting other civil liability regimes and in the drawing conclusions from this study

The Nairobi International Convention on the Removal of Wrecks (WRC) was adopted in Nairobi, Kenya, May 2007. The WRC was negotiated and drafted within the IMO Legal Committee, like many other important maritime conventions. It was adopted by an international conference, and will enter into force twelve months after the date on which ten states have either signed it without reservation, or have deposited instruments of ratification with the IMO Secretary General (WRC art. 18.1), acting as depositary for the WRC (WRC art. 20.1).[40]

The WRC is designed to fill a gap in the existing framework of international law governing shipping, particularly related to the recognition that shipping is a major source of marine pollution, and international rules are required to promote and ensure prompt removal of wrecks. The WRC can thus be seen as the last in a line of international instruments dealing with the most

[39] See e.g. IMO/LEG/89/5/2, where Comite Maritime International comments the relationship between the (draft) WRC and the law of salvage.
[40] IMO Briefing 12 of the 22 May 2007, "http://www.imo.org/Newsroom/mainframe.asp?topic_id=1472&doc_id=8070", 300608.

significant concerns related to shipping as a source of marine pollution (i.e. 1992 CLC, Fund, HNS and Bunker Oil Conventions).

The basic scheme of the WRC provides that following a maritime casualty resulting in a wreck the operator of a ship must report the wreck to the affected state. The affected state then determines what hazards the wreck brings with it, locates and marks the wreck. The registered owner of the ship is responsible for removing the wreck in co-operation with and under the supervision of the affected state.[41]

However, if the owner of the ship is not capable of removing the ship, the authorities of the affected state may remove the ship. Associated costs for wreck removal in this situation are directly recoverable from the shipowner. The right of authorities to remove wrecks, and the corresponding right to recourse against the shipowner is designed to serve as an incentive for shipowners to undertake the removal themselves.

The WRC applies first and foremost to the EEZ of states party, and, if the state party in question has not established such a zone, to an area beyond and adjacent to the territorial sea of that state and extending not more than 200 nautical miles from the baselines from which the territorial sea is measured (WRC art. 1.1). By this provision the convention avoids the problem of non-applicability resulting from the non-establishment of an EEZ, and does not force states that want to adhere to the convention to establish an EEZ.

Naturally, many wrecks are located within the territorial sea, since the existence of maritime hazards such as grounds are generally more present in the territorial waters than in open water. When drafting the WRC, it became apparent that several states felt it problematic to impose compulsory application of the WRC to their territorial seas.[42] As a compromise, states parties to the WRC are free to extend the application of the WRC to their territorial sea, by simply notifying the depositary of the convention (WRC art. 3.2).[43]

As the Intervention Convention (see below) also covers issues addressed by the WRC, the risk of overlap is addressed in the WRC by explicitly giving precedence to the Intervention Convention (WRC art. 4.1).

Following the trend within general law of the sea and maritime law, warships and ships operated by states on government non-commercial service are excluded from the application of the convention (WRC art. 4.2).

States parties to the WRC shall require masters and operators of ships flying the flag of that state to immediately report to the affected state, the state where the ship is located, a ship involved in a maritime casualty resulting in

[41] IMO/LEG/90/5, Annex I.
[42] IMO/LEG/92/4/3; and also IMO/LEG/91/3/1.
[43] IMO/LEG/92/4/3.

a wreck (WRC art. 5.1). Such reports shall include all the information necessary to determine the nature of the hazards this wreck may pose, including its precise location, type of ship, nature of any cargo, with particular reference to any hazardous or noxious substances, and quantity and types of any oils on board, including lubricating oil (WRC art. 5.2).

The affected state is then to determine whether the wreck poses a hazard, taking into account a non-exhaustive list of factors (WRC art. 6). It may be of interest to note that both factors relevant to navigation, such as traffic density, and factors relevant to the environmental impact, such as the environmental sensitivity of the area where the wreck occurred, are to be taken into account.

The affected state is under a further obligation to inform other mariners and other concerned states of the nature and location of the wreck as a matter of urgency. In doing this the affected state shall use all practicable means, including the good offices of States and organizations (WRC art. 7.1). Note here, that this obligation to warn attaches to the affected state even if the wreck is unlikely to be deemed hazardous in nature.

If the affected state has reason to believe that a ship poses a hazard, it shall ensure that all practicable steps are taken to establish the precise location of the wreck (WRC art. 7.2). This obligation expands where it has been determined that a ship poses a hazard, in which case the affected state is under a duty to mark the vessel with internationally accepted buoyage (WRC art. 8.1-2). The affected state shall promulgate the particulars of the marking by use of all practicable means, including appropriate nautical publications (WRC art. 8.3).

The registered owner of a sunken ship is liable for the compensation of all costs incurred by the affected state under WRC arts. 7-8 (WRC art. 10.1). This includes the costs for informing other mariners and other concerned states, locating and marking the wreck. The costs for the affected state to determine whether the wreck poses a hazard is, however, not recoverable from the registered owner and will rest with the affected state.

The substantial core of the WRC is art. 9, which imposes several duties upon a registered ship owner: first and foremost to remove the wreck at his/her own expense (WRC art. 9.2), and if he/she does not, or cannot, compensate the affected state for expenses incurred in its removal of the wreck (WRC art. 9.7).

It may be noted that the affected state is not under an obligation to remove wrecks deemed to constitute a hazard, but has the right to remove such wrecks and be indemnified by the registered owner. The registered owner thus bears the primary obligation for removal of the ship, according to certain conditions established by the affected state (WRC art. 9.5 and 9.6.a).

If the circumstances of a wreck require action more immediate than that which is likely to be taken by the registered owner, the affected state is entitled to remove the wreck in the most expeditious and practical manner available (WRC art. 9.8). Likewise, the costs incurred by the affected state in doing so (under WRC arts. 7-8) are to be absorbed by the registered owner (WRC art. 9).

However, if the owner proves that the maritime casualty leading to the wreck was the result of war, wilful conduct of a third party or was wholly caused by a failure in navigational aids for which a government is responsible, he/she is exempted from liability (WRC art. 10.1). More importantly, such liability may only be established if it is not in conflict with other named treaties, such as the 1992 CLC and the Bunker Oil Convention (WRC art. 11.1).

The liability of the registered owner is subject to compulsory insurance (WRC art. 12). Claims may be brought directly against the insurer - that is a right of direct action, which is further commented below.

Claims under the convention will be time barred if not brought within the first three years from the date the affected state determines the wreck to constitute a hazard. However, an absolute time bar of six years exist. If the wreck results from a series of casualties, the six year period shall run from the time of the first casualty (WRC art. 13). The affected state is thus under some time pressure in order not to loose its right of recourse against the registered owner.

Any dispute that arises between states parties to the convention, regarding the application or interpretation of the convention, shall, at first hand, be resolved through mediation, judicial settlement or other peaceful means of their choice (WRC art. 15.1). If no settlement is possible within twelve months from the date when a state party notified another that a dispute exists between them, the dispute shall be settled in accordance with LOSC part XV (WRC art. 15.2) which includes resort to international arbitration, to the International Tribunal for the Law of the Sea or to the International Court of Justice. A more detailed presentation of LOSC part XV is not considered relevant here.

The WRC is open for signature until November 2008, where after it remains open for accession (WRC art. 17).

The WRC enters into force twelve months after the date on which ten states have accepted to be bound to it (WRC 18.1).

As far as my research shows the WRC had not entered into force when this study was undertaken.

3.2 Characteristics

Although the description of the WRC above is as concise and targeted as a description of the characteristics could be, a short listing of the main characteristics of the WRC is offered here for the purposes of offering further clarity. Several of these characteristics are parallel to other civil liability regimes for protection of the marine environment from damages arising from maritime activities, as will be apparent from the following chapter concerning other civil liability regimes.

First and foremost, the WRC can clearly be classified as a maritime convention, since it relates to maritime activities and emanates from the IMO, but also because several of its essential features parallel other conventions generally considered being maritime conventions.

The WRC is a part of international law establishing civil liability, in the sense that the owner is obliged to compensate costs occurring from a certain event.

The liability is strict, but accompanied with the traditional marine exemptions from liability and subject to limitations on the levels of indemnity for which a shipowner may be held responsible.

The liability is channelled to the registered shipowner.

In order to ensure the financial capability of shipowners to meet liability incurred as a result of a shipwreck, the liability in the WRC is subject to compulsory insurance, thus spreading the risk over the industry.

The WRC cannot be said to embody the polluter pays principle, since under the WRC the polluter is only liable to a certain amount, and even up to that level the cost of pollution is limited by the compulsory insurance. Above that certain level, however, the innocent victim, whether it is a private entity, an affected state or the environment, has to carry the burden of pollution.

The last distinct characteristic of the WRC of interest here is its provisions requiring emergency response measures. Examples include an obligation on the shipowner to inform the affected state of the occurrence of an accident, and obligations on an affected state to take certain response measures, such as marking the wreck and informing the appropriate international organ.

Although the response measures obligations are not the primary target of the WRC, which is the establishment of civil liability and a duty to remove wrecks, the inclusion of such provisions in the WRC is a distinct and unique feature, especially when one considers that other characteristics of the WRC are in line with existing civil liability regimes for protection of the marine environment from damages arising from maritime activities. Since the field of civil liability regimes for protection of the marine environment from

damages arising from maritime activities (i.e. 1992 CLC, Fund, HNS and Bunker Oil Conventions) is coherent, even a minor deviation from this accepted regime is exceptional. The inclusion of response measures in the WRC is thus a distinct characteristic of this treaty's particular regime.

This inclusion of provisions regarding response measures in the WRC, a civil liability regime, is noteworthy and analysed throughout this study. Not many of the other characteristics of the WRC are surprising, but follow the general structure of treaties establishing civil liability regimes for the protection of the marine environment from damages arising from maritime activities. As is explained below, the inclusion of response measures in the WRC is not treated here simply as an atypical occurrence, but as a reflection of a general development in international environmental law, which is analysed and traced below.

4. Existing civil liability regimes

Protection of the marine environment is often mistakenly thought of as an area of law solely concerned with the regulation of maritime activities, such as shipping and offshore activities. This is not the case. However, it is true that the regulation of pollution from maritime activities is an important area within the broader concept of protection of the marine environment, however it is just one smaller concept at the absolute front line of environmental regulation. Maritime activities are not the one and only source of marine pollutants.

This study does not explore reasons related to the standing of maritime activities as an area particular important to environmental regulation, but simply takes note of this fact by asserting that studies of this particular area of law are relevant for other areas of environmental law in addition to addressing pollution specifically from maritime activities.

In order to loan quantitative proof to the assertion that maritime activities are not the sole source of marine pollution, a report[44] published in 1990 is employed here. This report estimates that 12 % of marine pollution emanates from shipping, 10 % from dumping, 1 % from sea-bed activities, 44 % from run-off and land-based discharges and 33 % from the atmosphere (the vast majority from land-based sources). Although these numbers do not tell us anything about the character of the respective pollutants in each scenario, they do paint a somewhat different picture of marine pollutants than the one often thought of. That is, that the majority of marine pollutants comes from maritime activities.

The presentation and analysis of civil liability regimes embodied in treaties below is divided in three subchapters: (1) treaties relating to ship-source damages; (2) treaties relating to the non-marine environment; and (3) other developments. As may be apparent, the first subchapter clearly deals with treaties that are directly comparable to the WRC and represent a special regime of international law, while the following subchapters deal with treaties exemplifying either the context in which the WRC exists or certain developments relevant to the WRC regime.

4.1 Treaties relating to ship-source damages to the marine environment

Although a description of the International Maritime Organization (IMO) is not essential for the purposes of this study, a brief presentation of this organisation which is of immense importance for shipping and maritime

[44] GESAMP, *"The State of the Marine Environment"*, 1990, p. 88.

affairs, is assistive in understanding the general context in which this study is situated and in which several of the treaties below were conceived and developed.

IMO is the specialised UN agency addressing all matters of international shipping and related activities. It was established in 1958 with the coming into force of its constitutive convention, signed in 1948, and until 1982, the IMO was known as the Intergovernmental Maritime Consultative Organisation (IMCO). The main tasks of the IMO have been to develop and promote a comprehensive regulatory framework for shipping, by promoting safety, environmental concerns, legal matters, technical co-operation, maritime security and efficiency of shipping. Consequently, all global instruments dealing specifically with the marine environment have been developed under the aegis of the IMO.[45]

Key IMO treaties include the International Convention for Safety of Life At Sea (SOLAS), the International Convention for the Prevention of Pollution from Ships (MARPOL) and the (international convention on) Standards of Training, Certification and Watchkeeping for Seafarers (STCW). Several IMO treaties have been subject to large numbers of ratifications and have had an important impact upon the world of shipping and other maritime activities.[46]

As the body under which several treaties of such importance have been concluded, the IMO must be regarded as an organisation at the absolute frontier of the development of regulations for protection of the marine environment. At the forefront of this highly developed area of international environmental law, the IMO could be considered, at least, as one of the leading organisations within international environmental law, whose actions are highly influential on the development of international environmental law in general.

4.1.1 Intervention Convention

As a result of the grounding of the oil tanker TORREY CANYON off the UK coast in 1967 and the English authorities' subsequent bombing of the ship while on the high seas, in an attempt to reduce the pollution by setting its cargo on fire, the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Intervention Convention) was adopted in 1969. Prior to the adoption of the Intervention Convention it had been unclear what measures a coastal state may take on the high seas in order to reduce or prevent pollution from a stricken vessel posing a threat to the coastal state. In the territorial sea the situation is clearer, since a vessel posing a threat to a coastal state ceases to be in innocent passage and therefore falls within the jurisdiction of the coastal state.[47]

[45] www.imo.org, 310308; Churchill & Lowe, p. 23; and Birnie & Boyle, p. 59.
[46] Ibid.
[47] Churchill & Lowe, pp. 353-354.

The Intervention Convention entitles a coastal state facing an imminent threat of pollution, resulting from a maritime casualty, to take necessary preventive measures on the high seas to mitigate or eliminate this threat (Intervention Convention art. I). The definition of maritime casualty includes collision, stranding or other incident of navigation or occurrence resulting in actual or threatened damage to a ship or its cargo (Intervention Convention art. II). However, measures taken to mitigate or eliminate the threat of pollution must be proportionate to the actual or threatened damage (Intervention Convention arts. I and V). The Intervention Convention does not apply to warships or state-owned ships used for non-commercial purposes (Intervention Convention art. I). Before a coastal state may take any of the measures available under the Intervention Convention, except in very urgent situations, the flag state of the ship and other states affected by the casualty must be consulted and anyone likely to be affected by the proposed measures must be notified (Intervention Convention art. III).[48]

In its previous non-amended form, the Intervention Convention only applied to oil pollution, but as a result of an amendment of a protocol in 1973 the Intervention Convention now applies to substances other than oil.[49]

The basic scheme of the Intervention Convention has attracted wide support, something that is evident from the reference in LOSC art. 221 to "customary and conventional rights". That is the right of coastal states to intervene, in a way described above, beyond the territorial sea. This reference indicates that at least the main principles of the Intervention Convention are supported by equivalent norms within customary international law.[50]

Although the Intervention Convention clearly does not establish a scheme providing for compensation to victims of pollution, and as such cannot be regarded as a civil liability regime, several of its provisions are important for the general understanding of the context of this study. As will be demonstrated here, several of its provisions and themes have had significance for the development of civil liability regimes that form the focus of this section.

The Intervention Convention relates to the WRC in that the Intervention Convention is a startingpoint for the rights of a coastal state to take enforcement measures, where coastal states generally does not have the right to take such measures, in order to prevent dangers posing a threat to the coastal state, including grave environmental hazards.

4.1.2 MARPOL 1973/1978

As a key instrument addressing ship-source pollution, MARPOL 1973 and its 1978 Protocol (MARPOL 1973/1978) merit some attention. MARPOL 1973/1978 is concerned with all forms of pollution, apart from dumping,

[48] Ibid.
[49] Ibid.
[50] Ibid.

and thus regulates both accidental and operational pollution by ships. Technically detailed standards are laid down in MARPOL 1973/1978 covering the pollutants oil, noxious liquid substances in bulk, harmful substances carried by sea in packaged form, sewage and garbage. Many of these standards attach directly to the actual construction of ships as well as to their everyday operation. Compliance with MARPOL 1973/1978 is ensured by requiring states parties to prohibit any violation of its provisions, subject to the limitations and constraints contained in MARPOL 1973/1978, and to the general principles in LOSC.[51]

A noteworthy method for giving effect to international standards, such as MARPOL 1973/1978, is provided by LOSC, and exemplified by the interplay between LOSC and MARPOL 1973/1978. In 2000, the parties to MARPOL 1973/1978 comprised over 90 % of merchant tonnage, which means at least that MARPOL 1973/1978 annexes I-II fall within the broader group of "agreed rules and standards"[52] to which LOSC makes reference.[53] Although the set of norms this phrase refers to is truly dynamic and evolutionary in character, it surely includes certain key instruments stemming from the IMO, such as MARPOL 1973/1978 annexes I-II. In some cases LOSC imposes a duty on states to legislate and enforce norms that have the same effect as that of generally accepted international rules and standards established through the competent international organization or general diplomatic conference (see LOSC part XII secs. 6-7), although in theory the legislative jurisdiction of a state is subject to the discretion of that state, as a core element of state sovereignty. Variations in enforceable requirements concerning ship construction and other essential conditions for shipping could result in chaos, since ships frequently navigate different jurisdictions and therefore could be subject to inherently incompatible and highly fragmented sets of norms. The reference to "agreed rules and standards" in LOSC is thus dictated by necessity and reality.

As with many solutions dictated by necessity, the reference in LOSC to "agreed rules and standards" is subject to criticism. Some of the "agreed rules and standards" to which LOSC refers to could even well reflect customary international law, and are thus binding upon states that have not explicitly agreed to be bound by those norms. Some however, surely do not reflect customary international law, and states that have consented to be bound by LOSC may then be obliged to implement and even enforce provisions falling within "agreed rules and standards", which they have not explicitly consented to be bound by. Noting the principle of state sovereignty, of which legislative jurisdiction is a core element, the way in which LOSC implements "agreed rules and standards" is not completely unproblematic.

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[51] Mandaraka-Sheppard, *"Modern maritime law: and risk management"*, 2007, p. 949; and Bates & Benson, *"Marine environment law"*, 1993, paras. 1.50-1.64.

[52] "Rules and standards" is used here as a short version of "internationally agreed rules, standards and recommended practices and procedures", which is the formulation embraced by LOSC.

[53] Birnie & Boyle, p. 363.

Although MARPOL 1973/1978 is regarded as, and indeed is, a key instrument for protection of the marine environment, it is not given any greater consideration in this study beyond its assessment as a significant source of primary international rules for protection of the marine environment. The reason for this decision is that MARPOL 1973/1978 does not contain provisions addressing civil liability, and as such is not treated as a civil liability regime.[54]

MARPOL 1973/1978 is although included here as relevant to the WRC in that it describes the relationship between LOSC, as a frame convention, and more specialised instruments, including treaties establishing civil liability regimes.

4.1.3 LOSC part XII

The United Nations Convention on the Law of the Sea (LOSC) was concluded in 1982, and entered into force in 1994. A basic objective of LOSC is to protect and preserve the marine environment (LOSC preamble) and its impact as a key framework for the law of the sea is immense. A detailed presentation of the general provisions of LOSC is considered to be superfluous to this study, and would quickly exceed the limits of this study. For the purposes of this study, however, it is appropriate to offer some brief words on those LOSC provisions that expressly address protection of the marine environment.

Although a natural startingpoint in the LOSC provisions on protection of the marine environment is not self-evident, because LOSC is a fundament for the law of the sea, the general duty to protect and preserve the marine environment from pollution seems a natural place to begin (LOSC arts. 192 and 194). The main provisions concerning protection of the marine environment are contained in part XII of LOSC (Protection and Preservation of the Marine Environment). Due to the character of LOSC as a legal framework providing for further development of environmental standards, LOSC part XII does not contain detailed environmental standards, but lays down the general regime regulating protection of the marine environment. The main focus for LOSC part XII, like LOSC in general, is to define the jurisdictional rights and obligations, with respect to both legislative and enforcement powers, of flag, coastal and port states (LOSC arts. 207-234 and 236). In addition, LOSC part XII deals with principles (LOSC arts. 192-196), global and regional co-operation (LOSC arts. 197-201), technical assistance (LOSC arts. 202-203), monitoring and environmental assessment (LOSC arts. 204-206) and responsibility and liability (LOSC art. 235).[55]

LOSC art. 235 explicitly addresses responsibility and civil liability and as such deserves some attention here. LOSC art. 235.2 requires states parties to

[54] Birnie & Boyle, pp. 366 ff.
[55] Churchill & Lowe, pp. 346-352.

ensure that recourse is available within their national systems to remedy damage caused by pollution of the marine environment under their jurisdiction. Furthermore, LOSC art. 235.3 requires states parties to co-operate in implementing existing compensation and liability regimes and in developing new regimes. LOSC does not contain provisions that actually provide for the bringing of civil liability claims but only calls upon states to develop such mechanisms. Art. 235 is typifying for the role played by LOSC in the protection of the marine environment to establish a legal framework within which more detailed instruments (e.g. MARPOL 1973/1978) are to be developed.[56]

Even an introductory presentation of the contents in LOSC part XII would exceed the limits of this study, and because the reader is assumed to have at least a general understanding of LOSC, no further presentation of LOSC is included in this study.

4.1.4 Salvage Convention

The International Convention on Salvage (Salvage Convention) was adopted in 1989 in order to harmonise salvage legislation with an aim to prevent delays in salving ships that may result from negotiations of salvage agreements. Salvage operations are often urgent in nature, making clear and predictable legislation most important. The sinking of the oil-tanker AMOCO CADIZ off the French coast in 1978 is an example of a situation where haggling over provisions in a salvage agreement probably worsened the consequences of the casualty.[57]

A fundamental principle of salvage law is the principle of “no cure no pay”, by which the salvor must be successful in his/her attempts to save the ship in order to be entitled to a salvage reward. Although this principle works well in most cases, it does not take pollution into account. Hence, a salvor who prevented pollution, for example by towing a sinking tanker to a less environmentally sensitive area, but did not manage to save the ship or its cargo, receives nothing. As a result, the “no cure no pay” principle provides little incentive for salvors to undertake operations to prevent environmental damage.

The Salvage Convention seeks to provide salvors with such an incentive, to undertake operations in order to prevent environmental damage, by taking into account the skill and efforts of the salvor in preventing or minimising environmental damage in the assessment of the salvage awards. If the salvor has not managed to save either the ship or its cargo, and thus is not entitled to receive any salvage award under the “no cure no pay” principle, the salvor may anyway be entitled to “special compensation” for the prevention of environmental damage. The compensation may consist of the salvors expenses in carrying out the salvage operation, plus an additional 30 % of

[56] Churchill & Lowe, pp. 376 and 389.
[57] Churchill & Lowe, p. 356.

the expense amount, for preventing and/or reducing environmental damage.[58]

4.1.5 Oil pollution under the international regime

The grounding of the above mentioned tanker TORREY CANYON off the UK coast in 1967, and the resulting spillage of 119 000 tons of crude oil into the sea, was the world's first major oil tanker disaster and sparked the start of the international community's efforts, through the IMO, to introduce legal compensation for victims of oil pollution.

As is typically the case in maritime law, environmental standards addressing oil pollution have developed gradually as a result of maritime accidents resulting in environmental disasters.

Since the development of the international regime addressing oil pollution is fragmented and highly detailed, a brief chronological overview is provided here as an introduction. The most important tools of this regime are analysed individually.

The International Convention on Civil Liability for Oil Pollution Damage of 1969 (1969 CLC) was adopted by the IMO two years after the grounding of the TORREY CANYON. Some states considered the compensation limits of the 1969 CLC to be too low, and so the International Convention of the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971 (Fund Convention) was adopted at a conference within the IMO, two years later.

The 1984 Protocol, by which an increase of the compensation limits was proposed, did not receive sufficient support to enter into force, however, a second attempt to increase compensation limits resulted in the successful 1992 Protocols to the CLC and Fund Convention, and the amended conventions are now known together as the 1992 CLC and the 1992 Fund Convention. Following the maritime disasters of the PRESTIGE and the ERIKA, and the consequent oil spills, the compensation limits in the 1992 CLC and 1992 Fund Convention were far exceeded by the amounts claimed in the cases. Consequently, the 2003 Protocol on the Establishment of a Supplementary Fund for Oil Pollution Damage (2003 Protocol) was adopted. This third tier of compensation has increased the compensation limits, which together with the 1992 CLC and the 1992 Fund Convention are 750 million Special Drawing Rights (in 2007, just over 1000 million USD).[59]

[58] http://www.imo.org/Conventions/contents.asp?doc_id=687&topic_id=259, 090408.
[59] Mandaraka-Sheppard, pp. 952-954.

4.1.5.1 1992 CLC

The 1992 CLC provides that where oil escapes or is discharged from a ship and causes damage to the territory of a contracting state, including its territorial sea, the shipowner is strictly liable for such damage and the result of any preventive measures taken. Three exceptions to the strict liability regime exist, by which the shipowner is not liable at all: and are (1) where the damage results from war or acts of God; (2) where the damage is caused by an act or omission by a third party with the intent to cause damage; or (3) when the damage is wholly caused by the negligence or other wrongful act of any government or other authority responsible for the maintenance of lights or other navigational aids (1992 CLC arts. 2-3).[60]

The liability under this regime is channelled not to the cargo owner, nor to the operator of the ship (who in shipping is often a person other than the owner, i.e. charterer), but to the shipowner. The shipowner is required to carry compulsory insurance for this purpose (i.e. P&I-insurance) and claims may be directed directly to the insurer of the ship (i.e. a P&I-club), creating a right to direct action.[61]

As is common within maritime law, the liability of shipowners is quantitatively limited. The limitation amount is set according to the tonnage of the ship, and is subject to an overall limit (1992 CLC art. 5, as amended by protocols). However, the shipowner looses his/her right to limitation and the liability is unlimited if the pollution is "the result of the actual fault or privity" of the shipowner (1992 CLC art. 5(2)).[62]

The 1969 CLC covers "pollution damage", defined as loss or damage caused outside the ship and occurring on the territory of a state party to the convention (1969 CLC art. II). Costs for preventive measures taken to minimise damage are expressly included. However, environmental damage is not referenced, leaving a large margin of appreciation open to the International Oil Pollution Compensation (IOPC) Fund, and the decisions of this body are therefore extremely important for the interpretation of the CLC and the Fund Conventions. The IOPC Fund has interpreted "pollution damage" to include clean-up costs at sea and on the beach, damage to property and economic loss suffered by persons who depend directly on coastal activities, such as fishers and hoteliers. It has been stated that "the [1969] Convention's definition of pollution is so vague it is not really a definition at all"[63], which explains why its interpretation in practice has been left to courts to develop.[64]

[60] Birnie & Boyle, pp. 385-387; and Mandaraka-Sheppard, pp. 955 ff.
[61] Ibid.
[62] Ibid.
[63] Abecassis, *"Oil pollution from ships: international, United Kingdom and United States law and practice"*, 1985, p. 209.
[64] Birnie & Boyle, pp. 387-389.

The 1992 CLC is an improvement over the 1969 CLC in that it explicitly states that compensation for the injury to the environment is recoverable at law, albeit under relatively narrow circumstances. Compensation is limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken, and does not include damage to the environment per se, however it may be stressed that many costs related to environmental damages nevertheless fall within the definition and are recoverable. As only "reasonable reinstatement measures" are deemed recoverable, the traditionally restrictive approach to environmental damage taken by courts excludes a large proportion of environmental damages.

Although, the 1992 CLC definition is certainly a major improvement to the 1969 CLC, it still does not impose civil liability to penalise those who pollute the environment to such an extent state that it cannot be reinstated. Damages resulting in irreversible environmental damage are not covered under the 1992 CLC, assumed not by the polluter but by the community as a whole. This practice clearly deviates from the polluter-pays principle.[65]

4.1.5.2 Fund Convention

The International Convention of the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971 (Fund Convention) supplements the CLC. The Fund Convention provides a second tier of compensation for such damages that is enhanced by the CLC.

The Fund Convention provides that where the shipowner is not liable under the CLC, because he/she comes within one of the three exceptions mentioned above, in cases where liability exceeds the shipowners financial capability or if the compensation exceeds the limitation amounts in CLC, the victim will be compensated by the IOPC Fund, up to a certain limit. The Fund Convention will not cover costs for environmental damages that fall outside the CLC, or exceed the limitation amounts in the Fund Convention.[66]

In addition, the Fund Convention relieves the shipowner of some liability by providing that the IOPC Fund will pay the portion of the shipowner's liability in excess of a certain amount. However, the fund will not relieve the shipowner from liability if the pollution results from "wilful misconduct" of the owner, or from his/her failure to observe provisions of certain conventions concerned with shipping safety or oil pollution (e.g. SOLAS and MARPOL 1973/1978), where such failure results in the damage at issue (Fund Convention art. 5).[67]

The idea behind the IOPC Fund and the Fund Convention is that cargo owners, and not only shipowners, should bear a share of the liability for oil pollution, and should thus contribute to financing the fund.

[65] Ibid; and IOPC Claims Manual, 2005, pp. 30-32.
[66] IOPC Claims Manual, pp. 7-8.
[67] Ibid.

4.1.5.3 2003 Protocol to the 1992 Fund Convention

The 2003 Protocol to the 1992 Fund Convention (Supplementary Protocol) establishes a third supplementary tier of compensation for pollution damage in those states parties. The criteria by which additional compensation is provided by the supplementary fund are identical to the criteria in the Fund Convention. The sole purpose of the Supplementary Protocol is then simply to provide higher amounts of compensation than the Fund Convention does.[68]

The Supplementary Protocol will not be analysed further in this presentation but its existence is noted and that it plays an important role in the overall compensation scheme established by the Fund Convention.

As a concluding remark attaching especially to the 1992 CLC, but also to the civil liability regime addressing oil pollution damage as a whole, I note that this regime solely address civil liability. No obligations above or those concerned with civil liability are found in the treaties establishing this civil liability regime. However, it may be noted that other obligations than those concerned with civil liability are imposed on shipowners in the event of oil pollution by other legal sources (e.g. LOSC). It is worth noting from a structural perspective that the treaties establishing the civil liability regime for oil pollution are pure civil liability treaties. As such, and especially because of the emphasis they place upon compensation for reparative and preventive actions, the oil pollution regime might be said to embrace a curative approach to the environment and is solely concerned with establishing civil liability.

The civil liability regime addressing oil pollution damage is relevant to an analysis of the WRC in that the treaties establishing civil liability for oil pollution damage are the first to impose civil liability for damages to the marine environment arising from maritime activities. As such, these treaties introduced the structure and form of civil liability regimes addressing damages to the marine environment arising from maritime activities. The WRC, as several of the other treaties discussed below, follows this structure that was introduced by the civil liability regime for oil pollution damage.

This structure is in this study taken as the most significant characteristic for the group of treaties that the WRC is meant to be a part of. As is apparent from other treaties presented below this structure is closely followed by the treaties that establish this group. The repetition of this structure, and some of the presentations of treaties, below, makes clear that this group of treaties is relatively uniform and consistent.

4.1.6 Bunker Oil Convention

In 2001, around 14 million tonnes of oil could be found being carried as fuel in non-tanker vessels at any given time, compared with approximately 130

[68] IOPC Claims Manual, p. 8.

million tonnes of oil carried as cargo on tankers. Nevertheless, the majority of oil spills come from non-tankers. In 1997, around half the total number of pollution claims arose from oil spilled from non-tankers. Since such claims are not covered by the CLC regime, the International Convention on Civil Liability for Bunker Oil Pollution (Bunker Oil Convention) was adopted in 2001 to provide for uniform rules and to facilitate the bringing of civil liability claims for such damages.[69]

The Bunker Oil Convention will enter into force in November 2008, after the requirements for entry into force are fulfilled seven years after its adoption.[70]

The Bunker Oil Convention is based on the 1992 CLC, but deals specifically with damage caused by hydrocarbon mineral oil, including lubricating oil used for the operation or propulsion of the ship and any residues of such oil; i.e. bunker oil (Bunker Oil Convention art. 1.5). The shipowner is strictly liable, with the same three exceptions provided in the 1992 CLC (Bunker Oil Convention art. 3), for bunker oil pollution damage (Bunker Oil Convention art. 1.9) (defined in almost exactly the same way as in the 1992 CLC) caused in the territory, including the territorial sea, or the exclusive economic zone of a state party to the Bunker Oil Convention (Bunker Oil Convention art. 2).[71]

Unlike the 1992 CLC the Bunker Oil Convention does not provide figures for the limitation of liability, but instead provides that the shipowner may limit his/her liability "under any applicable national or international regime, such as the Convention on Limitation of Liability for Maritime Claims, 1976" (Bunker Oil Convention art. 6). The liability regime of the Bunker Oil Convention is limited in similar ways as in the other civil liability regimes herein addressed, but differs in that it does not provide figures itself.[72]

Consistent with the general scheme of civil liability regimes concerned with ship-source pollution, the shipowner is required to carry insurance or other financial security sufficient to cover his/her liability up to the limit specified in the 1976 Convention on Limitation of Liability for Maritime Claims (Bunker Oil Convention art. 7).

Unlike the CLC regime the Bunker Oil Convention does not provide for a second tier of compensation, to deal with situations when liability exceeds a shipowner's liability limit, where a shipowner is financially incapable of meeting his/her liability or when the shipowner is not liable at all by virtue of one of the three exceptions mentioned above.[73]

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[69] IMO News, 2001, no. 2, p. 8; and Churchill, p. 20.
[70] www.imo.org, 030408.
[71] Ibid; Mandaraka-Sheppard, pp. 978-979; and Churchill, pp. 20 ff.
[72] Ibid.
[73] Ibid.

4.1.7 HNS Convention

The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention) concerns pollution from hazardous and noxious substances transported by sea. Like the Bunker Oil Convention, the HNS Convention is designed to follow the structure set by the 1992 oil pollution conventions. It was adopted in 1996 at a diplomatic conference under the auspices of the IMO. The HNS Convention entered into force in June 2007.[74]

Both damage from pollution and damage caused by other hazards, like fire and explosion, are covered by the HNS Convention (HNS Convention art. 4.5). Oil pollution by persistent oil is not covered, since such damage falls under the 1992 CLC and 1992 Fund Convention, although non-pollution damage caused by persistent oil, including fire and explosion, is covered by the HNS Convention. A large number of substances including liquefied natural gas, liquefied petroleum and individual substances defined in a number of international conventions and codes are covered by the HNS Convention (HNS Convention art. 1.5).

According to the HNS Convention, the registered shipowner is strictly liable for damages resulting from substances covered by the convention (HNS Convention art. 7). The definition of damage is the same in the HNS Convention as in the 1992 CLC, except that personal injury and damage to property are expressly included. The limitation on compensation for injury to the environment is identical to the 1992 CLC – only compensation for reasonable preventive measures and reasonable measures of reinstatement are admissible (HNS Convention art. 3). Like the 1992 CLC the liability is channelled directly to the shipowner (HNS Convention art. 7) and is subject to limitation (HNS Convention arts. 9-10). The liability of shipowners is subject to compulsory insurance with a right for claimants to bring claims directly against the insurer (HNS Convention art. 12). An additional tier of compensation is available with the establishment of the HNS Fund, which is financed by receivers of hazardous and noxious materials (HNS Convention art. 16 et seq.).[75]

As should be apparent, the HNS Convention and the Bunker Oil Convention are similar in most aspects, and build upon the general scheme established by the 1992 CLC and 1992 Fund Convention. As with the oil pollution regime, both treaties are engaged solely with issues of civil liability, and reproduce both the advantages and disadvantages of the oil pollution regime.

The HNS Convention and the Bunker Oil Convention are relevant to the analysis of the WRC in that they make evident that the general scheme and

[74] www.imo.org, 030408.
[75] Falkanger, Bull & Brautaset, *"Scandinavian maritime law the Norwegian perspective"*, 2004, pp. 210-211; and Mandaraka-Sheppard, pp. 980-984.

structure established by the 1992 CLC and 1992 Fund Convention is uniform and confirmed by later treaties and conferences. This uniformity of the structure of treaties establishing civil liability regimes for damages to the marine environment arising from maritime activities is of importance to this study in that it shows that the deviation of the WRC from this structure is noteworthy and important.

4.2 Treaties relating to the non-marine environment

As has been spelled out above, the present study focuses on civil liability regimes relating to the protection of the marine environment. Nevertheless, legal regimes relating to the non-marine environment are also of interest here. This stems from the fact that civil liability regimes relating to protection of the marine environment have not developed in isolation from other developments in international law, and some regimes concerned with the non-marine environment are considered to be of significant importance for the development of civil liability regimes relating to protection of the marine environment. The treaties described below are included both for their value in describing the relevant legal context, and as pertinent to the development of civil liability regimes relating to protection of the marine environment.

4.2.1 Treaties concerned with liability for nuclear damage

Treaties facilitating the bringing of claims for nuclear damage were established as early as in the beginning of the 1960s. Those treaties have, quite understandably, had a major impact as models for civil liability regimes concerned with damages arising from activities other than nuclear, including maritime activities. Due to the large influence of treaties addressing civil liability for nuclear damage on other civil liability regimes for environmental damage, civil liability regimes for nuclear damage are here included in the selection of treaties from which the characteristics of marine civil liability regimes are extracted.

The 1960 Convention on Third Party Liability in the Field of Nuclear Energy (Paris Convention) and the 1963 Vienna Convention on Civil Liability for Nuclear Damage (Vienna Convention) were the first two treaties to deal with civil liability for nuclear damage. The Paris Convention, to which all Western European states are party, was adopted under the aegis of the OECD and provides that an operator is strictly liable for loss of life, personal injury, damage to or loss of property caused by a nuclear incident within an installation or during the carriage of nuclear substances to or from the installation (Paris Convention art. 3). This liability is to a large extent channelled to the operator, with exceptions from liability for damages arising from an act of armed conflict, hostilities, civil war, insurrection or

grave natural disaster (Paris Convention arts. 3, 4 and 9). The liability is quantitatively limited (Paris Convention art. 7).[76]

Under the 1963 Brussels Supplementary Convention, claims exceeding the operator's liability are paid out of public funds, established by the state in which the installation is situated, up to a certain amount, and above this limit by all states parties to the 1963 Brussels Supplementary Convention. As far as this research shows, the Paris Convention has never formed the basis for the bringing of a transnational claim, presumably because there have been very few transnational claims at all for nuclear damages.[77]

The Vienna Convention, concluded under the auspices of the International Atomic Energy Agency (IAEA), is similar to the Paris Convention but included, prior to amendment, lower limitation amounts, and did not impose any obligation on public funds of the state in which the installation is situated to absorb any portion of. The Vienna Convention has more members than the Paris Convention, and is not geographically restricted in scope, but its significance is weakened by the non-participation of major nuclear states.[78]

Two more treaties, the Nuclear Maritime Carriage Convention[79] and Nuclear Ships Convention[80], deal with liability for nuclear damage, but neither is deemed to be of significance for this study, because both treaties are similar to the Paris and Vienna Conventions and also because their actual significance is small.[81]

Neither of the treaties concerned with civil liability for nuclear damage mention damage to the environment in their original or non-amended forms, which may be possibly explained by the relatively undeveloped status of environmental concerns in the early 1960s. Damage was restricted to damage to persons or property, but as the Chernobyl incident in 1996 showed, most damage caused by a major nuclear accident in fact falls within the category of damage to the environment, or damages to persons and property as a result of damage to the environment.[82]

The civil liability regime for nuclear damage has often been criticised for its insufficient available compensation, or in other words, its low limits on monetary compensation. For example, the damage resulting from the Chernobyl incident would certainly have exceeded the available amounts in the Vienna Convention as well as in the Paris Convention. However, since the Soviet Union was not a party to either treaty in 1988 when the

[76] Churchill, pp. 8-9; and Birnie & Boyle, pp. 476-485.
[77] Ibid.
[78] Ibid.
[79] 1971 Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material.
[80] 1962 Convention on the Liability of Operators of Nuclear Ships.
[81] Churchill, pp. 13-15; and Birnie & Boyle, p. 476.
[82] Ibid.

Chernobyl incident occurred, no transnational civil liability claims were brought forward.[83]

Nevertheless, the subsequent debate following the Chernobyl disaster led IAEA to revise the Vienna Convention to increase the limitation amounts and expand the definition of nuclear damage in a manner similar to the definition of damage in the 1992 CLC. The Protocol to Amend the Vienna Convention and the Convention on Supplementary Compensation for Nuclear Damage were adopted in 1997.

The revised Vienna Convention provides a definition of damage that includes the costs of both preventive measures and reinstatement of the environment, as well as loss of income resulting from nuclear damage. However, the definition of recoverable costs for preventive measures and reinstatement of the environment are, at least according to one author[84], no more than a codification of the last 20 years of practice in the IOPC Fund.[85]

In 2004, after several years of discussions, protocols were signed to amend the OECD treaties, the Paris and the Brussels Conventions. These amendments are similar to those in the Vienna Convention, and include a considerable increase of the limitation limits and new definitions of damage. Both the Paris and the Vienna Conventions leave a large margin of flexibility for domestic courts to decide which preventive measures and costs for reinstatement of the environment are reasonable, and thus recoverable. Consequently, it is uncertain to what degree damage to the environment is included in the definition of damage in this context. [86]

What is certain is that at least some costs for damages to the environment are per se recoverable, including costs for reinstatement and preventive measures, and also that damages to property, personal injury and economic loss resulting from environmental damages are also recoverable. Thus, both damages to the environment per se, and other damages caused by environmental damage are included in the definition of damage in the liability regimes for nuclear damages.

The treaties concerning civil liability for damage arising from nuclear activities are similar to the treaties establishing the oil pollution regime, the HNS Convention and the Bunker Oil Convention in that they strictly concern civil liability, in contrast to the WRC that includes provisions concerning preventive measures.

The treaties concerning civil liability for damage arising from nuclear activities suggest that the uniformity of treaties establishing civil liability for damages arising from maritime activities extends beyond maritime activities. The presentation of treaties concerning nuclear damage here is

[83] Ibid.
[84] De La Fayette.
[85] De La Fayette, pp. 27-32.
[86] Ibid.

relevant to the WRC in that it strengthens the picture of civil liability regimes as uniform. Furthermore, the development of the civil liability regime concerning damage arising from nuclear activities makes evident an increased openness for preventive measures, or rather compensation for preventive measures – a development that the WRC is an evidence of.

4.2.2 Lugano Convention

The Council of Europe's Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Lugano Convention) was adopted in 1993. The Lugano Convention is a scheme aiming to harmonise the regime of environmental liability, an extraordinary aim in Europe as well as in the rest of the world, which may be at least one reason why the Lugano Convention has not gained enough support to enter into force. As of 2008 the Lugano Convention had attracted only nine signatures in Europe, none of which have been followed by ratification. The Lugano Convention requires three ratifications to enter into force.[87]

Although the Lugano Convention excludes transportation of goods, such as shipping and most maritime activities, from its scope, it is relevant to the development of civil liability regimes for protection of the marine environment from damages arising from maritime activities. In particular, the definition of reinstatement in the Lugano Convention represents a serious advance on earlier instruments, including the maritime conventions, and several of its provisions have served as models for future development. For these reasons, the Lugano Convention, a non-marine convention, is included in the selection of treaties here, which form the basic marine civil liability regime.

The Lugano Convention imposes strict liability for dangerous activities or dangerous substances on an operator of the activity in question. In contrast to most other liability regimes the operator's liability is not limited in amount, which makes the Lugano Convention similar to the polluter pays-principle. The operator's capacity to meet eventual liability is guaranteed by compulsory insurance and other financial security.[88]

The definition of damage is wide in the Lugano Convention, and includes impairment of the environment as well as injury to property and person (Lugano Convention art 1.7). "Environment" is broadly defined, including natural resources, cultural heritage areas and "the characteristic aspects of the landscape" (Lugano Convention art. 1.10). The main concept is similar to the maritime conventions in that the definition of damage primarily focuses on economic losses, such as damage to property and personal injury, caused by damages to the environment, with compensation for damages to the environment per se limited to the reasonable costs of reinstatement (Lugano Convention art. 1.8). However, the Lugano Convention definition

[87] http://conventions.coe.int/Treaty/Commun/ChercheSig.asp?NT=150&CM=8&DF=&CL=ENG, 040708.
[88] Birnie & Boyle, p. 281.

of environment differs from other liability schemes assessed in this study in that it gives more attention to damage to the environment per se than the other instruments assessed above.

In addition, the Lugano Convention deserves special attention for its definition of "measures of reinstatement" (Lugano Convention art. 1.8). Neither of these two terms, "environment" or "measures of reinstatement", are defined in the other instruments assessed in this study. The definition of "measures of reinstatement" focuses on the operator's obligation to actually take measures to reinstate the environment to the condition it would have been in if the damage had not occurred. In other words, the operator's liability does not stop at eliminating these harmful substances in the environment, but requires the operator to take positive measures to actually reinstate its original condition, had the damage not occurred. The Lugano Convention gives clear directions on what should be done where restoration of the environment is impossible, namely to introduce equivalent components into the environment. As a result, damage to the environment itself has a stronger standing in the Lugano Convention than in the other instruments considered in this study.[89]

The structure of the Lugano Convention can be said to differ from the previously described treaties. This is evident, for example, from the inclusion of provisions on access to information (Lugano Convention chapter III). These provisions entitle individuals to request certain information from authorities, which they may require for the bringing of compensation claims.

The Lugano Convention differs from other regimes presented above because it includes norms other than such concerned only with establishing civil liability, it includes progressive and wide definitions of environment and it lacks limitations on liability. That a progressive treaty establishing civil liability, such as the Lugano Convention, as one of few, includes provisions on preventive and precautionary measures is relevant to the inclusion of preventive measures in the WRC. The inclusion of provisions on preventive measures, and upon compensation for such measures, is pertinent to the WRC as a predecessor to the WRC.

4.2.3 Basel Convention

After calls from developing states for a prohibition on the dumping of hazardous waste from industrialised states on their territories, the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal (Basel Convention) was adopted in 1989. The request of the developing states did not result in an immediate prohibition, but the Basel Convention did establish a scheme to regulate the transboundary movement of hazardous waste on the basis of prior informed

[89] Birnie & Boyle, p. 281; De La Fayette, pp. 22 ff; and http://www.basel.int/convention/basics.html, 080408.

consent and to ensure that disposal outside the country of origin is conducted in an environmentally sound manner. The lack of a liability and compensation scheme in the Basel Convention was considered a major defect and the reference to state responsibility for non-fulfilment of the obligations contained within it was not regarded as sufficient. After several years of negotiations the Protocol on Liability and Compensation for Damage Resulting from the Transboundary Movement of Hazardous Wastes and Their Disposal (Basel Protocol) was adopted in 1999.[90]

The Basel Protocol had, by 2008, received eight accessions and had not entered into force. Entry into force is pending the ratification of 20 parties.[91]

The Basel Convention and its protocol concern protection of the marine environment from damages arising from maritime activities, since carriage of hazardous waste is clearly within the scope of these treaties, and most transport of hazardous waste is carried out at sea. The application of the Basel Convention to hazardous waste may result in some overlap with the HNS Convention, which also covers most of the substances included in the Basel Convention. The HNS Convention is given explicit precedence in the case of overlap by the Basel Protocol art. 11, which gives precedence to any maritime convention.[92]

While the Basel Protocol is similar to other civil liability regimes, it differs in some important aspects. The liability is strict, but no single operator or generator is liable at all stages (Basel Protocol art. 4). The liability moves from the exporter, to the importer, to the generator and to the disposer at various stages of the transport of the waste (Basel Protocol art. 4.1). Fault-based liability is imposed upon any person who fails to comply with laws implementing the Basel Convention or who commits a wrongful, intentional, reckless or negligent act or omission that causes damage (Basel Protocol art. 5). Logically then, there is a right of recourse under the treaty (Basel Protocol art. 8). The liability is not limited to fault-based liability (Basel Protocol art. 12). For strict liability, national law establishes liability limits, but the Basel Protocol sets minimum limits for liability (Basel Protocol art. 12). Sufficient insurance or other financial security is compulsory (Basel Protocol art. 14). A second tier of compensation is available through a fund established by the Basel Convention's states parties in the developed world. Industry does not contribute to this fund, which instead is based on the voluntarily contributions of states parties. This regime is certainly even less harmonised with the polluter pays-principle than above described instruments.[93]

Apart from the traditional heads of damage to property and persons, the Basel Protocol defines damage as including: loss of income directly deriving from impairment of the environment, the costs of measures of

[90] Birnie & Boyle, pp. 428-438; and De La Fayette, pp. 24-27.
[91] http://www.basel.int/ratif/protocol.htm, 080408.
[92] Birnie & Boyle, pp. 428-438; and De La Fayette, pp. 24-27.
[93] Ibid.

reinstatement of the environment and the costs of preventive measures (Basel Protocol art. 2.2.c). Although the definition is clearly based upon the CLC 1992, it improves upon earlier formulations by explicitly including costs "to effect environmental clean-up" in the recoverable head of "preventive measures". The definition of "measures of reinstatement" is based upon the Lugano Convention, but again improves upon it by stating that costs to assess the damage are included in the recoverable measures. On the other hand, the Basel Protocol takes steps backwards in relation to the Lugano Convention by not providing for the recovery of costs for "introduction of equivalent components", in cases where the original environment cannot be reinstated.[94]

Since the Basel Protocol is linked to the Basel Convention, the structure of the Basel Protocol is considered in light of the Basel Convention. It is certainly correct to state that the Basel Protocol is not a regime focusing solely on civil liability, but instead also regulating several different aspects of transboundary movement of hazardous waste. Civil liability is established by a protocol, and called for in the convention itself. As such, civil liability is used as an instrument to work towards abolishing environmental damage caused by the transboundary movement of hazardous waste.

The approach of the Basel Convention and its protocol is more holistic and comprehensive than previously described regimes. Furthermore it may be noted that the Basel Protocol, which is explicitly concerned with civil liability, imposes in art. 6 an obligation on operators to take response measures in respect of the occurrence of an incident within the scope of the Convention. The Basel Protocol does not only implicitly call for response measures on a voluntary basis, but actually stresses response measures as part of an operator's obligations. The openness to compensation for preventive measures is in line with the increased focus on response measures that the Basel Protocol, and the WRC, makes evident.

4.2.4 Other developments

The three-fold approach taken in this presentation of civil liability regimes started in the first section by looking at civil liability regimes expressly addressing maritime activities, while the second part focused on regimes of special importance for the development of civil liability regimes in general. This third chapter, "Other developments", considers regimes that are of interest especially for the purposes of this study, rather than for civil liability regimes in general or those designed for protection of the marine environment. As such the regimes presented below are not of a level of importance as great as those in the previously noted regimes, but are of particular importance for this study.

[94] De La Fayette, pp. 25-27.

4.2.4.1 Mining in the area

One of the main reasons for the need, subsequent negotiation and conclusion of LOSC was the discovery of mineral resources on the deep sea-bed area beyond the limits of national jurisdiction. Ironically, disagreement over the provisions concerning mining in the sea-bed area led to the delay of the entry into force of LOSC. The adoption of the 1994 Agreement[95] resolved this disagreement, to a sufficient degree for LOSC to enter into force. The 1994 Agreement establishes the International Sea-Bed Authority (ISA), entitles the ISA to adopt regulations concerning mining in the area and clears the way for the exploration of polymetallic nodules on the sea-bed area under the supervision of ISA. Although the regulations adopted by ISA do not amount to an actual civil liability regime, they are included in this study because they provide for liability and compensation pursuant to LOSC and the part XI agreement.[96]

Substantive obligations, being rules of a primary nature addressing mining in the area are firmly rooted both in LOSC part XI and part XII. Art. 145 of LOSC part XI requires necessary measures to be undertaken in order "to ensure effective protection of the marine environment from harmful effects which may arise from such activities", art. 209 of LOSC part XII repeats the requirement for international rules and regulations protecting the marine environment from the harmful effects of mining in the area, LOSC art. 215 provides for enforcement in accordance with the provisions of LOSC part XI and art. 235 generally calls for the development of liability and responsibility schemes in relation to mining in the area.[97]

ISA has adopted regulations provided for by the 1994 Agreement, which contains more substantive yardsticks. However, in this study, focus should not be placed upon rules of a primary nature, but on the corresponding rules giving effect to the primary rules; rules of secondary nature. The general sanction under the regulations for non-compliance with the substantive obligations imposed therein is suspension of the exploitation contract established between a private operator and ISA. Furthermore ISA is entitled to impose monetary penalties on an operator for non-compliance with his/her substantive obligations. What is important is that the standard clauses for the exploration contract, which every mining venture in the area is to enter into with the ISA, also provide for a regime of responsibility and liability for all types of damage caused by a mining operator.[98]

This contractually-based liability regime includes provisions related to damage done to the marine environment in the course of mining activities, including "costs of reasonable measures to prevent or limit damage to the marine environment, account being taken of any contributory acts or

[95] The Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.
[96] De La Fayette, pp. 33-35.
[97] Ibid.
[98] Ibid.

omissions by the Authority". The civil liability regime for mining in the area contains well-known characteristics of civil liability regimes, including strict liability, exceptions from liability for force majeure, compulsory insurance and, unfortunately, difficulties with the definition of recoverable damages.[99]

It should be noted that not only damage to health, property or similar individual rights are included in the definition of damage, but also damage to the environment as such. Although the inclusion of the environment in this way is satisfactory, two additional problems with the liability regime arise in relation to the group of recoverable damages. The first addresses the question of who is to decide which measures are necessary in a certain context. The second problem relates to a reading *e contrario* of the wording; namely that irreversible damage to the marine environment would not have to be remedied by the operator through compensation, since only compensation for reversible damages are compulsory. This conclusion does not accord well with the purpose of the substantive obligations and will hopefully be superseded by ISA practice.[100]

To comment on the structure of the regime relating to mining in the area is a difficult task, since mining in the area is regulated by LOSC, making the approach taken to mining in the area predominately holistic. The regime relating to mining in the area thus not only includes civil liability, but also response measures and provisions regulating the enforcement jurisdiction for such matters. However, although the approach is holistic it is certainly of particular interest that provisions on response measures are included in the civil liability regime relating to mining in the area. The WRC is apparently not the sole example of a civil liability regime that includes provisions on response measures, but arguably is the most important indication of a development where international environmental law evolves from a curative approach towards an anticipatory approach.

4.2.4.2 Environmental damage in Antarctica

The Antarctic Treaty System as a notion is a commonly-used phrase, however, there remains a large degree of uncertainty as to which treaties are included in this system. The Antarctic Treaty System is often not defined, but simply referred to. When defined, the definitions usually vary, although the 1991 Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol) contains a comprehensive definition. For the purpose of this study, a brief description of the structure of the Antarctic Treaty System is sufficient. The treaty at the core of this system is undoubtedly the 1959 Antarctic Treaty. The other agreements surrounding this core treaty are the Convention for the 1972 Conservation of Antarctic Seals (CCAS), the 1980

[99] Bothe, *"The protection of the marine environment against the impacts of seabed mining: an assessment of the new mining code of the international seabed authority"*, 2002, pp. 227-231.
[100] Ibid.

Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Madrid Protocol.[101]

In a striking parallel to the previous chapter, the discovery of mineral resources in Antarctica and subsequent technical evolution highlighted the need for regulation of mining activities and led states parties to the Antarctic Treaty to conclude the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) in 1988. Although CRAMRA was quickly superseded by the Madrid Protocol, which contains a complete ban on mining for mineral resources in Antarctica, CRAMRA is of interest for the purposes of the present study because of its provisions concerning civil liability and related response actions.

CRAMRA requires the operator, like several other civil liability regimes, in the event of environmental damage to provide compensation for reasonable costs for the necessary response actions, including prevention, containment, clean-up and removal measures and action taken to restore the *status quo ante* in the area where the damage has occurred. The requirement that the operator covers costs related to restoration of the environment is innovative and progressive in comparison to other environmental civil liability regimes.[102]

A second innovation in CRAMRA is that the operator is strictly liable in the sense that the operator is liable for the reimbursement of costs for restoration to the status quo ante even where no such restoration has taken place. Recalling the problems with liability in cases of irreversible environmental damages, this provision of CRAMRA is indeed innovative in resolving such uncertainties, by making the polluter actually pay for the pollution for which he/she is responsible, rather than for measures eventually undertaken as a result of the pollution.[103]

The Madrid Protocol requires its parties to elaborate rules and procedures relating to liability for environmental damage in Antarctica (Madrid Protocol art. 16). Due to difficulties in concluding negotiations on this topic the goal of achieving agreement covering all activities was eventually abandoned. In 2005 an Annex on Liability arising from environmental emergencies was adopted, which now is Annex VI to the Madrid Protocol (Madrid Protocol annex VI). It enters into force by approval of the 28 consultative parties to the conference (ATCM) where it was adopted.[104]

The Annex VI to the Madrid Protocol is interesting for the purposes of this study in that it establishes civil liability of operators and requires operators to take emergency response actions when pollution occurs. Since the establishment of civil liability follows the general scheme of civil liability

[101] http://www.ats.aq/e/ats.htm, 230408; and Jacobsson, *"The Antarctic Treaty System – Erga Omnes or Inter Partes?"*, 1998, pp. 14 ff.
[102] De La Fayette, pp. 36-39.
[103] Ibid.
[104] http://www.ats.aq/e/ep_liability.htm, 24/04/08.

regimes, focus will here be placed on the provisions of the Madrid Protocol dealing with preventive measures.

First, operators in Antarctica are required to take measures to prevent damage to the environment through the construction of structures, specialised equipment and training of personnel, in addition to the formulation of contingency plans (Madrid Protocol annex VI arts. 3-4).

Second, in the event of an environmental emergency resulting from the activity of an operator, the operator is required to take prompt and effective response action (Madrid Protocol annex VI art. 5.1). However, if the operator does not do so the operator's home state and other states parties are encouraged to take the necessary response actions (Madrid Protocol annex VI art. 5.2 et sec). A right to recourse against a responsible operator who fails to take the requisite response actions exists for parties who have taken response actions themselves (Madrid Protocol annex VI art. 6.1), or, if no response actions are taken by any parties, the operator remains liable for an amount equal to that which any necessary response actions would have cost had they been taken (Madrid Protocol annex VI art. 6.2). This payment is made to a fund.

In the Madrid Protocol annex VI, much attention is afforded to preventive and responsive measures. The provisions upon civil liability appear as compliments to the provisions on response measures. The provisions on liability seem to be, if not of relatively minor importance, of equal importance to the provisions upon prevention and responsive measures. This combination of obligations imposed on an operator to compensate a victim through civil liability and to undertake response measures is noteworthy, especially since the inclusion of this combination of prevention, response and civil liability provisions was confirmed by the Madrid Protocol annex VI, after CRAMRA itself had been abandoned.

4.2.4.3 The ILC work on international liability in the case of loss from transboundary harm arising out of hazardous activities

Transboundary environmental harm has been on the agenda of the ILC since 1978, under the title "Liability for Injurious Consequences of Acts not prohibited by International Law". The topic was divided into two parts in 1997, whereby prevention and liability were to be dealt with separately. This chapter briefly describes the outcome of the ILC work on liability but does not comment on the work on prevention, since the prevention provisions are of such fundamental character that they are similar to general international law and would not loan any new perspective to this topic. Nevertheless, the interdependent relationship between the two concepts, prevention and liability, must definitely be noted. Although prevention of, and liability for, transboundary harm are considered by the ILC separately,

it is apparent that both subjects are concepts foundational to the topic, "Liability for Injurious Acts not Prohibited by International Law".[105]

In 2001, when the ILC presented its ILC Responsibility articles, some states thought that the topic on liability for transboundary harm was not sufficiently addressed within the concept of state responsibility. This view emanated primarily from developing countries, while several developed countries were of the view that the topic was sufficiently covered by the work on state responsibility. Nevertheless, in 2001 UNGA requested that the ILC continue its work upon liability for transboundary harm "bearing in mind the interrelationship between liability and prevention"[106]. The ILC thus took up a focused study on liability for transboundary harm. A fundamental question in this work was what perspective the ILC should take: whether to continue its work on strict liability of states for damages not prohibited by international law, or to shift the focus to other forms of liability where non-state actors would be the main subjects of liability. Since strict state liability for damage caused by activities on state territory has received little support from states, the ILC decided to focus its work on the development of regimes similar to those addressing damages from oil pollution and nuclear activities. Hence, the ILC in 2006 adopted a set of eight articles relating to liability for transboundary harm, entitled "Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities".[107]

When examining the ILC work upon liability for transboundary harm, three features are significant: First, the articles are without prejudice to existing or future liability schemes, such as the regime on state responsibility[108]. Second, none of the provisions contain any obligatory components, and as such are to be treated as soft law only. This is apparent from the consistent use of "should" instead of "shall" throughout the articles. Third, the principles apply only to physical damage caused by "activities which involve a risk of causing significant transboundary harm". This wording is a repetition of the ILC 2001 Articles on Prevention of Transboundary Harm and means that the present articles do not cover unforeseeable damages. [109]

As a general conclusion, the ILC Articles upon Liability for Transboundary Harm can be classified as residual, general and "soft" in character. However, the structure of the compensation and liability schemes drawn up by the ILC in the course of these articles follows the general pattern of existing civil liability treaties analysed above. As such, the ILC articles strengthen the established structure of civil liability regimes, and are not an example of progressive development of international law in this area. The mediating character of the articles is presumably a result of the fact that the

[105] Birnie & Boyle, pp. 105 ff.
[106] UNGA Res 56/82 (2001).
[107] 2006 ILC Report (A/61/10).
[108] Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities, with commentaries (incl. in A/61/19).
[109] Boyle, p. 14.

ILC noted that most states were unwilling to embrace and adhere to harsh substantive obligations concerning civil liability. It is a fact that most civil liability regimes never enter into force, presumably due to a lack of willingness by states to adhere to substantive provisions on civil liability. In order to prevent the ILC work upon Liability for Transboundary Harm from ending up like most civil liability regimes, that is - not in force - the ILC concluded the articles as purely soft law. This decision has been criticised, and arguably could be said to reflect the traditionally conservative and cautious approach of the ILC.[110]

The ILC work on Liability for Transboundary Harm nevertheless verifies that civil liability regimes most often have a certain structure and certain characteristics, making it possible to establish a coherent picture of the relationship between liability and prevention.

The relationship between liability and prevention is growing in importance in civil liability regimes, by being reflected in the provisions of treaties establishing civil liability regimes. This development of treaties establishing civil liability regimes is the main observation in this study. The inclusion of response measures in the WRC, a treaty designated to be complementary and similar to existing civil liability regimes for protection of the marine environment from damages arising from maritime activities, is not an astonishing matter, but reflects a general development in international environmental law – that responsive, anticipatory measures, are growing in importance.

4.2.4.4 EU Liability Directive

The EU Liability Directive entered into force on 30 April 2004, following publication in the European Union Official journal[111]. Member states were given three years to implement the directive.

As far as my research shows, the implementation of the EU Liability Directive has been overall severely delayed, and differs greatly among EU member states.[112]

The approach to civil liability in the EU Liability Directive is distinctly different from the other treaties reviewed in this study. While other schemes reviewed generally apply to traditional heads of damage, such as personal injury or damage to property, the EU Liability Directive covers only environmental damage. In more precise words, although it is a brief document, the types of damage covered in the EU Liability Directive are damage to biodiversity protected at European and national levels, damage to

[110] Ibid.
[111] Directive 2004/35/CE of the European Parliament and the Council of 21 April 2004 on Environmental Liability With Regard to the Prevention and Remedying of Environmental Damage, OJ No. L143, 30.4.2004, p. 56.
[112] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:72004L0035:EN:NOT, 080408; and Veysey, "*EU states take different stances on pollution liability directive*", 2008.

waters according to EC legislation, and land polluted in a way which risks human health, all resulting from occupational activities listed in annex III of the EU Liability Directive (art. 2). For damages resulting from the "high-risk" activities listed in annex III the liability is strict, while liability for damages arising from other activities is fault-based (EU Liability Directive art. 3.1). A liable operator is required under the EU Directive to prevent or to mitigate the damage, to clean-up the pollution and to restore the environment (EU Liability Directive art. 5).[113]

The aim of the EU Liability Directive is to establish "a common framework for the prevention and remedying of environmental damage at a reasonable cost to society", through the polluter-pays principle (EU Liability Directive preamble pp. 2-3, and art. 1). As has been pointed out above, most treaties establishing civil liability regimes for damage resulting from high-risk activities deviate from the polluter pays-principle often by limiting a polluter's liability and apportioning liability in excess of the amount that a polluter can pay on the industry or state as a whole. It could be argued that while the main aim of traditional liability regimes is to provide victims with compensation, the main aim for the EU Liability Directive is instead to prevent pollution from occurring in the first place. This difference in approach is apparent in provisions in the EU Liability Directive requiring the operator to take emergency and preventive actions when pollution occurs.[114]

EU member states are required by the EU Liability Directive to require operators to inform public authorities of all relevant details of environmental pollution, once pollution has occurred (EU Liability Directive art. 5.2). Furthermore, the polluter is required to take all necessary steps to prevent the threat of imminent pollution from occurring (EU Liability Directive art. 5.1). The public authority is then entitled to require an operator to take preventive measures (EU Liability Directive art. 5.3). If the operator cannot be found or will not or cannot act, the public authority is itself entitled to take any necessary steps and then recover the costs of prevention, clean-up and restoration from the polluter (EU Liability Directive art. 5.3).

In brief, the EU Liability Directive essentially obliges national authorities to ensure that measures for the prevention of pollution and restoration of the environment in the event of pollution are taken by operators who have infringed the directives listed in annex III, leading to environmental damage or the risk of such damage.[115]

The inclusion of provisions concerning response measures in the EU liability regime is noteworthy and important for this study, in the tracing of the inclusion of obligations concerning response measures in the WRC.

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[113] De La Fayette, pp. 46-49; and Wennerås, *"The enforcement of EC environmental law"*, 2007, pp. 142-143.
[114] Ibid.
[115] Ibid.

The EU Liability Directive, the Basel Protocol and the regime for mining in the area are civil liability regimes that not only address civil liability, but also response measures. However, the aforementioned civil liability regimes are all of minor importance. The WRC is therefore important in its designation to attain universal character, like the related 1992 CLC, HNS Convention and Bunker Oil Convention. As such, the inclusion of response measures in the WRC is seen here as a confirmation of the development that is reflected in, among other regimes and treaties, the EU Liability Directive, the Basel Protocol and the regime for mining in the area.

4.3 Common characteristics of existing marine liability regimes

The cursory overview of civil liability regimes above may seem to paint a fragmented picture, but nevertheless makes evident some common characteristics that may be extracted and compiled as indicative of civil liability regimes in general related to protection of the marine environment. Several of these characteristics are represented in the WRC.

A core characteristic relates to the structure of the treaties establishing civil liability regimes. Most of the more traditional treaties, such as the 1992 CLC, focus purely on the establishment of civil liability regimes, while more recent documents, such as the EU Liability Directive, contain progressive and potentially controversial features including obligations other than those concerning civil liability.

The main characteristics apparent in the oil pollution regime, HNS Convention, Bunker Oil Convention, the nuclear regime and EU Liability Directive are that the treaties that establish the regime are solely concerned with the establishment of civil liability. The lack of norms attaching to other matters is obvious when regarding the more traditional civil liability regimes relating to maritime activities, like the 1992 CLC.

All of the selected treaties establish schemes of strict liability in national law by requiring contracting parties to implement norms with a strict approach to the required standard of due diligence. The application of a standard of strict liability is motivated by the presumably insurmountable problems victims would otherwise face in establishing and proving fault of the operator in cases of environmental damage.

Liability is channelled to a particular responsible subject, such as the operator or owner of the ship or installation, although in certain cases there exists a right of recourse against other parties. The liability is quantitatively limited and is supported by compulsory insurance and compensation funds.

Another significant characteristic seems to be a great deal of complication when it comes to the definition of damage, particularly when treating

damage to the environment. It is apparent from the discussions above that the notion of damage to the environment is subject to complex and sometimes vague definitions.

It is noteworthy that none of the selected treaties actually follow the polluter-pays principle. Under all of the selected treaties the polluter, usually the operator, is only initially responsible for claims up to a certain limit, above which the industry or the state of the operator carries the burden. Beyond that upper limit the innocent victim carries whatever remains of the burden. [116]

The complexity of defining damage to the environment is another indication of the deviation from the polluter-pays principle. The background to these complex definitions is apparently that not all damage to the environment was to be attributed to the polluter him- or herself, but just some. The polluter-pays principle basically requires the polluter to pay for all pollution. The surveyed treaties shy away from this principle.

The characteristics presented above certainly amount to the main characteristics of the traditional marine liability regimes, and as such no consideration is given here to other characteristics not subject to overwhelming support.

[116] Boyle, p. 10; and Churchill, pp. 32 ff.

5. Conclusions

This concluding chapter principally reiterates what has been stated above, extracts essentials and assembles those extracts to form a consistent picture relating to the purpose of this study.

Since the purpose of this study relates to the body of existing law, the present discussion is primarily *de lege lata*, aiming not at a normative goal. However, since I doubt that any study can avoid some normative effect, I am tempted to state that an author should walk the line in full, and allow him- or herself to consciously present normative conclusions where appropriate, including a discussion *de lege ferenda*. In doing so it is my aim to more clearly separate normative from less normative conclusions, thus furthering transparency and the possibility of objectivity of a study. This concluding chapter is thus initially a discussion de lege lata, but approaches a discussion de lege ferenda.

The WRC is a treaty establishing civil liability – a civil liability regime. Structurally the WRC has many similarities with other civil liability regimes, and in particular with civil liability regimes for protection of the marine environment from damages arising from maritime activities, including the 1992 CLC, the HNS Convention and the Bunker Oil Convention. The WRC is part of a group of treaties with a uniform structure. This is confirmed by the intention of the legislator to adopt the WRC as the last in the line of regimes addressing the most apparent environmental hazards resulting from maritime activities.

However, the WRC deviates from this uniformity by including obligations regarding response measures, and not solely focusing on establishing civil liability. This feature, the inclusion of response measures in a civil liability regime, is taken note of in this study and afforded attention.

Through analysis of several other civil liability regimes it is apparent that obligations concerning response measures have been included previously in treaties establishing civil liability regimes, including the EU Liability Directive, the Basel Protocol and the regime for mining in the area. Such civil liability regimes, that include provisions on response measures, have, however, most often been seen as being progressive, controversial and most of them have never entered into force, and are of minor importance.

It is argued that the inclusion of response measures in civil liability regimes addressing environmental damages is an undergoing development. The WRC is thus not the sole example, but is, yet, the most important example of a civil liability regime including provisions on response measures. This importance afforded the WRC is even more strengthened by the fact that the group of treaties, in which the WRC is to be placed, is structurally uniform.

A deviation from this uniformity must therefore be seen as a rather heavy indication that it is a development.

As has been noted, civil liability regimes are increasing in importance as mechanisms for giving effect to primary rules concerned with protection of the marine environment. Whether this development is motivated by the appropriateness of such regimes for this task, or the failure of state responsibility to appropriately address this topic, remains unanswered in this study.

Noting that compliance could be called the Achilles' heel of international law, and the related need for innovative mechanisms to give effect to primary international rules, the importance of studies of secondary rules is stressed.

As has been noted in the methodological discussion above, the purpose of this study is not only to describe a certain phenomenon, but also to identify and assess certain developments through an examination of the WRC and its related context. As was stated in the methodological discussion, two phenomena, or sets of characteristics, are employed in this study; characteristics of the already existing civil liability regimes, and those of the WRC.

The characteristics of those civil liability regimes concerned with protection of the marine environment from damages arising from maritime activities that existed before the WRC was adopted may be summarized as imposing strict liability, limited, channelled liability subject to compulsory insurance, non-adoption of the polluter-pays principle and a complicated relationship with the concept of environmental damages. Furthermore, a fundamental characteristic of such civil liability regimes is the failure to include norms other than those concerned with civil liability.

The WRC is in most ways similar to, and closely follows the earlier marine civil liability regimes, and thus includes several corresponding characteristics. This similarity is in no way surprising, but rather to be expected. The uniformity, first and foremost established by the group of treaties (i.e. the 1992 CLC, Fund, HNS and Bunker Oil Conventions) of which the WRC is a part, means that any deviation in the WRC from this uniformity is significant. This is particularly so since the WRC was developed by the same organ, the IMO Legal Committee, that responsible for the other treaties within this group. Any deviation in the WRC from the uniformity expressed by the 1992 CLC, Fund, HNS and Bunker Oil Conventions must be regarded as significant and important since it represents a deviation from established practice.

The differing approach of the WRC when compared with existing civil liability regimes is evident in the inclusion of and attention given to response measures. The combination of provisions concerning response measures and provisions establishing civil liability in the same treaty is a

significant feature of the WRC. While most earlier civil liability regimes described above establish who will pay and for what, the WRC takes a more holistic approach, establishing exactly who is responsible, what this person will pay for, what this person is obliged to do when the situation leading to liability occurs and what will happen if the person does not meet his/her liability.

The inclusion of obligations concerning response measures in the WRC, such as locating and marking the wreck, is the major observation de lege lata in this study.

As the study aims to report on developments relevant to international environmental law in a broad sense, the applicability of this conclusion in non-maritime contexts is discussed. This study hinges upon the conviction that protection of the marine environment is a field of international environmental law that is particularly well-developed and as such, influential on and relevant to the evolution of international environmental law as a whole. This is particularly true concerning hazardous activities, such as shipping and nuclear activities, from which damages are likely to be concentrated and devastating.

It must although be borne in mind that this study focuses on regimes consisting of secondary rules, and not on primary rules. As such the conclusions are not literally transferable to the entire body of general international environmental law, which comprises both primary and secondary rules. Nevertheless, the inseparability of primary and secondary rules is relevant to the applicability of the conclusions. The conclusions of this study may not be directly extended to other areas of law, such as treaties based upon state liability. It is not my intention to preclude every possible analogy of conclusions of this study and other areas of international law, however, I wish to stress that every such extension of the conclusions requires careful consideration.

It could be claimed that the WRC does not amount to a civil liability regime proper, in the same way as more explicit civil liability regimes such as those established by the CLC or the EU Liability Directive, since the WRC contains provisions concerned with matters other than civil liability. This is indeed a valid argument. It is apparent that most of the treaties above described as including civil liability regimes also include provisions concerning other matters, but still generally, in doctrine and elsewhere, are referred to as civil liability regimes. As such, it may be said that the term “civil liability treaty” refers to treaties establishing civil liability but that then may also address other matters. To what extent a civil liability treaty has to focus on civil liability, in order to “qualify” as a civil liability treaty does not find a clear answer in this study.

It would be difficult to define a truly comprehensive treaty as a civil liability regime just because it includes some provisions concerning civil liability. On the other hand, a treaty like the WRC, where the establishment of civil

liability is a major, and conceivably most important purpose, can be classified as a civil liability regime. The WRC is therefore comparable to other civil liability regimes for protection of the marine environment from damages arising from maritime activities.

The inclusion of provisions concerning response measures in the WRC, a treaty that also establishes a civil liability regime, is the main observation that emerges from this study. This conclusion is resolute, as it derives from a logical process where premises are laid together leading to a conclusion - a deduction - while the conclusions drawn there from may be questioned, as well as the premises in the deduction.

The first conclusion I would like to draw from this study is that the increased inclusion of norms concerning response measures is not only evident in the WRC, but in treaties providing for protection of the marine environment in general, through the establishment of civil liability.

The WRC is not the first treaty to establish a civil liability scheme that includes obligations concerning response measures. The regime concerning environmental damage in Antarctica, the Basel Convention and Protocol, the EU Liability Directive and the regime for mining in the area are examples of other regimes combining civil liability and obligations to undertake response measures. The design of the WRC is thus not unsupported by the past.

Traces of a trend towards the inclusion of obligations concerning response measures in environmental civil liability regimes can be seen in several of the treaties analysed. While the Intervention Convention addresses only response measures, the CLC, Fund, HNS and Bunker Oil Conventions solely establish civil liability regimes, while more recent treaties, such as the Basel Convention and its protocol, the regime for mining in the area and the regime for environmental damage in Antarctica combine provisions for response measures and those establishing civil liability in the same instrument. A connection can be seen through the development of civil liability regimes for protection of the marine environment from damages arising from maritime activities, whereby obligations concerning response measures and obligations concerning civil liability are increasingly being combined in the same treaty. This study stresses that the WRC verifies and contributes to this development, through its deviation from established practice in order to follow this development that this study identifies.

The IMO has stated that the WRC is the final component in the development of civil liability regimes addressing apparent environmental issues related to shipping. The WRC’s deviation from the structure established by previous environmental civil liability regimes relating to shipping must be seen as intentional and not simply a minor detail, it may be regarded as a new reflection of a development. Furthermore, the support that this deviation finds in several similar treaties may further explain the

inclusion of obligations concerning response measures in the WRC as a development.

It may be proposed then, that the inclusion of response measures in treaties establishing civil liability for damages to the environment arising from maritime activities is a general development. The scope of this development, however, remains uncertain. Whether it only relates to a specific area of maritime activities, environmental damages in general or to international law in general is unclear from this study. What is certain is that this development is relevant for the regulation of environmental damages arising from maritime activities, and it is suggested that this development is relevant for international environmental law more broadly as well.

In order to locate this development in a wider and political context, the four step model describing the evolution of humankind's environmental consciousness is recalled.

It is obvious that the regulations of maritime activities understand that people are able to effect the environment in a lasting way, and recognise that the environment can often not repair itself but requires assistance. This can be classified as the epistemological break.

Furthermore, the curative approach is reflected in the establishment of civil liability, which aims directly at providing compensation for those who repair the environment.

It seems as if the said legislator has even realised the bitter reality of economics: that healing the environment is more costly than preventing environmental damages from occurring. Obligations concerning response measures may be said to attach to the preventive approach, in the aim at minimising damage once an incident has occurred. The conclusion of this study suggests that the maritime legislator combines the curative and the preventive approach by including obligations concerning response measures in treaties establishing civil liability regimes for environmental damage.

When legislators realise that our contemporary reliance on scientific knowledge is too great and that mankind needs to take more preventive measures than today's science invites, the legislator will have reached the anticipatory approach. The frequent recalling of the precautionary principle in international environmental law definitely hints at a movement towards the anticipatory approach, but when this approach actually will be employed is uncertain.

Whether the most important goal for international environmental law today is to extend the reparative approach to areas of environmental law other than those concerned with hazardous activities or to advance the regulation of such hazardous activities in order to actually implement an anticipatory approach, remains uncertain. However, noting the need for a healthy environment as the ultimate goal, I wish to encourage the reader both to

advance international environmental law in a direction consistent with the anticipatory approach, and to extend the inclusion of preventive measures in mainly curative instruments, also furthering the realisation of the anticipatory approach in international environmental law.

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