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The Importance of Solving Legal  
Problems Regarding Wrecks  
– Risks Posed by Dangerous Wrecks in  
Swedish Waters

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# Summary

This thesis discusses legal problems in relation to shipwrecks, with focus on dangerous and abandoned wrecks, and takes a *de lege ferenda* perspective on regulations regarding wreck liability, responsibility for wreck removal and prevention of pollution on the marine environment.

Abandoned wrecks may obstruct navigation and pose hazard to the marine environment. Moreover, wrecks create a wide range of problems, for lawyers, coastal States and societies, authorities, seafarers and insurers alike. The number of wrecks in Swedish waters is unknown but is currently being inventoried by the Swedish Maritime Administration. Nonetheless, and taking into account that the number of abandoned, and possibly dangerous wrecks, in Swedish waters is likely considerable, there is no comprehensible set of laws regulating problems stemming from and liability for wrecks. The past few years, attentiveness has been drawn in Sweden to the lack of regulations on wrecks. Wreck-related issues are also subject to recent international attention. A Wreck Removal Convention has been adopted, and will fill a gap in the existing international framework by providing uniform rules on effective wreck removal beyond the territorial sea. However, the Convention has not entered into force. International instruments regulating issues related to wrecks do exist, providing rules intended to prevent marine casualties and pollution. Moreover, these instruments provide obligations for States to take responsibility for such prevention.

In Sweden, liability for wrecks is primarily connected to wreck ownership. The owner is usually covered by liability insurance; therefore, the insurer, typically a P&I-club, plays an important role when wrecks cause damage. The Swedish authorities have some possibilities to intervene and take measures regarding dangerous wrecks.

The hazard wrecks may pose to the marine environment depends on a number of factors included in the characteristics of the wreck itself and of the cargo together with the conditions at the location of the wreck. Moreover, the measures that can or must be taken in regard to wrecks depend on these same factors together with others, such as economical/financial, political, and last but not least legal factors.

The international and national law covering wrecks is incomprehensive. The dominant feature of this field of law is the lack of regulation. Legislation concerning wrecks is best done nationally due to the fact that the most damage is done by wrecks in national waters. Nonetheless, international harmonization on wreck-related issues would be beneficial.

# Sammanfattning

I uppsatsen belyses rättsfrågor gällande skeppsvrak med fokus på övergivna och farliga vrak. Uppsatsen antar ett *de lege ferenda* perspektiv på lagstiftning angående juridiskt ansvar för vrak, ansvar för bortskaffande av vrak samt förebyggande av marin miljöförstöring.

Övergivna vrak kan försvåra navigering och utgöra miljöfara, och övergivna vrak kan utgöra stora problem för en mängd olika aktörer. Hur många skeppsvrak som finns i svenska vatten är det ingen som vet, men Sjöfartsverket leder för närvarande en inventering av antalet skeppsvrak i de svenska vattnen. Det finns ingen heltäckande lagreglering gällande de juridiska problem som vrak medför trots det faktum att det med största sannolikhet finns ett stort antal övergivna och förmodligen farliga vrak i de svenska vattnen. Bristen på funktionella lagregler har uppmärksammats i Sverige de senaste åren. Frågor gällande vrak har även uppmärksammats internationellt vilket har lett till antagandet av Vrakkonventionen. Dessvärre har konventionen ännu inte trätt i kraft. För det fall att konvention träder i kraft kommer den att fylla ett tomrum i det nuvarande internationella regelverket genom enhetliga regler för effektiv bortskaffning av vrak bortom territorialhavet. Andra internationella instrument som reglerar vrakrelaterade frågor finns dock att tillgå. Dessa instrument medför skyldigheter för stater att ta ansvar och att förhindra och förebygga förorening av den marina miljön samt olyckor till sjöss.

I Sverige är det juridiska ansvaret för vrak främst kopplat till vrakets ägare. Denne ägare är vanligtvis täckt av en ansvarsförsäkring, vilket medför att försäkringsgivaren, oftast en P&I-club, har en central roll vid de tvister som uppkommer när vrak orsakar skada. Visst ansvar faller även på svenska myndigheter som har vissa möjligheter att ingripa samt vidta åtgärder angående farliga vrak.

Vilken fara ett vrak utgör för den marina miljön beror på ett antal olika faktorer, där såväl vrakets egenskaper och last som förhållanden vid vrakets placering påverkar. De åtgärder som kan, eller måste, vidtas gällande vrak beror dels på dessa faktorer och dels på ekonomiska/finansiella, politiska och inte minst legala faktorer.

Varken internationella eller nationella lagar och regler om de juridiska problem vrak medför är heltäckande. Detta rättsområde domineras av bristande lagstiftning. Lagstiftning om vrak sker lämpligast nationellt eftersom vrak i nationella vatten orsakar mest skada. Men med detta inte sagt att internationell harmonisering inte vore önskvärt.

# Preface

Först och främst vill jag tacka min fantastiskt duktiga och hjälpsamma handledare Lars-Göran Malmberg för bärgning när jag gått på grund. Jag vill också tacka alla praktiker samt personal på myndigheter som tagit sig tid till att förklara problematiska frågor inom detta komplicerade rättsområde och som hjälpt mig få tag på material. Till sist vill jag säga tack till min käre far och mina vänner för ovärderlig hjälp med korrekturläsning.

Lund den 19 maj 2010

*Katarina Kepplerus*

# Abbreviations

Art.	Article
Cit:	Cited as
Ch.	Chapter
CMI	Comité Maritime International
COLREG	Convention on the International Regulations for Preventing Collisions at Sea, 1972.
EC	European Community
EEZ	Exclusive Economic Zone
E.g.	Latin: <i>Exempli gratia</i> , for example
Et al	And others
EU	European Union
HNS-OPRC Protocol	Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, 2000.
ICJ	International Court of Justice
I.e.	Latin: <i>id est</i> , in other words, that is to say.
IJMCL	The International Journal of Marine and Coastal Law
IMDG	International Maritime Dangerous Goods Code
IMO	International Maritime Organization
Intervention Convention	International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualties, 1969, as amended by protocol 1973.
LC	London Committee, IMO
LEG	Legal Committee, IMO
LLMC	Convention on Limitation of Liability for Maritime Claims, 1976.
London Convention	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972.
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto.
MC	Maritime Code, i.e. the Swedish Maritime Code ( <i>Sjölagen</i> )



OPRC Convention	International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990.
P&I Prop.	Protection and Indemnity Swedish: <i>Proposition</i> , government bill
PSSA Salvage Convention	Particularly Sensitive Sea Areas International Convention on Salvage, 1989.
SOLAS	International Convention for the Safety of Life at Sea, 1974.
SOU	Swedish: <i>Statens Offentliga Utredningar</i> , the Swedish Government Official Reports
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978.
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea, 1982.
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNON	United Nations Office at Nairobi
WRC	Nairobi International Convention on the Removal of Wrecks, 2007.

# 1 Introduction

## 1.1 Introduction to the subject

The fact that abandoned shipwrecks may cause very serious problems for a number of concerned parties is unknown to many. Yet, it is a fact that it is not only extremely costly to clean up wrecks that have hazardous effects on the environment, but it is also difficult to find applicable legal basis for liability where such basis exists only partially. The International Maritime Organization (IMO) has estimated the number of abandoned wrecks worldwide at almost thirteen hundred, and the numbers have reportedly increased in the past decades. The corresponding figure for the Baltic Sea is estimated at about 100 000.<sup>1</sup> The lack of exact statistics regarding wrecks is evident in light of the fact that these figures hardly correspond. Exact numbers and positions of shipwrecks do not exist, not for the Baltic Sea and not for Swedish territorial waters. However, authorities have recently started to look into shipwrecks destroying the environment or impeding navigation. Data is collected as a first step towards legislating the responsibility for wrecks, and also, hopefully, towards actions regarding dangerous wrecks in order to prevent future environmental damage.

The Torrey Canyon catastrophe in 1967 is often used to mark the beginning of awareness of the need for legislation protecting the marine environment. The discovery of mercury emissions in Japan endangering lives of coastal communities and the constant increase in pollution of the sea by oil and other substances, have further added to the need to protect the marine environment from increased pollution from different sources. Over-fishing and loss of biological diversity have added to a tendency of attention to marine environmental law globally. Because of this development, protection of the marine environment and sustainable use of its resources have been important issues in the modernization of the law of the sea.<sup>2</sup> This modernization continues, now with tendencies to include removal of wrecks – mostly because of their threatening, or actual, pollution to the marine environment.

An abandoned wreck within some proximity to the coast may cause considerable difficulties to the coastal State, not only by obstructing navigation. Wrecked ships may also have the effect that they pollute the marine environment in various ways, typically by a release of oil or other dangerous substances. Furthermore, the wreck may endanger fishing, and at times environmental impacts on the marine environment may continuously occur

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<sup>1</sup> [http://www.raa.se/cms/extern/aktuellt/aktuellt/ostersjons\\_unika\\_kulturarv\\_bortglomt.html](http://www.raa.se/cms/extern/aktuellt/aktuellt/ostersjons_unika_kulturarv_bortglomt.html), retrieved 2010-05-11.

<sup>2</sup> Birnie et al, page 380.

when wrecks leak fuel or substances over a long period of time, or when something in the construction of the ship itself affects the environment.<sup>3</sup>

## 1.2 Purpose

With a starting-point in both national and international law, the purpose of this work is to identify and illuminate legal problems in relation to wrecks. The objective is to explain the legal position concerning wrecks specifically regarding wrecks that are dangerous or abandoned. This thesis finally aims at analyzing the current development in this matter and to discuss *de lege ferenda* regarding liability for removal of wrecks and other measures taken relating to wrecks posing hazard. In principle, this thesis takes a Swedish perspective on the discussions relating to wrecks, but includes international regulations, and has a comparative approach to the legal problems discussed. In order to achieve this purpose, the following questions are discussed throughout the scope of this work:

*Legally, what is a wreck and who has responsibility for it?*

*What national and international laws regulate and relate to wrecks?*

*What measures can be taken regarding dangerous wrecks, who may and who must take these measures?*

*What effects may wrecks have on the environment?*

## 1.3 Theory

The theoretical basis for this work is general legal principles of international environmental law, primarily the precautionary principle, the polluter pays principle and the “no cure no pay” principle. Moreover, the theoretical foundation consists of generally accepted principles of public international law, such as the principle of sovereignty, together with customary law in regards to the law of the sea. The interpretation of the law on the subject forms part of a modern political and judicial tendency, i.e. sustainable development. Uncontroversial and contemporary as this perspective may be, still, it constitutes a clear standpoint and is therefore part of the theoretical basis.

## 1.4 Method

When presenting the facts and discussing applicable law in the descriptive section of this study, the method applied is traditionally legal. This means that the legal sources are assigned value and analyzed in such a way as to shed light on the given problem, and find the answers to the questions posed in the different chapters, as well as in the purpose of the study. This method is supplemented, in the descriptive section as well as in the analytical section, with a method of law and politics. This method considers which interests have been taken into account in the applicable law, and how the

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<sup>3</sup> De la Rue and Anderson, page 989.

relevant concerns of this study have been protected in the applicable law. The application of this method leads to discussions on *de lege ferenda* in the analytical section of the study. With the subject's new and contemporary character follows the need to adopt a forward-looking perspective through discussions on *de lege ferenda*. Therefore, discussions and analyses of preparatory work, proposed legislation and current development in the field gain value. It should also be said, that my methods include disciplines other than the judicial, primarily scientific and environmental disciplines, in order to provide a better understanding of the subject and its problems.

## 1.5 Material

The most central material used in writing this thesis includes preparatory work from IMO and other UN-bodies as well as Swedish government bills and other preparatory work, together with investigations and documents published and provided by Swedish Authorities. Swedish law in this field together with international conventions in force and not yet in force are central. Additionally, the material used in this study includes national and international doctrine, dissertations, and scientific reports. Finally, information presented in this thesis, primarily in the analytical section, derives from meetings and correspondence with practitioners in the maritime field.

## 1.6 Delimitations

The focus of this thesis, as explained in the purpose, is the national Swedish perspective in the international arena on regulations of wrecks. Consequently, and in order to paint a wide-ranging picture of the legal issues regarding wrecks, international law is discussed. However, the aim of the discussions on international law is not to provide an exhaustive description of all international law possibly connected to the *law of wrecks*. Instead, I aim at explaining the rules in force, which I find relevant in this context. Furthermore, EU law is not included in the scope of this work. Similar to the delimitations in international law, the discussions on national Swedish law is not exhaustive in the sense of explaining all legislation connected to wrecks. The aim is rather to explain the law and customs applied to dangerous and abandoned wrecks, together with law on liability for wrecks.

Geographically, this thesis is for the most part limited in its discussions to the seas surrounding Sweden. The focus is primarily on the Baltic Sea and the Skagerrak/Kattegat. The thesis therefore discusses international regulations from a Swedish point of view. In terms of maritime zones, the discussions include Swedish internal waters, the territorial sea, the exclusive economic zone and the waters adjacent to these zones, i.e. the high seas and maritime zones under the jurisdiction of neighbour States.

## 1.7 Disposition

Following this introduction, chapter 2 is devoted to a discussion on definitions on wrecks to clarify the object discussed throughout the thesis. Chapter 3 provides a discussion on how wrecks affect the environment and the different actions and measures that can be taken regarding dangerous wrecks. Next, in chapter 4, follows an overview of international law connected, in a broad sense, to wrecks. Chapter 5 provides an analysis of the ownership and judicial responsibility for wrecks. These first four chapters offer an orientation in the legal and practical problems surrounding wrecks. In chapter 6 follows a chronological review of the Swedish legal development regarding abandoned and/or dangerous wrecks, as well as discussions on the current development on the matter. Additionally, chapter 6 provides a discussion on international law regarding abandoned and/or dangerous wrecks. Chapter 7 illuminates problems regarding shipwrecks with a few illustrative cases with sunken and wrecked ships. The final part of the thesis, chapter 8, is devoted to an analysis on the discussions in the previous chapters and offers suggestions for future legislation, development and measures to be taken regarding abandoned or dangerous wrecks – on the national as well as on the international level.

## 2 What is a wreck?

*Since the object for discussion throughout this thesis is “wreck”, it is both important and logical to initially discuss the definitions of the term wreck. Hence, this chapter is devoted to legal definitions that are related to wrecks. In the following, I will answer a number of questions on the subject of defining wrecks: What objects are considered ships, and how can they transition into being wrecks? How is a wreck defined, and is there a discrepancy between the definitions in national and international law? Within the term wreck, are there various sorts of legal definitions?*

### 2.1 National definitions

#### 2.1.1 What is a ship?

Defining the term *ship* may seem unnecessary when considering that the purpose of this thesis is limited to cover wrecks from ships. However, as we shall see, the transition from a ship to a wreck is not without complications in terminology. Therefore, a distinction and legal definition on the predecessor to the wreck is discussed in the following.

The legislator has excluded a set definition on the term *ship* in Swedish maritime law. Nonetheless, a legal distinction can be found in the Swedish Maritime Code (MC), between a *ship* and a *boat*. The distinction provides that vessels with hulls at least 12 meters long and 4 meters wide are characterized as ships, and that smaller vessels are defined as boats.<sup>4</sup> As for the rest of the definition, the MC is silent. Thus, instead of having a set definition laid down by law, the indicated method used to define ships is a practical interpretation originating from generally accepted aspects. According to this method, as a rule, *ship* should be interpreted as a means of transport by sea. Devices for other use at sea, such as fishing, salvage, diving, icebreaking and similar activities connected to shipping are usually included in the term. Moreover, what is essential for the definition of a ship is a certain ability of maneuvering. However, the capacity of propulsion is usually not mandatory, even if its presence helps excluding ambiguousness. Using this method of interpretation, barges and lighters ships, as well as floating docks and floating cranes can be included in the term, while rafts, bridge pontoons and floating containers are excluded.<sup>5</sup>

In short, the ship is characterized as a means of transport equipped to be steered and having a hull supported in the water by enclosed air.<sup>6</sup> The central usage of this short definition is within the fields of law of maritime property, but may be used in the general maritime field as an “in any case

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<sup>4</sup> MC ch. 1 art. 2.

<sup>5</sup> Prop. 1973: 42, page 123.

<sup>6</sup> Tiberg, 2004, page 203.

common denominator”.<sup>7</sup> If either of the qualities mentioned is permanently lost in a casualty, there is reason to view the object as a wreck in a maritime legal sense.<sup>8</sup> However, the transition between the two classifications *ship* and *wreck* has some additional consequences that will be discussed in the following.

## 2.1.2 When does a ship become a wreck?

The classification of an object as a ship ceases when the vessel is a physical total loss, meaning that the ship has become a wreck. The total loss may occur through fire, explosion or scrapping. Moreover, physical total loss applies to a ship sinking in deep waters where it is not recoverable.<sup>9</sup> Even if the ship is not a physical total loss it may be damaged so severely that is either irreparable or not worth repairing. In the MC, the common terms for these situations are *beyond repair* or *constructive loss*.<sup>10</sup> However, the definition of a wreck according to the transition of a ship to a wreck through a physical total loss or constructive loss results in a few problems. Shipwrecks lying on the bottom of the sea often represent great values, both in the construction of the ship in means of steel and other metals and in the cargo. Therefore, they are of interest of retrieving, and for this reason, a physical total loss is somewhat misleading for describing a wreck.

Similar to the lack of definition for ships, there is no general, legal definition on shipwrecks in Swedish law. However, a definition for insurance purposes can provide some guidance. In a Norwegian case, with a Swedish average adjuster, a definition on the term wreck was discussed because a ship was wrecked and afterwards collided with a pipeline causing damage on the pipeline. In the case, the insurer was found to have payment liability, and the ship was declared a physical total loss by the hull insurer. Nonetheless, according to the average adjuster, a vessel does not necessarily become a wreck when abandoned in such a way that would normally, in every-day terms, classify the vessel's status as a wreck. For the reason that, as long as the vessel may be salvaged – regardless of whether the vessel has stranded, sunk or is afloat – it is not a wreck from an insurance point of view.<sup>11</sup>

An official report from 1975 provides that “a ship left abandoned will eventually lose its character as a ship and consequently become a wreck”.<sup>12</sup> This should indicate that the ship does not automatically become a wreck through the abandonment itself. Although, it is important to remember, this definition aims at interpreting conditions for insurance purposes. Providing a maritime definition on wrecks is complicated, according to the authors of

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<sup>7</sup> Tiberg, 1989, page 1.

<sup>8</sup> Tiberg, 2004, page 203.

<sup>9</sup> Falkanger et al, page 45.

<sup>10</sup> Falkanger et al, page 45, and MC ch. 1 art. 10.

<sup>11</sup> ND-1990-8, the average adjuster in Sweden, March 6 1990.

<sup>12</sup> SOU 1975:81, page 56, my translation. The official report is discussed more thoroughly in chapter 6.

the report, which is the reason for their choice of a different solution, i.e. the statement that definitions on wrecks should be set in the individual case based on relevant circumstances. The authors of the report therefore refrained from attempting to define the term wreck.<sup>13</sup>

### 2.1.3 Certain types of wrecks particularly protected by law

A wreck is classified as an ancient monument, if at least 100 years have presumably elapsed since the ship was wrecked.<sup>14</sup> Ancient remains are protected directly by law in Sweden, that is to say, no administrative decision will normally be issued in order to identify what is protected.<sup>15</sup> The protection means that it is prohibited, without permission, to displace, remove, excavate, and cover, or, by building development, planting or in any other way, to alter or damage an ancient monument.<sup>16</sup> Unlawful measures taken in respect to ancient wrecks are punishable by law.<sup>17</sup>

Wrecked modern passenger ships are, in some aspects, different in character than wrecked cargo ships. When passenger ships sink resulting in large number of victims, the wreck may be considered a burial-place, and under Swedish law it is a crime to disturb the peace of the grave.<sup>18</sup> In this context a particular case is noteworthy: After the passenger vessel *Estonia* was lost in the Baltic Sea in 1994, a particular act was passed with the purpose to protect the peace of the grave. To be exact, the act was passed in 1995 with the purpose to regulate activities at the wreck from the sunken ship *Estonia*.<sup>19</sup> Diving along with other under water activities in the area is forbidden, unless the activity aims at covering or protecting the wreck, or stopping harmful substances from being released from the wreck and thereby polluting the marine environment. The activity shall, additionally, be carried out by, or done with permission from, an Estonian, Swedish or Finnish authority.<sup>20</sup> Failure to comply with the act is a criminal offence.<sup>21</sup>

## 2.2 International definitions

In international law, definitions on terms can generally be found in different international instruments. In this case, the instrument offering a definition

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<sup>13</sup> SOU 1975:81, pages 56 and 71.

<sup>14</sup> *Lag (1988:950) om kulturminnen m.m.* (Act concerning Ancient Monuments and Finds [translation by “Statsrådsberedningen”]) ch. 2 art. 1 (8).

<sup>15</sup> Adlercreutz, in Dromgoole, page 301.

<sup>16</sup> *Lag (1988:950) om kulturminnen m.m.* ch. 3 art. 6, and Adlercreutz, in Dromgoole, page 302.

<sup>17</sup> *Lag (1988:950) om kulturminnen m.m.* ch. 2 art. 21.

<sup>18</sup> *Brottsbalken* (The Penal Code) ch. 16 art. 10.

<sup>19</sup> *Lag (1995:732) om skydd för gravfriden vid vraket efter passagerarfartyget Estonia* (Act concerning Protection of Peace of the Maritime Grave at the wreck of the Passenger Vessel Estonia [Translation by “Statsrådsberedningen”])

<sup>20</sup> *Lag (1995:732)* art. 2.

<sup>21</sup> *Lag (1995:732)* art. 3.



on wrecks is the Nairobi International Convention on the Removal of Wrecks (WRC). In this convention, a *ship* means "...a seagoing vessel of any type whatsoever and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and floating platforms, except when such platforms are on location engaged in the exploration, exploitation or production of sea-bed mineral resources."<sup>22</sup> Moreover, in the same Convention a definition is set regarding wrecks. The Convention provides that *wrecks* are defined as, following a marine casualty, a sunken or stranded ship, or part thereof, as well as any object that is sunken, stranded or adrift at sea from a ship, or a ship that is about, or may reasonably be expected, to sink or strand where effective measures to assist the ship or any property in danger are not already being taken.<sup>23</sup>

The UNESCO Convention on the Protection of the Underwater Cultural heritage corresponds to the Swedish national legislation on ancient monuments.<sup>24</sup> In this Convention the same time-limit of 100 years is found for wrecks which should be protected as a part of the underwater cultural heritage.<sup>25</sup>

The Swedish Act regulating the activities at the wreck from the sunken ship *Estonia*, mentioned in 2.1.3, prohibits diving for Estonian, Finnish and Swedish nationals. However, in this international context, it should be mentioned that this treaty is binding solely for the parties to the treaty according to principles of international law. According to the Vienna Convention on the Law of Treaties, the general rule is that "[a] treaty does not create either obligations or rights for a third State without its consent."<sup>26</sup>

## 2.3 Definitions suited for their purpose

Now we know that the objects considered ships are seagoing vessels with abilities of maneuvering but not necessarily with capacity of propulsions. Ships usually transition into wrecks when they are a physical total loss. Regarding the definition on wrecks, it is evident that in order to define shipwrecks for needed purposes the multiple practical definitions used in Swedish doctrine and established practice can be used as a starting point, but then subsequently modeled for the individual purpose. This is due to the fact that wrecks are defined differently depending on the objective of the definition and the fact that a set definition for all purposes is not particularly useful. We also know that there is a discrepancy between the definitions in national and international law, due to the just mentioned varying purposes for the definitions. In cases when a specific purpose for a legal definition of wrecks exists, this has resulted in different sorts of legal definitions, so to say, within the term "wreck", i.e. wrecks considered burial-places and wrecks protected as ancient monuments.

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<sup>22</sup> WRC art. 1 (2).

<sup>23</sup> WRC art. 1 (4).

<sup>24</sup> UNESCO Convention on the Protection of the Underwater Cultural Heritage.

<sup>25</sup> UNESCO Convention on the Protection of the Underwater Cultural Heritage art. 1.

<sup>26</sup> Shaw, page 928, and the Vienna Convention on the Law of Treaties, art. 34.

The purpose of the definition of wrecks in this thesis is to define objects which may pose danger to navigation or the marine environment, or both. The relevant objects in this context are wrecked ships in a rather wide and general sense. Therefore, the use of the term wreck in this work is common and non-legal, similar to the definition on the term used within the EU. According to this definition, a wreck is “[t]he hulk of a wrecked or stranded ship; a ship dashed against rocks or land and broken or otherwise rendered useless.”<sup>27</sup> This definition is appropriate to use throughout this work because of its wide range. However, a wreck in this thesis additionally means an entire ship lying on the seabed as well as a part of a ship lying on the seabed.

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<sup>27</sup> <http://iate.europa.eu/iatediff/FindTermsByLilId.do?lilId=49841&langId=en>, retrieved 2010-05-03.

## 3 Hazardous effects of wrecks and actions to reduce them

*This chapter provides a brief overview of the hazardous effect wrecks may have on their surrounding environment, and of the different actions and measures that can be taken regarding dangerous wrecks. These hazardous effects are the primary reason for the importance of drawing attention to wreck-related problems.*

### 3.1 Dangerous substances

Most seagoing ships transport oil, if not in the tank, at least oil used for the operation of the ship. Oil can cause serious damage, fouling coastlines and killing sea birds, fish and other marine life. In cases where the oil does not kill the fish or other marine life, the oil can damage the marine environment in other ways. However, oil is not the most noxious of marine pollutants for the reason that oil is eventually broken down by marine bacteria. Another reason contribute to the “less dangerous” characteristic of oil, namely that oil spills can to some extent be dealt with by keeping the oil together by means of booms and skimming it off the surface of the sea, or by dispersing it with chemicals.

Other substances, such as Chlorinated hydrocarbons (for instance Dichlorodiphenyltrichloroethane [DDT] and polychlorinated biphenyls [PCBs]), heavy metals (for instance lead, mercury and cadmium) and radioactive waste are not biodegradable, nor is there any possibility of removing them from the sea once they have entered it. These kinds of substances vary in their effect on the marine environment, but in general marine organisms absorb them, often becoming concentrated as they move up the food chain, affecting the growth, reproduction and mortality of marine life.

Nutrients, such as nitrates and phosphates, contained mainly in agricultural run-off and sewage can in small amounts be broken down by the sea and rendered harmless. Large amounts, on the other hand, lead to over-fertilisation, followed by de-composition and de-oxygenation of the water. This effect is particularly striking in enclosed seas like the Baltic Sea. The disposal of plastics from land and ships results in the littering of beaches and may seriously damage wildlife, especially marine mammals, birds and reptiles, which may ingest fragments of plastic or become trapped in plastic packaging and fishing gear.

Pollutants differ in their concentration and effects from region to region. Still, it can be said that coastal waters are generally the most polluted while the open ocean is relatively clean.<sup>28</sup>

## 3.2 Particularly Sensitive Sea Areas

A Particularly Sensitive Sea Area (PSSA) is, according to the IMO, an area that, because of its significance for recognized ecological or socio-economic or scientific reasons, needs special protection through action by IMO and which may be vulnerable to environmental damage by maritime traffic. The PSSA concept has been discussed in several international meetings, and the reports from these meetings reveal that the protected area, in its many manifestations, is perceived as a key device in the battle for sustainable development.<sup>29</sup> The IMO has declared the Baltic Sea the status of a Particularly Sensitive Sea Area. This PSSA classification gives the Baltic Sea environment better protection by enabling stricter rules concerning oil tanker transport. Additionally, the decision to declare the Baltic Sea a PSSA led to the creation of a number of traffic separation areas.<sup>30</sup>

## 3.3 Judging risks and taking action

Reports on issues regarding problems and solutions connected to wrecks, and the environmental risks posed by these wrecks, indicate that investigations must be carried out in several steps. Initially, data must be collected to increase the knowledge on the scope of the problem. Then some sort of technical evaluation must be made, to assess the possibility of an oil discharge from a wreck, together with an evaluation of methods that can be used to offload the oil or even remove the entire wreck. Several methods are available and it has been proved that there are few technological limitations to recover oil from deep waters and challenging environments. The removal of 14 000 tons of heavy oil remaining onboard the *Prestige*<sup>31</sup> in waters more than 3 500 meters deep is a good example of this. Finally, it is important to develop means of guidance for assessing the risks and consequences of oil releases from potentially polluting wrecks. The results from all this must simultaneously be compared to different regulatory and financial regimes, both nationally and internationally.<sup>32</sup> As a rule, measures of some sort regarding dangerous wrecks should always be deemed appropriate. The characteristics of the measures vary a great deal depending on the characteristics of the leakage. A sudden, large oil leak from a big wreck will demand an extensive salvage- or cleaning action at the surface, while a minor leakage lasting over a long time is more difficult to handle.

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<sup>28</sup> Churchill and Lowe, pages 331-332.

<sup>29</sup> Gjerde and Freestone, pages 431-435.

<sup>30</sup> SOU 2008:48, page 38.

<sup>31</sup> The *Prestige* was an oil tanker that sank off the coast of Spain in 2002.

<sup>32</sup> Michel et al, pages iii-iv.

Wrecks, with either minor leakage or future environmental threats, can be cleared of oil in different ways. It is possible to remove the oil directly from the tanks, on condition that the wreck has a reachable position and the location of the tanks is known. For wrecks leaking lighter distillates of oil, another option is to put a large tarpaulin, forming a kind of tent, over the wreck with the consequence that the oil (being lighter than water) is collected in the top layer of the constructed tent, from where it may be removed. The same procedure may be used for wrecks which have not started leaking yet. In these cases, holes are made in the wreck before the “tent” is put in place. A condition for using this method, however, is that the current must not be too strong, which unfortunately is the case on the location of numerous wrecks. Yet another option for wrecks leaking lighter sorts of oil is to first, under controlled circumstances, create an explosion of the wreck and subsequently deal with the oil spill at the surface.<sup>33</sup>

Funding is usually a limitation concerning action to remove oil or wrecks, even in cases where there is a responsible party. Wreck- and/or oil removal is very costly.<sup>34</sup> The expected environmental benefit of taking action must be weighed against the cost for proposed measures and operations. A large number of circumstances may affect the risk assessment. It is often difficult to gain knowledge beforehand on what quantity as well as quality of oil the wreck contains. Nonetheless, this information is crucial when deciding upon the potential environmental hazard and appropriate measures in respect to wrecks. Therefore, competent persons within shipping technology and historians should be consulted for their knowledge. Much information can be found in old documents and plans. Calculations on cost for draining of wrecks vary a great deal, with costs up to 100 million SEK. The choice of methods and investigations of a wreck depends on factors such as depth, the conditions at the seabed, currents, and the state and age of the wreck, and these same factors are correspondingly decisive for the cost for salvage- and cleaning actions.<sup>35</sup>

The risk assessment for potentially dangerous wrecks is done according to several criteria, of which the most important can be found in the WRC. The WRC stipulates a number of criteria that the coastal State should take into consideration when determining whether a wreck poses a hazard. These include the type, size and construction of the wreck, the proximity of shipping routes, whether the wreck is located in a particularly sensitive area, the nature and quantity of the wreck’s cargo as well as the amount and types of oil and the likely damage to result if the cargo or oil should be released into the marine environment. The list of the criteria in the WRC is not exhaustive. Consequently, any other circumstances that might necessitate the removal of the wreck should also be taken into account.<sup>36</sup>

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<sup>33</sup> Lindström, page 14.

<sup>34</sup> Michel at al, page iii.

<sup>35</sup> Lindström, page 14.

<sup>36</sup> WRC art. 6.

### **3.4 Note on positive effects of wrecks**

The positive effects that wrecks may have on or in the marine environment are outside the scope of this work. Nonetheless, a small note on those effects is appropriate in order to paint a broader picture of how wrecks affect their environment. Wrecks can have a positive effect on the marine environment by forming artificial reefs. Furthermore, wrecks are popular diving attractions, which can draw tourists to a region and thereby generate income for the region.<sup>37</sup>

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<sup>37</sup> Reference to information received at a meeting with Kjell Andersson, Marine Archeologist at LTH, Faculty of Engineering, Lund University.

## 4 States' international rights and obligations

*Problems related to wrecks need to be put into a wider perspective, namely in respect of pollution from ships in general. This chapter provides a discussion on the following questions: What international obligations do States have concerning protection of the environment and marine pollution? What obligations do States have concerning safe navigation at sea and the safety of shipping? What rights do States have to take measures to protect the marine environment, and what rights do they have to ensure safe navigation in their waters? Finally, how does the international framework protect the marine environment, and how does it aim at preventing loss of ships and collisions?*

### 4.1 The marine environment and operational pollution

#### 4.1.1 Provisions concerning the environment in the Law of the Sea Convention

The United Nations Convention on the Law of the Sea (UNCLOS) enjoys a wide participation and is in many aspects treated as customary law. The Convention is a dynamic legal framework due to later developments in the field of international environmental law. The Convention has brought with it a changed way to look at marine environmental law. Pollution is no longer a part of the implicit freedom of the seas; instead, the convention aims to protect the marine environment as a whole, and not simply the interests of other states. The emphasis in international law is now placed primarily on international regulation and cooperation focused on protection of the marine environment, rather than on responsibility or liability for environmental damage.<sup>38</sup>

The Convention provides that States are responsible for the fulfillment of their international obligations concerning the protection and preservation of the marine environment, and they shall be liable in accordance with international law.<sup>39</sup> Further, States are required to co-operate, and may be required to respond to pollution emergencies individually in cases where the incident falls within their jurisdiction or control. Failure to do so may amount to a breach of the State's obligation in customary law to control sources of pollution, even if the emergency itself is not attributable to state action or inaction. UNCLOS requires States to ensure that pollution arising from incidents or activities under their jurisdiction or control does not

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<sup>38</sup> Birnie et al, pages 382-384.

<sup>39</sup> UNCLOS art. 235 (1), and Birnie et al, page 430.

spread beyond areas where they exercise sovereign rights, or is not transferred to other areas. The Convention specifically mandates measures to prevent accidents and deal with emergencies emanating from all sources of marine pollution.<sup>40</sup>

The general term *pollution of the marine environment* means:

*The introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.*<sup>41</sup>

Furthermore, a section in UNCLOS is devoted to *International rules and national legislation to prevent, reduce and control pollution of the marine environment*.<sup>42</sup> States shall, according to the articles in this section, adopt laws to prevent pollution from activities in areas under their jurisdiction,<sup>43</sup> and pollution by dumping.<sup>44</sup> Moreover, States shall establish international rules, as well as national legislation, to prevent, control and reduce different kinds of pollution from vessels, through the competent international organization or diplomatic conference.<sup>45</sup> In addition, UNCLOS provides that States are obligated to ensure compliance to international and national rules for ships flying their flag,<sup>46</sup> and that States shall prevent ships not complying with international rules on seaworthiness from sailing, when the non-compliance threatens the marine environment.<sup>47</sup> Moreover, coastal States have rights to enforcement in relation to vessels not complying with international rules relating to pollution from vessels.<sup>48</sup> On the topic of maritime casualties, article 221 of the Convention provides rules for measures taken by States to avoid pollution arising from such casualties, and gives them the mandate to take and enforce measures beyond the territorial sea to protect their coastline or related interests.<sup>49</sup>

A coastal state may, according to UNCLOS article 211 (6), in respect of their Exclusive Economic Zone (EEZ), adopt laws and regulations for the control of pollution from vessels where international rules and standards are inadequate to meet special conditions. When a coastal state have reason to believe that a particular, clearly defined area in their EEZ needs to be covered by special rules, the coastal state may communicate these special

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<sup>40</sup> UNCLOS art. 194 and 195, and Birnie et al, pages 424-425.

<sup>41</sup> UNCLOS art. 1. 4, and Churchill and Lowe, page 382.

<sup>42</sup> UNCLOS part XII section 5.

<sup>43</sup> UNCLOS art. 209.

<sup>44</sup> UNCLOS art. 210.

<sup>45</sup> UNCLOS art. 211.

<sup>46</sup> UNCLOS art. 217.

<sup>47</sup> UNCLOS art. 219.

<sup>48</sup> UNCLOS art. 220.

<sup>49</sup> UNCLOS art. 221 (1).



needs to the appropriate receivers. After it has been determined that the coastal state has a right to adopt the laws and regulations for protecting the area the state may do so, and shall also set and publish limits for the particular, clearly defined area.<sup>50</sup> Since the Baltic Sea is declared a PSSA, the coastal states surrounding the Baltic Sea may adopt such special rules to protect their EEZs.

As a final note regarding UNCLOS, it should be mentioned that article 237 of the Convention is of some importance. This article provides that the provisions on protection of the marine environment is without prejudice to special conventions and agreements in the field, but that specific obligations under special conventions should be carried out in a manner consistent with general principles and objectives of the Convention.<sup>51</sup>

### 4.1.2 Marine pollution

Pollution from ships is generally of two kinds, operational and accidental. The latter of the two emanates from marine casualties. The purpose of the regulations regarding marine casualties is to minimize the risk and give coastal States adequate means to protect themselves and to secure compensation. Oil tankers and other vessels carrying hazardous and noxious cargoes represent a form of ultra-hazardous risk for all coastal States, representing the object of international law to moderate and control.<sup>52</sup>

The international law relating to marine pollution is, due to deficiencies of customary international law, contained almost wholly in treaties. These treaties can be divided into four categories: *general multilateral treaties* (there are some half a dozen concerned with pollution from ships), *regional treaties* (such as the 1974 Baltic Convention, replaced by the second Baltic sea Convention adopted in 1992), *bilateral treaties* (such as the Agreement concerning Protection of the Sound from Pollution between Denmark and Sweden, 1974), and finally, *the Law of the Sea Convention*.<sup>53</sup> On the subject of *regional treaties*, a notable feature of the second-generation agreements is that they include, for the first time in marine pollution treaties, references to several concepts recently developed in international environmental law, such as the precautionary principle, sustainable development and biodiversity.<sup>54</sup>

On the topic of pollution from shipping, a number of issues are raised. These include:

1. standards to reduce or eliminate pollution,
2. the prescription and enforcement of such standards,
3. measures to avoid accidental pollution,

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<sup>50</sup> UNCLOS art. 211 (5) and (6).

<sup>51</sup> UNCLOS art. 237.

<sup>52</sup> Birnie et al, pages 399-340.

<sup>53</sup> Churchill and Lowe, pages 333-336.

<sup>54</sup> Churchill and Lowe, pages 335-336.

4. action taken by coastal States in respect of pollution casualties,
5. co-operation in dealing with emergencies, and,
6. liability for pollution damage.

The International Convention for the Prevention of Pollution from Ships as modified by the Protocol relating thereto (MARPOL) regulates the first of these issues, i.e. *standards to reduce or eliminate intentional or operational pollution*. The MARPOL Convention was adopted in 1973 with the intention to deal with all forms of intentional pollution of the sea from ships, other than dumping. The detailed pollution standards are set out in the annexes. There are six annexes dealing with different kinds of pollution. The first two annexes are obligatory for all contracting parties, and deals with oil, and noxious liquid substances in bulk. Acceptance of the remaining annexes is optional. It appears that since its entry into force (Annex I in 1983, and annex II in 1987), MARPOL it has contributed towards reducing deliberate pollution from ships.<sup>55</sup>

The second issue, namely the *prescription and enforcement of such standards*, which are provided in the MARPOL Convention, was discussed under chapter 4.1.1 regarding UNCLOS. The third issue, i.e. the *measures to avoid accidental pollution*, includes limitations of the tank size and other measures designed to reduce the scale of marine pollution provided in MARPOL, together with marine traffic schemes and the Load Lines Convention mentioned in chapter 4.2.2.2. The fourth issue – *action taken by coastal States in respect of pollution casualties* – refers to the rules laid down in the Intervention Convention, discussed below in chapter 4.3.2. The fifth issue, *co-operation in dealing with emergencies*, is regulated partly in MARPOL, but also in the OPRC Convention, the Salvage Convention (discussed in chapter 4.3.5 and 4.3.3.) and in regional Conventions. The last issue relating to pollution from ships, i.e. *liability for pollution damage*, is regulated in the Civil Liability and Fund Conventions attempting to overcome the difficulties that may be faced by the victims of oil pollution. However, the rules laid down in these Conventions<sup>56</sup> are excluded from the scope of this work.

The MARPOL Convention is the main multilateral instrument in this context. However, both the International Convention for the Safety of Life at Sea (SOLAS), chapter VII, and IMO's International Maritime Dangerous Goods Code (IMDG) contains provisions relating to packing, marketing, labelling, documentation and stowage of dangerous goods, which have the purpose *inter alia* of reducing the risk of pollution resulting from the carriage of such goods by ships.<sup>57</sup>

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<sup>55</sup> Churchill and Lowe, pages 338-341.

<sup>56</sup> The International Convention on Civil Liability for Oil Pollution Damage, 1969, and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971.

<sup>57</sup> Churchill and Lowe, page 342.

## 4.2 Navigation and safety of shipping

### 4.2.1 Freedom of and danger to navigation

The fundamental principle governing the law of the sea is that *the land dominates the sea*. This means, that the land territory situation constitutes the starting-point for the determination of the maritime rights of a coastal State.<sup>58</sup> Regarding States' rights to freedom of navigation, different rules apply in different maritime zones. In *internal waters*, foreign vessels normally enjoy no right of navigation. In the *territorial sea*, foreign vessels enjoy the right of innocent passage, although the coastal State may suspend the right temporarily in limited areas if necessary for security reasons.<sup>59</sup> UNCLOS article 21, states that coastal States may adopt laws and regulations relating to innocent passage through the territorial sea, in respect of the safety of navigation and the regulation of maritime traffic.<sup>60</sup> Such laws shall be given due publicity, and foreign ships exercising the right of innocent passage through the territorial sea shall comply with such laws.<sup>61</sup>

In *international straits*, foreign vessels may have greater rights of navigation by means of treaty, or through the right of transit passage. Additionally, in international straits coastal States may not be able to suspend the right of navigation. In *archipelagic waters*, foreign vessels enjoy the right of innocent passage together with a more extensive right of archipelagic sea-lanes passage.<sup>62</sup> *Beyond the territorial sea*, all vessels enjoy, in principle, freedom of navigation under the exclusive jurisdiction of the flag State. However, this freedom is subject to a number of limitations, such as the coastal States' jurisdiction relating to pollution and resource control in the EEZ.<sup>63</sup>

The coastal State has, according the Law of the Sea Convention, a duty to give appropriate publicity to any danger to navigation, of which it has knowledge, within its territorial sea.<sup>64</sup> This duty has been interpreted as including dangers of which the coastal State should have knowledge.<sup>65</sup> The duty exists in both customary law, as was recognized in the Corfu Channel Case,<sup>66</sup> and in treaty law (in UNCLOS, article 24 [2] and in the Geneva Convention on the Territorial Sea and the Contiguous Zone, article 15 [2]).<sup>67</sup> A corresponding duty applies to States bordering straits relating to transit passage.<sup>68</sup>

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<sup>58</sup> Shaw, page 553.

<sup>59</sup> Churchill and Lowe, page 263.

<sup>60</sup> UNCLOS art. 21 (1) (a).

<sup>61</sup> UNCLOS art. 21 (3) and (4).

<sup>62</sup> Churchill and Lowe, pages 263-264.

<sup>63</sup> Churchill and Lowe, page 264, and UNCLOS art. 56.

<sup>64</sup> UNCLOS art. 24 (2).

<sup>65</sup> Lindefalk, page 57.

<sup>66</sup> Corfu Channel Case (United Kingdom v. Albania) 1949 ICJ.

<sup>67</sup> Churchill and Lowe, page 100.

<sup>68</sup> UNCLOS art. 42.

## 4.2.2 Safety of shipping

### 4.2.2.1 SOLAS

The International Convention for the Safety of Life at Sea (SOLAS) is the main convention dealing with seaworthiness of ships. The Convention contains a large number of complex regulations laying the standards relating to construction of ships, fire-safety measures, life-saving appliances, the carriage of navigational equipment together with other aspects of the safety of navigation, the carriage of goods, special rules for nuclear ships and high speed craft, management for the safe operations of ships, and special measures to enhance maritime safety. States parties to the convention must impose, through their own national legislation, the standards laid down in the Conventions upon the vessels sailing their flag. The enforcement lies primarily with the flag State, but port States have a degree of control.<sup>69</sup>

### 4.2.2.2 Other IMO instruments dealing with seaworthiness

Along with SOLAS, there are three other IMO conventions dealing with seaworthiness of ships:

- ✓ The International Convention on Load Lines, from 1966, deals with the problem of overloading which is often the cause of shipping casualties.
- ✓ The 1971 Agreement on Special Trade Passenger Ships, with the subsequent protocol of 1973, deals with the safety of ships carrying a large number of unberthed passengers in special trades – such as the pilgrim trade.
- ✓ And finally, the 1977 International Convention for the Safety of Fishing Vessels, with a subsequent protocol (neither of which have entered into force)<sup>70</sup> lays down regulations governing the construction and equipment of fishing vessels.<sup>71</sup>

### 4.2.2.3 Prevention of collisions at sea

Along with regulations on seaworthiness, a series of regulations designed to prevent collisions at sea are noteworthy. The current regulations are annexed to the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREG). COLREG is primarily concerned with a vessel's conduct and movements in relation to other vessels, in particular when visibility is poor, for the purpose of collision avoidance, and also with the establishment of common standards in relation to sound and light signals. As far as enforcement is concerned, breach of COLREG is

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<sup>69</sup> Churchill and Lowe, page 265.

<sup>70</sup> [http://www.imo.org/Conventions/mainframe.asp?topic\\_id=247](http://www.imo.org/Conventions/mainframe.asp?topic_id=247), retrieved 2010-05-11.

<sup>71</sup> The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), mentioned in the next subchapter 4.2.2.3 "Prevention of collisions at sea", additionally forms part of the legal framework regarding seaworthiness.

commonly made an offence under the criminal law of the flag State party to COLREG. In UNCLOS,<sup>72</sup> ships exercising their right of innocent passage through the territorial sea, or their right of transit passage through straits, must observe the regulations annexed to COLREG, regardless of whether the flag State or coastal State is party to the Convention on the International Regulations for Preventing Collisions at Sea.

An important means of reducing the risk of collisions between ships is the use of traffic separation schemes. These are now prescribed by the IMO and over 100 such schemes exist. Since the entry into force of COLREG in 1977,<sup>73</sup> observance of these schemes is mandatory for ships flagged under States Parties to the Convention. Even if IMO is the only international body competent to prescribe traffic separation schemes, coastal States also have some competence. As well as traffic separation schemes IMO also recommends deep water routes (for areas in which either navigation is particularly hazardous or, in which it is exceptionally important, primarily for environmental reasons, to avoid casualties in these areas), areas to be avoided and other routeing measures. Other means of reducing risk of collisions should also be noted, e.g. mandatory ship reporting systems (introduced as a possibility in SOLAS in 1994), crewing standards in, primarily, the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), adopted 1978, and the establishment of navigational aids such as light houses and radar beacons, also mandatory under the SOLAS regime.<sup>74</sup>

## **4.3 Accidental and deliberate pollution, and marine casualties**

### **4.3.1 Wreck removal**

The WRC was adopted in 2007.<sup>75</sup> Since there are six signatory States and one contracting,<sup>76</sup> and since ten is the required number of parties, it has not yet entered into force.<sup>77</sup> The WRC provides the legal basis to enable coastal States to remove, or have removed, wrecks posing hazard to the safety of shipping or to the marine environment. For these objectives to be satisfied, the WRC includes provisions on the reporting and locating of ships and wrecks, and determining the hazard posed by wrecks, including assessment of damage to the marine environment. The WRC also regulates measures to facilitate removal of wrecks, as well as the liability of the registered ship-owner. The owner is, through the convention, required to maintain compulsory insurance or other financial security to cover the liability under

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<sup>72</sup> UNCLOS art. 21 (4) and art. 39 (2).

<sup>73</sup> [http://www.imo.org/Conventions/contents.asp?doc\\_id=649&topic\\_id=257](http://www.imo.org/Conventions/contents.asp?doc_id=649&topic_id=257), retrieved 2010-05-11.

<sup>74</sup> Churchill and Lowe, pages 267-270.

<sup>75</sup> The convention was adopted on 18 May 2007 at UNON, Nairobi.

<sup>76</sup> As of July 31 2009.

<sup>77</sup> LEG 96/10, annex, page 5, and WRC art. 18 (1).

the Convention.<sup>78</sup> The Convention will fill a gap in the existing international legal framework by means of providing a set of uniform international rules aimed at ensuring the prompt and effective removal of wrecks located beyond the territorial sea.<sup>79</sup> Further discussions on the WRC follow under the following subchapters where the WRC is put in relation to existing international instruments.

### **4.3.2 Right of intervention for coastal States**

While, principally, vessels exercising the high-seas freedom are subject only to the jurisdiction of the flag State, an exceptional right of coastal State intervention in international law can be derived from the principle of necessity or from the right of self-defence. The International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualties, 1969, as amended by protocol 1973, (Intervention Convention) clarified the rights of coastal States. The application of the convention was later, in 1973, extended to pollution from other substances than oil. The right of intervention beyond the territorial sea has become part of customary law, proved not only from the widespread ratification of the Intervention Convention but also UNCLOS article 221, and article 9 of the Salvage Convention (the Salvage Convention is discussed below in chapter 4.3.3.2).

The Intervention Convention entered into force in 1975 and it has today 86 State parties.<sup>80</sup> It provides that coastal States may take such measures necessary to prevent, mitigate or eliminate grave or imminent danger to their coastline, or related interests, from pollution, or threat of pollution that may reasonably be expected to result in major harmful consequences.<sup>81</sup> However, the concerns of safety of navigation, and a lower threshold for environmental concerns are not dealt with by the Intervention Convention. Therefore, the Intervention Convention was not satisfactory in this aspect and there was a need for these interrelated concerns to be regulated by a freestanding regime, i.e. the WRC.<sup>82</sup> The WRC does not apply to measures taken under the Intervention Convention; hence, the Intervention Convention has priority over the WRC in cases where both conventions are, theoretically, applicable.<sup>83</sup>

### **4.3.3 Salvage**

#### **4.3.3.1 No cure no pay**

Most maritime salvage services have traditionally operated on the basis of the “no cure no pay” principle. This principle provides salvors with no reward for work carried out benefiting the coastal State and reducing the

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<sup>78</sup> IMO, Foreword to the WRC, 2008 edition, page iii.

<sup>79</sup> [http://www.imo.org/Conventions/mainframe.asp?topic\\_id=1604](http://www.imo.org/Conventions/mainframe.asp?topic_id=1604), retrieved 2010-05-05.

<sup>80</sup> LEG 96/10, annex, page 1.

<sup>81</sup> LEG 85/3/1, page 1.

<sup>82</sup> LEG 85/3/1, page 2.

<sup>83</sup> WRC art. 4 (1).

liability of the vessel owner for pollution damage if the vessel itself is lost. On the subject of salvage to prevent pollution of the marine environment, the Intervention Convention allows coastal States to override the master's discretion in calling for salvage assistance, and empowers them to take necessary measures to protect the coastal environment. However, it does not provide incentive for salvors themselves to assist in this task.<sup>84</sup>

#### **4.3.3.2 The Salvage Convention and environmental protection**

Previously the salvage rules in the leading maritime nations were based on an international convention on salvage from 1910. In 1989, the new International Convention on Salvage (Salvage Convention) was adopted, which entered into force in 1996. The Salvage Convention has been ratified by nearly 50 states. The new Salvage Convention has a stronger focus on environmental protection. It entitles a salvor to so-called "special compensation" in cases where salvage services are provided to a ship that by itself or together with the cargo poses a risk of environmental damage, even if the salvage operation as such is unsuccessful.<sup>85</sup>

The Salvage Convention is mainly concerned with private-law matters. There are two main features of the Salvage Convention. Firstly, salvors are entitled to "special compensation" for salvage operations, in respect of either the vessel and/or cargo, which have prevented or minimized damage to the environment. Secondly, salvors have a duty of care to carry out salvage operations in such a way as to prevent or minimize this danger to the environment. The Convention does not apply to environmental protection unrelated to the salvage of the vessel or cargo but it has, nevertheless, the important effects that protection of the environment is regarded as a "useful result" even if the vessel itself is lost, and that expenses are recoverable in excess of the limit for salvage of the vessel or cargo alone. With the Convention, salvors have a continued incentive to mitigate environmental damage. On the other hand, consistently with the "no cure no pay" principle, the salvor remains uncompensated for efforts, no matter how great, which lead to no useful result – whether because the vessel is lost or because damage to the marine environment cannot be reduced or averted.<sup>86</sup>

#### **4.3.3.3 The relation between WRC and the Salvage Convention**

The WRC applies primarily to a vessel that has already sunk or stranded.<sup>87</sup> In many cases where a vessel has stranded, such a vessel will already be the object of attention for tug operators and salvage companies whether under contract to the owner or as pure salvage. The WRC provides that the registered owner may contract with any salvor or other person to perform

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<sup>84</sup> Birnie et al, page 429.

<sup>85</sup> Falkanger et al, page 447.

<sup>86</sup> Birnie et al, pages 429-430.

<sup>87</sup> WRC art. 1 (4) (a) and (b).

the removal of the wreck determined to constitute a hazard on the owner's behalf. Before such removal commences, the coastal State may "...lay down conditions for such removal only to the extent necessary to ensure that the removal proceeds in a manner that is consistent with considerations of safety and protection of the marine environment".<sup>88</sup> Consequently, the Salvage Convention and the WRC are compatible in their workings, on condition that: the coastal State behaves reasonably and fairly; the coastal State does not impose unreasonable conditions on the outset; and, the coastal State does not intervene unreasonably after the removal has commenced.<sup>89</sup>

#### 4.3.4 Dumping

Since pollution control on land became more and better regulated, and since dumping waste at sea resulting from land-based activities was cheap and easy, dumping at sea became an increasingly popular way of disposing waste in the 1950's and 1960's. The main kinds of waste dumped include radioactive matter, military materials, dredged materials (representing about 80-90% of all dumping), sewage sludge and industrial waste. International conventions deals with dumping as a source separate from shipping, mainly because dumping, unlike other pollution from ships, is always deliberate, and because dumping is an extension of pollution from land.<sup>90</sup>

The Convention on the Prevention of Marine Pollution by Dumping and Other Matter (London Convention) was adopted in 1972 with the purpose of regulating the dumping of wastes at sea.<sup>91</sup> The Convention is now commonly regarded as one of the more successful legal instruments and has led to an apparently significant reduction in the volume and type of waste being dumped at sea.<sup>92</sup> The London Convention defines dumping as the deliberate disposal of waste from ships and aircraft, but excludes the disposal of waste incidental to the normal operation of ships and aircraft.<sup>93</sup> Parties to the Convention must take legislative action to impose the requirements laid down in the Convention regulating dumping upon: vessels and aircraft registered in its territory or flying its flag; vessels and aircraft loading matter in its territory or territorial sea which is to be dumped; and, vessels and aircraft under its jurisdiction believed to be engaged in dumping.<sup>94</sup>

Since the 1990's, there have been a number of moves to restrict or phase out main kinds of dumping. This can be seen as a representative for the departure from the traditional approach to control dumping, something that

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<sup>88</sup> WRC art 9 (4).

<sup>89</sup> LEG 90/5/1, pages 1-2.

<sup>90</sup> Churchill, pages 329-330.

<sup>91</sup> It came into force in 1975, and has today 86 ratifications. Moreover, the 1996 Protocol to the London Convention 1972 has 37 ratifications. (LC 31/15, page 3)

<sup>92</sup> LC 24/14, annex, page 2.

<sup>93</sup> London Convention art. 3 (1), and Churchill and Lowe, page 364.

<sup>94</sup> London Convention art. 7, and Churchill and Lowe, page 364.



was based on the sea's assimilative capacity, towards a precautionary approach, and a holistic approach towards waste management. There are three sets of amendments from 1993, the result of which is that the main substances which are still permissible to dump are: dredged materials, sewage sludge, fish processing wastes, vessels, and continental shelf oil and gas installations. A proposal to introduce a moratorium on the dumping of such installations was rejected at the 1995 meeting of the parties.<sup>95</sup>

UNCLOS article 210 (5) states that dumping within the territorial sea and EEZ, and onto the continental shelf, shall not be carried out without the express prior consent of the coastal State, which has the right to permit, regulate and control such dumping after due consideration of the matter with other States which by reason of their geographical situation may be adversely affected thereby. The requirement of due consideration goes beyond the provisions of the London Convention, and most regional conventions, although it may not do more than reflect the requirements of customary law. UNCLOS article 216 provides, concerning enforcement of regulations on dumping, that national laws and applicable international rules and standards are to be enforced by flag States, by coastal States in relation to dumping in their territorial seas and EEZ's and onto their continental shelves, and by States in whose territories waste is loaded.<sup>96</sup>

### **4.3.5 Pollution incidents**

The Protocol on Preparedness, Response and Co-operation to pollution incidents by Hazardous Noxious Substances (HNS-OPRC protocol)<sup>97</sup> and the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC Convention)<sup>98</sup> apply the basic principles to pollution incidents in cases where ships, offshore installations, and port-handling facilities cause accidents threatening the marine environment, the coastline or related individual States. Parties to the instruments must take all appropriate measures to prepare for and respond to such incidents. A national system capable of responding rapidly and effectively must be established, including the designation of competent national authority and a national contingency plan. Information concerning these arrangements shall be provided to other States and parties are, additionally, required to ensure that offshore oil operations within their jurisdiction, as well as port-handling facilities, are conducted in accordance with emergency procedures approved by the competent national authority.

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<sup>95</sup> Churchill and Lowe, pages 365-366.

<sup>96</sup> Churchill and Lowe, pages 369-370.

<sup>97</sup> The HNS-OPRC protocol entered into force in 2007.

([http://www.imo.org/Conventions/mainframe.asp?topic\\_id=258&doc\\_id=683](http://www.imo.org/Conventions/mainframe.asp?topic_id=258&doc_id=683), retrieved 2010-05-19) The predecessor to the HNS-OPRC protocol, namely the International Convention on Liability and Compensation for damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, was adopted in 1996 but never entered into force. (LEG 96/10, annex, page 4).

<sup>98</sup> The OPRC Convention entered into force in 1995.

([http://www.imo.org/Conventions/mainframe.asp?topic\\_id=258&doc\\_id=682](http://www.imo.org/Conventions/mainframe.asp?topic_id=258&doc_id=682), retrieved 2010-05-19)

While the primary responsibility for responding effectively will fall, in most cases, on the relevant coastal States, flag States also have a responsibility for ensuring that their vessels are adequately prepared to deal with emergencies. It is unrealistic to expect flag States to maintain the capacity to respond to accidents involving their vessels wherever they may occur, and apart from this mentioned responsibility, in article 3 of the OPRC Convention, the Convention does not attempt to make them do so.<sup>99</sup>

## 4.4 Applicability of international law in Sweden

To clarify what obligations Sweden has concerning the international instruments mentioned in this chapter, the conventions and protocols that Sweden has ratified are listed below:

- ✓ The International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualties, 1969, as amended by protocol 1973,
- ✓ The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, and the subsequent protocol from 1996 (London Convention and Protocol),
- ✓ The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL), i.e. Annexes I/II, III, IV, V, VI,
- ✓ The International Convention for the Safety of Life at Sea, 1974, with the subsequent protocols from 1978 and 1988 (SOLAS),
- ✓ The International Convention on Salvage, 1989, and
- ✓ The International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 (OPRC), and the Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances (OPRC-HNS-protocol), 2000.<sup>100</sup>

Consequently, Sweden is bound by the international regulations described in this chapter and is obliged to enforce the regulations on vessels flying its flag and to regulate in Swedish waters according to the international agreements. An example of how this obligation is carried out in Swedish law can be found in the MC chapter 16 article 9, and chapter 19 article 1 (3), where rules on special compensation in salvage operations is described correspondingly to the Salvage Convention.

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<sup>99</sup> Birnie et al, page 425.

<sup>100</sup> [http://www.imo.org/Conventions/mainframe.asp?topic\\_id=248](http://www.imo.org/Conventions/mainframe.asp?topic_id=248), retrieved 2010-05-10.

## 5 Liability for wrecks

*A common opinion regarding ownership is that ownership of an object is a natural link between the object and the owner, which, in the absence of a voluntary transfer, remains through any vicissitudes of life, or through inheritance upon the owner's death.<sup>101</sup> Ships and vessels represent large economical values for the owner. Wrecked ships, together with the cargo that was on board the ship when it was lost, correspondingly have a great economical value, why ownership and liabilities arising from wrecks are important aspects of the sphere of rules relating to wrecks.*

*On the subject of ownership and responsibility for wrecks, a few questions arise: What obligations follow with ownership of vessels, and what follow with ownership of wrecks? How is ownership determined? How can liabilities relating to vessels and wrecks be limited? And how can ship-owners insure their liabilities?*

### 5.1 Ship and wreck owner liability

*Ship owner liability<sup>102</sup> may be based on particular provisions, one of those being the strict owner liability for oil pollution. This strict liability does in fact concern pollution from vessels. However, pollution, and liability for the same, does not cease simply because the oil leaks out after the ship has become wrecked.<sup>103</sup> Noteworthy in the context is that the owner is not the only one liable for the vessel. In fact, Swedish law places liabilities arising from many other types of events upon the operator of the vessel.<sup>104</sup> The wreck owner liability is the owner's liability for damages caused by the wreck as such, and it lies upon the owner at the time when the damage was caused. Wreck owner liability also covers the costs for the removal of wrecks being impediments on navigation, and wrecks that may cause environmental or other damage.<sup>105</sup> The Maritime Administration, authorized by Royal Ordinance to remove wrecks, has various means of passing the wreck removal on to others. This may be done by order to the wreck owner if oil from the vessel threatens the environment.<sup>106</sup>*

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<sup>101</sup> Tiberg, 2004, page 208.

<sup>102</sup> The term "ship owner liability" is used synonymously to "vessel owner liability", which is often the term used in the doctrine. I have chosen to use the term "ship owner liability" to avoid confusion in light of the definitions explained in chapter 2.

<sup>103</sup> Tiberg, 1973, page 193.

<sup>104</sup> Tiberg, 2004, page 208.

<sup>105</sup> See *Kungörelse (1951:321) om undanröjande av för sjöfarten eller fisket hinderliga vrak m.m.* (Royal Ordinance on removal of wrecks impeding navigation or fishing [my translation]), and Tiberg, 2004, page 208.

<sup>106</sup> *Lag (1980:424) om åtgärder mot förorening från fartyg* (Act on Actions against Pollution from Ships [my translation]) ch. 9 art. 5.

If a ship obstructs a public port, the port authority may remove it, and costs may be charged to the ship owner.<sup>107</sup> As far as wrecks are concerned, the same rules are applicable by analogy.<sup>108</sup> The owner of a wreck may be liable to fines, and even to prison sentences for up to two years, according to the environmental rules on littering in the Environmental Code.<sup>109</sup> The provision was previously limited to littering solely to the *environment*, but was revised to include sunken wrecks permanently under water. The rule is now widened to a general prohibition of littering “outdoors at a place to which the public has access”.<sup>110</sup>

In cases of collision between two ships the collision chapter in the MC is applicable. However, it does not apply in cases of collision between two objects, where one of them is not a ship.<sup>111</sup> Nor is it applicable in cases regarding questions of liability when a ship is damaged by something else than another ship. Hence, when a ship collides with a wreck the general rules on damage is applicable.<sup>112</sup>

Ownership of wrecks is determined by the legal system applicable to the area where the wreck is found. Consequently, Swedish law is generally applicable to Swedish territorial waters, but not the EEZ or continental shelf. Nevertheless, correspondingly to other systems, there are provisions applicable to the situation where a vessel has salvaged property under way, in any waters, and brought the property into safety in Sweden.<sup>113</sup> Similar to many other countries, the rules on wreck ownership is far from clear in Swedish law. However, further discussions on determination of ownership have been excluded from the scope of this work.<sup>114</sup>

## 5.2 Limitation of liability in national law

According to the general provisions on liability in the Swedish Maritime Code, the owner or operator of a ship shall be liable for any loss or damage caused by the master, any member of the crew, or the pilot through fault or neglect in the performance of his duties.<sup>115</sup> On the other hand, the MC stipulates that the operator’s liability can be limited. Furthermore, a limitation of the liability is possible for an owner of a vessel who does not operate the vessel; for a person who manages the vessel in the owner’s place; for a charterer or shipper; and for any one performing services directly connected with salvage.<sup>116</sup> The right to limitation of liability is applicable, regardless of the grounds for the liability, to claims on account

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<sup>107</sup> *Lag (1986:371) om flyttning av fartyg i allmän hamn* (Act on removal of ships in public ports [my translation]) art. 1 and art. 6-8.

<sup>108</sup> Tiberg, 2004, page 209.

<sup>109</sup> *Miljöbalken* (The Environmental Code) ch. 29 art. 7.

<sup>110</sup> *Miljöbalken*, ch. 15 art. 30, translation by Tiberg, and see Tiberg, 2004, page 209.

<sup>111</sup> MC ch. 8, and Tiberg, 1973, page 192.

<sup>112</sup> Tiberg, 1973, page 192.

<sup>113</sup> Fan, page 8, and Tiberg, 2004, page 211.

<sup>114</sup> Fan, page 8, and Tiberg, 2004, page 211.

<sup>115</sup> MC ch. 7 art. 1 (as translated in the official translation).

<sup>116</sup> MC ch. 9 art. 1 (as translated in the official translation).

of, inter alia, measures for the raising, removal, destruction, or rendering harmless of a vessel which is sunk, stranded, abandoned or wrecked, including anything that is or has been on board.<sup>117</sup> The right to limitation of liability does, however, not apply to claims for salvage or contribution to general average or any contractual claim for payment in respect of measures regarding the raising, removal, destruction or rendering harmless of a wrecked vessel, or of that sort.<sup>118</sup> Moreover, nor is claims for oil pollution included in the right of limitation of liability.<sup>119</sup>

### 5.3 International limitation of liability

The 1976 Convention on Limitation on Liability for Maritime Claims (LLMC) entitles ship-owners and salvors to limit their liability in accordance with the provision in the convention.<sup>120</sup> The LLMC entered into force in 1986. The Convention covers any type of charterer, whether time, voyage or by demise. Some important changes brought forward by the Convention are the extended right for the salvor to limit his liability,<sup>121</sup> as well as the extension of cover to insurers of the party liable, who are entitled to limit their liability to the same extent as their assured.<sup>122</sup> The primary thrust of the limitation provisions is directed at claims in respect of loss of life or personal injury, loss of or damage to property, occurring on board or in direct connection with the operation of the ship or with salvage operations and consequential loss resulting there from.<sup>123</sup> The LLMC also covers claims in respect of the raising, removal or destruction of wrecks, claims in respect of the removal and destruction of cargo, and third-party claims in respect of measures taken to minimise the loss caused by the defendant.<sup>124</sup> Certain claims are specifically excluded from the Convention,<sup>125</sup> such as claims for salvage or contribution in general average.<sup>126</sup>

### 5.4 Insurance for liability

Losses, damages, liabilities and expenses incurred by ship-owners, cargo owners and others in the shipping context may be covered by insurance. There is a distinction between ship-owner insurances and cargo insurances, the former having the obvious and characteristic feature that the policies are associated with vessels and therefore of primary interest for ship-owners. Noteworthy is that there are a series of different insurances, each with their own scope of cover. Consequently, each insurance type only covers selected

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<sup>117</sup> MC ch. 9 art. 2 (as translated in the official translation).

<sup>118</sup> MC ch. 9 art. 3 (1) (as translated in the official translation).

<sup>119</sup> MC ch. 9 art. 3 (2) (as translated in the official translation).

<sup>120</sup> LLMC art. 1 (1).

<sup>121</sup> LLMC art. 1 (3).

<sup>122</sup> LLMC art. 1 (6).

<sup>123</sup> LLMC art. 2 (1) (a).

<sup>124</sup> LLMC art. 2 (2).

<sup>125</sup> LLMC art. 3.

<sup>126</sup> Wilson, pages 276-279.

components of the losses, damages, liabilities and expenses an owner may incur. Some insurance are designed to cover the owner in relation to claims for damages that may arise in connection with the operation of the ship, primarily Protection and Indemnity (P&I) insurance. Hull insurance also contains an important element of liability insurance, i.e. in connection with collision liability. Hull insurance is primarily a property damage insurance which provides cover if the ship is damaged or becomes a total loss.

P&I insurance is the central liability insurance in the shipping context. It covers the owner's liability for a wide range of damages. Among other damage covered, the P&I insurance covers the owner's liability for navigational obstruction and wreck removal.<sup>127</sup> The insurer, namely the P&I club, naturally have insurance agreements between the club and its members, i.e. the ship-owners. In these agreements, clauses regarding obstruction to navigation and wreck removal stipulate the terms of the insurance and the liabilities covered. These clauses may take the form quoted below:

***Obstruction to navigation and wreck liabilities***

*Liabilities, costs or expenses incurred where the entered ship as a result of a casualty has caused an obstruction to navigation.*

*Liabilities, costs or expenses relating to the raising, removal, destruction, lighting or marking of the wreck of the entered ship, its cargo or equipment which relates to the ship or wreck, when such acts are compulsory by law or the costs thereof are legally recoverable from the Member except to the extent they are covered by the Hull insurance of the entered ship. The value of the wreck and other property saved shall be credited to the Association.*

*Liabilities, costs or expenses incurred as a result of the presence or involuntary shifting of the wreck of the entered ship or its cargo. However, where the Hull Underwriters have not acquired title to the wreck, the cover afforded by the Association is limited to a period of three years from the day the insurance ceased.*<sup>128</sup>

In the second paragraph of this clause, the liability relating to wreck removal is covered by the P&I club only when such acts are compulsory by law. This is a logical limitation in the insurance cover offered by the P&I club.<sup>129</sup>

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<sup>127</sup> Falkanger et al, pages 474-475.

<sup>128</sup> The Swedish Club: *Rules for P&I Insurance, Rules for PD&D Insurance, Articles of Association*, section 5, page 20, <http://www.swedishclub.com/upload/93/Eng%20P&I%20Rules%202010-02-20.pdf>, retrieved 2010-05-05.

<sup>129</sup> Reference to correspondence with Marcus Lindfors, Senior Claims Executive, Assuransforeningen Skuld.

# 6 Abandoned or dangerous wrecks

*For the reason that some wrecks have inherently dangerous characteristics, measures regarding these wrecks are deemed necessary on occasion. One such measure is to remove the wreck to prevent hazardous effects on the marine environment, or to prevent the wreck from impeding navigation. The responsibility for wreck removal, however necessary, is only partly laid down by law in Sweden. The same lack of comprehensive legislation exists internationally.*

## 6.1 Swedish law

### 6.1.1 Attempts to legislate responsibility for dangerous wrecks

#### 6.1.1.1 Wrecks causing serious inconvenience or danger

In the following discussion, the legal position is explained from a chronological perspective, with the intention that the most recent developments will be put in relation to older acts in addition to legislative attempts. On the topic of responsibility for wreck removal, a few questions require answers: *What is known about the extent of the problem with dangerous wrecks? What current legislation puts down rules regarding responsibility for removal of dangerous wrecks? Which authority is responsible? What is currently being done, on authority as well as governmental level, concerning regulation on responsibility for wreck removal?*

In 1975, a committee appointed to look into the measures regarding abandoned shipwrecks presented its report *Dangerous wrecks*, and attempts were made to pass legislation in the matter.<sup>130</sup> However, the bills that stemmed from the report were never passed. Nonetheless, the discussions in the report concerning dangerous wrecks are not obsolete for the reason that since 1975, there has been no new attempt to legislate in these matters. The report deals with questions regarding the legal regulations of the owner's responsibilities and the authority's powers to take measures to remove dangerous, hindering or disfiguring ships, shipwrecks and similar objects in the water. Two separate groups of situations are distinguished, the first of which is most relevant in this work, namely, *cases when ships are wrecked, sunk or otherwise lost, or left lying causing threat of harm for human life or health, impediments or dangers to shipping, detriment to the fisheries or*

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<sup>130</sup> SOU 1975:81 *Farliga vrak*, (Dangerous wrecks [my translation]), and *Beslut 2004-01-22*, *Diarienummer 383-02-21*.

*damage to the landscape or environment.* In other words, this concerns serious inconveniences or dangers, mostly involving ships or shipwrecks of considerable size, and, more often than not, dangerous goods cause damage in these situations.<sup>131</sup> The other group, namely interferingly ships or wrecks, is discussed in the next subchapter.

The report recommends a bill for these situations, based on the fundamental rule prescribing duties to the ship-owner to take reasonable measures with the ship, the purpose of which is to remove the serious inconveniences or dangers previously mentioned. Should the owner not comply to take measures, the Counties Agency shall prescribe the owner to do so within a set timeframe. Should the owner still not comply, the Counties Agency shall have the authority to decide upon appropriate measures to be taken. In cases where immediate measures are called for, and the owner cannot be expected to take these measures, the Counties Agency should be at liberty to attend to the needed measures. In urgent matters, other authorities should have the power to take necessary measures. Directions as to how to carry out appropriate measures may be given to the owner who takes measures, when he himself takes steps to solve the situation so that the situation is not worsened. The suggested responsible authority to give these directions is the Counties Agency. Further, the agency should be at liberty to intervene if the owner does not comply with the directions. The measures, either prescribed to the owner or carried out by the authority, should be proportionate to the situation. Conversely, the measures might involve destruction or sinking of the ship if necessary.<sup>132</sup>

The suggested bill also includes authority to the County Agency to intervene against salvage operations carried out by independent salvors if the operation could cause or worsen inconveniences or dangers described above. The ship-owner should as a rule, compensate costs paid by the government. Should the owner be negligent in respect to the wreck removal, the only sanctions available, in the suggested bill, is the authority's power to carry measures out in his place, together with the owner's duty to compensate the costs.

In addition, if an operator of the ship is to be found, these rules were suggested to apply to him instead of the ship-owner. The bill is suggested to be applicable to not only ships and shipwrecks, but to other kinds of objects causing danger or inconveniences in a similar way. Furthermore, it should be applicable both in common and private waters, as well as on the high seas as long as the bill does not collide with Sweden's international agreements.<sup>133</sup>

### **6.1.1.2 Interferingly ships or wrecks**

The second group of wrecks discussed in the report, includes *cases where ports and berths are used for lasting anchoring contrary to provisions about*

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<sup>131</sup> SOU 1975:81, page 17.

<sup>132</sup> SOU 1975:81, page 18.

<sup>133</sup> SOU 1975:81, page 18.



*such use*. In these cases, the ship might not be used for shipping at all and may appear disturbing or interfering with the peace or order. Typically, the ship is rundown and left abandoned. This second group also includes pleasure-boats anchored permanently similar to vehicles put up unlawfully. Contrary to the first group, the common denominator for these ships is the fact that they do not cause serious inconvenience or danger. Instead, these cases reflect situations caused by disregarded guidelines. For this reason, the report deals with the two groups separately. Briefly, the recommended bill for the second group of ships/wrecks gives the police authority to arrange for removal of the ships. Additionally, the ship-owner should compensate the costs for he who moves the ship or wreck. Furthermore, he who has demanded the removal of the ship or wreck should carry costs that the ship-owner cannot reasonably be demanded to compensate.<sup>134</sup>

### **6.1.2 Deciding upon the responsibility for abandoned wrecks**

In 2004, the Office of the Chancellor of Justice<sup>135</sup> drew the government's attention to the need for legislation regarding abandoned and/or dangerous wrecks. An abandoned shipwreck by the Swedish coast gave rise to a statement from the Chancellor of Justice explaining the legal situation. The Chancellor clarified that no authority was responsible neither for the removing of the wreck in question, nor for abandoned wrecks in general. The Chancellor was of the opinion that someone – either the state or the local authority – ought to have this responsibility. However, the Chancellor concluded that this is a question for the legislator. Consequently, the Chancellor could not commission an authority to take responsibility in this case. Therefore, he forwarded his views in the matter to the Ministry of Industry, Employment and Communications.<sup>136</sup>

In November 2007, the government commissioned the Swedish Agency for Public Management<sup>137</sup> to investigate and give proposals to the question of who should have the right or obligation to take care of, clean up or remove abandoned shipwrecks and ships. The government considered this the necessary first step towards solving problems stemming from abandoned and dangerous wrecks. Following the investigation of responsibility for removal of abandoned wrecks, it was decided that it would be possible to continue by means of an inventory of wrecks in Swedish waters. The purpose of the inventory should be to judge the possible risks posed by wrecks, and to clean up the wrecks considered hazardous.<sup>138</sup>

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<sup>134</sup> SOU 1975 :81, pages 17 and 19.

<sup>135</sup> Swedish: *Justitiekanslern*.

<sup>136</sup> *Beslut 2004-01-22, Diarienummer 383-02-21*, swedish: *Näringsdepartementet*.

<sup>137</sup> Swedish: *Statskontoret*.

<sup>138</sup> Press release November 7 2007, The Ministry of the Environment, <http://www.regeringen.se/sb/d/119/a/91577>, retrieved 2010-03-01.

## 6.1.3 Government initiative to clarify responsibility for wrecks

### 6.1.3.1 Report on dangerous wrecks and ownerless ships

In 2008, the Swedish Agency for Public Management presented a report on questions of responsibility for abandoned shipwrecks.<sup>139</sup> The Agency explains the legal position on dangerous wrecks and ownerless ships and, in addition, presents suggestions on how to solve the issue with responsibility for wrecks. In the report, three categories of wrecks, with three different corresponding problems stemming from them, are presented,<sup>140</sup> namely:

1. when the object is an impediment on navigation,
2. when the object cause hazard to the marine environment, and finally
3. cases where the object causes littering or something of the sort.<sup>141</sup>

### 6.1.3.2 Cases when the object is an impediment on navigation

In cases where a ship, or another large object, has sunk in a general navigable course and thereby obstacles or dangers to navigation occurs, and the responsible owner or shipper do not act appropriately to remove the wreck, the responsible authority (*Lotsstyrelsen*<sup>142</sup>) may make arrangements for the removal of the wreck to a necessary extent.<sup>143</sup>

Accordingly, as appears from the report, it has been established practice for a long time that when navigation is hindered in a general navigable course the Swedish Maritime Administration may take necessary measures. Conversely, there are no rules laid down by law for removal of obstacles to navigation consisting of wrecks capable of functioning but at the same time obviously abandoned. The solution proposed in the rapport is that the Swedish Maritime Administration shall be authorized to take necessary measures in these cases.<sup>144</sup>

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<sup>139</sup> *Vrak och ägarlösa båtar* 2008:6 (Wrecks and abandoned boats [my translation]), reference number: 2007/228-5, date: 2008-05-21.

<sup>140</sup> Wrecks and abandoned boats 2008:6, page 7.

<sup>141</sup> This third category of wrecks is excluded from the scope of this work because wrecks belonging in this category are not considered dangerous, and therefore launches discussions irrelevant to this thesis.

<sup>142</sup> The former responsible maritime administration later preceded by *The Swedish Maritime Administration*.

<sup>143</sup> *Kungörelse (1951:321) om undanröjande av för sjöfarten eller fisket hinderliga vrak m.m.* (Royal Ordinance on removal of wrecks impeding navigation or fishing [my translation])

<sup>144</sup> Wrecks and abandoned boats 2008:6, page 7.

When the commander of the ship encounters dangerous wrecks he has the obligation to inform, with whatever means available to him, ships nearby and the rescue center of the danger.<sup>145</sup>

### **6.1.3.3 Cases where the object causes hazard to the marine environment**

On the subject the second category in the report, namely cases when an object cause hazard to the marine environment, some conclusions are drawn. The Agency gives expression to the fact that sunken ships may constitute a potential risk to the environment for a number of reasons. These reasons may be increasing rust and discharging of various sorts. Currently, the Coast Guard is the responsible authority for effective discharging from newly lost ships, as well as wrecks. The Coast Guard takes action when oil or other harmful substances have been released into the water, or when there is imminent danger for such a release, as long as a few general criteria are fulfilled. Conversely, today no authority has an explicit responsibility for preventive measures regarding wrecks that may discharge harmful substances in the future.<sup>146</sup> Further, it is concluded in the report that the knowledge we have today regarding the extent of the problems with wrecks harmful to the environment is insufficient.<sup>147</sup>

As concluded in chapter 5, the ship-owner is primarily responsible and liable for discharging from wrecks. However, according to the Agency, most of the wrecks that potentially may harm the environment in Swedish waters are most likely relatively old, often as old as from the Second World War. The possibility to go after, or even identify, the owner in these cases is in practice very small. In addition, it is not possible to go through means of insurance with these kinds of wrecks. The Agency concludes that the government would most likely have to take responsibility for necessary measures regarding these old wrecks.<sup>148</sup>

According to the Agency, the handling of problems with hazardous wrecks should be coordinated at a national level. Cleaning-up and removal of wrecks requires specialized skills (including shipping technical skills and understanding of the specificities of sunken ships) and can be very costly. In one single case the cost can amount to up to several hundred million SEK.<sup>149</sup> To address the problem of potentially hazardous wreck, the Agency suggests that the following measures should be implemented:

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<sup>145</sup> *Förordning (2007:33) om befälhavares skyldigheter vid faror för sjötrafiken och sjönöd*, (Ordinance on the captains obligations regarding dangers to navigation and distress at sea [my translation]) art. 3.

<sup>146</sup> Wrecks and abandoned boats 2008:6, pages 7-8.

<sup>147</sup> Wrecks and abandoned boats 2008:6, page 8.

<sup>148</sup> Wrecks and abandoned boats 2008:6, page 8.

<sup>149</sup> As we can see this high cost estimated by the Agency corresponds to estimations made in the reports discussed in chapter 3.

- ✓ The Swedish Maritime Administration shall do an inventory on the presence of wrecks that may be harmful to the environment.
- ✓ The Swedish Maritime Administration shall, further, be responsible for the evaluation of what wrecks needs rapid action.
- ✓ Finally, the same authority shall set up a program for wrecks needing pressing action.<sup>150</sup>

The Agency considers it impossible to determine how wide-ranging a program for remediation of wrecks must be with the insufficient information currently available. Consequently, the Agency does not find it possible to determine the total cost for financing the remediation of wrecks.<sup>151</sup>

#### **6.1.3.4 Conclusions drawn regarding dangerous wrecks and ownerless ships**

The main issue in the government's mission to the Agency is: *who should be responsible for the various tasks needed to deal with problems related to wrecks and ownerless boats?* The conclusion drawn by the Agency is that the issue of responsibility is not very complicated and hardly the most central in the context. Thus, there are few potential candidates to take responsibility for the various functions discussed above.

The Agency finds that the problems with dangerous or hazardous wrecks have not been resolved largely because the necessary measures can entail significant costs. Therefore, the funding issue is most probably the most central. The Agency further concludes that the necessary measures will in most cases have to be financed with public funds. Furthermore, the Agency notes that, in practice, the problems that arise often are resolved on an ad hoc basis, even though set rules and structures for responsibility are missing. This is facilitated by the existence of a well established co-operation between relevant authorities, such as between the Maritime Administration and the Coast Guard.<sup>152</sup>

#### **6.1.3.5 How to proceed**

In 2008, the Ministry of the Environment<sup>153</sup> presented a government bill.<sup>154</sup> In the government bill, *A Coherent Swedish Politic for the Seas*,<sup>155</sup> the categories of wrecks presented in the report from 2008 are correspondingly presented. In substance, the government agrees with the recommendations from the Agency for Public management, and hence, the government takes the standpoint that ownerless wrecks may constitute an environmental problem when leaking substances such as oil and metals. Because the government agreed with the Swedish Agency for Public Management, it commissioned the wreck inventory to the Maritime Administration. Additionally, it is concluded in the report, in accordance with the report by

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<sup>150</sup> Wrecks and abandoned boats 2008:6, pages 8-9.

<sup>151</sup> Wrecks and abandoned boats 2008:6, pages 8-9.

<sup>152</sup> Wrecks and abandoned boats 2008:6, pages 11-12.

<sup>153</sup> Swedish: *Miljödepartementet*.

<sup>154</sup> Prop. 2008/09:170.

<sup>155</sup> Swedish: *En sammanhållen svensk havspolitik*.

the Agency, that there is a need to clarify what authority will be responsible for the subsequent handling of this matter. The government decided to return to the question with abandoned and ownerless wrecks once the inventory is completed, so that the government has knowledge on the extent of the problem with dangerous wrecks. The government also decided that the next steps, namely inspections and caretaking as well as the appointment of a responsible authority, should not be taken until the proportions of the problems posed by wrecks are known.<sup>156</sup>

#### **6.1.4 The inventory by the Maritime Administration**

As decided by the government, a wreck inventory should be carried out by the Maritime Administration. The inventory is described in a project plan, *Wrecks as environmental threats*.<sup>157</sup> According to this plan, the purpose of the mission is to expand the knowledge of what actual threat wrecks pose to the environment. The Maritime Administration shall examine the occurrence and environmental risks with wrecks and similar environmental threats on the seabed.<sup>158</sup> Furthermore, the focus of the mission is to do an inventory of information on wrecks in different databases. Regional surveys in general and indicative reports on leaking wreck particularly, together with the reports and knowledge of the consulting authorities<sup>159</sup> is a main part of the mission. Thereafter, the data is filtered through a number of aspects, namely: ship-owner's responsibility, year of construction, size of the ship and age.

A principal question in the investigation, beside the inventory itself, is in what way, and to what extent, the environmental threat can make future remediation actions necessary. Therefore, the threat from wrecks in different waters – such as the Baltic Sea, the Skagerrak and the northern waters – will be analyzed.<sup>160</sup> To make a prioritization of what wrecks are necessary or efficient to clean up possible, further knowledge on the wrecks' condition and status, as well as a timeline of the decomposition process is crucial.<sup>161</sup> The analysis of the reaction of different substances in water is also included in the mission in order to quantify the environmental threat posed by both residual bunker and different types of cargo.<sup>162</sup> An overall total appraisal will be done with a specially developed risk assessment model of wrecks. Both spreading risks at a constant leak from the wreck and the impact of

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<sup>156</sup> Prop. 2008/09:170, page 152.

<sup>157</sup> Project plan: "Vrak som miljöhö", number 11588-0, register number 09-02375.

<sup>158</sup> "Vrak som miljöhö", page 1.

<sup>159</sup> *Statens marina museer* (National Maritime Museums), and *Riksantikvarieämbetet* (Swedish National Heritage Board).

<sup>160</sup> This analysis is done in collaboration with Stockholm University.

<sup>161</sup> According to the project plan as well as according to Bengt-Åke Larsson, Assistant head of department/Sea captain at the Maritime Administration, who has the overall responsibility at the Maritime Administration for the project.

<sup>162</sup> The Maritime Administration does this in collaboration with the Transport Agency and the Coast Guard.

sudden major releases, as well as a number of other potentially hazardous factors will be examined.<sup>163</sup>

The research project around the wreck Skytteren outside Lysekil is the technological platform and operational sounding board for the Maritime Administration's investigation.<sup>164</sup> It is noted that this study may in part influence focus on the research work based on discovered knowledge gaps on key factors for prioritization and risk assessment.<sup>165</sup>

## 6.2 International law

### 6.2.1 Right to remove dangerous wrecks

In international law, effectively, there are two main aspects of the *law of wrecks*: the private law aspect where a wreck is considered maritime property,<sup>166</sup> and the regulatory law aspect in which a wreck is often a potential navigational and environmental hazard. The private law aspect refers to possession and ownership of wrecks, as well as the rights and liabilities arising out of those proprietary interests. The private law aspect was discussed in chapter 5 with a national perspective. The international perspective on the private law aspect is not included in the scope of this work. The regulatory aspect of the law of wrecks is two-fold. One part of this is the protection of the wreck as property. The other part addresses the question of responsibility for the removal of a wreck that poses a safety of environmental hazard.<sup>167</sup>

In the early stages of negotiations for a wreck removal convention, regarding wreck removal in the territorial sea, the Comité Maritime International (CMI) concluded,

*“...although UNCLOS does not explicitly confer on coastal States in its articles on the territorial sea the right of wreck removal, as they have sovereignty over their internal waters and territorial sea and are required not to hamper innocent passage in the latter and can adopt laws regulating the safety and pollution prevention therein, and this represents a codification of customary international law, widely evidenced by State practice, **the coastal State has the right to remove wrecks in this area.** States’ practice in exercise of this right diverges, however...”<sup>168</sup>*

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<sup>163</sup> This risk model is developed in collaboration with Chalmers University.

<sup>164</sup> A discussion on the wreck Skytteren follows in chapter 7.

<sup>165</sup> “Vrak som miljöhöhot”, pages 1-2.

<sup>166</sup> Maritime property consists of vessel, cargo and freight. Additionally, the wreck of the vessel and cargo may be considered maritime property.

<sup>167</sup> Fan, page 7.

<sup>168</sup> LEG/83/5/1, page 3.

The State's sovereignty rights in their territorial sea covers the right to remove wrecks, and therefore, the maritime zone of interest in discussions on wreck removal from an international perspective is the EEZ. The EEZ is the area covered by the WRC, however, States may include their territorial sea to be covered by the Convention if they so wish.<sup>169</sup>

The WRC was discussed in chapter 4 regarding States' international obligations. However, in this section a few additional comments will be made. The WRC will play an important role to the parties of the Convention, once it has entered into force. It will then provide the legal basis for States to remove, or have removed, shipwrecks that may have the potential to affect adversely the safety of lives, goods and property at sea, as well as the marine environment. To clarify, the state may take measures in relation to the removal of a wreck that poses a hazard.<sup>170</sup> *Hazard* means any condition or threat that either poses a danger or impediment to navigation, or may reasonably be expected to result in major harmful consequences to the marine environment, damage to the coastline or related interests of States.<sup>171</sup> *Removal* includes any form of prevention, mitigation, or elimination of the hazard created by a wreck.<sup>172</sup> The number of abandoned shipwrecks worldwide has reportedly increased, even though the marine casualties have decreased dramatically in recent years. The decrease in marine casualties is mostly a result of the work of IMO and efforts of governments and the industry. Consequently, more work still has to be done to deal with the problems caused by abandoned shipwrecks.

IMO identify, in principle, the same problems with abandoned wrecks as the Swedish authorities. IMO note that these problems are three-fold:

- ✓ Depending on its location, a wreck may constitute a hazard to navigation, potentially endangering other vessels and their crews;
- ✓ Of equal concern, depending on the nature of the cargo, is the potential for a wreck to cause substantial damage to the marine and coastal environments; and finally,
- ✓ In an age where goods and services are becoming increasingly expensive, there is the issue of the costs involved in the marking and removal of hazardous wrecks.

The WRC attempts to resolve all of these and other related issues.<sup>173</sup>

## 6.2.2 Obligations to remove dangerous wrecks

Due to the fact that the WRC has not entered into force, currently there is no international instrument in place particularly regulating wreck removal. Nevertheless, in practice, orders from coastal States demanding removal of

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<sup>169</sup> WRC art. 3 (2).

<sup>170</sup> WRC art. 2 (1).

<sup>171</sup> WRC art. 1 (5).

<sup>172</sup> WRC art. 1 (7).

<sup>173</sup> [http://www.imo.org/Conventions/mainframe.asp?topic\\_id=1604](http://www.imo.org/Conventions/mainframe.asp?topic_id=1604), retrieved 2010-05-05.

wrecks create a practice with obligations for the responsible party, usually the wreck owner, to remove wrecks. Most coastal States will today demand the removal of any wreck considered an obstruction or hazard to navigation. This demand usually takes the form of a legally binding removal order or directive. Nevertheless, a demand for removal may be issued even in cases where the wreck is not causing this type of problem.<sup>174</sup>

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<sup>174</sup> Fan, page 8.



# 7 Illustrative cases regarding dangerous wrecks

*As we have seen in the previous chapters, wreck-related problems have wide and various implications for different concerned parties. To demonstrate and exemplify these various implications, a few illustrative incidents with wrecks causing various kinds of damage are presented in this chapter.*

## 7.1 *Tricolor* – an impediment to shipping and an environmental hazard

### 7.1.1 The accident

The *Tricolor* was a Norwegian flagged vehicle carrier built in 1987 which was struck by *Kariba*, a Bahamian flagged container ship on December 14 2002. The accident took place in the French EEZ some 20 miles north of the French coast in the English Channel. It sank as a result of the impact of the striking and was eventually declared a total loss. In December 2002, French authorities ordered the *Tricolor* to be removed, as it was perceived to represent a danger to shipping and the environment.<sup>175</sup> Two days later the unloaded German cargo vessel *Nicola* struck the wreck of the *Tricolor*. Tugs pulled the cargo ship from the wreck on the same day. On January 1 2003, the *Tricolor* was struck again by the Turkish tanker *Vicky*, which was carrying 77,000 tons of gas oil.<sup>176</sup>

### 7.1.2 Insurance and funding issues

The removal and disposal of the *Tricolor* wreck and cargo was conducted in accordance with a contract between the owner of *Tricolor*, and the consortium *Combinatie Berging Tricolor*. The cost of removal and disposal incurred under the contract was covered by the owner's P&I insurance with the Gard P&I Club of Norway. The so-called Pool into which many P&I associations, among them Gard, have entered, had a range at the time of USD 25 million excess of USD 5 million; i.e. Gard had to retain the first USD 5 million, the excess being subject to distribution amongst all P&I associations participating in the Pool according to pre-defined parameters. Gard had in addition collectively purchased commercial market reinsurance protection for liabilities, losses, costs and expenses that exceed the Pool.

The cost of removing *Tricolor* exceeded the upper limit of the Pool. However, the actual end cost is subject to confidentiality between the

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<sup>175</sup> <http://www.tricolorsalvage.com/pages/home.asp>, retrieved 2010-05-03.

<sup>176</sup> <http://www.tricolorsalvage.com/pages/history.asp>, retrieved 2010-05-03.

contractual parties will and depends on various circumstances related to contractor performance. The end cost for Gard is depending on how much can be recovered from the owners of *Kariba*, and the P&I insurer of *Kariba*, as well as various circumstances related to contractor performance. It is therefore possible that the two P&I associations may bring claims against the Pool at the end of the day. There were other types of marine insurance involved in this event as well, e.g. the hull insurance of both vessels, as well as the loss of hire insurance for the *Kariba*. However, as to the wreck removal itself, only the P&I insurance will come into play.<sup>177</sup>

### 7.1.3 The wreck removal

The salvors cut the 190 meters long wreck of *Tricolor* into nine pieces. Platforms were erected on both sides of the wreck, and a special cutting wire was strung under the wreck between these platforms. The cutting wire, automatically controlled, could then move back and forth to cut the wreck.<sup>178</sup> The pieces of the wreck was subsequently lifted from the bottom of the ocean and placed on giant barges with the help of two floating cranes. All the cars were pulled from the wreck when it had reached the harbour, and were then scrapped.<sup>179</sup>

## 7.2 *Fu Shan Hai* – a modern environmental hazard

On Saturday May 21 2003, the Chinese ship *Fu Shan Hai* collided with *Gdynia*, registered in Cyprus, outside the Swedish southern coast. The following environmental remediation was historically one of the largest operations performed by the Coast Guard. Altogether, the Coast Guard had collected 1000 tons of oil from the water and there was still remaining oil in the water. The operation cost the Coast Guard just over around 10 million SEK and the affected Swedish municipalities in southern Sweden about 15 million SEK. Overall, including lost of ship and cargo, the salvage action, reparation of *Gdynia*, and the clearing of oil, the cost was over one billion SEK.<sup>180</sup>

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<sup>177</sup> <http://www.tricolorsalvage.com/pages/insurance.asp>, retrieved 2010-05-03.

<sup>178</sup> <http://www.tricolorsalvage.com/pages/infographic.asp>, (link “cutting the Tricolor”) retrieved 2010-05-04.

<sup>179</sup> <http://www.tricolorsalvage.com/pages/infographic.asp>, (link “lifting the tricolor”) retrieved 2010-05-04.

<sup>180</sup> <http://www.kustbevakningen.se/kbvtemplates/Page.aspx?id=790>, retrieved 2010-05-03.

## **7.3 Hazards to the marine environment – an old wreck beginning to leak**

### **7.3.1 Steel corrosion and the wreck situation in the Skagerrak**

Very simplified, steel corrodes one millimeter per year in saltwater. However, other factors such as depth, currents and salinity, effects the corrosion. Therefore the calculations on steel corrosion vary considerably. Nevertheless, using this generalization, the conclusion can be drawn that steel from ships wrecked in the Second World War has now corroded several centimeters. Consequently, this would result in a considerable permitting of leakage from a number of wrecks within a near future.<sup>181</sup>

Furthermore, there are a number of ships fully loaded with chemical weapons sunken deliberately in the end of world war two, so-called gas ships, in the Skagerrak. After comprehensive investigations and risk assessments regarding these ships, the conclusion have been drawn that it is motivated, not only from an environmental perspective but from economical and practical points of views, to let the wrecks lay on the deep ocean bed. The effects of the gas ships on the environment are judged to be mainly local. On the subject of oil leakage from wrecks in the Skagerrak, both a sudden, large oil spill and a slow leakage for decades are possible. As a result of the fact that the chemical compounds in oil as well as in chemical weapons are directly and chronically toxic, and may result in bioaccumulation, there is an obvious risk for, primarily, local damages to the ecosystems.<sup>182</sup> All these risks should be put in the perspective that 261 known wrecks located in the Skagerrak are identified as potential environmental threats.<sup>183</sup>

### **7.3.2 Damage caused by *S/S Skytteren* and the implications thereof**

In 2005, a large oil leakage was discovered from the former *S/S Skytteren*, wrecked 1942 outside Lysekil on the Swedish west coast. The wreck had then been permitting leakage in smaller amounts for about 10 years.<sup>184</sup> *Skytteren* was originally built as a transatlantic liner under the name *S/S Suevic*, sailing to both America and Australia from Europe. In 1928, she was sold to Norway and re-built to a whaler.<sup>185</sup>

Following the leakage from *S/S Skytteren*, examination of the wreck was made by means of sonar equipment and photography, showing that the

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<sup>181</sup> Lindström, page 10.

<sup>182</sup> Lindström, page 11.

<sup>183</sup> Hassellöv, page 5.

<sup>184</sup> Lindström, page 9.

<sup>185</sup> Lindström, page 10.

wreck was permitting leakage through corroded welded joints. Using aerial photographs of the wreck, a leakage of 1000 liters/24 hours was calculated. The *S/S Skytteren* may have had a bunker capacity up to 6000 m<sup>3</sup>, which would mean that a leakage of this volume could, theoretically, continue for 16 years. Besides, there is the constant risk that the wreck will break allowing a sudden leakage of large amounts of oil into the marine and coastal environment.

The leakage from *S/S Skytteren* drew attention to the question of the effect aging wrecks may have on the environment. *S/S Skytteren* went down under the Second World War. A large number of ships were lost under that period of time. Even taking salinity, temperature and oxygen levels into account, the fact that steel corrodes is inevitable. Consequently, the corrosion will in time create holes in ships. It is hard to say when this will happen. However, the leakage from *S/S Skytteren* and several other wrecks have started to permit oil leakage the past 10 to 15 years. This indicates that within the near future similar situations may be expected.<sup>186</sup>

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<sup>186</sup> Lindström, page 11.

# 8 Analysis

## 8.1 General remarks

The legal issues with wrecks are interlaced with environmental and economical problems. Without comprehensive applicable law, liability for wrecks remains unsettled. Therefore there is a need for legislation. For this to happen, enough retrieved knowledge and data concerning the extent of the situation with abandoned wrecks, and knowledge of the possible impact of wrecks on the environment is crucial. As the Swedish government points out, the knowledge level needs to be increased before we can take the next step. At the same time, for underwater archeologists and other parties concerned with the intolerable situation with wrecks lying on the seabed, lacking legislation makes the practical problems difficult to solve.

The concept of wreck removal merely forms a part of a long chain of provisions and attempts to protect *the marine environment* and *the safety of navigation*. These two objectives is the purpose of a large number of national and international laws. Wreck-related questions must be put into the larger perspective of national and international rules with the purpose of protecting these two objects, and discussed in the light of this perspective.

As explained in the introductory chapter, this thesis takes a Swedish perspective including international regulations. A number of factors contribute to the choice of this perspective. To begin with, the wrecks that affect States the most are located relatively close to their coast in national waters, i.e. in their territorial waters or in their EEZ. Furthermore, wrecks located in international waters may very well affect the marine environment harmfully but because the high seas, so to say, belong to everyone and no one, enforcement is very difficult. In addition, because of this status of the high seas, there really is no good international forum where wreck removal and other measures relating to wrecks located in the high seas could be decided upon and enforced. As a result, wreck-related questions are best solved nationally. This being said, harmonization of the handling of wrecks in different States would be beneficial. An advantageous co-operation between the States surrounding the Skagerrak is a good example of this. In short, the international perspective on legislation relating to wrecks can be summarized as a means of agitation on individual States, rather than a forum where States can attempt to change the attitude towards legislation on wrecks.

Another aspect of the international perspective in this field of law is noteworthy. Maritime law has an international character overall because shipping and trade have international characteristics per se. It is not unusual for ship-owners and operators responsible for damage caused by a wreck in Swedish waters to be of a foreign nationality. If polluting wrecks, with the natural international implications, are compared to vehicles littering the

environment at land, with the more clear national implications, it becomes very clear that damage caused by wrecks and legislation relating to wrecks are not solely national issues. Therefore, the effect on other States is inevitable. For this reason, harmonization and collaboration between States in these matters would be beneficial for the maritime community as a whole.

## **8.2 The legal position in Sweden in relation to newly wrecked ships and older wrecks**

### **8.2.1 The legal position in a nutshell**

The legal position regarding liability for wrecks, damage caused by wrecks, and wreck removal can be summarized with the following eight paragraphs:

- ✓ The Maritime Administration may remove wrecks that pose a danger to fishing or navigation, on the condition that the ship-owner does not act appropriately to remove the wreck.
- ✓ The Maritime Administration may order the wreck owner to remove the wreck if the wreck permits leakage that threatens the environment.
- ✓ The wreck owner has primary responsibility for damage caused by the wreck as such. Further, the owner is liable for the cost for removing wrecks that are impediments on navigation or that may cause environmental damage. The wreck owner liability lies upon the owner at the time when the damage was caused.
- ✓ The ship-owner liability covers the strict owner liability for oil pollution. This strict liability does not cease after the ship has been wrecked. Therefore, the owner is liable for oil emissions from the wreck.
- ✓ The Coast Guard is the responsible authority for immediate emissions of dangerous substances from newly lost ships as well as wrecks.
- ✓ In cases where a wreck obstructs a public port, the port authority may remove it. Costs for the removal may be charged to the wreck owner.
- ✓ The wreck owner may be liable to fines, and even prison sentences, according to general prohibitions of littering.

This summary shows an absence of a comprehensive legal framework and exhaustive legislation. Some of these rules are merely analogies of laws concerning ships; some are rules derived from established practice; some derives from general environmental prohibitions; and some are old and outdated. For reasons of clarity, an exhaustive act on wreck-related legal issues would make legal problems with wrecks easier to foresee and solve. Furthermore, an exhaustive act governing liability for wrecks has the advantage that a stricter liability can be placed on the wreck owner, or on

operator of the ship, if such strict liability should be the wish of the legislator. Finally, passed legislation will draw further attention to the problem with wrecks polluting the marine environment and impeding navigation. This could have the effect that environmental damage will be better prevented in the future.

Currently, depending on the maritime zone in which a wreck is located, the responsibility to take measures regarding the wreck is placed on different subjects and authorities. This creates confusion, and can have the effect that no measures are actually taken. The confusion and failure to take action can be explained by insufficient co-operation, together with the fact that authorities may see an opportunity to pass the problem along. The illustration below further emphasizes the current legal position and the shortage in Sweden in this field of law.

<b>Municipality/ internal waters</b>	<b>Territorial sea</b>	<b>EEZ</b>	<b>High Seas</b>
The local authorities are responsible for wreck removal.	The State is responsible for wreck removal.	The State may take responsibility for wreck removal. The wreck owner is responsible / The coastal State may intervene.	No State or legal entity is responsible for wreck removal.

This simplified model gives indications to several problems related to dangerous wrecks. Wrecks may cause just as much damage in the territorial sea as in the internal waters but somewhat arbitrarily, simply depending on where the casualty took place, different authorities will have responsibility to take action. With currents and uneven coastlines, the effect on the marine and coastal environment may be the same if the wreck is located 12 nautical miles from the coast or 12, 5 nautical miles from the coast. Therefore, action is sometimes necessary even if the wreck is located in the EEZ.

## **8.2.2 Issues with newly wrecked ships**

Existing rules regarding wreck owner liability is relatively easy to apply to newly wrecked ships. Not only is the owner probably fairly easy to find due to registers of ship-ownership, but he is most likely insured for his liability. The owner's liability insurance usually covers wreck removal, and therefore, P&I clubs play an important role in cases where a wreck needs to be removed. Because the authorities can find the liable owner, they can issue a wreck removal order or alternatively take measures themselves to subsequently seek compensation for their expenses from the owner. The P&I clubs have experience of handling wreck removal and will, when an order is issued from a State that a wreck needs to be removed, see to that the removal is carried out on behalf of the owner (i.e. the member of the club).

For these reasons, the legal position in Sweden regarding wrecks is in principle fairly effective regarding newly wrecked ships.

The accident involving *Tricolor* in the English Channel illustrates clearly how a wreck can be an impediment to shipping. The wreck was hit twice, causing large oil spills, before it was removed. In the light of the danger the wreck posed, the wreck removal order was issued. The removal of *Tricolor* did not seem like an unreasonable request, even considering the large costs and the difficulty of the operation. The order to remove the wreck is a good example of an appropriate right of the coastal State in cases where a wreck has proved to pose serious danger to that State.

The *Fu Shang Hai* incident illustrates how marine casualties are handled by the Coast Guard by means of prompt actions. The incident represents one of the largest oil spills handled by the Coast Guard in modern time. The actions taken by the Coast Guard were very costly, but successful. Should the Coast Guard not have intervened to clear up oil, the long time environmental impact would have been difficult to judge. Prompt actions, as costly as they may be, have the advantage that long term harmful effects on the environment are avoided. In cases with older wrecks that have not yet caused damage to the environment an alternative exists. This alternative, namely to wait until proof of actual damage exists, may appear tempting. However, the discussion in the next subchapter proves otherwise.

### **8.2.3 Issues with older wrecks**

Older wrecks have far more complicated implications than newly wrecked ships. The authorities have yet to find out the exact scope of the problem with old and potentially dangerous wrecks in Swedish waters. Since many of these wrecks are the result of ships wrecked during the Second World War, and research of the wreck *Skytteren* indicate that wrecks of this age will potentially start to permit leakage, the authorities may soon be faced with a serious and very expensive problem. The existing laws are difficult and impractical to apply to older wrecks. The wreck owner is typically deceased or impossible to find. As pointed out by the Agency for Public Management, the financing is the most difficult issue to solve regarding dangerous and abandoned wrecks. Accordingly, the Agency finds that the problems with the wrecks have not been resolved largely because the necessary measures can entail significant costs. The financing issues are probably the reason for the lack of adequate legislation in this field of law. As the Agency points out, the issue of responsibility is not very complicated and hardly the most central in the context of dangerous and abandoned wrecks. There are in fact few potential candidates to take responsibility for actions that should be taken. Most likely, the Maritime Administration together with the Coast Guard will be jointly responsible for remediation actions and wreck removal. The main issue for the government to decide upon and resolve is how actions to clean up or remove wrecks should be financed. A possible solution would be to create a fund that would finance actions taken or commissioned by the Coast Guard and the Maritime



Administration. It would be very difficult to include preventive action regarding abandoned wrecks in the budgets for the authorities.

### **8.3 The legal position in international law in relation to newly wrecked ships and older wrecks**

The existing international law primarily regulates seven aspects related to wrecks:

- ✓ Preventing marine casualties through regulations on safety of navigation and shipping,
- ✓ Preventing marine casualties from having detrimental effects on the marine environment,
- ✓ Protection of the marine environment by means of applying the precautionary principle and the polluter pays principle,
- ✓ Providing coastal States with rights to intervene when marine casualties occur, which have hazardous effects on the marine and coastal environment of the affected State,
- ✓ Obliging States to co-operate regarding protection of the marine environment,
- ✓ Prohibiting dumping of certain wastes to prevent pollution of the sea bed, and
- ✓ Providing salvors with the incentive to prevent or minimize damage to the marine environment by means of entitling them to special compensation.

The existing international law related to wrecks provides the international community with both obligations and rights, but is lacking in several aspects. The entry into force of the Wreck Removal Convention would fill this gap. Unfortunately, it is likely that considerable time passes before the Convention enters into force. The financing and the provision stipulating obligatory insurance for vessels is probably the biggest reason for this, which is indicated by the discussions on the WRC at IMO meetings and conferences.<sup>187</sup>

The existing international law is satisfactory regarding regulations of newly wrecked ships and marine casualties. In addition, the WRC would add to this satisfaction. A long chain of provisions aiming at preventing casualties, and the effect these casualties could have on the environment can be identified. Regulations on seaworthiness of ships, standards for the crew and for watch keeping, preventing collisions, preventing overloading of ships, and so on, all contribute to the prevention of marine casualties and, hence, the occurring of new wrecks. However, as regards older wrecks, the only international legislation to be found regulates the underwater cultural heritage. The modernization of marine environmental law has not yet

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<sup>187</sup> See, e.g. LEG 94/5/4.

reached the point where wrecks are an important source of marine pollution. Shipping, dumping, sea-bed activities and land activities are considered to be the four main sources of marine pollution today. The impact wrecks, both newly wrecked and older wrecks, may have on the environment should grant them a status of an important source of pollution. It would be negligent to deny their impact on the marine environment.

## 9 Conclusions and legislative proposals

In the introductory chapter describing the purpose of the thesis, a number of questions were posed. As we have seen, these questions do not easily provide short or clear answers. Therefore, the questions and answers that follow below are simplified.

*Legally, what is a wreck and who has responsibility for it?*

No set definition on the term wreck exists in Swedish law. In international law wreck is defined in the Wreck Removal Convention, which is not yet in force. Primarily, the owner of the wreck has the legal responsibility for it.

*What national and international laws regulate and relate to wrecks?*

Internationally, several conventions regulate issues related to wrecks. These conventions have two primary objectives: to protect the marine environment and ensure safe navigation. Nationally, sporadic acts and established practice regulate wreck-related issues.

*What measures can be taken regarding dangerous wrecks, who may and who must take these measures?*

A number of measures can be taken in relation to dangerous wrecks. Among these, removal of the wreck is the most interfering. Authorities may intervene in certain cases when wrecks cause damage. The owner must sometimes take measures regarding his wreck.

*What effects may wrecks have on the environment?*

Wrecks have different hazardous effects on the environment, depending on characteristics of the wreck itself, primarily the characteristic of the substance which the wreck permit leakage of, as well as the conditions in the marine environment in which the wreck is located.

The object for the discussions in this thesis has wide and various implications. Different perspectives on the effect wrecks have on the environment and on navigation contribute various dimensions of the problems. The problems with a dangerous and abandoned wreck cannot simply be summarized with how a coastal society is affected, or by how the wreck is an impediment to navigation. Consequently, the problem is not limited to financial issues regarding wreck removal or liability issues when the ship-owner or another liable subject remains unknown. Rather, all these dimensions are interlaced and parties involved in conflicts arising from wrecks would benefit if these dimensions were collected in a more comprehensive and updated legislation. The most serious legal problem in Sweden regarding wrecks is just this lack of comprehensive legislation. To conclude the thesis I therefore present some suggestions to a possible future national legislation that would fill, at least parts, of the gap in this field of

law, as well as clear some of the ambiguousness characterizing wreck related legal problems.

## **“Act (2012) on Liability, Responsibility and Removal of Wrecks etc.”**

### **§1. Definitions**

For the purposes of this act,

1. A *wreck* is a sunken or stranded ship, or hulk or other part thereof, usually appearing as a result of a marine casualty,
2. A *dangerous wreck* is a wreck, proved hazardous, or with potential or actual threat of posing hazard, to the marine environment, or to shipping or navigation.

### **§2. Application of the act**

This act applies to waters under Swedish jurisdiction, that is, the internal waters and the territorial sea. This act further applies to the exclusive economic zone under condition that the provisions of the act are in accordance with Sweden’s international agreements. The provisions in this act should be carried out in accordance with such agreements.

### **§3. Legal responsibility and liability for wrecks**

Responsibility for a specific wreck purports the obligation to report the wreckage to the responsible authority, to carry out measures prescribed by the responsible authority, alternatively to pay the charges for measures deemed necessary by that same authority, and to cooperate in giving information to the responsible authority concerning the type of the ship, the cargo and other similar useful data.

Responsibility rests on the registered owner of the ship, where such a person can be found. Alternatively, responsibility falls on the operator of the ship. If neither the owner nor the operator can be found, the Swedish Authority, as decided by the government, takes responsibility for the wreck.

Liability for wrecks rests on the registered owner of the ship at the time it caused damage. Wreck owner liability includes liability for all damages caused by the wreck as such. If no owner can be found, liability for the wreck falls on the operator of the ship, before the ship was wrecked, at the time the wreck caused damage.

### **§4. Removal of wrecks and other measures concerning wrecks**

As a general rule, measures should be taken concerning wrecks proved to be of dangerous character. The government can decide upon the principles regarding how wrecks are deemed to be of a dangerous character. Where options to remove the wreck, with acceptable result, are available, the least interfering option should have preference. Measures should be proportionate to the hazard the wrecks pose.

### **§5. Financial responsibility for wreck removal and other measures concerning wrecks**

The person responsible for the wreck should bear the cost for financing the removal or other measures concerning wrecks up to a certain limit

decided by the government. If the government is responsible for the wreck, the State should bear the corresponding amount of the cost.

A national fund should be established with the purpose of bearing the remaining parts of the cost, not paid by the subject responsible for the wreck, for wreck removal or other measures concerning wrecks.

#### **§6. Performance of wreck removal**

The Coast Guard, the Maritime Administration and the affected municipality should together assign the removal operation to an appropriate performer.

#### **§7. Diving on wrecks**

Until the wreck has been approved to be safe and all necessary measures have been carried out, it shall be prohibited to dive near and on the location of the wreck. The area covered by the prohibition shall, in each case, be decided by the responsible authority. After the wreck has been cleared for diving, all diving for purposes of wrecking and plundering is prohibited.

Diving on or near wrecks is prohibited, unless the required permission has been given by the responsible authority.

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