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The Development of the MARPOL and EU Regulations to Phase out Single Hulled Oil Tankers

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Summary

In 1990, the US adopted the OPA 90 in response to the Exxon Valdez grounding outside the Alaskan coast in 1989. The OPA 90 was the first legislation demanding double hull on oil tankers in order to prevent the spillage of oil in case of a grounding or collision. The IMO adopted amendments to MARPOL 73/78 in 1992, which for example required all new tankers of 600 dwt and above to have double sides or double bottom and tankers of 5,000 dwt and above to have both double bottom and double sides.

The Erika accident outside the French coast shook the EU and a stricter regulation, in comparison with the MARPOL, on double hull tankers was adopted. The Prestige accident in 2002 further spurred the EU to put pressure on the IMO to implement the same accelerated phase out scheme of single hulled tankers as the EU had already adopted. This developed into a battle between the EU and the IMO on the jurisdictional right to prevent marine pollution by phasing out single hulled tankers.

The thesis is a descriptive and analytical study of the development of the MARPOL and EU phase out schemes. By presenting the relevant UNCLOS articles it is analyzed how unilateral legislation may prevent single hulled tankers by using the jurisdiction of flag, port, and coastal states. The EU has taken an independent initiative to regulate the phase out stricter than the IMO and chapter 2 examines the jurisdiction of the EU in the field of maritime pollution prevention. The study shows that the EU member states may, by using their flag and port state jurisdiction given to them by the UNCLOS, implement the EU regulation.

Chapter 3 describes how the MARPOL and EU schemes on the phasing out of single hulled tankers developed. These schemes came about during a process lasting a decade when both organizations wanted to prove their efficiency to respond quickly to the problems of oil pollution. Finally, the EU, after political pressure from the EU member states and the public opinion, had the IMO adopting the same phase out scheme as the EU but with some exemptions. The shipping industry is vulnerable to unilateral legislation since shipping is an international business and EU politicians are not considered to be as competent in the maritime field as experts of the IMO. Therefore, the IMO needs to take the initiative back from the EU on all matters concerning marine legislation.

The last chapter analyzes the possible consequences for the shipping industry due to the phasing out of single hulled tankers. The phase out require, among other things, new tonnage to be built and old tonnage to be scrapped. There are many consequences for the shipping industry when new legislation is made and some of them may be very costly for some of the actors in the shipping industry.

Preface

When writing this thesis I wanted to leave the four walls of the university to understand the practical implication of the phase out for the shipping industry. By doing so, I have learnt more than what I would have learnt only reading about it. I am thankful to everyone that has given me a minute of their time to tell me about their view of the phase out or simply told me a good story from the corridors of the shipping industry.

I would also like to thank my supervisor Svante O. Johansson for being patient and supportive throughout this thesis. The comforting and wise words from Svante during the most stressful periods have calmed me down and convinced me that I was on the right track. Thank you Svante!

Further, I want to express my deepest gratitude towards the Kaj Rehnström Scholarship Committee that awarded me with the Kaj Rehnström Scholarship for my thesis. By recognizing my thesis with the Kaj Rehnström Scholarship, I was encouraged that the subject of my thesis was of interest for the shipping industry and could be a useful source for anyone interested in the phase out of single hulled tankers.

Throughout the work with the thesis, I have had the opportunity to meet with and interview people working, in one way or the other, in the shipping industry. For explaining and sharing your knowledge about the practical side of the phasing out of single hulled tankers I want to thank Jonas Rosengren at Vinges advokatbyrå, Björn Södahl then at Concordia Maritime, Sten Claesson at Stena Oil, Jakub Walenkiewicz, Bartosz Maciolowski, Karl Rygh, Terje Staalström, Wilhelm Magelssen, and Odd Torset at Det Norske Veritas, and Christopher Frisk at Sveriges Redareförening. Without your expertise and insight in the shipping industry, I would not have had the valuable practical understanding of the phase out that I have today. Thank you all!

Lastly, I want to thank my fiancé Andreas Dencker and my parents René Johansson and Jane Stenman. Andreas has put a healthy pressure on me to finalize my thesis and he has forced me to explain to him what my thesis was about, which has made me stay focused. My parents have always put trust in what I am and what I do. Even when it comes to writing a thesis about the phase out of single hulled tankers!

Göteborg, May 2005,

Caroline Stenman

Abbreviations

13F	Regulation 13F of Annex I of MARPOL 73/78
13G	Regulation 13G of Annex I of MARPOL 73/78
13H	Regulation 13H of Annex I of MARPOL 73/78
DWT	Dead Weight Tonnage
EEZ	Exclusive Economic Zone
EU	European Union
HGO	Heavy Grade Oil
IMCO	Inter-Governmental Maritime Consultative Organization
IMO	International Maritime Organization
INTERTANKO	International Association of Independent Tanker Owners
ITOPF	Independent Tanker Owners Pollution Federation
LC	Legal Committee
LDT	Light Displacement Tonnage
MARPOL	International Convention for the Prevention of Marine Pollution from Ships, 1973 as modified by the protocol of 1978 relating thereto
MEPC	Marine Environment Protection Committee
MSC	Maritime Safety Committee
OILPOL	1954 London Convention for the Prevention of Pollution of the Sea by Oil
OPA 90	United States Oil Pollution Act of 1990
UK	United Kingdom
ULCC	Ultra Large Crude Carrier
UNCLOS	United Nations Convention on the Law of the Sea
US	United States
VLCC	Very Large Crude Carrier

1. Introduction

1.1 General

Shipping is perhaps the most international of all the world's great businesses. A ship may be registered in Liberia, owned by a shipping company in Norway, have a master from Croatia, have a crew from the Philippines, and sail between India and Brazil. At the same time, shipping is also one of the world's most risky businesses. The best way to improve safety at sea is to develop international regulations that all shipping nations follow. Since the mid-1800s, adoptions of a number of such treaties and conventions have been made. Unfortunately, most treaties and conventions are not adopted until an accident occurs that prove the necessity for an international regulation.

There is no other cargo that is shipped globally as much as oil and the trade of oil may impact most coast states. More than 2,000 million tonnes of crude oil and refined products were transported by sea in 1998, which in weight represented 40% of the total cargo shipped by sea.¹ The crude oil is shipped from the main natural resources: from the Middle East/Gulf to Southeast Asia, Japan/South Korea, Europe and the United States (US); from North Africa to Europe; and from the Caribbean to the US.

The largest importer of oil is the European Union (EU),² which represents about 27% of the total world trade of crude oil whilst the US imports about 25% of the world total.³ The annual demand of oil in the EU is around 640 million tonnes, but about 800 million tonnes is annually transported to, from, and between the EU ports.⁴ This is not including the domestic trade within individual states. About 70% of the tanker trade in the EU is focused on the Atlantic and northern coasts and 30% in the Mediterranean. The crude oil imported to the EU is mainly from the Middle East and North Africa and the trade routes are determined by port and refinery locations.

The largest ports for oil within the EU are Rotterdam, which handles 100.8 million tonnes of crude oil annually, Marseilles, 48.3 tonnes, Le Havre, 37.0 tonnes, Trieste, 35.7 tonnes, and Wilhelmshaven, 32.6 tonnes.⁵ This oil is transported on Very Large Crude

¹ COM(2000) 142 final on the safety of the seaborne oil trade, p. 8.

² The EU member states are: Austria, Belgium, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, The Netherlands, and the United Kingdom.

³ COM(2000) 142 final on the safety of the seaborne oil trade, p. 8.

⁴ *Ibid.*

⁵ *Ibid.*, p. 9.

Carriers⁶ (VLCC) or Ultra Large Crude Carriers⁷ (ULCC) routed around Africa or on “Suezmax” tankers⁸, which can pass through the Suez Canal.

The world’s tanker fleet may roughly be divided into oil, crude, products, chemical, and liquid gas tankers. The oil tanker fleet is the largest in tonnage terms, the largest of all shipping sectors, and has the world’s largest ships. On January 1, 2004, the world oil tanker fleet consisted of 7 565 ships totalling 318 million dead weight tonnage (dwt⁹).¹⁰

The Torrey Canyon, the Exxon Valdez, the Erika, and the Prestige were all accidents that proved the need for stricter regulations concerning oil tankers. The environmental damage on the marine and coastal environment caused by oil pollution was not realized until the Torrey Canyon accident in 1967. The following accidents made it further clear how important it was to legislate in order to prevent the same type of accidents. Therefore, the aftermath of these oil pollution catastrophes has been stricter legislation and a tougher attitude towards the oil companies and the tanker trade.

This master thesis will focus on the development of one of the latest trends to avoid pollution from oil: the phasing out of single hulled tankers. The phasing out of single hulled tankers was first introduced by the US after the Exxon Valdez grounding in 1989 through the Oil Pollution Act of 1990 (OPA 90). OPA 90 has been followed by actions taken by the International Maritime Organization (IMO) and the EU. The phasing out of single hulled tankers has been a controversial issue in the shipping industry since it is questioned how efficient a double hull is in comparison with a single hull in case of a grounding or collision. How efficient double hulled tankers will be to prevent pollution from oil will be seen in the future.

1.2 Purpose

The purpose of this master thesis is, firstly, to study the right of flag, port, and coastal states to ban ships from their area of jurisdiction. This is done by studying the jurisdiction of flag, port, and coastal states according to the United Nations Convention of the Law of the Sea (UNCLOS).¹¹

Secondly, the development of the IMO’s and the EU’s phase out schemes of single hulled tankers is reviewed. Traditionally, the EU has relied heavily on the IMO to legislate on

⁶ With a tonnage of +200 000 deadweight tonnage.

⁷ With a tonnage of +300 000 deadweight tonnage.

⁸ With a tonnage of 120 – 140 000 deadweight tonnage.

⁹ Deadweight tonnage is essentially equal to the carrying capacity of a ship. It is the difference in weight between a ship loaded with stores and fuel and the same ship empty but with stores and fuel. Deadweight tonnage is a useful measure of the absolute cargo capacity (within 5%).

¹⁰ Nya Sjöfartens Bok 2005, Svensk Sjöfartstidnings Förlag AB, Breakwater Publishing, p. 33.

¹¹ United Nations Convention of the Law of the Sea, Montego Bay, December 10, 1982, in force October 1, 1994.

the area of marine environmental protection issues and understated its own competencies and responsibilities. After the Erika and the Prestige accidents, the EU has undertaken larger responsibilities instead of waiting for the IMO to agree to develop higher standards.¹² The EU's major concern is that the international regulations that are passed by the IMO are not applied efficiently and therefore the EU is looking for larger legislative power in the maritime field.

Thirdly, what are the possible consequences of the phase out of single hulled tankers for the shipping industry? There are several consequences of the phase out and this thesis will analyze a few of them.

1.3 Method

The thesis consists of three main chapters that are of different character. In chapter 2 the focus lies on the UNCLOS and the way the UNCLOS gives flag, port, and coastal states jurisdiction when it comes to legislating about pollution from ships. This chapter presents the basis for how states may put double hull requirements on ships registered in the state's registry or sailing in its waters. UNCLOS thereby gives the frames for how far unilateral legislation, like the EU regulation, may go beyond international legislation passed by the IMO. Consequently the purpose of this chapter is to analyze whether the EU may develop maritime legislation that prevent single hull tankers from registering in EU member states, enter the ports of EU member states, and navigate in EU member states' waters.

Chapter 3 explains the development of the MARPOL and EU regulations that phase out single hull tankers. This development is studied with the four oil spills from the Torrey Canyon, the Exxon Valdez, the Erika, and the Prestige as a setting in order to show how legislation develops after the event of an accident. The IMO and the EU influenced each other during the development of the phasing out schedules. Therefore, the two organizations' steps towards the phase out schemes of today are presented in chronological order. This emphasizes how the IMO and the EU affected and pressured each other to keep the legislative process up. One of the main points here is to show how the EU widened its legislative role regarding maritime legislation. The IMO has been the sole international body to develop maritime legislation but with the phase out of single hull tankers, the EU has made itself into an actor in this field.

Finally, chapter 4 analyzes the possible consequences that the phase out of single hull tankers may have for the shipping industry as a whole. This chapter divides the shipping industry into four different markets: the newbuilding market that trades new ships, the freight market that trades sea transport services, the sale and purchase market that trades

¹² Hedemann-Robinson, Martin. *Protection of the Marine Environment and the European Union: some critical reflections on law, policy and practice*. The Journal of International Maritime Law, June-July 2004, Vol. 10, Issue 3, p. 254.

second hand ships, and the demolition market that trades old ships. When studying possible consequences for the shipping industry I reflected over how legislation suddenly changes the rules for the actors on the market. Hence, adequate legislation is extremely important when it comes to an international, which is includes a number of different actors.

1.4 Delimitation

In order to make this thesis readable, I have had to narrow the topic down. A lot has been written on the phasing out of single hulled tankers and the objective is to stay close to the regulations developed by the IMO and the EU. Therefore, I briefly mention the OPA 90 since this thesis focuses on the IMO and EU regulations. The MARPOL consists of a number of Annexes and only Annex I and, especially, the amendments dealing with the phasing out of single hulled tankers are of interest here.

This thesis does not study the structure of the IMO or the EU. The reader is, consequently, supposed to have basic knowledge of the two organizations and how conventions and regulations are developed by each organization.

The huge amount of legislation that followed upon the Erika accident were named the Erika I and Erika II packages. The phasing out of single hulled tankers is just one of a series of measures in dealing with the prevention of oil pollution. Other measures include the Condition Assessment Scheme (CAS) that affects how single hulled tankers are phased out. As the CAS involves another set of rules, for example on how the assessments of single hulled tankers are supposed to be made, it would in itself be a whole thesis and, therefore, there is no room for a description of this set of rules. The focus of this thesis is solely on the set of rules concerning the phase out of single hulled tankers.

2 The UNCLOS and flag, port and coastal states

2.1 The UNCLOS

The United Nations' Convention on the Law of the Sea (UNCLOS) states in detail the extent to which states have rights or duties when it comes to legislation about pollution from ships. Different rules apply to flag states, coastal states, and port states. The obligation of the flag state is the same whether the ship is in the internal waters, the territorial sea, the contiguous zone, in the exclusive economic zone (EEZ), or on the high seas. The rights of the port state depend on whether a particular ship is leaving or entering a port in the port state, and for the coastal state in which area the ship is sailing.¹³

International law, which relates to the protection and preservation of the marine environment, develops as a response to concrete casualties. The UNCLOS has, from a legal point of view, been a milestone in the development of international law on the subject. Unlike other fields of international law, treaty law largely and mainly governs marine pollution¹⁴ and the UNCLOS' provisions on flag state and coastal state jurisdiction are generally recognized to represent customary law.¹⁵

The international maritime community is probably among the most sensitive towards regional or other unilateral initiatives. The argument, strongly upheld by both the maritime industry and a considerable number of governments, is that a global business, where the players easily can choose the jurisdiction of their operations, needs regulation at a global level in order to avoid a patchwork of standards in various geographical areas. The EU is party to the UNCLOS, which means that the UNCLOS is binding upon the EU member states and the institutions of the EU.¹⁶ The UNCLOS demands that its contracting parties ensure that any other international agreements on protecting and preserving the marine environment are to be carried out in a "manner consistent with [the UNCLOS'] general principles and objectives".¹⁷ This severely limits the ability of the EU to adopt enhanced unilateral safety measures for ships entering European marine waters.¹⁸

¹³ Ringbom, Henrik. *Preventing Pollution from Ships – Reflections on the 'Adequacy' of Existing Rules*. Review of European Community and International Law, Volume 8, Issue 1, 1999, p. 21.

¹⁴ *Vessel--source Pollution and Coastal State Jurisdiction – The Work of the ILA Committee on Coastal State Jurisdiction Relating to Marine Pollution (1991-2000)*, edited by Erik Franckx, Kluwer Law International 2001, p. 11-31.

¹⁵ Ringbom, *Preventing Pollution from Ships – Reflections on the 'Adequacy' of Existing Rules*. p. 22.

¹⁶ Hedemann-Robinson, p. 269.

¹⁷ Article 237 of the UNCLOS.

¹⁸ Hedemann-Robinson, p. 272.

2.2 Flag state jurisdiction

The flag state is the state in which a particular ship is registered. The flag state is obligated to adopt and enforce anti-pollution laws and regulations in compliance with international rules and standards adopted by IMO according to articles 211(2) and 217 of the UNCLOS. In accordance with article 211(2), states must adopt laws and regulations for the prevention, reduction and control of pollution of the marine environment from ships "flying their flag or of their registry". Only flag states can adopt standards for ships but these standards must at least have the same effect as that of "generally accepted international rules and standards," for example those contained in the MARPOL 73/78, established through the competent international organization¹⁹, in this case the IMO.²⁰ Article 217 exclusively addresses the enforcement of international rules and standards by flag states and provides that such enforcement must take place "irrespective of where a violation occurs." The flag state is further more free to uphold a higher standard on environmental rules for the ships registered in its registry than what is required internationally.²¹

Rules according to design and equipment, such as the phasing out of single-hull tankers, have to be enforced by the flag state since it is under their jurisdiction to enforce the legislation on ships registered in their registry.

2.3 Port state jurisdiction

The port state must generally be understood as referring to the state (or states) to whose port a ship is proceeding at a given moment. Port state jurisdiction according to article 218 of the UNCLOS relates to the enforcement of the applicable international rules and standards in respect of a discharge from a ship outside the port state's internal waters, territorial sea or EEZ. Port state enforcement jurisdiction depends on the foreign ship being voluntarily within a port or at an offshore terminal of the port state.

Foreign ships do not enjoy unrestricted rights of entry into ports unless there is a specific treaty regime applicable according to general international law. Unless there are rights of passage safeguarded, sovereignty is normally exclusive. These rights apply through internal waters that were formerly high seas, archipelagic waters, territorial sea, and straits used for international navigation.

Even where there is a right of passage an automatic right to enter a port does not exist according to the UNCLOS. Article 211 (3) of the UNCLOS imply that port states may put requirements on ships entering their ports. A port state is entitled to deny access

¹⁹ Article 211 (2) of the UNCLOS.

²⁰ Ringbom. *Environmental Protection and Shipping – Prescriptive Coastal State Jurisdiction in the 1990's*. MARIUS Nr. 224, Nordisk Institutt for Sjørett. Oslo, December 1996, p. 16.

²¹ *Ibid.*, p. 14.

according to Article 211 (3) to a ship entering its port whenever the port entry requirements of such state concerning construction, equipment, and manning of the ship are not complied with. The same article further on expressly gives a right for “co-operative arrangements” concerning port entry requirements between two or more states in a region.²² From this follows that an EU regulation restricting single hulled tankers from EU member states’ ports is in accordance with the rights given to the port states by the UNCLOS.

Article 211 (3) also gives port states the possibility to set up special measures “which establish particular requirements for the prevention, reduction and control of pollution of the marine environment as a condition for the entry of foreign ships into their ports.” If international conventions set up regulations on hull construction and port states set up stricter requirements, there may be a conflict between international commitments and the port states’ sovereignty.²³ There seems to be a recognition of port states’ rights to regulate beyond international conventions, which means seeing the conventions as minimum requirements, as long as there are no duties restraining such action in the convention.²⁴ Port states have more possibilities to challenge international conventions than coastal states have as we shall see below.

2.4 Coastal state jurisdiction

The basic distinction between the enforcement jurisdiction of port states and that of coastal states is that the enforcement jurisdiction of a coastal state relates to violations of the laws and regulations of the coastal state in its internal waters, territorial sea, EEZ, or on the contiguous zone and is applied for the protection of the coastal state itself. The formal distinction according to the UNCLOS between port state jurisdiction and coastal state jurisdiction is in the direct consequence of the extension of the coastal state’s jurisdiction over its EEZ.

When it was realized in the 1970’s that flag state jurisdiction was not sufficient to protect coastal states from pollution, coastal states needed jurisdiction to set up their own pollution legislation. In order to find a reasonable balance between the coastal state’s jurisdiction and foreign ships rights to innocent passage, the UNCLOS’ Article 211 sets the guidelines for their jurisdiction. The wider legislative powers of port states have been a reason for coastal states to try to put restrictions on ships by exercising port state jurisdiction. This is not possible since only port states have the jurisdiction to put requirements on ships entering their ports.²⁵

²² Ringbom. MARIUS, p. 128.

²³ *Ibid.*, p. 23.

²⁴ *Ibid.*, p. 23.

²⁵ Ringbom. *Preventing Pollution from Ships – Reflections on the ‘Adequacy’ of Existing Rules*, p. 23.

The coastal state has competence to legislate for the protection and preservation of the marine environment providing it does so without prejudice to the freedom of navigation. The coastal state's pollution laws must confirm and give effect to generally accepted international rules and standards in order to be accepted laws according to the UNCLOS.²⁶ As a result, coastal states must adhere to international conventions and are not free to pass legislation that goes beyond international conventions such as the UNCLOS.

2.4.1 The internal waters

Internal waters are defined as all waters on the landward side of the baseline from which the breadth of the territorial sea is measured.²⁷ A coastal state has full sovereignty within its internal waters since they are classified as an integral part of the coastal state. No right of passage, innocent or else, exists for foreign ships in internal waters in the absence of a treaty or other agreement. A limitation on a coastal state's sovereignty may although arise under international customary law or under treaties that the coastal state has entered into.²⁸

There is no obligation for a coastal state to allow foreign ships into its internal waters, except in cases of distress and where drawing straight baselines encloses waters, which were not previously regarded as internal waters where the right of innocent passage still applies.²⁹ Besides these exceptions, coastal states are free to restrict or impose conditions upon entry into internal waters, including ports. After all, several international conventions require states to prevent unseaworthy ships from entering ports as a matter of international law.³⁰ When a foreign ship has entered internal waters, it is subject to the domestic legislation, which can be enforced against it.

States that want to establish particular requirements for the prevention, reduction, and control of marine pollution as a condition for the entry into their ports or internal waters must give "due publicity" to such requirements and to communicate these to the IMO according to the UNCLOS Article 211 (3).³¹

²⁶ Özcayir, Oya. *Port state control*, London, Lloyd's of London Press, 2003, p. 72.

²⁷ Article 8 of the UNCLOS.

²⁸ Özcayir. *Port state control*, p. 68.

²⁹ Article 8 (2) of the UNCLOS.

³⁰ Evans, Michael D. *International Law*, Oxford University Press, 2003, p. 630 ff.

³¹ Rue, Collin de la, Anderson, Charles B. *Shipping and the Environment*, LLP Reference Publishing, London, 1998, p. 902.

2.4.2 The territorial sea

The territorial sea, which can range up to twelve nautical miles from the coast, is considered to be territory of the coastal state.³² The coastal state enjoys sovereignty but has to respect the rights of foreign ships in the territorial sea.³³ The jurisdiction enjoyed by a state within its territorial sea could be compared to that which it may exercise within its internal waters and the contiguous zone. These together represent a progression from the strongest to the weakest form of jurisdictional competence that the coastal state enjoys over maritime spaces based upon territorial sovereignty.³⁴ Although the coastal state exercises ‘sovereignty’ within its territorial sea, this sovereignty is circumscribed in a number of ways.

The basic restriction of the coastal state’s sovereignty is the right of innocent passage for ships from other states through the coastal state’s territorial sea. This is how the territorial sea is distinguished from the internal waters, where the coastal state has complete jurisdiction. The UNCLOS regulates the right of innocent passage of foreign ships through the territorial sea in Article 17. There is no right to enter a foreign port, but there is a well-established right of foreign ships to exercise innocent passage through territorial seas over which the coastal state has a right of regulation.³⁵

Innocent passage is given a broad meaning in the UNCLOS and is presumed to exist unless one or more of a number of specified situations occur. In relation to pollution issues, passage is deemed innocent unless there is an act of “wilful and serious pollution” contrary to the UNCLOS. In this case, the coastal state has unrestricted enforcement jurisdiction.³⁶ The emphasis is clearly on intentional and not accidental pollution. The coastal state’s laws and regulations must be consistent with the UNCLOS and other rules of international law, such as the IMO conventions. The laws and regulations of the coastal state must also be given due publicity, practically meaning that the IMO must be informed.³⁷

Article 21 (2) regulates how a coastal state may adopt laws and regulations, giving it legislative jurisdiction within the territorial sea. Foreign ships must comply with the coastal state’s laws and regulations but these laws and regulations can not apply to the design, equipment, manning, or construction of foreign ships unless they give effect to generally accepted international rules and standards.³⁸

³² Ringbom. MARIUS, p. 17.

³³ Özcayır. *Port State Control*, p. 70.

³⁴ Evans. *International Law*, p. 630 ff.

³⁵ Article 17 of the UNCLOS.

³⁶ Article 19 (2)(h) of the UNCLOS.

³⁷ Article 21 (2) of the UNCLOS.

³⁸ Article 21 (2) of the UNCLOS.

Beside the restrictions, according to Articles 17 and 21 (2) the coastal state has full sovereignty in its territorial sea.³⁹

The UNCLOS provisions limit the possibilities for the EU to intervene to control the movements of ships that pollute or are liable to pollute in European waters. Even though the UNCLOS gives states the possibilities and duties to undertake measures to preserve and protect the marine environment, any unilateral or collective measures by such states are subject to the overriding principle of so-called ‘innocent passage’ of international maritime traffic passing through coastal waters. The EU regulation does not in full ban single hulled tankers from entering the coastal waters of the EU since there are some legal implications imposed by the UNCLOS in respect of “innocent passage” for international ships.⁴⁰

Therefore, the rights of coastal states to intervene from a precautionary perspective to control the movements of hazardous threats from ships registered in other flag states are compromised as coastal states may not “hamper innocent passage of foreign ships”⁴¹ nor specify design, construction, manning or equipment standards other than generally accepted international rules and standards.

2.4.3 The contiguous zone

Under Article 33 of the UNCLOS, the contiguous zone is referred to as “a zone contiguous to its territorial sea.” A coastal state’s rights in the contiguous zone are a functional and protective measure. According to Article 33 (1) of the UNCLOS the coastal state may exercise the control necessary to prevent infringement of its customs, fiscal, immigration, or sanitary laws and regulations within its territory or territorial sea. The coastal state exercises control and not jurisdiction within the contiguous zone. The rights of the coastal state in the zone do not amount to sovereignty.⁴²

2.4.4 The exclusive economic zone

With the UNCLOS a new ocean zone was defined, the EEZ. Until then the EEZ had been a concept of customary law, but with the UNCLOS, it is recognized and affirms the coastal state’s powers over the natural resources within its EEZ. The coastal state has sovereign rights for specific purposes but does not have the sovereignty comparable with what the coastal state enjoys in the territorial sea. Under Article 33 of the UNCLOS, the

³⁹ Özcayir. *Port state control*, p. 70.

⁴⁰Hedemann-Robinson. *Protection of the Marine Environment and the European Union: some critical reflections on law, policy and practice*, p. 270.

⁴¹ Article 211(4) of the UNCLOS.

⁴² Özcayir. *Port state control*, p. 72.

EEZ is defined as “an area beyond and adjacent to the territorial sea” and it is open for states to claim one, although it is not obligatory.⁴³

The UNCLOS has restricted the range of coastal states’ legislative power in the territorial sea, but has increased it by giving them certain powers to legislate about marine pollution from foreign ships in the EEZ.⁴⁴ Article 211 (5) gives the coastal state the power to adopt pollution legislation that conforms and gives effect to “generally accepted international rules and standards established through the competent international organization or general diplomatic conference.” When such rules do not provide sufficient protection for certain areas of the EEZ, the coastal state may implement international rules and standards, or adopt additional regulations of its own as long as these do not impose design, construction, manning, or equipment standards on foreign ships other than generally accepted international rules and standards. Before doing so, consultation with the IMO and obtaining IMO’s approval is necessary as well as giving at least fifteen months notice of the entry into force of the coastal state’s regulations.⁴⁵

Finally, article 234 provides for ice-covered areas, lying “within the limits” of the EEZ, which would seem to include the territorial sea as well as the EEZ, the coastal state may adopt non-discriminatory pollution regulations. In this case there is no requirement that design, construction, manning or equipment standards must conform to generally accepted international rules although the coastal state’s regulations must have “due regard to navigation” nor are there any particular procedures to be observed.⁴⁶ The coastal state has no limitations or qualifications to enforce this competence.

The coastal state may exercise its enforcement powers in its territorial sea or EEZ in respect of violations not only of its own pollution rules, but also of “applicable international rules and standards.” The effect may be that some coastal states take action to enforce the provisions of conventions to which they, and possibly the flag state of the offending ship, are not parties. This is if unless “applicable” refers to rules, which are contained in a convention, to which the coastal state is a party, or are part of customary international law.

So far, however, the UNCLOS appears to have had a limited impact on state practice, especially regarding the jurisdiction of coastal and port states. As regards coastal states’ jurisdiction in the EEZ, most states claiming an EEZ do no more than repeat the basic provision in article 56 (1)(b) of the Convention, namely that they have jurisdiction with regard to the protection and preservation of the marine environment.

⁴³ Özcayir. *Port state control*, p. 71.

⁴⁴ Churchill, R. R, Lowe, A. V. *The Law of the Sea*, 3rd edition, 1999, Manchester University Press, p. 347.

⁴⁵ Article 211 (6) of the UNCLOS.

⁴⁶ Churchill, Lowe. *The Law of the Sea*, p. 348.

2.4.5 The high seas

The high seas are according to UNCLOS Article 86 all parts of the sea that are not included in any other maritime zone. Ships have for a long time enjoyed freedom of navigation on the high seas providing that navigation is exercised with “due regard” for the interest of other states.⁴⁷ Only the flag state has the competence to enact laws and standards on pollution from ships on the high seas.

⁴⁷ Article 87 (2) of the UNCLOS.

3 The development of regulations to phase out single hulled oil tankers

A presentation of the IMO is needed before studying the development of the single hull phase out according to the MARPOL 73/78 and the EU regulation. To further understand how double hulled tankers came about, a presentation of some of the first steps of maritime legislation to prevent pollution from oil is made.

3.1 The IMO is established

It was always known that, to improve safety at sea, the establishment of a competent international body was detrimental. The international regulations adopted by this body would be followed by all shipping nations. Before, treaties had been adopted but it was getting near to impossible to get several countries to agree on different treaties. When the United Nations (UN) was established the hopes for an international body was realized.

The UN Maritime Conference established the after-sought international organization in Geneva in 1948. A convention⁴⁸ then established the Inter-Governmental Maritime Consultative Organization (IMCO) in 1948 but the name was changed to the IMO in 1982.⁴⁹ The constitutive treaty, signed in 1948, came into force in 1958. The IMO is the UN's specialized agency for shipping and it is the organization that has had the most effect upon the law of the sea.

The IMO has a wide competence in matters affecting shipping. The committees, such as the Maritime Safety Committee (MSC), the Legal Committee (LC) and the Marine Environment Protection Committee (MEPC), have played important roles in the establishment of regulations concerning navigation and pollution.⁵⁰ Some of the regulations are presented to the Council, where the 32 member states with the largest interests in shipping are represented. The Council passes the regulations on to the Assembly, which meets every other year and where all member states, at present about 164⁵¹, have a seat.⁵² The regulations may be recommended proposals, by the Assembly, and then to be followed by member states. These recommendations are not binding but the IMO may later have them adopted as conventions. Around forty conventions and protocols have been concluded this way and many of them have been ratified by several member states. The IMO does not have any enforcement tools for

⁴⁸ Convention on the Inter-Governmental Maritime Consultative Organization, Geneva, March 6, 1948. The name of the convention was changed in 1982 to 'Convention on the International Maritime Organization'.

⁴⁹ From here on the IMCO will be called the IMO even before the change of the name in 1982.

⁵⁰ Churchill, Lowe. *The law of the sea*, p. 23.

⁵¹ *Nya Sjöfartens Bok*, 2005, p. 97.

⁵² Churchill, Lowe. *The law of the sea*, p. 23.

its conventions or agreements, but does instead rely on the member states to implement these as they sign up to them. The IMO agreements are usually general in their wording and the detailed implementation of them is left to the individual member states. It has become clear that the ordinary framework for international action on maritime safety under the support of the IMO is inadequate of what is needed to tackle the causes of such marine pollutions effectively. The IMO suffers from a major handicap since it lacks the proper means to verify how its regulations are applied throughout the world.⁵³

3.2 The OILPOL

In 1954, the United Kingdom (UK) organized a conference on oil pollution. Thirty-two countries, representing 95% of the world's merchant tonnage, participated in the conference. The conference resulted in the adoption of the International Convention for the Prevention of Pollution of the Sea by Oil⁵⁴ (OILPOL) in 1954.⁵⁵ The OILPOL mainly regulated pollution resulting from routine tanker operations and from the discharge of oily wastes from machinery spaces. The problem with accidental pollution was not addressed. These were regarded as the major causes of oil pollution from ships. The OILPOL entered into force on July 26, 1958, and what the OILPOL did to prevent pollution from oil was to:

- establish "prohibited zones" extending at least 50 miles from the nearest land in which the discharge of oil or of mixtures containing more than 100 parts per oil per million was forbidden and
- require contracting parties to take all appropriate steps to promote the provision of facilities for the reception of oily water and residues.⁵⁶

In 1962, amendments were made to the OILPOL that extended its application to ships of a lower tonnage and also extended the "prohibited zones". The 1969 amendments further restricted operational discharge of oil from oil tankers and from machinery spaces of all ships. The OILPOL did have some impact on the prevention of oil pollution but the growth in oil trade and developments in industrial practices required further action. But pollution control was in 1962 still a minor concern for the IMO and the possible consequences of a large oil spill would be seen later. The grounding of the Torrey Canyon in 1967, when 120,000 tonnes of oil was spilled, proved the scale of the problem.

3.3 Post-Torrey Canyon actions

The Liberian tanker the Torrey Canyon was in 1967 one of the largest ships in the world. She carried more than 120,000 tonnes of crude oil, from Kuwait, when she ran

⁵³ COM(2000) 142 final on the safety of the seaborne oil trade, p. 4.

⁵⁴ International Convention for the Prevention of Pollution of the Sea by Oil, London, May 12, 1954. In force July 26, 1958.

⁵⁵ Rue, Anderson. *Shipping and the Environment*, p. 759.

⁵⁶ www.imo.org, Prevention of Marine Pollution Conventions, MARPOL 73/78.

aground outside the Scilly Isles, UK, on March 18, 1967. She broke apart and the escaping oil polluted the south west of England, the Channel Islands, and Brittany. Thousands of sea birds died and the tourist season was spoiled for the local people. The Torrey Canyon grounding resulted in the largest oil pollution accident ever recorded up to that date. Out of the Torrey Canyon disaster a new convention was signed in 1969, the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties.⁵⁷ It came into force in 1975 and gives coastal states the right to take such measures on the high seas as may be necessary “to prevent, mitigate or eliminate danger to its coastline or related interests from pollution by oil or the threat thereof, following upon a maritime casualty.” Such actions must be necessary and only be undertaken after consultations with, in particular, the flag state, the owners of the ship, the owners of the cargo, and sometimes independent experts that are appointed for this purpose. A coastal state that takes actions that are not permitted is liable to pay compensation for any damage caused by such measures.⁵⁸

3.3.1 The MARPOL

In the following years, the IMO implemented a number of measures to prevent tanker accidents and to minimize the consequences of accidents. The IMO held an extraordinary session of its council to draw up an action plan on technical and legal aspects of the Torrey Canyon accident. In 1969, the IMO Assembly decided to hold an international conference four years later, in 1973, in order to prepare an international agreement against the pollution of the sea, land, and air by ships.⁵⁹

The following international conference in 1973 incorporated the OILPOL and its amendments into The International Convention for the Prevention of Pollution from Ships,⁶⁰ which was going to be the most important international instrument in the prevention of pollution from oil in particular. The 1973 Convention addressed only the issue of operational pollution and required ballast to be carried only in clean or segregated ballast tanks. This would avoid the pollution that may occur when ballast water containing remnants of oil is discharged from cargo tanks or when tanks are being cleaned.

In February of 1978, as a response to a number of accidents, the IMO held a Conference on Tanker Safety and Pollution Prevention. The necessary number of parties ratifying the 1973 Convention were still lacking and this hindered it from entering into force. The considerable economic costs and technical difficulties that it took to comply with the 1973 Convention’s provisions stopped countries from ratifying it. A Protocol was, therefore, added in 1978 at the Conference on Tanker Safety and Pollution Prevention and it absorbed the 1973 convention and it is now known as the International Convention for the Prevention of Marine Pollution from Ships, 1973 as modified by the protocol of 1978 relating thereto (MARPOL 73/78).

⁵⁷ International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, Brussels, November 29, 1969. In force May 6, 1975.

⁵⁸ www.imo.org, Prevention of Marine Pollution Conventions, The International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969.

⁵⁹ www.imo.org, Prevention of Marine Pollution Conventions, MARPOL 73/78.

⁶⁰ International Convention for the Prevention of Pollution from Ships, London, November 2, 1973.

The MARPOL is designed to deal with all forms of intentional pollution of the sea from ships, other than dumping. It is made up of six annexes that concern oil (Annex I), noxious liquid substances in bulk (Annex II), harmful substances carried by sea in packaged forms (Annex III), sewage (Annex IV), garbage (Annex V), and air pollution (Annex VI).

To achieve the entry into force of MARPOL 73/78, the 1978 Protocol allowed states to become party to the MARPOL 73/78 by first implementing Annex I covering oil as it was decided that Annex II on chemicals would not become binding until three years after the Protocol entered into force. Annex II would not be binding until three years after the entry into force of the Protocol or of such longer period as might be decided by the parties to the MARPOL. This gave states time to overcome technical problems in Annex I, which for some had been a major obstacle in their achievement to ratify the 1973 Convention. This modification resulted in that the MARPOL 73/78 and Annex I came into force in October 1983 and Annex II in April 1987. Annex III came into force in July 1992, Annex IV in September 2003, and Annex V in December 1988. Annex VI comes into force in May 2005.

The 1978 Protocol also added some changes to Annex I, for example protectively located segregated ballast tanks⁶¹ were required on all new tankers of 20,000 dwt and above. The segregated ballast tanks had to be positioned as to help protect the cargo tanks in the event of a collision or grounding. This was the first attempt to directly address the issue of accidental pollution. The 1978 amendments to MARPOL 73/78 was a Russian roulette concerning accidental pollution since less than 50% of the cargo tanks were unprotected by the protectively located segregated ballast tanks. The increasing tanker traffic, in the end of the 1970s, together with the increase in both tanker size and the cargo being carried meant that the risks of spills were substantial.

All of the Annexes have been amended since 1978 by using the tacit amendment procedure. This is when an amendment enters into force on a specified date unless an agreed number of states object by an agreed date. The basic principle is that states are assumed to consent to the new regulation if they do not specifically object within a certain period.⁶² States do not have to present the new regulation to their legislature for approval, which in some cases may take many years. The new regulation comes into force for all states that do not object by a specified date, usually after 18 months, provided that one-third of the parties do not object.

It appears as if the MARPOL 73/78 has resulted in the reduction of accidental pollution from ships. The quantity of oil spilt during the 1970s was about 3,142,000 tonnes, during the 1980s it was about 1,176,000 tonnes, and during the 1990s the total quantity of oil spilt was 1,140,000 tonnes.⁶³ The MARPOL 73/78 has most certainly contributed to this decline in accidental oil spill along with better methods of controlling the disposal of wastes.⁶⁴

⁶¹ This meant that the segregated ballast tanks had to be arranged so that the side and bottom area of the tanks were 30-45 % of the total side and bottom area of the entire hull.

⁶² www.imo.org, About IMO, Frequently Asked Questions.

⁶³ www.itopf.com, Historical Data, Statistics.

⁶⁴ www.imo.org, About IMO, Frequently Asked Questions.

The OILPOL is now mostly of historical interest since the MARPOL 73/78 replaces the OILPOL. Fewer than twenty parties to the OILPOL have not become parties to the MARPOL 73/78. They are therefore bound by the OILPOL but it is of less importance since their collective fleet amount for a small portion of the total world fleet.⁶⁵ Annex I and II have 130 contracting parties that represent 97.07% of the world's tonnage⁶⁶ and the remaining states are bound by UNCLOS' reference to "generally accepted rules and standards".⁶⁷ The large amount of contracting parties to Annex I and II must make them fall into the category of "generally accepted international rules and standards" referred to in several of the UNCLOS articles mentioned above because of their international acceptance and wide applicability.⁶⁸

3.4 Post-Exxon Valdez actions

In 1989 the single hulled Exxon Valdez went aground in the Prince William Sound outside the coast of Alaska. The resulting oil spill released about 37,000 tonnes of heavy crude oil into the sound and its neighbouring waterways.⁶⁹ The sheer magnitude of this disaster provoked the issuance of the United States Oil Pollution Act of 1990 (OPA 90), which ordered the immediate phase out in U.S. waters of single-hulled tankers such as the Exxon Valdez.⁷⁰ OPA 90 required new oil tankers to be double hulled and established a phase out scheme for existing single hulled tankers. Older single hulled tankers were phased out starting in 1995 and the final date for phase out of all single hulled tankers is in 2015. The phase out of any particular single hull tanker was based upon its year of build, its gross tonnage, and whether it had been fitted with either double side or double bottom.

The Exxon Valdez oil spill caused widespread environmental damage in Alaska and a heavy financial burden on Exxon, one of the world's largest corporations. But the incident is not even among the top twenty oil spills. The wreck of Torrey Canyon spilled three times as much oil. But the Exxon Valdez spill was the largest oil spill in US history emanating from a ship. It affected the marine transport of oil and changed the way US society, government, media, and the industry would deal with oil pollution in the future. The incident induced a burst of legislative activity in the US Congress and as a result, the OPA 90 went into force.

⁶⁵ Churchill, Lowe. *The Law of the Sea*, p. 338-352.

⁶⁶ www.imo.org as of January 31, 2005.

⁶⁷ Article 211 (2) of the UNCLOS.

⁶⁸ Keselj, Tatjana. Port State Jurisdiction in Respect of Pollution from Ships: The 1982 United Nations Convention on the Law of the Sea and the Memoranda of Understanding, *Ocean Development & International Law*, No. 30, 1999, p. 127-160.

⁶⁹ ITOPF Handbook 2004/2005.

⁷⁰ Birkland, Thomas A. *In the Wake of the Exxon Valdez*, *Environment*, September 1998, Volume 40, Number 7.

3.4.1 The IMO reacts by adopting regulations 13F and 13G

The IMO did not react to the single hull phase out in the US until in 1992. That is when international requirements for the double hulling of oil tankers were introduced by the IMO on March 6. Amendments to Annex I of MARPOL 73/78 were adopted. The amendments introduced two new regulations, 13F and 13G, relating to standards for design and construction of new and existing oil tankers.⁷¹

3.4.1.1 Regulation 13F

Regulation 13F required all new tankers contracted on or after July 6 in 1993 of 600 dwt or more to follow specified hull requirements. Oil tankers between 600 dwt and 5,000 dwt must be fitted with double bottom or double sides with a separated space that has to be at least 0.76 meters. Oil tankers of 5,000 dwt and above are required to have a double hull, which means double bottom and double sides, separated by a space of up to two meters. 13F also specifies that other designs may be accepted as alternative to double hull as long as they give at least the same level of protection against oil pollution in the event of a collision or grounding.

Amongst the alternatives is to incorporate a so-called “mid-deck” under which the pressure within the cargo tank does not exceed the external hydrostatic water pressure. Tankers with this design have double sides but not a double bottom. Instead of a double bottom, another deck, the “mid-deck”, is installed inside the cargo tank with the venting arranged so that there is an upward pressure on the bottom of the hull. The hydrostatic water pressure prevents the outflow of oil by loading the cargo so that the hydrostatic pressure at the tank bottom is less than the external water pressure. If the tank is breached by grounding, sea water flows in instead of oil flowing out.

Other designs and constructions may be accepted as long as such designs and constructions ensure at least the same level of protection against oil pollution in the event of a collision or stranding. They must also be approved by the MEPC based on guidelines developed by the IMO.⁷² Further on, new requirements were introduced for oil tankers of 20,000 dwt and above concerning subdivision and stability.

Tankers of 5,000 dwt and above shall comply with regulation 13F not later than April 5, 2005. Tankers between 600 dwt and 5,000 dwt shall be fitted with a double hull, which means a double bottom and double sides, complying with the dimension requirements in regulation 13F (7) not later than the date of the delivery of the ship in 2008. Various types of exemptions to extend the time when a single hull tanker can carry heavy grade oil may be granted by the state in which a ship is registered, the so-called flag state. The exemptions have been drafted to accommodate various domestic and regional needs during a transitional period. A flag state may allow a single hulled tanker between 600 dwt and 5,000 dwt to carry heavy grade oil until it reaches 25 years. A flag state may also allow a tanker with double bottom or double sides of 5,000 dwt and above to carry heavy grade oil until it reaches 25 years.

⁷¹ Marine Environmental Protection Committee 52 (32).

⁷² www.imo.org, Marine Environment, MARPOL, The 1992 Amendments.

A party to the MARPOL 73/78 was entitled to deny entry, except when this is necessary for the purpose of securing the safety of a ship or saving life at sea, of single hulled tankers carrying heavy grade oil, which have been allowed to continue operation under the exemptions mentioned above, into the ports or offshore terminals under its jurisdiction.

3.4.1.2 Regulation 13G

Regulation 13G applies to existing crude oil tankers of 20,000 dwt and above and product tankers of 30,000 dwt and above. The MARPOL Protocol of 1978 required segregated ballast tanks on all new tankers of 20,000 dwt and above and it was applicable in 1982. Oil tankers that are 25 years old and which were not constructed according to the requirements of the MARPOL Protocol have to be fitted with double sides and double bottoms according to 13G. These oil tankers are no longer permitted under Regulation 13G to operate after 2007 or 2012 unless they do not comply with the double hull requirements or equivalent design standards or Regulation 13F. Tankers built according to the standards of the MARPOL Protocol are exempt until they reach the age of 30. Therefore, tankers may not be operated after 2007, 25 years after 1982, or in certain cases 2012, if they do not comply with Regulation 13F. For existing single hull oil tankers delivered after June 1 in 1982 or those delivered before June 1 in 1982 and which are converted, complying with the requirements of MARPOL 73/78 on segregated ballast tanks and their protective location, this deadline would be reached at the latest in 2026.

3.4.2 EU Regulation 2978/94

The first EU regulation to deal with double hulled oil tankers and segregated ballast tanks was adopted November 21, 1994 and went into force on January 1, 1996. Regulation 2978/94⁷³ had as its objective to promote the use of environmentally friendly oil tankers to, from and within EU ports. This was made by giving tankers operated as segregated ballast oil tankers, double hulled tankers, and oil tankers of an alternative design lowered fees by port, harbour, and pilotage authorities. The fees for these kind of tankers were to be reduced by the tonnage of the segregated ballast tanks to ensure that this type of tanker did not attract higher port fees due to its greater tonnage for the same load capacity.

An EU regulation has to be applied fully by the EU member states, which means that a member state has no power to apply a Regulation incompletely or to select only some provisions. The member states and their governing institutions and courts are bound directly by EU law and have to comply in the same way as with national law.⁷⁴ This means that Regulation 2978/94 had to be complied to by all the EU member states as it went into force in 1996. No member state could levy higher charges on a tanker with segregated ballast tanks after that date.

⁷³ Council Regulation (EC) No 2978/94 of 21 November 1994 on the implementation of IMO Resolution A.747(18) on the application of tonnage measurement of ballast spaces in segregated ballast oil tankers.

⁷⁴ Craig, Paul. de Burca, Grainne. *EU Law*, Third edition, Oxford University Press, 2003, p. 112-114.

There were no other measures taken by the EU until the accident outside the French coast with the oil tanker the Erika in 1999.

3.4.3 The 1999 amendments to 13G

Amendments to regulation 13G, rules for existing crude and product tankers, of Annex I were adopted on July 1, 1999, and entered into force on January 1, 2001. These amendments made existing oil tankers between 20,000 and 30,000 dwt carrying persistent product oil, including heavy diesel oil and fuel oil, subject to the same construction requirements as crude oil tankers. In principle, 13G requires that existing tankers must comply with the requirements for new tankers in regulation 13F, including double hull requirements for new tankers or alternative arrangements, no later than 25 years after the date of delivery. The amendments extended the application from applying to crude oil tankers of 20,000 dwt and above and product carriers of 30,000 dwt and above, to apply also to tankers between 20,000 and 30,000 dwt that carry heavy diesel oil or fuel oil. The purpose was to address the concerns that oil pollution incidents involving persistent oils were as severe as those involving crude oil, so regulations applicable to crude oil tankers also apply to tankers carrying persistent oils.⁷⁵

3.5 Post-Erika reactions

On December 11, 1999, the Maltese-registered tanker the Erika, a 24-year old tanker with segregated ballast tanks, was carrying 31,000 tonnes of heavy fuel oil on her way to Italy when she encountered adverse weather conditions off the coast of France. The Erika split in two and spilt about 10,000 tonnes⁷⁶ into the sea. A vast 400 km stretch of the French Atlantic coast was affected and the viscous oil slicks killed approximately 63,000 sea birds and numerous other marine organisms and animals. The physical damage was serious and extensive, cost of clean up very high, and the economic loss, including from tourism, was considerable.⁷⁷

The impact of the Erika proved to be almost as great as that of the Torrey Canyon in 1967 and the Exxon Valdez in 1989. The Erika catastrophe outraged the public and forced the French government and the EU to threaten unilateral and regional action to prevent further casualties. It further on forced the IMO to react in order to protect its position as the only global forum where international legislation is made to protect the environment from international shipping activities.⁷⁸

⁷⁵ www.imo.org, Marine Environment, MARPOL, The 1999 Amendments.

⁷⁶ COM(2000) 142 final on the safety of the seaborne oil trade p. 4.

⁷⁷ Fayette, Louise de la. Protection of the Marine Environment in 2000, *Environmental Policy & Law*, 2001, Vol. 31, Issue 3, p. 140-150.

⁷⁸ Fayette. The marine environment protection committee: The conjunction of the law of the sea and international environmental law, *The International Journal of Marine and Coastal Law*, Vol. 16, No 2, p. 194.

3.5.1 A proposal for an EU regulation to accelerate the phase out of single hulled tankers

In 2000, following the sinking of the Erika, the European Union Commission proposed to introduce a phase out scheme for single hull tankers similar to the OPA 90. On November 30, 2000, the European Parliament approved, subject to a number of amendments, the Commission's proposals for a regulation on the accelerated phasing-in of double hull or equivalent design requirements for single hull tankers. The amendments adopted by the European Parliament were based on the draft agreement drawn up at the MEPC 45th meeting. The amended proposal aimed at establishing an accelerated phasing-in scheme for the application of the double hull or equivalent design requirements of the MARPOL 73/78 to single hull tankers. The proposed phase-out schedule for single hull tankers was in line with the draft text of revised regulation 13 G of MARPOL 73/78 Annex I. Under the amended proposal the system of financial incentives and disincentives found in Regulation 2978/94 were withdrawn. Tankers below 5,000 dwt were excluded from the phase-out schedule of the proposal, to ensure normal supply to the market in the island regions of the EU.

The EU's concern was that due to differences between the OPA 90 and the MARPOL 73/78, single hull tankers banned from U.S. waters because of their age would begin, from 2005 and onwards, to operate in other regions of the world, including the waters of the EU. Therefore, it was in the interest of the EU to adopt measures to avoid single hulled oil tankers from starting or continuing to operate in the EU. The EU member states decided to discuss the matter at the IMO first. The outcome was the 2001 revised regulation 13G, with a phase out scheme stricter than before.

3.5.2 The 2001 Amendments to 13G

The Erika accident prompted the IMO to prepare significant amendments to MARPOL 73/78 to phase out older single hull tankers and to accelerate the phasing in of double hulls. The MEPC of IMO agreed during its 45th session in October 2-6, 2000, to accelerate the MARPOL 73/78 Convention's phase out of single-hull tankers by draft agreement to the MARPOL 73/78 Regulation 13G of Annex I. This agreement was to be refined and adopted at the MEPC 46th meeting in April of 2001.⁷⁹

The draft drawn up at 45th MEPC meeting identified three categories of tankers:

- "Category 1 oil tanker" means oil tankers of 20,000 dwt and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 dwt and above carrying other oils, which do not comply with the requirements for protectively located segregated ballast tanks (commonly known as Pre-MARPOL tankers).

⁷⁹ Özcayir. *The Erika and Its Aftermath*, International Maritime Law, September 2000, Volume 7 Issue 7, p. 230 ff.

- "Category 2 oil tanker" means oil tankers of 20,000 dwt and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 dwt and above carrying other oils, which do comply with the protectively located segregated ballast tank requirements (MARPOL tankers), while

- "Category 3 oil tanker" means an oil tanker of 5,000 dwt and above but less than the tonnage specified for Category 1 and 2 tankers.

Although the new phase-out timetable, according to the draft agreement, sets 2015 as the principal cut-off date for all single-hull tankers, the flag state may allow for some newer single hull ships registered in its country that conform to certain technical specifications to continue trading until the 25th year of their delivery. However, any port state can deny entry of those single hull tankers that are allowed to operate until their 25th anniversary to ports or offshore terminals. They must communicate their intention to do this to IMO.

The IMO approved the new global timetable for accelerating the phase-out of single hulled tankers at the MEPC 46th meeting in April 23-27, 2001. The new timetable was a result of the Erika accident and the MEPC 46th meeting was even re-scheduled so that the revised regulation 13G would enter into force at the earliest possible time permitted under the MARPOL 73/78. Therefore, the 2001 amendments entered into force on September 1, 2002. The EU member states indicated that they would make use of paragraph 8(b) and would deny port entry to single hulled tankers beyond 2015.

The draft agreement to Annex I brought in a new global timetable for accelerating the phase-out of single-hull oil tankers. The timetable would see most single-hulled oil tankers eliminated by 2015 or earlier. Double-hull tankers were seen to provide greater protection of the marine environment from pollution in certain types of accidents. All new oil tankers built since 1996 are required to have double hulls.

3.5.3 EU Regulation 417/2002

Subsequently, the EU adopted Regulation 417/2002⁸⁰ on February 18, 2002, concerning the phasing-out of single-hulled tankers and it entered into force on September 1, 2002. The regulation reflected the changes made to the MARPOL at the 46th MEPC meeting. The new Regulation implemented the same phase out schedule as the amendments to regulation 13G of Annex I of MARPOL 73/78. Further, Regulation 417/2002 identified the three different categories of tankers as had been introduced according to the revised Regulation 13G

The purpose of Regulation No. 417/2002 was “to establish an accelerated phasing-in scheme for the application of the double hull or equivalent design requirement of the MARPOL 73/78 Convention to single hull oil tankers and to ban the transport to or from ports of the member states of heavy grades of oil in single hull tankers.”⁸¹ It

⁸⁰ Regulation (EC) No 417/2002 of the European Parliament and of the Council of 18 Feb 2002 on the accelerated phasing-in of double hull or equivalent design requirement for single hull oil tankers and repealing Council Regulation (EC) No 2978/94.

⁸¹ Article 1 of Regulation 417/2002.

applies to oil tankers of 5,000 dwt and above entering into a port or offshore terminal of a member state, irrespective of their flag of flying the flag of a member state.

The difference between the revised Regulation 13G and Regulation 417/2002 was that the EU Regulation did not allow “the continued operation, in accordance with paragraph 5 of revised Regulation 13G of Annex I to MARPOL 73/78, of Category (2) and Category (3) oil tankers under the flag of a Member State” or “the entry into the ports of offshore terminals under the jurisdiction of a Member State of other Category (2) and Category (3) oil tankers, irrespective of the fact that they continue to operate under the flag of a third State in accordance with paragraph 5 of revised Regulation 13G of Annex I to MARPOL 73/78.”⁸²

3.6 Post-Prestige actions

On November 13, 2002, the *Prestige*, a tanker of 81,564 dwt, carrying a cargo of 77,000 tonnes of heavy fuel oil, suffered hull damage in heavy seas off northern Spain. She started drifting towards the coast but was eventually taken in tow by salvage tugs. Since neither Spain nor Portugal gave the *Prestige* a safe haven, the tanker was towed out into the Atlantic. The *Prestige* broke in two on November 19, after six days at distress, and the two sections sank some hours later in water two miles deep. In all, it is estimated that some 63,000 tonnes were lost from the *Prestige*.⁸³ Owing to the highly persistent nature of the *Prestige*'s cargo, the released oil drifted for extended periods with winds and currents, travelling great distances. Oil came ashore in Galicia and later into the Bay of Biscay affecting the north coast of Spain and the Atlantic coast of France, as far north as Brittany. Some light and intermittent contamination was also experienced on the French and English coasts of the English Channel. Although oil entered Portuguese waters, there was no contamination of the coastline.⁸⁴

The *Prestige* accident was another awakening for the EU and the IMO during the process of legislating on the phasing out of single hulled tankers.

3.6.1 EU Regulation 1726/2003 amending Regulation 417/2002

In December 2002, following the sinking of the *Prestige*, the Commission proposed to accelerate the phase out scheme approved in 2001 to align it with the relevant phase out dates of the OPA 90. It was considered that single-hulled ships were the cause of significant pollution and that damage to the hull had the unavoidable consequence of spillage of the cargo into the sea. The European Parliament and the Council adopted on July 22, 2003, the amendment to Regulation 417/2002, by means of Regulation

⁸² Article 7 of Regulation 417/2002.

⁸³ www.itopf.org Case Histories, The *Prestige*.

⁸⁴ *Ibid.*

1726/2003.⁸⁵ With the adoption of Regulation 1726/2003, the EU has since October 21, 2003, applied rules that are as strict as the OPA 90 for the gradual phasing-out of single hull oil tankers.

After a long debate between the fifteen member states, three fundamental changes were made to the existing Regulation 417/2002. Firstly, Category 1 oil tankers (Pre-MARPOL tankers) were considered the most vulnerable ships since they are crude oil tankers of 20,000 dwt and above and oil product carriers of 30,000 dwt and above having no segregated ballast tanks in protective locations. They are generally constructed before 1982. The final date for the use of these oil tankers under new Regulation 1726/2003 was therefore brought forward from 2007 to 2005 and subject to an age limit of 23 years. The age limit was 28 years under Regulation 417/2002.

Category 2 oil tankers (MARPOL-tankers) equipped with segregated ballast tanks protectively located and, therefore, provide greater protection against grounding and collision. They are generally constructed between 1982 and 1996. These tankers were to be withdrawn by 2010 according to the stricter timetable under Regulation 1726/2003. The same timetable now applied to small, category 3 oil tankers. Category 3 corresponds to single hull oil tankers below the size limits of categories 1 and 2 but above 5,000 dwt. These smaller tankers often operate in regional traffic.

The new phase out schedule is as follows:

Category of oil tanker	Date or year
Category 1 oil tankers of 20,000 dwt and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 dwt and above carrying other oils, which do not comply with the requirements for protectively located segregated ballast tanks (Pre-MARPOL tankers)	2003 for ships delivered in 1980 or earlier, 2004 for ships delivered in 1981, and 2005 for ships delivered in 1982 or later.
Category 2 oil tankers of 20,000 dwt and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 dwt and above carrying other oils, which do comply with the protectively located segregated ballast tank requirements (MARPOL tankers) and Category 3 - oil tankers of 5,000 dwt and above but less than the tonnage specified for Category 1 and 2 tankers	2003 for ships delivered in 1975 or earlier, 2004 for ships delivered in 1976, 2005 for ships delivered in 1977, 2006 for ships delivered in 1978 and 1979, 2007 for ships delivered in 1980 and 1981, 2008 for ships delivered in 1982, 2009 for ships delivered in 1983, and 2010 for ships delivered in 1984 or later.

⁸⁵ Regulation (EC) No 1726/2003 of the European Parliament and of the Council of 22 July 2003 amending Regulation 417/2002 on the accelerated phasing-in of double-hull or equivalent design requirement for single hull tankers.

Secondly, the transport of heavy grades of oil such as crude oil, fuel oils, bitumen and tar was prohibited in single-hulled tankers. The ban applied to tankers of 600 dwt or more, with a transitional period for small ships with less than 5,000 dwt until 2008 according to Article 4 section 5. The heavy grades of oil chosen are heavy fuel oil, heavy crude oil, waste oils and bitumen and tar. When spilt into the sea the heavier oils behave differently from lighter grades of oil. Due to their low volatility and high viscosity (resistance to flow), heavier oils evaporate slower than lighter grades and hardly dissolve. Therefore, these oils tend to remain in slicks and degrade only very slowly and can cause severe ecological damage to the ecosystems of the marine and coastal environments. In contrast, accidents involving spills of lighter oils may result in atmospheric pollution whilst lighter grades evaporate and pollute the atmosphere.⁸⁶

Thirdly, the transportation of heavy grades of oil (HGO) in single hull tankers, to or from the ports of an EU member state, is furthermore prohibited with immediate effect.

The presidency of the Council and the Commission informed the IMO of the calendar in accordance with Article 211 (3) of the UNCLOS. The accelerated single-hull phase-out proposal to amend provisions of the MARPOL 73/78 was discussed on 14-18 July, 2003. This proposal to amend MARPOL 73/78 was submitted by the EU member states and called for further acceleration of the phase-out timetable for single-hulled tankers and an immediate ban of carriage of heavy grade oil in single-hulled tankers.⁸⁷ The EU member states wanted to have their standards adopted at the international level. The EU wanted to work in co-operation with the IMO and suggested that its standards become global standards through further amendments to Annex I.⁸⁸ Amendments were expected to be taken during a special session of the MEPC in December, 2003, in London. Under MARPOL 73/78 rules, the new standards will not come into force until 16 months after they have been adopted, which would be in April 2005.

The EU now focused on the international arena. While waiting for a decision at the MEPC meeting in December, the Commission continued with concluding bilateral agreements with countries close to the EU, since given that the new MARPOL 73/78 amendments would not enter into force until 16 months after their adoption.⁸⁹

⁸⁶ COM(2002) 780 final Proposal for a regulation amending Regulation No 417/2002 on the accelerated phasing in of double hull or equivalent design requirements for single hull oil tankers and repealing Council Regulation 2978/94.

⁸⁷Thébaud, Lucie. *Maritime Safety Culture in Europe*, Managerial Law, Volume 46, Number 1, 2004, p. 21.

⁸⁸ *Ibid.*

⁸⁹ *Single Hull Oil Tankers Banned from European Ports from 21 October 2003*, IP/03/1421, Date: 21/10/2003.

3.6.2 The 2003 amendments to 13G and a new regulation 13H

Following the adoption of Regulation 1726/2003 in July, 2003, the EU submitted a proposal to the IMO to make amendments to Annex 1 of MARPOL 73/78. The proposal was circulated to the IMO member states for their consideration at the MEPC 49th meeting, so that the meeting could decide whether to hold an additional meeting in December, 2003. This in order to give the IMO member states the minimum six month period to consider the proposed amendments.⁹⁰

The MEPC 49th meeting held extensive discussions in plenary in relation to the proposals to amend MARPOL 73/78. The proposals were submitted by all, at that point, fifteen member states of the EU, and they called for further acceleration of the phase-out timetable for single-hull tankers. The outcome of the discussions was that the MEPC meeting agreed on an accelerated phase-out for Category 1 tankers, so-called pre-MARPOL tankers. This would bring forward the final phasing-out date for these tankers to 2005, from 2007. The MEPC 49th meeting discussed the proposal to bring forward the phasing-out of category 2 and 3 tankers, so-called MARPOL tankers and smaller tankers, to 2010, from 2015. While there was substantial support in principle to the 2010 deadline, there was also concern relating to the phase-out of tankers of less than 20 years old in 2010 that this would lead to. There was a suggested proposal, for further consideration in December of 2003, which could see the operational life of these tankers extending to 2015 or until the ship reaches a specified age.

The MEPC 49th meeting considered the proposed draft regulation on the carriage of HGO in single-hull tankers, which would ban the carriage of HGO in single-hull tankers. The MEPC agreed on the need for further technical discussion at the December meeting of the proposed new regulation 13H on Prevention of oil pollution when carrying HGO. In particular discussion was needed in relation to the physical properties of HGO, including their definition, in relation to density and/or kinematic viscosity, and in fighting pollution.

The MEPC 50th meeting adopted an amendment to Regulation 13G of MARPOL 73/78 Annex I that accelerated the phase out of single hull tankers and a new regulation 13H, similar to EU Regulation 1726/2003, on the carriage of HGO.

Under a revised regulation 13G of Annex I of MARPOL 73/78, the final phasing-out date for Category 1 tankers (pre-MARPOL tankers) was brought forward to 2005, from 2007. The final phasing-out date for category 2 and 3 tankers (MARPOL tankers and smaller tankers) was brought forward to 2010, from 2015. The amended 13G phase out schedule was kept from the proposal put forward by EU member states and Regulation 1726/2003. The regulation would apply to oil tankers of 600 dwt and above carrying HGO as cargo regardless of the date of delivery. The regulation would not apply to double hull tankers complying with regulation 13F or regulation 13G(1)(c).

⁹⁰ *EU Countries Propose MARPOL Amendments in Prestige Response*, IMO News, No. 2, 2003, p. 6.

The revised Annex I of MARPOL 73/78 provided for a number of exceptions that were not dealt with in EU Regulation 1726/2003. For example, flag states could exempt oil tankers operating exclusively in regional trades from the phase out regime. The revised regulation allowed the flag state to permit continued operation of category 2 or 3 tankers that were fitted with double bottoms or double sides, which were not used for the carriage of oil and extending to the entire cargo tank length or double hull spaces, and that did not meet the minimum distance protection requirements. The flag state could allow continued operation beyond 2010, if the ship was in service on July 1, 2001. Again, such continued operation must not go beyond the date on which the ship reaches 25 years of age after the date of its delivery.

A flag state could also allow continued operation of a single hull oil tanker of 600 dwt and above but less than 5,000 dwt, carrying HGO as cargo, if, in the opinion of the flag state, the ship is fit to continue such operation, having regard to the size, age, operational area and structural conditions of the ship, provided that the operation shall not go beyond the date on which the ship reaches 25 years after the date of its delivery. The flag state of a party to the MARPOL 73/78 may also exempt a tanker of 600 dwt and above carrying HGO as cargo if the ship is either engaged in voyages exclusively within an area under the flag state's jurisdiction, or is engaged in voyages exclusively within an area under the jurisdiction of another party, provided the party within whose jurisdiction the ship will be operating agrees.

A party to MARPOL 73/78 is entitled to deny entry of single hull tankers carrying HGO which have been allowed to continue operation under the exemptions mentioned above, into the ports or offshore terminals under its jurisdiction, or deny ship-to-ship transfer of HGO in areas under its jurisdiction except when this is necessary for the purpose of securing the safety of a ship or saving life at sea. The EU member states announced that they would not make use of those exemptions and that the single hull tankers from countries benefiting from them would not be allowed to operate from or to EU member states' ports.

A new MARPOL 73/78 regulation 13H on the prevention of oil pollution from oil tankers when carrying HGO banned the carriage of HGO in single-hull tankers of 5,000 dwt and above after the date of entry into force of the regulation (5 April 2005), and in single-hull oil tankers of 600 dwt and above but less than 5,000 dwt, not later than the anniversary of their delivery date in 2008. Under the new regulation 13H, HGO means any of the following:

- a) crude oils having a density at 15°C higher than 900 kg/m³;
- b) fuel oils having either a density at 15°C higher than 900 kg/ m³ or a kinematic viscosity at 50°C higher than 180 mm²/s;
- c) bitumen, tar and their emulsions.

At the same time, the 50th MEPC meeting also adopted a resolution urging member states to implement the new regulation 13H to ships flying their flag as soon as possible, preferably as from January 1, 2004. However, no states made any commitment to the resolution at the MEPC 50th meeting and it is not clear if the resolution will have an impact on early implementation of regulation 13H. Denial of entry should not be included in this early implementation.

The amended regulation 13G and the new regulation 13H entered into force on April 5, 2005 and the new phase out schedule is as follows:

Category of oil tanker	Date or year
<p>Category 1 - oil tankers of 20,000 dwt and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 dwt and above carrying other oils, which do not comply with the requirements for protectively located segregated ballast tanks (commonly known as Pre-MARPOL tankers)</p>	<p>5 April 2005 for ships delivered on 5 April 1982 or earlier Anniversary date in 2005 for ships delivered after 5 April 1982</p>
<p>Category 2 - oil tankers of 20,000 dwt and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 dwt and above carrying other oils, which do comply with the protectively located segregated ballast tank requirements (MARPOL tankers) and Category 3 - oil tankers of 5,000 dwt and above but less than the tonnage specified for Category 1 and 2 tankers</p>	<p>5 April 2005 for ships delivered on 5 April 1977 or earlier Anniversary date in 2005 for ships delivered after 5 April 1977 but before 1 January 1978 Anniversary date in 2006 for ships delivered in 1978 and 1979 Anniversary date in 2007 for ships delivered in 1980 and 1981 Anniversary date in 2008 for ships delivered in 1982 Anniversary date in 2009 for ships delivered in 1983 Anniversary date in 2010 for ships delivered in 1984 or later</p>

3.6.3 Revision of Annex I of MARPOL 73/78

The MEPC 51st meeting gave final approval to the revised texts of MARPOL 73/78 Annex I with a view to adoption at MEPC 52nd meeting in October, 2004, with an expected entry into force date of January 1, 2007. Annex I was updated and included amendments adopted in recent years. It incorporated the various amendments adopted since MARPOL 73/78 entered into force in 1983, including the amended regulation 13G, which now is regulation 20 in the revised annex, and regulation 13H, now regulation 21 in the revised annex, on the phasing-in of double hull requirements for oil tankers.

It also separates, in different chapters, the construction and equipment provisions from the operational requirements and clarifies the distinctions between the requirements for new ships and those for existing ships. The revision provides a more user-friendly, simplified Annex I. The revised text of Annex I was adopted on October, 2004 at the 52nd MEPC meeting.

3.6.4 EU Regulation 2172/2004

On December 14, 2004, an amendment⁹¹ to Regulation 417/2002 was adopted since some of the references to Annex I to the MARPOL 73/78 had to be updated in the regulation due to the above revision of Annex I.

⁹¹Commission Regulation (EC) No 2172/2004 of 17 December 2004 amending Regulation 417/2002 on the accelerated phasing-in of double-hull or equivalent design requirement for single hull tankers.

4 The possible consequences for the shipping industry

4.1 The newbuilding market

The phasing out of single hulled tankers is supposed to have a positive outcome on employment since the new double hull tonnage will increase the demand of new buildings. A couple of unfortunate tanker accidents in 2004 will mean stronger pressure for an even faster phase-out of single-hull tankers. The phase-in pace of double hull tankers up to and including 2007 is, however, about the maximum that the shipyards can deliver. That fact, along with the reducing average age of the fleet which is already down to 12 years, means that fleet renewal is more likely to slow down than speed up.⁹²

There is still a lot of tonnage that is trading that is banned from trading with HGO to and from EU ports. Since April 5, 2005, many of these are also banned from trading at any ports in IMO countries. Large scale scrapping is thus forecasted. The ordering of oil tankers in the 2004-2008 period is forecast at 1,115 tankers, which is 117 less tankers than in the previous five-year period. Together with the large orderbook this means deliveries of 1,224 tankers until the end of 2008. This is 362 oil tankers more than in the previous five-year period.⁹³

There appears to have been a great deal of conversion of Category 1 tankers to protectively located segregated ballast tanks (Category 2) which will give them up to three years extra trading.⁹⁴ Looking at the graphs below, single-hull tanker phase-out will not have any significant market impact before towards 2010, when the EU and the US ban single hulled tankers. Also the MARPOL regulations that are subject to extensions granted by flag states and subject to acceptance by port states give states more flexibility on when to phase out single hulled tankers.⁹⁵

Under the international MARPOL regime, only Japan and Singapore have declared that they will accept single hulled tankers between 2010 and 2015 until they are 25 years old. Australia has announced that it will not allow single hulls after 2010 and will not allow single hulls to enter with HGO after April 5, 2005, when the latest changes to MARPOL enter into force. The major oil exporters Iraq, Kuwait, Libya, Saudi Arabia, and United Arab Emirates have not ratified MARPOL as well as Thailand and a number of African countries. This might result in that banned single hulled tankers will start trading in the waters of these non-ratifying countries.

⁹² http://www.intertanko.com/about/annualreports/2004/1_2.html, Annual Review.

⁹³ Shipping Markets Forecasts, Issue No. 8, March 2005, Lloyd's Register Fairplay, p. 6.

⁹⁴ http://www.intertanko.com/about/annualreports/2004/1_2.html, Annual Review.

⁹⁵ http://www.intertanko.com/about/annualreports/2004/1_2.html, Annual Review.

Phase out per segment - number⁹⁶

Year	5-29,999	30-60,000	60-79,999	80-119,999	120-199,999	VLCC	MARPOL	EU
2005	57	86	18	11	2	2	176	45
2006	51			6	4	1	62	62
2007	73	26	9	37	4	4	153	153
2008	56	20	9	6	3	1	95	95
2009	31	20	14	7	3	3	78	78
2010	59	39	22	20	3	6	149	696
2011	29	10	7	21		9	76	22
2012	24	14	5	15	2	6	66	30
2013	24	16	3	11	5	0	69	17
2014	23	11	2	12	11	16	75	15
2015	153	46	14	52	40	112	417	72
Total	580	288	103	198	77	170	1,416	1,285

Phase out per segment – million dwt⁹⁷

Year	5-29,999	30-60,000	60-79,999	80-119,999	120-199,999	VLCC	MARPOL	EU
2005	1.0	3.4	1.2	1.0	0.3	0.5	7.4	1.5
2006	0.6	0.0	0.0	0.6	0.7	0.3	2.1	1.9
2007	0.9	1.1	0.6	3.3	0.6	1.2	7.5	7.5
2008	1.0	0.9	0.6	0.5	0.5	0.3	3.8	3.8
2009	0.5	0.9	0.9	0.6	0.4	0.9	4.2	4.2
2010	0.9	1.7	1.5	1.8	0.4	1.6	7.8	65.9
2011	0.4	0.4	0.5	1.9	0.0	0.2	5.4	1.4
2012	0.3	0.6	0.3	1.4	0.3	1.5	4.4	1.8
2013	0.4	0.7	0.2	1.1	0.7	2.6	5.6	1.4
2014	0.3	0.5	0.1	1.1	1.6	4.3	7.9	1.5
2015	1.6	1.8	0.9	5.1	5.8	30.9	46.3	5.3
Total	7.7	11.9	6.7	18.5	11.2	46.4	102.4	96.2

The tanker owners are likely to see an increase in maintenance costs. Double hull tankers are made up of almost double the steel and it will need to be taken care of to avoid corrosion of ballast tanks due to salt water. This has been an issue of discussion during the development of the IMO and EU regulations. Tanker owners know that if adequate maintenance is not made, a double hull may be worse off than an old single hull tanker. Corrosion may lead to leakage in the hull, which can result in inert gases in the ballast tanks. These may explode and put the crew at great danger.

⁹⁶ http://www.intertanko.com/about/annualreports/2004/1_2.html, Annual Review.

⁹⁷ http://www.intertanko.com/about/annualreports/2004/1_2.html, Annual Review.

4.2 The freight market

The sector in the shipping industry that most likely will be most affected by the phase out are tanker owners that are operating oil tankers to and from and between the ports of the EU in order to import, export, and distribute oil and oil products within the EU. The EU regulation phase out addresses all oil tankers above 600 dwt, regardless of their flag, when they operate to, from, and between the ports of the member states. Companies operating oil tankers will have to phase out their single hulled tankers according to the EU or the IMO regulations depending on whether they are a member state of the EU or not. If a company is registered in an EU member state, the exemptions according to the IMO regulation are not applicable since all EU member states have announced that they will not make use of the exemptions. A company registered in a state that only follows the IMO regulation may continue trading with its Category 2 and 3 tankers as long as until 2015 if the flag state allows this.

Shipping companies with new and modern tonnage will be in a better competitive position than companies with old single hulled tankers will be. The oil companies, afraid of liability due to oil spills and the gigantic fines and expenses that follow, are demanding safe tonnage to transport their oil to the refineries. Unfortunately, there are still sub-standard tankers trading since there are states that have not signed the MARPOL 73/78 and therefore will not have to phase out their single hulled tankers. These tanker owners may offer cheaper services on the spot market for oil companies that are willing to take the risk to let their oil travel in second class.

Crewmembers of the new, more advanced double hull tonnage will have to be better qualified to be able to safely operate the new tankers. Therefore, highly skilled crewmembers will be likely to be well prepared for a more demanding shipping industry. Companies investing million of dollars in new tonnage will want the best crew on their tankers.

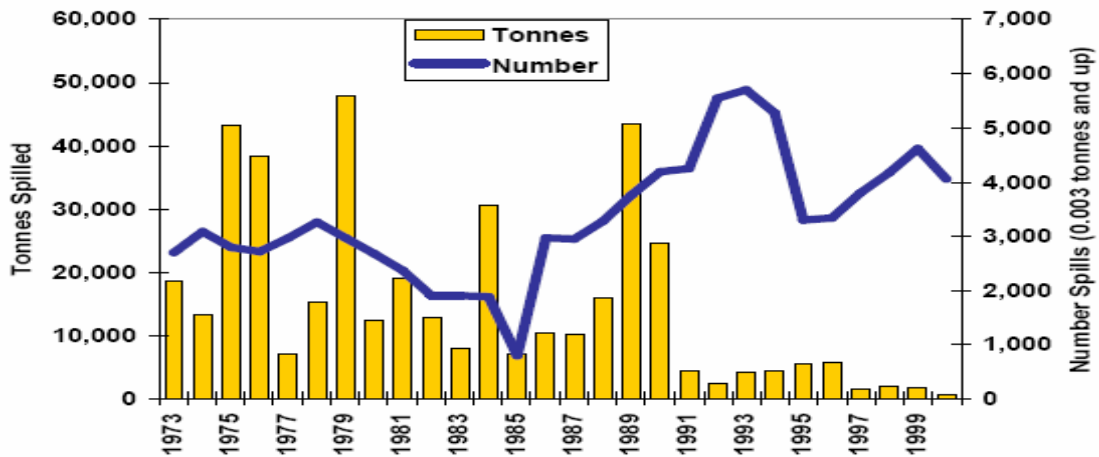
The phasing out of single hulled tankers will most likely have a positive effect on preventing future oil spills. This will give the shipping industry a better reputation for taking care of the environment. 15,000 tonnes of oil is estimated to be the amount spilled in 2004, compared with 42,000 tonnes in 2003 and 67,000 tonnes in 2002. The worst year of oil spilled was in 1979, when 640,000 tonnes were spilled into the oceans and the Atlantic Empress alone spilt 287,000 tonnes.⁹⁸ 2004 was the year with the lowest amount of accidental oil spilt from tankers since records started in 1978.⁹⁹

It is interesting to look at the amount of oil spilled in the U.S. since the phase out of single hull tankers began with the OPA 90. It is clear, according to the graph below, that there was a huge decrease after the OPA 90 was adopted even though the number of spills increased. This means that most oil spills were small in comparison with earlier spills when a few spills amounted to tens of thousands of tonnes.

⁹⁸ The Scandinavian Shipping Gazette, 22 April, 2005, p. 7.

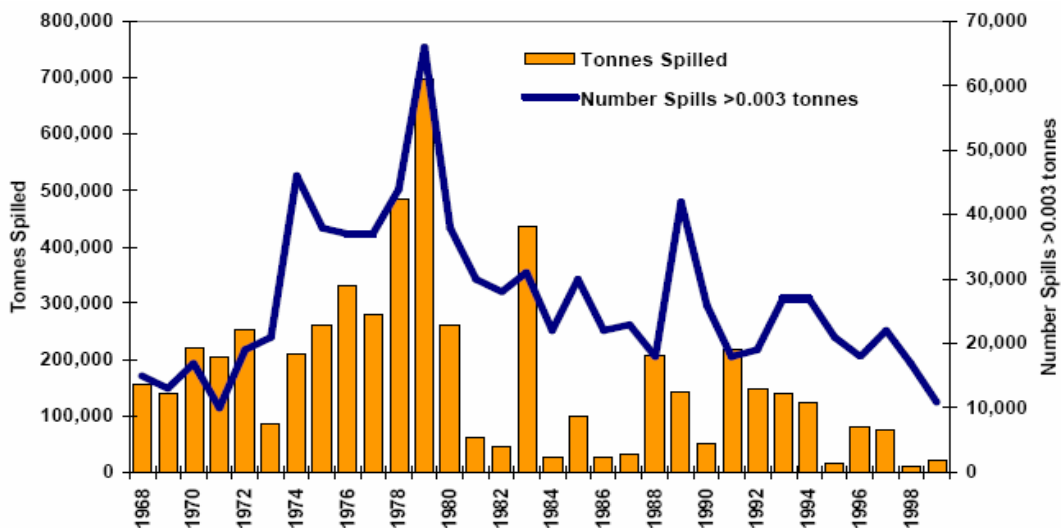
⁹⁹ http://www.intertanko.com/about/annualreports/2004/1_2.html, Annual Review.

US Ship Spills 1973-2000¹⁰⁰



It is also obvious, according to the graph below, that both the number of spills and tonnes spilled have decreased during the period 1968-1997. After an all time high in 1979, the year of the Atlantic Empress, the occurrence of accidents have steadily gone down with a few exceptions.

Estimated annual spills of tankers world wide¹⁰¹



When legislation is passed that decreases the number of accidents, the tanker owners are not subject to fines, damages, and clean-up costs as they would have been in the case of an accident. Even though new tankers demand large investments, tanker owners are more willing to invest in safe and clean tankers than having their name associated with an accident involving a huge oil spill.

¹⁰⁰ Lentz, S. A. Felleman, F. *Oil Spill Prevention: An Active Approach*, International Oil Spill Conference, 2003, p. 4-5.

¹⁰¹ *Ibid.*

Also oil companies are more and more demanding safe tankers since the Exxon Valdez, when the oil company Exxon was involved, and the Erika, when TotalFina was the subject of the outraged public. No company wants bad publicity and especially not oil companies that deal daily with the scare of an accident with their name involved.

4.3 The sale and purchase market

The newbuilding prices for oil tankers larger than 60,000 dwt have fallen slowly but the surge on the market, the high steel prices, and the queues at the yards have given an upturn since 2003. Expectations are that prices will stabilise in 2005 due to aggressive Chinese pricing.¹⁰² Due to the hot oil tanker market, the owners want new tankers immediately so the second hand prices of tankers have risen.¹⁰³

4.4 The demolition market

The MARPOL and EU regulations accelerating the phase out of single hull oil tankers will lead to more ships being scrapped in particular in 2010. Future scrapping volumes of up to 16 million light displacement tonnage (LDT)¹⁰⁴ in the peak year of 2010 are much higher than the highest recorded scrapping volumes with a mean annual scrapping volume in year 1994 - 2003 of 4.7 million LDT and a maximum, recorded in 1999, of 6.4 million LDT. The total fleet of single hulled tankers of 5,000 DWT and more made up about 2,256 ships or 129.5 million DWT as of January, 2004. It is estimated that the accelerated phase out scheme may lead to a peak volume of scrap in 2010 of up to 16.7 million LDT. This is 25-30% higher compared to the estimate of the peak volume of 2015 for the MARPOL 13G regulation. The single hull oil tankers are estimated to account for 11.0 million LDT.¹⁰⁵

The worst case scenario assumes that none of the exemptions possible under the IMO regulation is used. This is in practice probably not going to happen since for example a number of major flag states, Panama, Liberia, Bahamas, Brazil, India or Russia, are likely to apply for such exemptions. The theoretical peak in phase out volume will probably be lower and distributed over several years.¹⁰⁶

The current capacity to meet the phase out demand is found in the developing countries where the scrapping industry is located. The predicted future scrapping volumes are considerably higher than the mean annual and maximum scrapping volumes recorded above, but there is no historical evidence of capacity constraints in the industry. Thus, if the future ship breaking is to be carried out under the present conditions governing the industry in Asia, it may be expected that the demand for scrapping capacity can be met.¹⁰⁷

¹⁰² Shipping Markets Forecasts, Issue No. 8, March 2005, Lloyd's Register Fairplay, p. 6.

¹⁰³ Shipping Markets Forecasts, Issue No. 8, March 2005, Lloyd's Register Fairplay, p. 6.

¹⁰⁴ This is when the tanker is built with nothing in it.

¹⁰⁵ European Commission Directorate-General Energy and Transport, *Oil Tanker Phase Out and the Scrapping Industry*, June 2004, p. 15.

¹⁰⁶ *Ibid*, p. 147.

¹⁰⁷ *Ibid*, p.9.

5 Closing comments

5.1 Conclusion

According to the UNCLOS, the EU has certain identified possibilities to act unilaterally as long as the EU member states use the jurisdiction given to them by the UNCLOS. The jurisdiction of flag and port states are required to prevent single hulled tankers from registering in the EU as well as ban them from trading to and from EU ports. Coastal state jurisdiction is weaker and, therefore, the EU regulation uses the jurisdiction of flag and port states that each EU member state is given by the UNCLOS.

After a series of accidents with large amounts of oil spilt, the IMO and the EU have implemented legislation to prevent future oil spills. After the Exxon Valdez the US introduced double hull requirements and the IMO did the same in 1992. The EU did not react until the Erika accident when the EU politicians saw the need to prove their competency to act vigorously. The EU and IMO have, since then, taken every other step in the process of developing schemes to phase out single hulled tankers. The EU has obviously been pressuring the IMO to tighten the MARPOL in order to have a uniform regulation internationally. The IMO amended, after political pressure from the EU member states, Annex I of the MARPOL so that the single hull phase out scheme would be similar to the EU regulation. Although the MARPOL give some exemptions that flag and port states may use in order to let Category 2 and 3 tankers trade for a longer period, the MARPOL and EU regulations are essentially the same.

The shipping industry will see many consequences due to the single hull phase out. Mainly, there will be a reduction in tonnage since tankers will be phased out. This tonnage will have to be replaced by new double hulled tankers. The shipyards and scrapping industry are expecting excellent years until the single hull tonnage is replaced by double hull tankers. Also the sale and purchasing market will see higher prices on second hand double hulled tankers since the demand for new tankers is high and the ordering books at the shipyards are full.

5.2 Reflections and future studies

The alertness of the shipping industry following a marine disaster has been a phenomenon ever since the sinking of the Titanic. On several occasions, a tragic accident has brought up a number of safety issues and the Erika and the Prestige incidents created a new climate in which the public is increasingly intolerant of any failure on the part of the maritime industry. The maritime community is acting faster than before in order to bring into force new legislative measures and restore the confidence in the system again.

The IMO was after the Erika challenged to take immediate action. The EU was threatening to take unilateral action and, thereby, threatening IMO's legislative

supremacy in matters concerning maritime safety and pollution prevention. States have recognized that shipping is a pre-eminently international activity that needs regulation at the international level and as a result the IMO has been a successful organization.

The relationship between the IMO and the EU has become much more tense and difficult as a result of the sinking of the Erika and the Prestige. In both cases the European Commission made proposals that went far beyond the MARPOL amendments. The European Commission was inclined to do so due to, among other reasons, the considerable pressure from the European Parliament and particularly, on the Erika, from the French and, on the Prestige, from the French and Spanish politicians and people. The result of the two organizations different ways to regulate on this area has been the growth of a new order. According to this new order the EU will decide what it wants before demanding the same from the IMO. The underlying threat is that if the other members of the IMO do not agree, the EU will make its own regulations. The European Commission justifies this by quoting the example of the US. This means that the EU ignores the fact that that they open the door for other unilateral agreements. The benefits of an international body like the IMO may be lost and, in the long term, the shipping industry will always benefit from any legislation designed on an international basis.

It is difficult to know how long the relations between the IMO and the EU will continue like this. As mentioned above, the recent accidents of the Erika and the Prestige have led to a strong pressure on the EU institutions from the concerned member states to create unilateral agreements to protect the EU from more environmental disasters and hence increasing the risk for conflict with international legislation. The fact that the EU has been triumphant with getting the IMO to phase out single hulled tankers at the same speed as the EU will probably increase the chances that the EU will continue to pressure the IMO to enforce the kind of maritime legislation that the EU is in need of.

What will happen in the future when a double hull VLCC collides and breaks both hulls as it leaves the port of Marseilles? What will the reactions of the EU member states be and what will be the next move by the EU or the IMO? Will there ever be a triple hull or an age limit on tankers?

As mentioned above, the shipping industry is one of the most international industries there is and as such, it needs to be regulated at the international level. The EU has walked its own path and forced the IMO to set stricter rules. The members of the European parliament are under pressure to prove to the voters that they have the possibility to respond quickly. The experts of the IMO are not in the need to prove this ability; instead they look for a long term solution that does not have to satisfy voters' needs.

For a future study it would be interesting to investigate how the phasing out of double hull tankers affected the shipping industry in the end. Also, further studies of how the IMO and EU relations will develop would be of interest since the EU has been successful in its efforts so far. Will the IMO take the legislative supremacy back from the EU or will the EU increase its legislative power in the maritime field?

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