An Analysis of United States Environmental Law within the Maritime Jurisdiction

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ABSTRACT

Maritime law relating to compensation for environmental damage has been rapidly developing over the past two decades. This thesis attempts to clarify some of the legal questions concerning compensable costs and damages by focusing on 1) the right to compensation for pure economic losses (ie., economic losses unconnected with personal injury or property damage) and 2) the right to compensation for damage to natural resources ("damage to the environment"), including the costs of restoration or replacement. The questions raised in this thesis are dealt with on the basis of federal statutory law and non-statutory maritime law. Consequently, state statutes fall outside this study. Federal statutory laws examined include the Federal Water Pollution Control Act, the Comprehensive Environmental Response, Compensation and Liability Act, 1980, the Oil Pollutional Act, 1990, and the geographically more limited statutes including the Outer Continental Shelf Lands Act, 1978, the Trans-Alaska Pipeline Authorization Act. and the Deepwater Port Act, 1974. Because of the general character and the international significance of the questions involved—and in order to see U.S. pollution legislation in context—several international conventions are examined. These include the International Convention on Civil Liability for Oil Pollution Damage, 1969, the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971, and the Convnention on Civil Liability for Damage Caused During the Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, 1989. The thesis concludes with comments and suggestions on the issues covered throughout the paper.

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I. INTRODUCTION

This thesis addresses the questions concerning compensable environmental damage in the maritime context. The increasing seaborne transport of oil and other hazardous substances constitutes a growing pollution risk to US waters and shorelines.[1] We have already witnessed several serious accidents which have resulted in some very large oil spills. Also, other substances than oil have shown to be harmful. Spills and discharges pollute the water, damage property, threaten persons, and are costly to abate. The public awareness of the expanding dimensions of the problem has been increased also by spills from offshore facilities.

Along with the entire body of law governing environmental conservation, the theory of law relating to compensation for damage caused by spills of oil and other hazardous substances has been rapidly developing over the past two decades. Of particular importance in the latter area is the nature and extent of the costs and compensation awardable for damage to the environment.

The question of awardable compensation in connection with environmental damage caused by ships (or offshore facilities) is far from clear under U.S. law. A spill or discharge of oil or other hazardous substance (e.g., chemicals, gases) calls into play a complex scheme of statutory and case law imposing liability for damage. The notion of and conditions for compensable damage vary under applicable federal statutes and under general principles and rules of maritime law (see infra). Consequently it is difficult to draw a complementary, overall picture of the current standing of the law. However, I

[1] Oil and oil products represent around 38% by volume of total seaborne trade. Hazardous cargoes account for a further 10-15%. Marine Log. 1996.

will in this thesis try to clarify some of the questions concerning compensable costs and damages.

Excluded from the thesis will be cases of loss of human life and personal injury. Although such incidents of course happen in connection with shipping activities[2], they are fortunately relatively rare in the environmental impairment context. Further, even if such losses and injuries occur, the claimant's right to compensation seems rather clear—although there of course remain some problems (concerning both the losses for which compensation is paid and the evaluation of the injuries).

However, spills and discharges from ships normally cause damage to property. Boats, fishing gear, water, and embankments may be contaminated. Beaches and coastlines may be polluted, necessitating clean-up operations at considerable cost. Preventive measures and cleanup operations may further cause damage to roads, piers and embankments. But neither the concept of property damage nor the conditions for compensating such damage create insuperable problems; also U.S. law recognizes both the principle of *restitutio in integrum* (compensation for the reduction in value or for necessary costs of repair) and the rule that consequential losses (e.g., loss of earnings) suffered by owners or users of property (e.g., boatowners, fishermen) that has been contaminated or damaged are compensable.

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[2] In April 1947 the freighter Grandcamp was being loaded with ammonium nitrate in the port of Texas City. During loading it was noticed that a fire had started in one of the holds. The only fire-fighting supply available consisted of two jugs of drinking water and a two-gallon fire extinguisher. This was not enough to extinguish the fire and consequently it spread and by the time the fire department arrived it was too late. Less than an hour later the ship exploded with such force that two light planes flying overhead were destroyed by the blast. The explosion also damaged another ship carrying ammonium nitrate which was moored 200 yards away. This ship, the High Flyer (no pun intended), caught fire and subsequently blew up. A total of 468 people were killed, mostly as a result of the first explosion. The accident also caused considerable material damage.

This thesis focuses on 1) the right to compensation for pure economic losses (i.e., economic losses unconnected with personal injury or property damage) and 2) the right to compensation for damage to natural resources ("damage to the environment"), including costs of restoration or replacement.

Pure economic losses may hit, for example, a hotel owner when his turnover drops as a result of pollution affecting the area near the hotel or a fisherman if the fishing deteriorates because of sea pollution. The main problem with compensating pure economic losses is that a successful claim generally seems to presuppose that an individual and defined right (e.g., a right to property or a right of possession) has been infringed. In the case of environmental impairment, however, interest is often directed towards cases where public rights (e.g., fishing rights in the sea and the right to use recreational areas—even when privately owned) have been infringed. Does a pure economic loss (e.g., loss of earnings) when the right is exercised on a public basis, qualify for compensation under U.S. law?

In addition to personal injury, property damage and pure economic losses, ships carrying oil and other hazardous substances may cause damage to the environment, e.g., to wildlife and to food chains in the environment. The question of compensating damage to the very environment, i.e., to the natural resources, presents many problems. This type of damage cannot easily be assessed in monetary terms; the marine environment lacks a market value as such. How then, should compensation be assessed?[3] Further, even if the

[3] In the case of property damage, the compensation may relate either to the costs of repair or to the costs of replacement. If the costs of repair exceed the value of the property before the damage was caused, compensation will generally be paid for the cost of replacement. In the case of damage to natural resources, restoration is the main alternative. The test of reasonableness has to be applied in determining the costs of restoration.

environment *per se* constituted an object protected by tort law, who would be entitled to claim compensation? Could a claim for compensation be laid by the private citizen(s) or should a claim be filed by the authorities (federal agencies, states, municipalities etc.)?

The question of compensating damage caused to natural resources is comparatively new. Many countries still lack statutes or court decisions dealing with the question of compensating damage caused to the environment as such. But there is a growing awareness of the problem and some countries have already enacted legislation concerning this matter (e.g., Germany, Italy and Norway). Infra I will deal with the problem on the basis of U.S. law.[4]

The questions raised in this thesis are dealt with on the basis of federal statutory law and non-statutory maritime law. Consequently, state statutes fall outside this study. Such an exclusion seems appropriate considering the aim and scope of the thesis (notice also the heterogeneity and diversity of state law[5]). Environmental consciousness increased in the United States after the Second World War, and in particular after the end of the 1960s. The federal legislature has developed vigorous activity in the field of environmental law. It has passed comprehensive laws for the protection of land, air, and water, which can be complemented by the statutes of individual states. The federal statutes examined in this thesis are the following:

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[4] It may be added that when a shipping accident occurs, it may be necessary to take measures to prevent or minimize the damage to the environment (e.g., by using booms around a leaking ship or dispersants to combat spills of oil or other hazardous substances). It is not always clear whether certain costs should be considered as costs of preventative measures or as costs of restoring damaged property. For example, the costs incurred for the cleaning of a polluted beach may be considered as restoration costs or as costs of measures taken in order to prevent further damage.

[5] Many state statutes provide a right of recovery for damages caused by environmental impairment. But they differ greatly on issues such as the limitation of liability, the defense against liability, and the types of damages that may be claimed. This creates a confusing pattern of liability that varies from state to state.

1) the Federal Water Pollution Control Act (FWPCA) or Clean Water Act (33 USC s. 1251 *et. seq.*);

2) the Comprehensive Environmental Response, Compensation and Liability Act, 1980 (CERCLA), amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA), (42 USC s. 9601 *et. seq.*);

3) the Oil Pollution Act, 1990 (OPA) (33 USC s. 2701 *et. seq.*); and

4) the geographically more limited statutes, the Outer Continental Shelf Lands Act, 1978 (OCSLA) (43 USC s. 1801 *et. seq.*), the Trans-Alaska Pipeline Authorization Act, 1973 (TAPAA) (43 USC s. 1651 *et. seq.*) and the Deepwater Port Act, 1974 (DPA) (33 USC s. 1501 *et.seq.*).

In addition to these federal statutes a claimant may base his action on general principles and rules of maritime law (maritime tort including public nuisance, the Robins Dry Dock-doctrine etc.).[6]

Because of the general character and the international significance of the questions involved—and in order to see the U.S. pollution legislation in context—it is also interesting to make some comparative notes on solutions adopted in international conventions, i.e., the International Convention on Civil Liability for Oil Pollution Damage, 1969 (CLC)[7] together with the accompanying International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971

[6] It may be noted that a state common law action in tort or nuisance is in its substantive content similar to the law of maritime tort.

[7] The CLC came into force in 1975. Sixty-eight states have acceded to the convention.

(FC)[8] (the CLC and FC were revised by Protocols in 1984[9] but these have not yet come into force), and the Convention on Civil Liability for Damage Caused During the Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, 1989, (the CRTD Convention, not yet in force). The United States has not acceded to these Conventions.

The scope of the present thesis still requires more clarification. The paper will concentrate on damage caused by shipping. Problems concerning environmental impairment in connection with offshore activity are dealt with only as marginal issues. It is also to be noted that the application of admiralty jurisdiction is restricted in cases of accidents occurring on "artificial island" drilling rigs.[10] Further, no attempt is made to define notions and concepts such as "environmental impairment," "hazardous substances," "natural resources" etc. in the introductory part of this thesis, but I shall take notice of them when finding them in applicable statutes and rules.

In Part II of this thesis I will make some rather general remarks on admiralty jurisdiction and maritime law. Hopefully, this will serve as useful background

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[8] The FC came into force in 1978. Forty-five states have acceded to the convention. The FC provided for the creation of the International Oil Pollution Compensation Fund (IOPC Fund) to be maintained by contributions from member states.

[9] Protocol of 1984 to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969 and Protocol of 1984 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971. The Protocol to the CLC has been ratified by six States (Australia, France, Germany, Peru, Saint Vincent and the Grenadines, and South Africa) and the Protocol to the FC by two States (France and Germany).

[10] Paulette Boudreaux Rodrigue v. Aetna Casualty and Surety Company, 395 U.S. 352 (1969) involved wrongful death actions brought by the families of two men who were killed while working on an artificial island on the outer Continental Shelf off the Louisiana coast. The Supreme Court held that since the deaths occurred on artificial islands rather than on the high seas, and since Congress, in enacting the Outer Continental Shelf Lands Act, intended that such artificial islands were not to be considered within maritime jurisdiction, the Death on the High Seas Act was inapplicable and its inapplicability removed any obstacle to the application of Louisiana law by incorporation as federal law through the Outer Continental Shelf Lands Act.

information for the unacquainted reader. Admiralty jurisdiction furthers important objectives such as the uniformity of law in maritime matters. This jurisdiction becomes a very important factor in terms of federalism. Those readers who are familiar with these issues may move to the following Part. Part III will examine the right to compensation for pure economic losses in connection with environmental impairment by ships. This part also contains a more general survey of the applicable statutes and rules. Part IV deals with the question of damage to natural resources and the right to claim compensation (including the costs for restoration and replacement). Lastly, Part V contains several conclusions and comments on the issues covered by this thesis.

The main text of the thesis will endeavor to give the reader an overview of the issues covered, while more detailed information will be provided in the footnotes.

A. The United States In Ocean Shipping

The importance of the ocean shipping industry to the United States cannot be

understated. The United States is the world's largest trading nation. In **1990**, U.S. exports were valued at **S393.6** billion, and U.S. imports at **S495.3** billion. Hence, U.S. international trade by surface, air, or ocean transportation modes amounted to **S888.9** billion during **1990**. Ocean transportation alone, which consists of cargo carried by liner vessels, non-liner vessels (tramps) and tankers, totaled **S445.2** billion in **1990**.[11]

The introduction of the steamship in the 19th century radically transformed ocean shipping, and led to the creation of the modern steam-powered liner system. It was around this time period, beginning at the age of steam propulsion, that the legal community recognized the economic conflict between cargo-owners and shipowners over risk allocation.[12]

Until the late 1960s or early 1970s, the liner trades used general cargo or break bulk ships. After the truckload or boxcar load of cargo had been delivered to the pier, these break bulk ships were loaded by breaking the truckload into small quantities that were lifted onto the ship by a sling and boom, then stowed.[13]

In the late 1960s the liner industry was dramatically changed by the introduction of containerization. Containers are large metal boxes that can be placed on a tractor-trailer chassis, loaded at the exporter's plant, sealed, shipped by truck or train to the port, lifted onto a container ship by a dockside crane, and stacked in specially designed slots.[14] The container itself is then unloaded at the destination. This is all accomplished without directly handling the cargo inside the container.[15]

The introduction of containers represented a revolution in cargo handling, and continues to have an impact in the 1990s on shipping patterns, shipping companies, conferences, and alliances. Before containerization, shipping was very labor-intensive, with limited ship size, increasing wage rates, and slow port turnaround.[16] By 1960, labor costs in port accounted for 80% of the total cost of a typical voyage.[17] It was estimated that the average handling time per voyage fell from 157 hours for a non-containerized ship to 31 hours for a containerized ship, reducing cargo handling costs 65 to 80%.[18] All of the major trade lanes now are containerized, and the impact of containerization has shifted to developing intermodal services—the efficient merging of different transportation modes into a seamless whole.[19]

Vessels must be specially designed or adapted to carry containers. Containerization is highly efficient for carriers because it significantly reduces the time and labor needed to load and unload a ship. It is preferred by shippers because it means faster delivery and, by reducing handling, it minimizes breakage and pilferage.[20] Today, virtually all liner cargo in the largest U.S. foreign trades are moved by containers.[21] Certain U.S. foreign trades remain substantially uncontainerized because of inadequate financing to purchase the necessary equipment and facilities, the lack of an infrastructure, or the nature of the

cargo.[22]

B. Transition to a Global Economy

The implementation of two major multilateral trade pacts in 1994 can be expected to result in a dramatic increase of international ocean shipping for the United States. In December 1994, the United States and over 100 other nations ratified the Uruguay Round of the General Agreement on Tariffs and Trade (GATT). GATT creates a World Trade Organization (WTO) that essentially eliminates most tariffs and many restrictions in international commerce.[23] GATT is viewed as having "an effect on 'generations to come' because it will encourage trade among nations."[24] Included in the potential benefits of GATT is an estimated global income gain of more than $500 billion due to the reduction of tariffs and quotas.[25] By the year 2005, the liberalization of trade will produce an estimated $122 billion gain in annual income for the United States alone.[26]

Similarly, the North American Free Trade Agreement (NAFTA), implemented on January 1, 1994 by the United States, Mexico and Canada,[27] creates a free trade zone of over 370 million people comprising a market of over $7 trillion.[28] NAFTA will make North America the largest and richest market in the world.[29] As commented by U.S. Commerce Secretary Ronald H. Brown following Congress's ratification of GATT in December 1994: These treaties—like the GATT and the NAFTA—are responsive to the realities of global economies. We compete and win by removing tariff and non-tariff barriers, by moving to a day of global free trade, by making sure that our goods, products, and services can be exported to our trading partners around the world.[30]

With the passage of NAFTA and GATT, the important role ports and marine transportation play in the economic well-being of the United States will certainly grow.

Foreign trade is an increasingly important part of the U.S. economy, currently accounting for over 20% of our gross domestic product. By the year 2010, U.S. exports and imports are projected to increase in value from $454 billion in 1990 to $1.6 trillion, while the volume of cargo is expected to increase from 875 million metric tons to 1.5 billion.[31] Various international shipping lines are now experiencing substantial increases in cargo volume and net profits from ocean shipping that are attributable to the finalization of GATT and NAFTA.[32] Capitalizing on GATT and NAFTA, cities such as Baltimore, Seattle and Tacoma already report significant expansion of international cargo trade ranging from 3% to 16%.[33]

The commercial ports of the United States handle over 95% of international cargo.[34] Port activity links every community in the United States to the world market—enabling the marine industry to deliver imported goods more inexpensively to consumers across the nation and to create export opportunities.[35] Even if the economy slows down, profits in the U.S. transportation business should remain healthy in 1995. Railroads, truckers, airlines and shipping companies have all been doing more with fewer assets. Traffic volumes are up sharply. Rates are rising and profitability is strong. Returns on equity for the group jumped last year to almost 13% from a five-year average of 10%.[36]

The intermodal shipping industry is also is experiencing rapid growth. Intermodal is the fastest growing part of the shipping business, up 15% in November 1994.[37]

Notwithstanding the tremendous growth of international ocean transportation,

shipping concerns still await a uniform scheme for allocating and determining responsibility for loss, damage, and delay of cargo and goods.

II. HISTORIC BACKGROUND OF CARGO DAMAGE LAW

A. Pre-Twentieth Century Developments

In the early 17th century, Sir John Davies, the Attorney General for Ireland under King James I, discussed the independent development of a body of maritime mercantile law in Great Britain:

> That until he understood the difference betwixt the Law Merchant and the Common Law of England he did not a little marvel that England . . . having so many ports and so much good shipping what should be the cause that in the books of the common Law of England there are to be found so few cases concerning Merchants of ships. But now the reason thereof was apparent, for that the Common Law of the land did leave those cases to be ruled by another law; namely, the Law Merchant, which is a branch of the Law of Nations.[38]

The "Law Merchant" of early times comprised both the commercial and maritime law of modern codes, but was peculiarly applied to merchants and developed from the customs of merchants them selves.[39] These laws essentially concerned the mercantile and trading community, and were administered in special courts distinct from the ordinary courts of the land. Foreign merchants, over which the common law frequently held no jurisdiction, were subject to the Law Merchant.[40]

Even centuries earlier, the Law Merchant had defined the rights and liabilities of the carrier and shipper. In the sixth century after the founding of Rome, the sea carrier was made by Roman edict an "insurer" of the goods it carried. The sea carrier was viewed as preserving good faith, insuring the safety of the goods delivered, and preventing fraud and robbery.[41] The shipper might not know how his goods had been abstracted or

damaged, nor whether there was anyone whom he could hold responsible. If there had been "culpa" on the part of the carrier, it could be easily concealed.[42] The reasoning behind the Roman law was that the carrier should be held liable for all loss and damage rather than the shipper being deprived of his remedy. In time, however, "exceptions" to carrier's liability for loss were admitted for shipwreck and piracy.[43]

By the sixteenth century, there was a growing feeling within the European commercial community that the owner and master of a ship should be excused for non-delivery or damage to cargo due to perils of the sea, pirates, and unusually bad weather.[44] These circumstances were recognized as defenses by the year 1570, available to the shipowner or master who could establish the truth of his contentions.[45] For loss or damage due to any fault or negligence of the master or crew, the master was held liable. Bills of lading during that time period typically reflected what the Law Merchant implied.[46] The rule of the Law Merchant was that the carrier was liable unless he could prove that the loss of damage occurred through some "inevitable" mischance, which no amount of care or prudence on his part could have prevented, and was in fact unattended by "culpa" or negligence.[47]

By the early nineteenth century, general maritime law principles recognized that a cargo owner who shipped his goods by a marine carrier was given special protection.[48] In both common law and civil law countries, the carrier was held strictly liable unless it could prove "(1) that its negligence had not contributed to the loss and (2) that one of the four 'excepted causes' was responsible for the loss."[49] Thus, the carrier was liable if

one of the four exceptions applied and the carrier had been at fault, but in all other cases the carrier was liable without fault. Amounting to "no fault" liability, a carrier at the time assumed very broad liability for cargo under general maritime law, and was described as an insurer of the goods.[50]

However, in deference to freedom of contract, the shipper and carrier could agree to a different risk allocation—including one in which the carrier assumed virtually no liability—even for its own negligence.[51] To minimize their role as "quasi-insurers" of cargo damage and loss, carriers began to use the bill of lading for avoiding liability. By the late nineteenth century, bills of lading started to contain more exculpatory clauses to reduce or eliminate the carriers' responsibilities.[52] The bills of lading became so lengthy that it became difficult to ascertain rights and liabilities. Even bankers were "in doubt as to their security when discounting drafts drawn against bills of lading, cargo underwriters [had] not known the risks which they covered when insuring goods . . . and carriers and shippers [were] in constant litigation."[53] The exculpatory clauses typically included losses and damage from thieves, heat leakage, and breakage; contracts with other goods; perils of the seas; jettison; damage by sea water; frost; decay; collision; strikes; benefit of insurance; liberty to deviate; sweat and rain; rust; prolongation of the voyage; nonresponsiblity for marks or numbers; removal of the goods from the carrier's custody immediately upon discharge; limitation of value; time for notice of claims; and time for suit.[54] All of these exculpatory clauses were valid "if reasonable," and the courts in those days rather stringently interpreted reasonableness in the carrier's favor.[55]

The British and American courts differed in their views on the enforceability of broad exclusions on bills of lading. The British Courts generally enforced bills of lading with even the most far-reaching exculpatory clauses, viewing the carrier's strict liability under general maritime principles as essentially a "default rule" to be applied only in the absence of an agreement to the contrary.[56] In the United States, freedom of contract was more restricted. The U.S. federal courts allowed carriers to limit their liability in many circumstances, but carriers could not exonerate themselves from liability if either negligence or a failure to provide a seaworthy ship was committed by the carrier.[57]

In 1882, the International Law Association ("I.L.A.") at its Liverpool Conference, prepared a draft of a model bill of lading, amounting to a compromise for voluntary adoption by shipper and carrier.[58] The model draft provided that the carrier should be liable for negligence "in all matters relating to the ordinary course of the voyage," such as the stowage and care of the cargo, but should be exempt from liability for "accidents of navigation," even though losses might be attributable to negligence of the crew.[59] It also required a carrier to exercise "due diligence" to make the vessel seaworthy, provided for a 100 pound (sterling) package limitation in absence of a higher declared value, and included a list of specific "exceptions" for which the carrier would not be responsible.[60] Although it never received widespread acceptance, the I.L.A. model bill achieved some influence in the subsequent Hague rules.[61]

If the carrier brought the cause of the loss or damage within one of the perils excepted

in the carrier's bill of lading, the cargo owner then had the burden of proving that the carrier's negligence caused or contributed to the loss, in which event the carrier was liable.[62] During times before meaningful discovery procedures were implemented, that burden of proof was a very real defensive weapon, and a source of serious difficulty for the cargo claimant.[63] In a significant number of cases, this burden was impossible for cargo shippers to bear.[64]

B. The Harter Act Of 1893

While the international community was accomplishing little toward the unification of the law in the late 19th century, several countries enacted legislation governing exculpatory clauses in bills of lading.[65] The general dissatisfaction with the state of the law, including its short limitation periods and oppressive exemptive clauses, brought about the movement which resulted in the United States in the Harter Act of 1893.[66] The Act was "essentially a compromise between the conflicting interests of carriers and shippers."[67]

The Harter Act recognized some of the common law obligations of the carrier, and made it unlawful for an ocean bill of lading to diminish specific obligations.[68] As violative of public policy, the Act voided any bill of lading seeking to relieve the carrier from negligence in "proper loading, stowage, custody, care, or proper delivery" of the goods,[69] and also voided any clause purporting to reduce the obligation of the owner to exercise due diligence in regard to seaworthiness.[70] However, if the carrier exercised due diligence in furnishing a seaworthy vessel in all respects, then the owner was exempt

from liability for damage or loss resulting from "faults or errors in navigation or in the management of [the] vessel."[71] A shipowner had no liability for the negligence or fault of his captain and crew in their navigation and management of the vessel because the owner lacked control after his ship left port and communications were often difficult or impossible.[72] The shipowner was no longer liable for perils of the sea, acts of God, acts of public enemies, inherent defects of goods carried, seizure under legal process, acts or omissions of the cargo shippers, and saving or attempting to save life or property at sea.[73]

Though an important step in the development of the law of maritime carriage, the Harter Act was ultimately a disappointment.[74] The Act was not an effective solution to the shippers' problem of burdensome exculpatory clauses in bills of lading, nor did it establish any positive rules of law.[75] It also did not alter the validity of very low limitation or valuation clauses, and failed to address the validity of stringent notice of claim clauses or very short periods for filing suit.[76]

Passage of the Act was followed by about 30 years of instability, during which the law relating to shipments to or from the United States differed from that in most other parts of the world.[77] A movement for uniformity developed, and in culmination of this movement the Committee Maritime International ("CMI") drafted a set of rules at a 1921 conference at the Hague, based upon the Harter Act theory.[78]

C. The Hague Rules

As the Harter Act had not ended the controversy, the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading [79] (commonly known as the "Hague Rules) was adopted by twenty-six participating nations in 1924. Most shippers welcomed the Hague Rules, although they were adopted against the wishes of shipowners who opposed the increase in carrier liability under this new convention.[80] Today, there are about 77 contracting parties to Hague, including a large number of developing countries.[81]

The Hague Rules set out the bases for shipowner liability for cargo loss and damage.[82] They preclude contractual exemptions from liability on the part of shipowners; provide shipowners with seventeen specified defenses, including the controversial "nautical fault" defense; and establish a limit of shipowner's liability of $500 per package or customary freight unit.[83]

Although there was major American involvement in the final stages of drafting the Hague Rules, the United States was slow to ratify or enact a statute based upon Hague.[84] Apparently due to the United States' failure to ratify the convention, other countries hesitated to adopt the Hague Rules.[85] There even was a movement by British shipowners in the early 1930's to repeal the United Kingdom law ratifying the Hague Rules, on the basis that the rest of the world had been seemingly unwilling to accept international uniformity.[86]

The United States domestically implemented the Hague Rules with the enactment of the Carriage of Goods by Sea Act in 1936 (COGSA),[87] and ratified the international convention in 1937.[88] With the U.S. adoption of the Hague Rules, the world's remaining maritime powers joined the new regime fairly quickly. Within two years of the U.S. ratification, most of the European shipping nations followed suit, and by the beginning of World War II, the majority of the world's shipping was committed to the Hague Rules.[89]

D. COGSA

Derived from the Hague Rules, COGSA "is really a bill of lading act governing the relations of cargo and ship, so long as a bill of lading embodies the contract of carriage."[90] COGSA applies during the time period of between the loading of the goods and the time they are discharged from the ship, "tackle to tackle."[91]

The enactment of COGSA did not repeal or completely supersede the Harter Act.[92] The Harter Act still governs carriage of goods under a bill of lading in interstate commerce, loading and discharge of the cargo, and deck carriage.[93]

COGSA represents some significant changes from the Harter Act and the prior liability scheme. Its provisions are as follows:

(1) COGSA requires an ocean common carrier operating between the U.S. and foreign ports to exercise due diligence to make his ship seaworthy, to make the holds fit and safe for carriage and preservation of the goods carried, to properly equip the ship, and to load, handle, stow, carry, keep, care for and discharge the goods properly and carefully.[94] For

liability to arise, however, it must be shown that the want of due diligence to make the ship seaworthy was the proximate cause of the cargo loss or damage.[95]

(2) A carrier will not be liable for any "uncontrollable" loss or damage falling under any one of the seventeen defenses,[96] which include:

(a) acts, neglect or default of the master or servants of the ship in navigating and managing the ship [the "nautical fault" defense];

(b) fire—unless caused by the fault of the carrier;

(c) perils of the sea;

(d) acts of God, war, or public enemies;

(e) intervention of law;

(f) acts or omissions of shippers;

(g) strikes, riots, or civil commotion;

(h) attempts to save life or property at sea (this includes damage caused by deviation to save life or property at sea);

(i) inherent vice of the goods or shrinkage, where the damage is caused by the characteristics of the goods; i.e., a liquid that evaporates;

(j) insufficient packing or marking by the shipper;

(k) a latent defect in the goods or damage caused by a defect in the goods, not the negligence of the carrier; and

(l) any other cause arising without the actual fault of the carrier or its agents (although the burden is on the carrier to prove freedom from fault).[97]

(3) A $500 per package or customary freight unit limitation, unless the value of goods is declared on the bill of lading.[98] The carrier is barred from using a lower limitation amount.[99]

(4) What constitutes a "package" under COGSA has created some problems for the courts, especially in light of the now common use of the shipping container.[100] Jurisdictions are split on whether a container could be considered a package for purposes of the $500

limitations.[101]

(5) The Act extends the time to provide notice of claim and file suit against the carrier. Notice of the loss should be provided to the carrier before or upon removal of the goods, or within three days after removal if the loss is not apparent.[102] Claimants have up to one year to file suit following delivery.[103] Lesser time limits (which may have been allowed under the Harter Act) are prohibited under COGSA.[104]

(6) COGSA does not apply when cargo is carried on deck, where the bill of lading states that the cargo will be carried on deck.[105]

(7) Under COGSA, unexplained losses, or losses where there is no clear evidence which of two causes was responsible for the damage, are far more likely to fall on the carrier.[106]

COGSA's principal goal was not so much to revise the rules of substantive law, but to unify the law governing bills of lading world-wide. It attempted to do so in a uniform, predictable manner "that would allow carriers, shippers, consignees, bankers, and insurers to know their respective rights and responsibilities with certainty . . . without the necessity of examining long and complicated bills of lading."[107]

III. INTERNATIONAL PROPOSALS, CONVENTIONS AND AMENDMENTS ATTEMPTING WORLD UNIFORMITY ON

LIABILITY RULES

Despite the United States' adoption of the Hague Rules through COGSA, several problem areas remained with the Hague scheme, causing uneasiness for both shippers and carriers.[108] These problems included the confused state of American law on the limitation of $500 per package or per "customary freight unit;" the inadequacy of the $500 package limitation; questions as to what constituted a "package" in view of the newly-developed container trade; concerns about the rigid non-delegability of the duty to use due diligence to make seaworthy; and the contractual extension of the carriers defenses to other parties to the transaction such as stevedores.[109]

A. Visby Amendments of 1968

Decades later, largely in response to the emergence of containerization in ocean transportation and international dissatisfaction with the per-package limitation, a diplomatic conference convened in Brussels in 1968 to amend certain provisions of the Hague Rules through the adoption of a Protocol.[110] Under Visby, most of the original Hague Rules survived, thus preserving most of the case law decided over the last 50 years.[111] Both the Hague Rules and the Visby Protocol retain the same basic rule of carrier liability, requiring the carrier to exercise "due diligence . . . to make the ship seaworthy," and to see that the ship is "properly manned, equipped and supplied."[112]

That conference resulted in a 1968 Amendment to the Hague Rules, designated as the "Hague-Visby Amendments".[113] The 1968 Amendment modified Hague in several respects. First, the Amendment increased the per-package limitation to $663 or $2 per

kilogram for lost of damaged goods, whichever is higher. Second, the Amendment clarified the definition of "package" to be the number of packages or units enumerated in the bill of lading as packed in such "article of transport".[114] Third, the Amendment denied the carrier the right to limit liability where damage was intentionally caused or recklessly caused by the carrier with knowledge by the carrier that damage would ensue.[115]

Certain other minor revisions were included in the 1968 Amendment to render it more consistent with American law. For example, the Amendment made inadmissible any contradictions of recitals of condition as set forth in the bill of lading when the bill has been transferred to a party in good faith. The Amendment approved the practice of granting extensions of the one year time limitation.[116] The Amendment also defined the carrier as including the "owner or the charterer who enters into a contract of carriage with a shipper."[117]

By 1993, it was estimated there were seventy-eight countries that adhered to Hague and/or Hague-Visby, covering 63.9% of U.S. trade.[118] Of that group, by 1993, there were thirty-two nations that acceded to Hague-Visby.[119] To date, the United States has not yet adopted or ratified the Hague-Visby Amendments, and the 1936 COGSA remains substantially unchanged.[120] "As a result, the United States today has a law . . . that is different on its face from the laws of most of its major trading partners and different in application from the law of any other country."[121] Notwithstanding, most bills of lading currently reflect Hague-Visby, as carriers reluctantly adjust to raising liability limits because of containerization.[122] Interestingly, the U.S. courts have been

applying Hague-Visby under choice of law rules.[123]

B. Immediate Shipper Enthusiasm For and Carrier Opposition To 1968 Hague-Visby Amendments

Within only months after the 1968 Visby Convention at which the Hague-Visby Amendment was promulgated, shippers were pleased with the results and encouraged prompt ratification by the United States.[124] Joseph P. Baittiner, on behalf of the Singer Company, summed up the views of most U.S. shippers by expressing support for Hague-Visby as "a solution equitable to both shipowner and shipper interests . . . ."[125] Speaking on behalf of the Commerce and Industry Association of New York (a shipper's organization), Joseph A. Sinclair wrote to then-Secretary of State Dean Rusk that his members were "very pleased" with Hague-Visby and hoped "that the State Department will make every effort to obtain Congressional action during the present session having the assurance that ratification of the [Hague-Visby] Convention will be widely supported by major U.S. exporters."[126]

In contrast, the carriers vigorously opposed ratification of Hague-Visby following the 1968 convention. Ralph E. Casey, then President of the American Merchant Marine Institute ("AMMI"), which represented most of the U.S. flag steamship lines, doomed the prospects for any ratification.[127] In his letter to Secretary Rusk dated May 22, 1968, Mr. Casey expressed "strong opposition" by the AMMI to U.S. implementation of the Hague-Visby Protocol of 1968. On behalf of shipowners' interests, Mr. Casey criticized the weight liability limitation as excessive,[128] the mixed limitation concept as having

no ceiling,[129] and the container clause as especially disturbing.[130] Benjamin W. Yancey, the former President of the U.S. Maritime Lawyers Association, similarly expressed "his sharp disagreement" with Hague-Visby.[131]

In the face of such determined opposition from significant portions of the maritime industry, the Executive Branch decided it could not go forward towards ratification.[132] Congress' unwillingness to act in the absence of an industry consensus has long been recognized.[133] For this sole reason, according to a commentator, the Visby Amendments were not ratified between 1968 and 1978.[134]

C. The SDR Protocol of 1979

In 1979, the Hague-Visby Rules were further amended to account for currency exchange imbalances.[135] The "SDR Protocol of 1979" revised the previously-existing Poincare gold standard for liability limitations to a system using a "Special Drawing Right" (SDR) in an amount calculated by the International Monetary Fund (IMF).[136]

The liability limitation was increased in the SDR Protocol to 667 SDRs per package or customary shipping unit, or 3 SDRs per kilo.[137] During 1992, the SDR fluctuated at around U.S. $1.28.[138]

As is the situation with the 1968 Hague-Visby Amendment, the United States never adopted the SDR Protocol.[139] Notwithstanding, thirty-one nations adopted or were adopting the SDR Protocol and Hague-Visby Amendment by 1992.[140]

D. The UNCITRAL Hamburg Rules of 1978

In 1978, the United Nations Commission on International Trade Law ("UNCITRAL") held a conference in Hamburg, Germany, in response to a demand for revision of the Hague-Visby Rules.[141] UNCITRAL had "conceived all of these problems in terms of economic warfare between cargo and carrier," and between "traditional maritime nations" and the "developing world."[142]

The Hamburg Rules are quite different from the previous international conventions on cargo liability in both form and structure, and as the U.S. Department of Transportation found, would provide for an increase in carrier liability.[143] The major features and changes of the Hamburg Rules are as follows:

(1) Elimination of the nautical and managerial fault defenses;

(2) Reduction of the seventeen defenses of COGSA, down to three defenses:

(a) that the carrier took all reasonable measures to avoid the damage;

(b) that the loss, damage or delay was caused by fire; or

(c) that the loss, damage or delay was due to efforts of the carrier to save life or property at sea.

(3) The $500 per package limitation first appearing in the Hague Rules in 1924 and adopted by COGSA 12 years later, would be increased to 835 SDR's (Special Drawing Rights) per package, or approximately $1,169 per package or customary shipping unit.

(4) Shippers would be given an option of claiming damages based on the weight of the cargo rather than the value of the package (maximum recovery of 2.5 SDR's per kilo, approximately $1.59 per lb. or $1169 per package, whichever is higher).

(5) The term "per package" would be defined as the packaging units described in the bill of lading, thus curtailing shipowners' attempts to limit their liability to $500 for an

entire container on the grounds that it is the "package" when no other packaging was described on the bill of lading.

(6) Carriers would be liable for delays, but only up to 2 1/2 times the amount of freight charges.

(7) "On-deck" cargo would be covered by liability rules for the first time.

(8) Cargo moving without a bill of lading would be covered for the first time.

(9) The burden of proof would shift to shipowners to prove they "took all measures that could reasonably be required to avoid the occurrence and its consequences," thus eliminating negligence of the master or crew as a defense. Under COGSA, the carrier only has the burden of proving seaworthiness at the time of the voyage, and then the burden shifts to the shipper to prove the carrier's negligence.

(10) Notice of loss or damage would be permitted to be given not later than one working day after delivery to the consignee (rather than before removal from the port).

(11) Notice of concealed loss of damage would have to be given within 15 days, in lieu of 3 days.

(12) Suits or arbitration could be instituted within 2 years from delivery rather than one year at present.

(13) Cargo owners would be relieved of "General Average" contributions if the shipowner's negligent navigation or mismanagement of the ship caused the catastrophe which resulted in the claim for general damage.[144]

The United States has not ratified the Hamburg Rules, which went into force on November 1, 1992 after ratification by twenty other nations.[145] To date, only twenty-two nations have adopted the Hamburg Rules, of which seven are land-locked nations having no ports. All twenty-two nations combined represent a very small portion of U.S. trade.[146] These nations are not major shipping powers and are more concerned with protecting their imports and exports.[147]

E. The Multimodal Conventions

Today, complex inter-relationships bind together carriers, terminal operators, and multimodal service companies.[148] Multimodal conventions are "intended principally to deal with the advent of multimodal door-to-door container shipping practices, and to provide for adequate compensation in cases where damage occurred but the transport mode on which it occurred cannot be determined."[149]

Since 1975, three voluntary sets of model rules have been established in an attempt to resolve the tangled web of multimodal relations and establish uniform principles of liability for multimodal operators. The three sets of rules are the 1975 International Chamber of Commerce Uniform Rules for a Combined Transport Document,[150] the 1980 United Nations Convention on International Multimodal Transport of Goods,[151] and the 1991 United Nations Conference on Trade and Development/International Chamber of Commerce Rules for Multimodal Transport Documents[152] published with effect from January 1, 1992.[153]

The multimodal proposal given the most attention in the United States is the proposal of the 1980 Multimodal Convention. This proposal becomes mandatory upon ratification of a certain number of states and "basically adopts the same approach as the Hamburg Rules."[154] In addition, it allows for the creation of a new entity, called a Multimodal Transport Operator (MTO), which could offer to shippers an optional door-to-door system of liability through a bill of lading.[155]

The 1980 Multimodal Convention limits liability to approximately $1,160 per package or, alternatively, $3.50 per kilogram. These limits are about ten percent higher

than the limits in Hamburg. The limits apply when either "(a) the mode on which the damage occurred cannot be determined; or (b) the mode on which the damage occurred can be determined and the limits under that mode are lower than those under the Multimodal Convention."[156] Under the Multimodal Convention, shippers would bring their claims and lawsuits against the MTO who could then bring a subrogation action against the underlying actual carrier.

Adherence to the 1980 Multimodal Convention by thirty nations is necessary to bring it into force. As of May 1991, only five nations had ratified the Multimodal Convention.[157] As with the Hamburg Rules, years may pass before the Multimodal Convention enters into force.[158]

F. American Bar Association Proposal of 1987

In 1987, the American Bar Association (ABA) attempted to resolve the deadlock with a compromise between shipper and carrier interests.[159] By majority vote, the ABA's House of Delegates recommended that the U.S. government support ratification of the Hague-Visby Amendments—with revisions.[160] The ABA called for the immediate ratification of the Hague-Visby Amendments, and requested that the U.S. government consider further changes, such as (1) increasing liability limits from $500 per package to the $1,160 per package ($3.50 per kilo) as suggested in the 1980 U.N. Convention on International Multimodal Transport of Goods; (2) eliminating nautical fault as a defense; (3) placing liability with a single party for intermodal shipments; and (4) subjecting terminal operators and stevedores to the same liability rules as carriers.[161]

The ABA's majority report, as outlined above, was drafted by a subcommittee of eight highly experienced maritime lawyers chaired by Allan I. Mendelsohn, a former U.S. State Department Legal Advisor and U.S. delegate to several diplomatic transportation conferences.[162] A minority report favoring adoption of the Hamburg Rules, supported by shippers, was rejected by the ABA.[163] To date, however, there has been no industry consensus or congressional action on the ABA's recommendation.[164]

G. Major Differences Between Hague, Hague-Visby and Hamburg Regimes

1. Scope of Application

The Hague Rules apply only to bills of lading issued in a contracting state. The Hague-Visby Rules apply to the carriage of goods between different states, provided that the bill of lading is issued in a contracting state, the carriage is from a port in a contracting state, or the parties have agreed to the application of the Convention. The Hague and Hague-Visby Rules only apply when a bill of lading is issued in connection with the carriage.[165] For example, COGSA, Hague, and Hague-Visby do not apply when electronic data interchange is used.[166]

The Hamburg Rules apply to all carriage by sea contracts between two different states provided that the port of loading, the port of discharge, or the place of issuance of the transport document is located in a contracting state. Hamburg applies whether or not a bill of lading or other transport document has been issued.[167]

2. Definition of "Carrier"

COGSA, Hague, and Hague-Visby only apply to the contracting carrier, but do not apply to the liability of the actual non-contracting carrier who has not issued a bill of lading to the consignor.[168] In contrast, the Hamburg Rules governs liability of both the contractual carrier and actual carrier. Essentially, Hamburg makes the contractual carrier liable for the whole carriage, including those portions performed by the actual carrier, and also enables the shipper to hold the actual carrier liable.

3. Period of Carrier Responsibility

COGSA, Hague, and Hague-Visby provide for liability only from the time that the goods are loaded onto the ship and ends when they are discharged from the ship.[169] On the other hand, Hamburg covers from the period of time the carrier takes the goods at the port of loading until the carrier actually delivers the goods at the port of discharge. Thus, the Hamburg liability regime extends beyond the actual carriage, even before loading and after unloading.[170]

4. Exemptions/Defenses from Liability

Under COGSA, Hague, and Hague-Visby, carriers have the burden to prove the seaworthiness of the vessel and the exercise of due diligence. However, the carrier has seventeen defenses from liability.[171] The most controversial is the "nautical fault" defense, which exempts a carrier from liability when the loss or damage arose from a negligent act in the navigation or management of the ship.[172]

The Hamburg Rules no longer exonerate the carrier from negligence for "nautical fault," and reduce the defenses to three.[173]

5. Limits of Liability

COGSA and Hague limit the carrier's liability to $500 per package.[174] The 1979 Protocol to Hague-Visby raised the limit to 667.67 SDRs or 2 SDRs per kilogram of goods, whichever is higher. The Visby Amendment allows a shipper an opportunity to limit the carrier's liability to the equivalent of one package when a large container is packed with multiple packages of valuable goods.[175]

Under Hamburg, the liability limits have been increased to 835 SDRs (about $1,000) per package or 2.5 SDRs per kilogram.[176]

6. Delay Damages

Neither COGSA, Hague, nor Hague-Visby cover carrier damage for delay of goods.[177] However, Hamburg provides mandatory delay damages in the amount of 2 1/2 times the freight payable for the goods delayed.[178]

7. Deck Cargo

Under Hague, "the carrier is not liable for cargo carried [or stacked] on deck under a bill of lading that states the cargo is so carried."[179] In contrast, the Hamburg Rules,

"taking into account modern transport techniques, which often involve stowing containers on deck, provide suitable rules for deck cargo."[180]

H. MLA-Proposed "Carriage of Goods By Sea Act of 1995"

Another attempt for industry consensus was recently made by the U.S. Maritime Lawyers Association (MLA). In February 1995, the MLA proposed a draft bill titled the "Carriage of Goods by Sea Act of 1995."[181]

The proposal appears to be an attempted harmonization of Hague-Visby and Hamburg, although primarily based on Hague-Visby. A problem with the MLA proposal of this sort is that for unilateral action to take place, the United States would have to denounce the Hague-Visby Rules, a step which is not conducive to international uniformity.[182]

The MLA proposed bill is modeled from the form of the existing COGSA statute. Key features and revisions to COGSA are as follows:[183]

(1) The "nautical fault" defense of 46 U.S.C. § 1304(2) has essentially been eliminated, as a carrier is now liable where the cargo claimant presents proof of negligence in the navigation or management of the ship. Section 4(2)(a) of the proposal provides:

The carriers and their ships shall not be responsible for loss of damage arising or resulting from—

(1) Act of the master, mariner, pilot or the servants of the ocean carrier in the navigation or in the management of the ship, unless the person claiming for such loss is able to prove negligence in the navigation or management of the ship[184] . . .

(2) The fire defense is limited, as a carrier is liable if the cargo claimant proves the

fire was caused by actual fault or privity of the carrier;[185]

(3) The balance of the "17 defenses" are restricted to circumstances only where loss was not caused by the actual fault and privity of the carrier and/or its agents, the burden of proof for the defense falling on the carrier;[186]

(4) The carrier is proportionately liable for loss or damage shown to be caused by its agents;[187]

(5) Absent any proof of cause of loss or damage, the carrier is liable for one-half of the loss or damage;[188]

(6) A carrier is liable for loss or damage from any "unreasonable" deviation in saving or attempting to save life or property at sea. If deviation is "reasonable," the exemption remains;[189]

(7) Limitation of damages to 666.67 SDRs per package or two SDRs per kilogram, whichever is higher. These limits do not apply if a greater value was previously declared on a contract of carriage;[190]

(8) Contracts of carriage include both negotiable and non-negotiable bills of lading, whether printed or electronic data interchange (EDI);[191]

(9) The definition of "carrier" would encompass both shipowner and charterer, as well as the contracting carrier and performing carrier;[192]

(10) Carriers would be liable from time of receipt to time of delivery of goods;[193]

(11) The definition of "goods" does not exclude cargo by which the contract of carriage is carried on deck;[194]

(12) Notice of damage or loss can be tendered to the carrier until delivery of the goods to the person entitled to receipt, or if not apparent, within three days thereafter;[195]

(13) Inclusion of a three-month period for a carrier to bring an indemnification or contribution claim against another party; and allowing one year to file an arbitration claim following delivery;[196]

(14) Invalidating any prior covenants providing a choice of foreign forum for litigation if goods originated or passed through the United States;[197]

(15) There is no liability for delay in delivery of goods.[198]

The MLA proposal attempts to strike a compromise between carrier and shipper interests. To date, there has been no formal action taken on the MLA's proposal.

IV. INCONSISTENT POSITIONS OF VARIOUS U.S. SHIPPING INTERESTS

Although the United States government has signed both the Hague-Visby Amendments and the Hamburg Rules, neither has been ratified by the United States.[199]

During the mid-1970's, a dramatic reversal of positions took place between carrier and shipper interests.[200] Partly out of concern for the evolving Hamburg Rules, the shipowners and MLA changed their views on Hague-Visby, viewing Visby as a "positive contribution to international maritime law".[201] Shippers, on the other hand, abandoned their previously strong support for Hague-Visby and quickly embraced the unfolding Hamburg Rules.[202] Although the shippers and carriers have completely switched interests, the controversy continues between the two groups at an almost identical level of intensity.[203]

Currently, shipowners and cargo underwriters support Visby but not Hamburg, while shippers largely support Hamburg. In response to this controversy the United States suggested a potentially acceptable compromise.[204] The compromise, known as the "trigger approach," was created by the government with the hope that a package arrangement could be transmitted to the Senate, requesting the Senate's advice and consent for the ratification of both Visby and Hamburg.[205] Neither side has been willing to change its position significantly.[206]

The "trigger approach" was first proposed in 1978 in expectation that the Hamburg Rules would be ratified at a later date.[207] In 1988, the United States Department of Transportation had sought to achieve a compromise by developing a "trigger mechanism," whereby the United States would ratify the Visby Protocol immediately and commit itself to adopting the Hamburg Rules when a substantial proportion of U.S. trade involved countries enacting Hamburg.[208] To date, the trigger approach has been unacceptable to a majority of all of the commercial interests.[209] Carriers, carrier insurers and cargo insurers will not compromise on the Hague-Visby system, and shippers adamantly oppose Visby unless it leads to Hamburg. The situation creates a classic stalemate causing governmental inaction until the maritime industry can solve its own problems.[210]

Nevertheless, the opposing shipping interests have voiced different theories and arguments on key issues for supporting the particular regimes. The following subsection discusses the differing opinions on key issues.

A. The Seventeen Defenses

Carriers maintain that the Hague-Visby approach is appropriate, noting that most of the seventeen defenses are implicitly "retained anyway" in the Hamburg regime.[211] However, carriers feel that Hamburg's rephrasing of multiple defenses into the three generalized defenses is a giant step backward in legal process. Carriers view Hamburg as only creating vagueness and inconsistency in the law on their available defenses.[212]

Shippers, in contrast, see the change in Hamburg on these defenses as a positive

move, and as more properly placing the risks of loss upon the carrier where it is negligent.[213] In any event, shippers contend, the Hamburg Rules do not really abolish the entire list of carrier defenses, but rather effectively leave all defenses intact except for "nautical fault."[214]

While the rhetoric of the respective interests concerning the "17 versus 3 defenses" debate might sound similar in substance, their ultimate goals for enactment of opposing legal regimes remain steadfast.

B. Nautical Fault Exemption

Carriers view the exemption of nautical fault as an important device of risk distribution among insurers in major casualties.[215] It works to spread loss among numerous underwriters, with little effect on the world's cargo premiums. In any event, carriers

maintain that the "nautical fault" defense is unimportant in the vast, routine majority of claims, but potentially important in major casualties such as collisions, strandings or fires.[216]

In contrast, shippers feel there is no justification for the "nautical fault" defense.[217] Shippers argue that in the contemporary times of advanced telecommunications, where shipowners can maintain constant verbal and visual contact with its captains and crews, the historic rationale of the shipowner's inability to control its vessel at sea no longer exists.[218] This defense, the shippers maintain, has succeeded in permitting carriers to

evade liability on the high seas. It is an embarrassment to exonerate a carrier based upon a showing of negligence, and unfair to make the shipper pay for established nautical or managerial negligence on the part of the carrier and/or its management and agents.[219]

C. Burden of Proof

Carriers maintain that there is not really any shifting of the burden of proof under Hamburg, other than as a result of vague draftsmanship of the shipowner's defense. It may be, carriers argue, that the carrier has that heavier onus only due to the burden of resolving that "vagueness" of the defense.[220]

Shippers feel that existing cargo liability laws unfairly place major risks of loss on cargo owners, and that Hamburg properly shifts that risk.[221]

D. Delay

Carriers argue that damages for unreasonable delay are nonetheless recoverable under present law, and that Hamburg merely limits damages for delay.[222] Shippers disagree, contending that Hamburg properly allows for 2.5 times the freight charges.[223]

E. Package Limitation and Increase In Liability Limits

Carriers maintain that, in the end, all costs fall back upon the shippers of cargo, who have to pay their own insurance premiums, and ultimately the carrier's premiums and liabilities, through freight rates.[224] Even though increased recovery limits might be a gain for individual shippers, it would not be a gain for shippers as a class.[225]

Regarding the per-package definition, and the effect of containerization, carriers contend that in the United States the law has become substantially settled through litigation.[226]

Shippers believe that higher liability limits should result in a substantial reduction in their cargo insurance premiums.[227] It is equitable to shift the risks to shipowners who have direct control over the degree of protection to cargo in transit.[228] Shippers contend a specific provision defining "package" is necessary, in view of the containerization age.[229]

F. Deck Carriage

According to carriers, under existing law, carriage on deck of containerized cargo provides at least as much protection to shippers as would be provided by the Hamburg Rules.[230] Responding, shippers maintain that containership operators should not have to fear that their storage on-deck would not be considered, in accordance with the usage of the trade.[231]

G. Uniformity of Law and Increased Litigation

Carriers state that the Hamburg Rules are inconsistent, unclear and confusing, and replacing the Hague Rules will create another half century of litigation to interpret the new treaty.[232] To the contrary, shippers maintain that the Hamburg Rules will result in less litigation due to removal of the nautical fault defenses, the introduction of the "presumed fault" standard, and increased time limits.[233] Extensive litigation is not required, shippers argue, to determine what the Hamburg standard of liability

means.[234] Comparing the Hamburg standards to those of the Warsaw Convention, shippers comment that no oppressive litigation or claims payments have been reported.[235]

H. Economic Implications of the Two Regimes

Carriers maintain that adoption of the Hamburg Rules would necessarily lead to higher cost, both in the short term and the long run.[236] In contrast, shippers argue that Hamburg results in lower costs for shippers by eliminating double insurance on the same risk.[237] But after five years of futile searches for reliable data, the effort to resolve the economic argument had to be abandoned, as neither economic proposition was provable to its opposition.[238]

As the conflict was summarized in 1992 by Professor Joseph Sweeney of Fordham Law School:

> Because theoretical positions for or against the alternative solutions are wedded to economic self-interest we have reached the point where organized shippers (something hardly possible before changes in the antitrust law in 1984) and organized carriers (carriers have always been very effectively organized) are glaring at each other and saying NEVER. The voice of the insurance industry is also not heard as the voice of experience but rather the voice of self interest as P&I clubs—responsive to their shipowner members' concerns—and cargo insurers—forced to justify their continued existence—have been unable to present a convincing rationale for doing nothing.[239]

V. ENACTMENTS THROUGHOUT THE WORLD

The Hague-Visby Amendments have been adopted by most of the United States'

trading partners.[240] These include such commercial allies as Australia, Canada, Japan, Belgium, China, Denmark, France, Germany, Hong Kong, Italy, Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom—an estimated 63.9% of U.S. trade.[241]

Adherents to the Hamburg Rules to date amount to twenty-two nations. These are generally developing nations with an import-export focus, whose trade is estimated at less than 2% of total U.S. trade.[242] Shipowning interests often criticize the Hamburg Rules for being adopted by a minuscule portion of the world's foreign traders, with no major commercial power adopting the rules.[243] However, as Professor Sturley comments, the United States action regarding the Hamburg rules could change this perception because United States' adoption of the Hague Rules was a major factor in their gaining wide-spread international acceptance.[244]

Some U.S. trading partners have compromised with variations of the "trigger approach," ratifying Hague-Visby immediately and adopting the Hamburg Rules at a later time. For example, Australia has enacted its Carriage of Goods by Sea Bill of 1991 under which the Visby Amendments were ratified immediately, with automatic adoption of the Hamburg Rules in three years.[245]

In 1993, Canada enacted its Carriage of Goods by Water Act, implementing the 1968 Visby Amendments and the 1979 Special Drawing Rights Protocol immediately.[246] The law also includes provisions for future adoption of the 1978 Hamburg Rules.[247] The Act will require the Minister of Transport to conduct a review within five years to determine whether the Hague Visby Rules should be replaced by the Hamburg Rules.

Thus the Act allows Canada to implement new liability rules as Canada's trading partners adopt these conventions. The Minister referred to this Act as "a staged approach with respect to the two international conventions."[248] Canada naturally would like to move in concert with the United States because the United States is Canada's second largest trading partner in terms of waterborne trade.[249]

Most recent enactments of Hague-Visby by other countries have included custom-tailoring in the domestic legislation.[250] Some state have adopted, and other states are adopting, laws that combine elements from the Hague regime and the Hamburg Rules. These "tailored" laws, however, combine the two regimes but do not follow a uniform approach.[251]

New Zealand, the most recent Hague-Visby adherent, took such liberties, including a particularly well-drafted definition of the carrier that may fit in well with U.S. efforts.[252] Korea also took liberties with Hague-Visby.[253]

A. The Scandinavian Maritime Codes

In the most radical departure to date, the Scandinavian countries have incorporated much of the Hamburg Rules in their version of Hague-Visby.[254] Even the Scandinavian countries, with their long history of supporting international uniformity in this field, have adopted legislation effective October 1, 1994 that strikes a compromise between Hague-Visby and the Hamburg Rules.[255]

Finland, Norway, Sweden and Denmark believe that the Hamburg Rules look to the future, and are implementing as much of the Hamburg Rules in the new legislation as is

allowed by Hague-Visby.[256] The legislation is expected to give rise to many conflicts and much uncertainty in the industry.[257] The major changes in the new Scandinavian codes include the following:

(1) The "tackle-to-tackle" principle of Hague-Visby is abandoned.[258] The carrier will no longer be allowed to exclude liability for damage to or loss of the goods occurring at the loading port, before the goods pass the ship's rail, or at the unloading port after passing of the rail. The carrier will be liable for the load as long as it is in charge of the goods at the port of loading, during the carriage and at the port of discharge. In other words, the Scandinavian countries have adopted the compulsory period of responsibility of the Hamburg Rules, which cannot be contracted out of.[259]

(2) The Scandinavian countries also give up the catalogue of defenses available to the carrier in the Hague-Visby Rules.[260] Instead, the carrier must prove that its servants and agents took all measures that could reasonably be required to avoid the damage in order for the carrier to avoid liability for damage to the goods whilst they were in its charge.[261] This rule has also been picked from the Hamburg Rules, but unlike the Hamburg Rules, the Scandinavian countries will continue to keep the carrier's defenses in respect of fire and navigational mismanagement of the ship.[262]

(3) The carrier can no longer exclude liability for damage of or loss to live animals.[263]

(4) The carrier will no longer be allowed to exclude liability for loss of or damage to deck cargo, and cargo may only be carried on deck under very special circumstances. If the carrier carries a cargo on deck in breach of an express agreement with the shipper to carry it below deck, the carrier will lose its right to limit its liability.[264]

(5) The new Codes maintain the limitation amounts of the Hague-Visby Rules for damage to or loss of the goods. The carrier may limit its liability to 2 SDR per kilogram of the goods or to 667.67 SDR per package, whichever is the higher amount.[265]

(6) The Scandinavian Codes also adopt the jurisdiction and arbitration provisions of the Hamburg Rules, ensuring a plaintiff that it can always commence proceedings in a minimum number of places: (a) where the defendant has its principal place of business; (b) where the transport agreement was entered into; or (c) where the goods were taken over or delivered by the carrier.[266]

B. The Chinese Maritime Code

The People's Republic of China has also enacted legislation which combines

characteristics of both Hague-Visby and the Hamburg Rules.[267] Attempting to follow those principles recognized internationally in the shipping world in its 1993 Maritime Code, China primarily tailored carriers' main responsibilities upon the Hague-Visby Rules, but also adopted significant portions of the Hamburg Rules.[268] The significant provisions of the new Chinese act are as follows:

(1) The law adopts the Hamburg definitions of "carrier," to include both contracting carrier and the actual carrier;[269]

(2) Modified from the Hamburg Rules, the carrier has responsibility over goods in containers from time of receiving the goods at port, until time of delivery at the port of discharge. With non-container goods, the carrier is responsible from the time of loading until the time of unloading, derived from Hague-Visby.[270]

(3) The carrier is liable to the shipper for delay as per Hamburg, but damages are limited to the (actual) freight payable for the goods delayed.[271] (The Chinese enactment does not provide the 2 1/2 times enhancement factor as in Article 6(1)(b) of the Hamburg Rules);

(4) Following the SDR Protocol of Hague-Visby, the carriers' liability for loss or damage to goods is 666.67 SDRs, or 2 units of account per kilogram, whichever is higher.[272]

(5) Twelve (12) defenses to carrier liability are maintained in the new Chinese code, derived from the 17 exceptions of the Hague Rules. Notwithstanding, as provided in the Hamburg Rules, the carrier shall bear the burden of proof for these defenses.[273]

(6) The carrier is liable for loss or damage to deck cargo, unless the shipper had contractually agreed to deck carriage beforehand. This provision is derived from Article 9 of Hamburg.[274]

VI. WHAT SHOULD THE UNITED STATES PURSUE FOR A NEW LEGAL REGIME?

Though having served shipping and international trade well for years, the Hague/COGSA regime is now substantially outdated.[275] It was designed for marine transportation existing before the late 1920s, and is unsuitable for entry into the twenty-

first century.[276] The original drafters of the Hague Rules could not have possibly anticipated the electronic data revolution, advanced satellite telecommunications, the containerization age, the elimination or reduction of most tariffs on trade, the world's emergence into a global economy with GATT and NAFTA, or the proliferation of international ocean transport of goods.

The United States can no longer proceed under an outmoded legal system for liability determination. Shipper and carrier interests, by necessity, must be prepared to make compromises for this purpose. With the significant growth of ocean shipping as discussed above, an increase of cargo claims and litigation will be handled within an ancient system that is unprepared to efficiently, fairly and effectively resolve these disputes.

Despite an abundance of theories from all concerned commercial interests expressing many different scenarios and points of view, the current legal and judicial framework cannot properly deal with ever-increasing cargo damage disputes. Fault, or lack of it, is often factually difficult to establish. Once effective legal guidelines are clearly established, there should be less occasions for litigation. It is extremely difficult, expensive and time consuming to litigate or arbitrate disputed facts and legal issues, especially under antiquated laws that do not take into account many of the key developments in contemporary ocean shipping.

Due to the strongly opposing sentiments of carrier and shipper interests, it is doubtful that Congress will ever have the impetus to enact either the Hague-Visby or the Hamburg regime. Nevertheless, all shipping interests agree that devising a new legal regime is

essential.

What type of liability scheme would be fair, realistic and serve the better long-term interests of American society? In this regard, there is no reason why the United States is constrained to rigidly adopt either Hague-Visby or the Hamburg Rules *in toto*, without exploring combinations, compromises and other alternatives. If substantive variations of these rules are contemplated, it would be necessary for the United States to denounce the particular compact being revised.[277] In addressing these issues, various policy factors should be considered.

A. World Uniformity

It would serve the future international trade community to promote a new legal regime upon the framework of the Hague-Visby Amendment with its SDR Protocol. As most of the industrialized world and trading nations have gravitated towards Hague-Visby, there are strong considerations for proceeding in that direction. However, the Hamburg Rules have some attractive attributes as well. The Scandinavian countries and China seem to have reached an equitable balancing of interests between carriers and shippers.

B. Strong U.S. Flag Fleet

National merchant fleets not only contribute to the prestige of countries that sponsor them, but are also viewed as essential to protecting national security and guaranteeing unimpeded access to international markets on reasonable terms. A distinguishing feature

of the ocean shipping industry is the over-arching presence of government intervention to support national fleets.[278] A basic goal of the U.S. Shipping Act of 1984 is to preserve and encourage the development of an economically sound and efficient U.S. flag-liner fleet capable of meeting national security needs.[279] In 1992 U.S. Representative Walter Jones had expressed his view that there are many policy problems facing the U.S. maritime industry; he perceived many of them as exacerbated by wrong governmental policies.[280]

An important factor that must be considered is the survival of the U.S. flag fleet. However, for different reasons, the U.S. flag fleet has experienced a marked decrease in the number of American-flagged carriers since 1984. Regrettably, this trend is continuing.[281]

In response to 1992 reports that two of our largest liner companies would leave the U.S. flag and possibly change their corporate status by 1995, U.S. Representative Robert W. Davis noted that the liners' decision would be based upon many factors—but principally center around their need to be competitive in the world market.[282] He stressed the importance of a continued and significant presence of a U.S. flagged, U.S. owned and U.S. crewed liner operation. Even the shippers, Congressman Davis maintained, would regret the day when no U.S. carriers were at the table. To prevent the loss of our U.S. flag fleet, he suggested that we revisit regulatory and economic approaches and maintain a delicate balance between the carriers and shippers.[283]

On this note, a strict Hamburg regime, expected to "provide for an increase in carrier liability,"[284] would not be a source of encouragement for a U.S. flag fleet. It is in the

better national interests for the United States to pursue a more balanced approach to risk allocation.

C. Compromise On The "Nautical Fault" Defense

Undoubtedly one of the major sources of controversy between shippers and carriers is the "nautical fault" defense, effectively exonerating shipowners from the negligence of their captains and crew in the navigation and management of the ship. The nautical fault defense is at odds with traditional American tort concepts, as well as the liability laws governing the trucking and railroad companies.

As Roger Wigen testified in 1992 before the House Subcommittee on Merchant Marine, on behalf of the National Industrial Transportation League (a shipper's organization):

> The world has changed a great deal since the Hague Rules were adopted in 1924. Wooden ships have given way to highly automated steel ships. Marconi's wireless has been replaced with satellite communications. Gangs of longshoremen lifting loads of breakbulk cargo have yielded to conga lines of intermodal containers hoisted aboard ships by cranes. Isolated national economics now compete fiercely in global commerce. However, the laws governing international maritime cargo liability have failed to keep pace. They are tied to a philosophy which believes a carrier has no liability for cargo once a seaworthy ship leaves port, even if the captain and/or crew are guilty of negligence. These laws accept the premise that once at sea, the carrier has no control over its captain and crew. While this may have been true in the first third of the century, it certainly is not true today. Telecommunications advances allow a maritime liner carrier to have as much control over its crew as do trucking and railroad companies.[285]

The "nautical fault" defense should be revised, as its historic rationale has been virtually eliminated and the exemption is inconsistent with modern tort liability concepts.

The shipowner's non-control over his vessel, captain and crew while out at sea has diminished. Satellite telecommunications and other advanced technologies enable the shipowner to continuously monitor and control the operation of his vessels through regular verbal, visual and radar communications.

As there may be certain situations in which the historic rationale for the nautical fault defense would still be applicable, a fair and logical compromise might be reached on this issue. Circumstances may exist where the shipowner is unable to exercise reasonable control over his vessel, captain and crew, or where the shipowner was unaware of facts and circumstances leading to the negligence of his captain and crew in their operation and management of the vessel. For example, evidence showing an unexpected technical break in communications preventing conveyance of a shipowner's directions to his captain or crew, or a shipowner's lack of knowledge of their negligent propensities due to concealment, might suffice to establish the defense.

Thus, rather than maintain a complete exemption, a qualified nautical fault defense would be equitable to both sides of the debate, yet still retain the nautical faults traditional rationale. The shipowner should have the burden of presenting evidence to establish his lack of control or lack of knowledge of facts under these circumstances. Section 1304(2)(a) of COGSA might be revised as follows to effect this compromise:

> (2) Neither the carriers nor their ship shall be responsible for loss of damage arising or resulting from—
>
> (a) Act, neglect or default of the master, mariner, pilot or the servants of the carrier in the navigation or in the management of the ship, if the shipowner could not reasonably control such conduct of the carrier's master, mariner, pilot or servants, or the shipowner did not know and

could not have reasonably known of facts and circumstances leading to such act, neglect or default of the carrier's master, mariner, pilot or servants.[286]

D. An Effective & Economical Loss Compensation System

The interests of a commercial society are better advanced with a strong first-party claims resolution system, primarily reliant on cargo damage coverage. Once damage to freight is shown to be a covered loss, a shipper's own cargo insurer will routinely investigate and evaluate the claim and promptly compensating the shipper. It can be expected to be a relatively quick process. A cargo insurer can always pursue contribution, indemnification and/or subrogation against any other responsible party, including the carrier. Hague-Visby seems to allocate the greater risks of loss upon the shipper, essentially furthering a strong first-party indemnity system. In contrast, the Hamburg Rules create a new regime of third party rights and remedies against the carrier, shifting somewhat to a third-party recovery process.

Despite the shift of risk in the Hamburg Rules favoring shippers, it is the shipper that may ultimately pay for the loss. Even if the Hamburg Rules are adopted in the United States, there would not be elimination of the need for cargo damage insurance for the shipper.

Cargo insurance, unlike shipowners' protection and indemnity insurance, is a form of property insurance ordinarily paid promptly on proof of loss, without regard to liabilities which may be the subject of later disputed claims. This feature in itself is of great value to cargo owners, who are unlikely to give it up for the privilege of pursuing third-party claims dependent the proof of liability under new, unclear and controversial rules, with a

new network of claims agents responsible mainly to foreign protection and indemnity underwriters.[287]

In any event, a maritime attorney expressed a view not long ago that "the whole issue is a red herring, because no matter who buys coverage, shippers end up paying the premium. Increasing liability may be shrewd public relations [for the carrier], but it is an essentially meaningless gesture . . . because increased premiums will eventually be passed along to the shipper."[288] According to that maritime attorney, the party in the best position to purchase cargo insurance is the shipper, because only the shipper has certain knowledge of what is being shipped.[289] Thus, it might be that shippers and carriers really have little in substance to argue about anyway.

VII. CONCLUSION

The United States is the world's largest trading nation, with international trade approaching almost $1 trillion annually. The importance of ocean transportation to U.S. foreign trade is great, as approximately half of that trade consists of cargo carried by liner vessels.

The emergence of the United States into the global economy of the 21st century with

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[7] Robert Rendell. Report on Hague Rules Relating to Bills of Lading. 22 INT'L LAW. 246. 247 (1988) [hereinafter ABA Reports].

[8] Id. Return to text.

[9] Id.

[10] Gerard Verhaar. Which Rule Is Best For You?. 36 AM. SHIPPER 44 (1994).

[11] ANDREW H. CARD. JR.. U.S. SECRETARY OF TRANSPORTATION. REPORT TO THE PRESIDENT AND CONGRESS OF THE ADVISORY COMMISSION ON CONFERENCES IN OCEAN SHIPPING 17 (1992) [hereinafter CARD REPORT].

[12] Sweeney. supra note 1. at 512.

[13] See CARD REPORT. supra note 11. at 17.

[14] Id.

[15] Id.

[16] Id. at 9.

[17] Id.

[18] Id.

[19] Id.

[20] Id. at 17.

[21] Certain ores. grains and wood products cannot be shipped via containers and must be shipped breakbulk. Additionally. certain cargoes must be shipped in refrigerated container facilities. Also. wheeled cargo trailers. containers with chassis. and self-propelled equipment which can be driven onto and off a vessel over ramps are transported by roll-on/roll-off (ro/ro) vessels. Ro/ro vessels are often used to transport automobiles. CARD REPORT. supra note 11. at 52 n.3.

[22] See supra note 21.

[23] Gary Yerkley. Senate Approves GATT Trade Bill 76-24. Clearing Way for WTO Early Next Year. 11 Int'l Trade Rep. (BNA) 1874 (1994); House. Senate Conferees Complete Work on GATT Bill. 11 Int'l Trade Rep. (BNA) 1470 (1994); see also 11 Int'l Trade Rep. (BNA) 610 (1994).

[24] Gary Yerkey. U.S. Companies Say GATT Trade Pact Will Boost Business. Jobs for Decades. 11 Int'l Trade Rep. (BNA) 1876 (1994).

[25] Sutherland Says Uruguay Round Income Benefits to Top $500 Billion by 2005. 11 Int'l Trade Rep. (BNA) 1533 (1994).

[26] Report Says Uruguay Round Pact Will Boost World Income $510 Billion. 11 Int'l Trade Rep. (BNA) 1757 (1994).

[27] Jay L. Camillo. Mexico: NAFTA Opens Door to U.S. Business. 115 BUS. AM. 14 (Mar. 1994).

[28] Bill Richardson. With NAFTA. Opportunities Will Be Bright for U.S. Business. 7 HISPANIC 132

(1994).

[29] NAFTA Opens a New Era. 82 NATION'S BUS. 24 (1994).

[30] Yerkley. supra note 23. at 1874.

[31] "Testimony February 7. 1995 Erik Stromberg. President. American Association of Port Authorities. House Transportation Water Resources and Environmental Water Resources Development Act," FEDERAL DOCUMENT CLEARING HOUSE CONGRESSIONAL TESTIMONY (Feb. 7. 1995) [hereinafter Stromberg].

[32] Reversal of Fortunes for Liner Industry. BUS. TIMES. May 5. 1994 (Shipping Times Section). at 18.

[33] Suzanne W. Sun. As Tariffs Fall. Cargo Rises. BALTIMORE SUN. Jan. 1. 1995. at 2. Report Forecasts Port Volumes Will Double Over Next 20 Years. NEWS TRIBUNE. Mar. 4. 1995. at B4.

[34] Stromberg. supra note 31.

[35] Id.

[36] James R. Norman. Transport. FORBES. Jan. 2. 1995. at 194.

[37] Moneyline: Analysts Worry As Manufacturers Move Jobs Overseas (CNN television broadcast, Nov. 4, 1994); Intermodal is defined as "[o]f the conveyance of goods: making use of differing modes of transport during the journey between the place of dispatch and the destination." OXFORD ENGLISH DICTIONARY 1120 (2d ed. 1989).

[38] ERIC FLETCHER. THE CARRIER'S LIABILITY 36-37 (1932).

[39] Id.

[40] Id.

[41] Id.

[42] Id.

[43] Id. at 96-97. Carriers were held liable because they could best take precautions against such loss.

[44] Id. at 51. 88.

[45] Id. at 51.

[46] Id. at 51. 88.

[47] Id. at 99-100.

[48] Michael F. Sturley. Basic Cargo Damage Law: Historic Background. 2A BENEDICT ON ADMIRALTY 2-1 to 2-3 (1995) [hereinafter Sturley, Basic Cargo Damage Law].

[49] Michael F. Sturley. 1 THE LEGISLATIVE HISTORY OF THE CARRIAGE OF GOODS BY SEA ACT 3-4 (1990) [hereinafter Sturley, LEGISLATIVE HISTORY]. The four excepted causes include an act of God, an act of public enemies, shipper's fault, or inherent vice of the goods.

[50] Sturley, Basic Cargo Damage Law. supra note 48. at 2-1 to 2-2; see also A. KNAUTH, THE

AMERICAN LAW ON OCEAN BILLS OF LADING 116 (4th ed. 1953).

[51] Sturley, LEGISLATIVE HISTORY, supra note 49, at 3; see also COLINVAUX, THE CARRIAGE OF GOODS BY SEA ACT, 1924 at 1 (1954).

[52] Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-2.

[53] Id. at 2-2 to 2-3.

[54] Benjamin Yancey, The Carriage of Goods: Hague, COGSA, Visby and Hamburg, 57 TUL. L. REV. 1238, 1240 (1983).

[55] Id.

[56] Sturley, Basic Cargo Damage Law, supra note 48, at 2-3.

[57] Id.

[58] Sturley, LEGISLATIVE HISTORY, supra note 49, at 4.

[59] Id.

[60] Id. Specific exceptions included an act of God; fire; arrest and restraint of princes, rulers and people; and certain damages arising from the nature of the goods shipped or insufficiency of the packages.

[61] Id.; see also supra part II.C. (describing the Hague Rules).

[62] Yancey, supra note 54, at 1239.

[63] Id.

[64] Id. at 1240.

[65] Sturley, LEGISLATIVE HISTORY, supra note 49, at 5.

[66] Yancey, supra note 54, at 1240-41. The Harter Act of 1893 is found at 46 U.S.C. §§ 190-196.

[67] Sturley, Basic Cargo Damage Law, supra note 48, at 2-5; see also In re Ballard Shipping Co., 823 F. Supp. 68, 71 n.2 (D.R.I. 1993).

[68] Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-5.

[69] 46 U.S.C. app. § 190 (1988).

[70] 46 U.S.C. app. § 191 (1988); Yancey, supra note 54, at 1241.

[71] 46 U.S.C. app. § 192 (1988).

[72] Cargo Liability and the Carriage of Goods by Sea Act (COGSA): Oversight Hearing Before the Subcomm. on Merchant Marine of the House Comm. on Merchant Marine and Fisheries, 102d Cong., 2d Sess. (1992) (statement of Roger Wigen of 3M Corporation) [hereinafter Oversight Hearing].

[73] 46 U.S.C. app. § 192 (1988); see also Sturley, Basic Cargo Damage Law, supra note 48, at 2-5.

[74] Yancey, supra note 54, at 1241.

[75] Sturley, Basic Cargo Damage Law, supra note 48, at 2-5.

[76] Yancey, supra note 54, at 1241.

[77] ABA Reports, supra note 7, at 248.

[78] Id.

[79] DUBLIN STATIONERY OFFICE, INT'L CONF. IN MARITIME LAW, INT'L CONVENTION FOR THE UNIFICATION OF CERTAIN RULES OF LAW RELATING TO BILLS OF LADING (1994).

[80] UNCTAD, THE ECONOMIC AND COMMERCIAL IMPLICATIONS OF THE ENTRY INTO FORCE OF THE HAMBURG RULES AND THE MULTIMODAL TRANSPORT CONVENTION 8-9 (New York 1991).

[81] Id.

[82] Id.

[83] See ABA Reports, supra note 7, at 248.

[84] Sturley, Basic Cargo Damage Law, supra note 48, at 2-18.

[85] Id. at 2-19.

[86] Id. at 2-20.

[87] 46 U.S.C. app. § 1300 et. seq.

[88] See REPORT FROM HOUSE MAJORITY AND MINORITY STAFF TO MEMBERS OF HOUSE SUBCOMMITTEE ON MERCHANT MARINE REGARDING OVERSIGHT HEARING ON CARGO LIABILITY LAWS 2 (June 23, 1992) [hereinafter HOUSE STAFF REPORT].

[89] Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-20.

[90] Yancey, supra note 54, at 1244.

[91] Id.; see also 46 U.S.C. app. § 1301 (1988).

[92] See HOUSE STAFF REPORT, supra note 88, at 3.

[93] Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-20.

[94] 46 U.S.C. app. §§ 1303(1)-(2), 1304(1) (1988).

[95] See Yancey, supra note 54, at 1244. COGSA effectively reverses the previous rule set forth in May v.
Hamburg-Amerikanishe, 290 U.S. 333 (1933), in which the Supreme Court held that there need not be a causal connection between the lack of due diligence, unseaworthiness and damage for liability to be imposed on the carrier.

[96] 46 U.S.C. app. § 1304 (1988); see also HOUSE STAFF REPORT, supra note 88, at 3.

[97] 46 U.S.C. app. § 1304 (1988).

[98] Id. app. § 1304(5).

[99] Id. app. § 1303(8)

[100] A 40-foot shipping container can carry goods worth hundreds of thousands of dollars. See Paul S. Edelman, Proposed Changes for Cargo Liability, N.Y.L.J., August 7, 1992, at 3.

[101] See HOUSE STAFF REPORT, supra note 88, at 4; c.f. Inter-American Foods, Inc. v. Coordinated Caribbean Transp., 313 F. Supp. 1334 (S.D. Fla. 1970) ($500 "per package" limitation applied to each of a number of cartons of shrimp loaded into a trailer); Standard Electrica S.A. v. Hamburg SudAmerikanische Dampfschiltfahrts-Gesellschaft, 375 F.2d 943 (2nd Cir. 1967) (each pallet containing cartons of expensive electrical parts constituted a "package").

[102] 46 U.S.C. app. § 1303(6) (1988).

[103] Id.

[104] Id. app. § 1303(8).

[105] HOUSE STAFF REPORT, supra note 88, at 4.

[106] Sturley, Basic Cargo Damage Law, supra note 48, at 2-22.

[107] Id.

[108] Yancey, supra note 54, at 1246. COGSA was ratified by the United States in the late 1930's, and subsequently ratified by almost all nations.

[109] Id. at 1246-47.

[110] ABA Reports, supra note 7, at 248-49; see also HOUSE STAFF REPORT, supra note 88, at 4.

[111] Edelman, supra note 100.

[112] Id.

[113] PROTOCOL TO AMEND THE INTERNATIONAL CONVENTION FOR THE UNIFICATION OF CERTAIN RULES OF LAW RELATING TO BILLS OF LADING (February 23, 1968) [hereinafter Hague-Visby Amendment].

[114] HOUSE STAFF REPORT, supra note 88, at 4.

[115] Id.

[116] Hague-Visby Amendment, supra note 113, art. 1; see also Yancey, supra note 54, at 1248-49.

[117] Edelman, supra note 100.

[118] Statement of George F. Chandler, III, for Maritime Law Association, reprinted in Oversight Hearing, supra note 72, at 8.

[119] See Oversight Hearing, supra note 72, at 58.

[120] Sturley, Basic Cargo Damage Law, supra note 48, at 2-23.

[121] Id.

[122] Verhaar, supra note 10.

[123] See Daval Steel Products v. M/V Acadia Forest, 683 F. Supp. 444 (S.D.N.Y. 1988); Francosteel Corp. v. M/V Deppe Europe, 1990 AMC 2967 (S.D.N.Y. 1990); and Uhl-Baumaschinen GmbH v. M/V Federal Seaway, 1990 U.S. Dist. LEXIS 91908 (S.D.N.Y. 1990).

[124] Allan I. Mendelsohn, Why the U.S. Did Not Ratify the Visby Amendments, 23 J. MAR. L. & COM. 29, 40 (1992).

[125] Id.

[126] Id.

[127] Id.

[128] Id. at 41.

[129] Id. at 42.

[130] Id.

[131] Id. at 45.

[132] Id. at 51.

[133] Cf. Peter H. Pfund, International Unification of Private Law: A Report on United States Participation, 1985-86, 20 INT'L LAW 623, 625 (1986).

[134] Mendelsohn, supra note 124, at 30, 51-52.

[135] HOUSE STAFF REPORT, supra note 88, at 4.

[136] PROTOCOL AMENDING THE INTERNATIONAL CONVENTION FOR THE UNIFICATION OF CERTAIN RULES OF LAW RELATING TO BILLS OF LADING (Dec. 21, 1979).

[137] Edelman, supra note 100, at 3.

[138] Id.

[139] See HOUSE STAFF REPORT, supra note 88, at 4.

[140] Edelman, supra note 100 at 3.

[141] See HOUSE STAFF REPORT, supra note 88, at 4; Yancey, supra note 54, at 1249-50.

[142] Yancey, supra note 54, at 1249-50.

[143] HOUSE STAFF REPORT, supra note 88, at 5.

[144] See "Background Paper by the U.S. Department of Transportation," June 24, 1992, reprinted in Oversight Hearing, supra note 72, at 125; "Testimony on Behalf of the Transportation Claims and Prevention Council, Inc. on Oversight on Cargo Liability," June 24, 1992, reprinted in Oversight Hearing, supra note 72, at 124-25.

[145] DOT Paper, Oversight Hearing, supra note 72, at 124-25.

[146] George Chandler, Memorandum: Re: International Uniformity of Law, 1 (August 19, 1994).

[147] HOUSE STAFF REPORT, supra note 88, at 4.

[148] Hugh Kindred, New and Improved? The UNCTAD/ICC Multimodal Rules Reviewed, 33 TRANSP. J. 5 (1994).

[149] ABA Reports, supra note 7, at 250.

[150] INT'L CHAMBER OF COMM., UNIFORM RULES FOR A COMBINED TRANSPORT DOCUMENT (1975).

[151] UNITED NATIONS CONF. ON A CONVENTION ON INT'L MUTIMODAL TRANSP., UNITED NATIONS (1980).

[152] INT'L CHAMBER OF COMM., UNITED NATIONS CONF. ON TRADE AND DEVELOPMENT, UNCTAD/INTERNATIONAL CHAMBER OF COMM. RULES OF MUTLIMODAL TRANSPORT DOCUMENTS (1992).

[153] Kindred, supra note 148.

[154] ABA Reports, supra note 7, at 250.

[155] Id.

[156] Id.

[157] UNCTAD, supra note 80, at 209.

[158] ABA Reports, supra note 7, at 250.

[159] See ABA Reports, supra note 7.

[160] E.J. Muller, Hamburg's Last Stand? Hamburg Rules: American Bar Association Recommends Ratification of Visby
Amendments, 86 CHILTON'S DISTRIBUTION 70 (1987).

[161] ABA Reports, supra note 7, at 246. Almost half of all ocean freight damage claims stem from on-dock handling. Id.

[162] Id. at 253.

[163] Id. at 254.

[164] Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-26.

[165] UNCITRAL, Status of the Hamburg Rules, U.N. Doc. A/CN.9/401/Add. 1, at 3-12 (U.N., May 13, 1994).

[166] Oversight Hearing, supra note 72, at 125; see also COGSA, 49 U.S.C. app. § 1301 (b) (1988).

[167] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 3 ¶ 11.

[168] Id.; see also Oversight Hearing, supra note 72, at 125.

[169] 46 U.S.C. app. § 1301(e) (1988); UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4

¶ 22; Oversight Hearing, supra note 72, at 125.

[170] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 3 ¶ 13.

[171] COGSA, 46 U.S C. app. § 1304(2) (1988).

[172] Id. app. §§ 1303-1304 (1988); UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4 ¶ 15; Oversight Hearing, supra note 72, at 126.

[173] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4 ¶ 15; Oversight Hearing, supra note 72, at 125.

[174] 46 U.S.C. app. § 1304(5).

[175] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4 ¶¶ 17-18; Oversight Hearing, supra note 72, at
126-27.

[176] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4 ¶ 16; Oversight Hearing, supra note 72, at 127.

[177] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4 ¶ 21; Oversight Hearing, supra note 72, at 127.

[178] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4 ¶ 21; Oversight Hearing, supra note 72, at 127.

[179] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4 ¶ 19; Oversight Hearing, supra note 72, at 126.

[180] UNCITRAL, Status of the Hamburg Rules, supra note 165, at 4 ¶ 20; Oversight Hearing, supra note 72, at 126.

[181] U.S. Maritime Lawyers Association, Proposed Carriage of Goods by Sea Act of 1995, app. 2 (1995) (changes to existing law).

[182] Cf. Sweeney, supra note 1, at 534.

[183] Id.

[184] U.S. Maritime Lawyers Association, supra note 193, at 13-14 (emphasis added).

[185] Id. at 14.

[186] Id. at 14-15.

[187] Id. at 15.

[188] Id. at 15-16.

[189] Id. at 16.

[190] Id.

[191] Id. at 2.

[192] Id. at 1.

[193] Id. at 18.

[194] Id. at 2.

[195] Id. at 11.

[196] Id.

[197] Id. at 21-22.

[198] Id. at 21.

[199] ABA Reports, supra note 7, at 249.

[200] Mendelsohn, supra note 124, at 52.

[201] Id.

[202] Id.

[203] Id. at 53.

[204] ABA Reports, supra note 7, at 251.

[205] Id.

[206] ABA Reports, supra note 7.

[207] See THE SPEAKERS' PAPERS FOR THE BILL OF LADING CONVENTION CONF. (Nov. 29, 1978) (Lloyd's of London Press).

[208] See Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-25 n.13.

[209] Id.

[210] See Sweeney, supra note 1, at 535.

[211] Position Paper of American Flag Ship Operators, reprinted in Oversight Hearing, supra note 72, at 234. The "nautical fault" defense is omitted.

[212] Id. at 233-35.

[213] Oversight Hearing, supra note 72, at 68 (shipper comments).

[214] Id.

[215] American Flag Position Paper, reprinted in Oversight Hearing, supra note 72, at 236-37.

[216] Id.

[217] Oversight Hearing, supra note 72, at 68-69 (shipper comments).

[218] See Statement of Roger Wigen of 3M Corporation, reprinted in Oversight Hearing, supra note 72, at 21-22.

[219] Id.

[220] American Flag Position Paper, reprinted in Oversight Hearing, supra note 72, at 239.

[221] Augello Testimony, reprinted in Oversight Hearing, supra note 72, at 101.

[222] American Flag Position Paper, reprinted in Oversight Hearing, supra note 72, at 246.

[223] Oversight Hearing, supra note 72.

[224] American Flag Position Paper, reprinted in Oversight Hearing, supra note 72, at 230.

[225] Id.

[226] Id. at 240.

[227] Augello Testimony, reprinted in Oversight Hearing, supra note 72, at 100-101.

[228] Id.

[229] Oversight Hearing, supra note 72 (shipper comments).

[230] American Flag Position Paper, reprinted in Oversight Hearing, supra note 72, at 23.

[231] Oversight Hearing, supra note 72, at 71 (shipper comments).

[232] American Flag Position Paper, reprinted in Oversight Hearing, supra note 72, at 71.

[233] Oversight Hearing, supra note 72, at 69 (shipper comments).

[234] Id.

[235] Id.

[236] See John C. Moore, The Hamburg Rules, 10 J. MAR. L. & COM. 1 (1978); see also Sweeney, supra note 1, at 530; George Chandler, A Comparison of COGSA, the Hague-Visby Rules and the Hamburg Rules, 15 J. MAR. L. & COM. 233, 237 (1984).

[237] See Sweeney, supra note 1, at 531.

[238] Id.

[239] Joseph C. Sweeney, The Uniform Regime Governing the Liability of Maritime Carriers, ENTE COLOMBO '92: CURRENT ISSUES IN MARITIME TRANSPORTATION 13 (Genoa, June 25, 1992), reprinted in Oversight Hearing, supra note 72, at 155-56.

[240] Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-23.

[241] See Oversight Hearing, supra note 72, at 42-44.

[242] Id. at 40.

[243] E.g., Statement of American Institute of Marine Underwriters, reprinted in Oversight Hearing supra note 72, at 55.

[244] Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-24.

[245] See 1991 AUSTL. ACTS 160 (Oct. 31, 1991). As of this writing, Australia has not yet implemented the Hamburg Rules.

[246] See R.S.C., Ch. 21, (1993) (Can.) (Bill No. C-83).

[247] Id.

[248] Oversight Hearing, supra note 72, at 128.

[249] Id.

[250] Chandler, supra note 236, at 237.

[251] See UNCITRAL, Status of the Hamburg Rules, supra note 165, at 2.

[252] Chandler, supra note 236, at 237.

[253] Id.

[254] Id.

[255] See Sturley, Basic Cargo Damage Law, supra note 48, at pg. 2-26 n.19.

[256] See Scandinavian Codes, Ch. 13, On Carriage of General Cargo; see also Christopher Lowe, The Scandinavian Compromise Maritime Codes, LLOYD'S LIST, June 10, 1994, at 8.

[257] Lowe, supra note 256.

[258] Scandinavian Codes, supra note 256, at § 24.

[259] Id.; see also Lowe, supra note 256.

[260] Scandinavian Codes, supra note 256, § 25; see also Lowe, supra note 256.

[261] Id.

[262] Scandinavian Codes, supra note 256, § 26; see also Lowe, supra note 256.

[263] Scandinavian Codes, supra note 256, § 27; see also Lowe, supra note 256.

[264] Scandinavian Codes, supra note 256, § 34; see also Lowe, supra note 256.

[265] Scandinavian Codes, supra note 256, § 30; see also Lowe, supra note 256.

[266] Scandinavian Codes, supra note 256, §§ 60-61; see also Lowe, supra note 268.

[267] See Carriage of Goods by Sea, Chapter 4 of the Chinese Maritime Code (1993).

[268] Dongnian Yin, The Characteristics of the Law of Contract Relating to Carriage of Goods by Sea of the Chinese Maritime Code, 1993, reprinted in Conference Materials for the International Conference on

Maritime Law (Shanghai, Oct. 11, 1994) at 2-4.

[269] Carriage of Goods by Sea, Chapter 4 of the Chinese Maritime Code, art. 42 (1993).

[270] Id. art. 46.

[271] Id. arts. 50, 57.

[272] Id. art. 56.

[273] Id. art. 51.

[274] Id. art. 53.

[275] Oversight Hearing, supra note 72, at 127.

[276] Id.

[277] Cf. Sweeney, supra note 1, at 534.

[278] See CARD REPORT, supra note 11, at app. E-24.

[279] See Statement of U.S. Representative Walter B. Jones, reprinted in CARD REPORT, supra note 11, at 170.

[280] Id.

[281] See Statement of U.S. Representative William J. Hughes, reprinted in CARD REPORT, supra note 11, at 175.

[282] See Statement of Representative Robert W. Davis, reprinted in CARD REPORT, supra note 11, at 173-74.

[283] Id.

[284] Oversight Hearing, supra note 72, at 31.

[285] See Oversight Hearing, supra note 72, at 21-22.

286 See generally 46 U.S.C. app. § 1304 (1988) (codifying section 1304(2)(a) of COGSA). The text in italics represent the author's proposed revision of COGSA.

[287] American Flag Position Paper, reprinted in Oversight Hearing, supra note 72, at 254.

[288] Id.

[289] William Warren, Red Hot Issue or Red Herring? Legal Liability and Cost of Cargo Insurance, 34 AMERICAN SHIPPER 40 (1992).

achieve its goal of prompt and efficient assessments.[119] The Rule also promotes the active and early participation of responsible parties.[120] The trustee, however, has the discretion to determine the extent of the parties' involvement and the timing of the invitation to become involved, provided the responsible party is invited to participate before the trustee delivers the Notice of Intent.[121] To determine the extent of responsible party participation, the trustee must consider such factors as the identity of the responsible party, the willingness of the responsible party to participate, the willingness of the responsible party to fund the restoration, and the degree of responsible party cooperation.[122]

Responsible party participation was the subject of extensive public comment.[123] Some commenters supported the provisions requiring responsible party coordination as a means to reduce litigation and facilitate cost restoration plans.[124] These commenters originally urged NOAA to make the Rule more explicit in its definition of the trustee's ability to limit participation and dismiss responsible parties hindering the assessment process.[125] One commenter urged NOAA to include a mediation provision in the Rule to prevent trustees from arbitrarily dismissing responsible parties because of procedural

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[119] 61 Federal Register at 449.

[120] *Id.* at 500 (to be codified at 15 CFR s. s. 990.14(c)); *see also Id.* at 443.

[121] 61 Federal Register at 500.

[122] *Id.* at 501 (to be codified at 15 CFR s. s. 990.14(c)(5)).

[123] *See* Comments of the Chevron Corporation, NOAA Comment No. 15 (Sept. 28, 1995) [hereinafter NOAA Comment No. 151; Comments of the States/British Columbia Oil Spill Task Force, NOAA Comment No. 3 2 (Oct. 2, 1995) [hereinafter NOAA Comment No. 3 21; Comments of the Association of State and Territorial Solid Waste Management Officials, NOAA Comment No. 46 (Sept. 29, 1995) [hereinafter NOAA Comment No. 461; Comments of the Natural Resources Defense Council, NOAA Comment No. 61 (Oct. 2, 1995) [hereinafter NOAA Comment No. 6 11.

[124] *See* NOAA Comment No. 46, *supra* note 54; NOAA Comment No. 6 1, *supra* note 54.

[125] *Id.*

assessments.[126] In response, the drafters included a specific provision to allow trustees to terminate responsible party participation.[127]

Other commenters strongly urged the deletion of the requirement that trustees invite responsible party participation.[128] These commenters suggested that the invitation to participate should be left to the trustee's discretion to avoid any conflicts of interest caused by responsible party participation in the restoration process and the duty of those parties to protect their finances and stockholder investments.[129] In response, NOAA reiterated its position that responsible party involvement is essential to achieve expeditious and cost-effective assessments and restoration.[130] NOAA maintains that broad trustee discretion to terminate responsible party involvement will protect the integrity of the restoration process, by facilitating cooperation among all the affected parties and providing a neutral referee to oversee assessments.[131]

IV.1.1.1.4. The Restoration Planning Phase

Once the trustee invites the responsible parties to participate, the process enters the Restoration Planning Phase.[132] Upon entering this phase, the trustee must determine whether an injury has resulted from the incident.[133] To do so, the trustee must evaluate whether: (1) the definition of injury has been met;[134] and (2) either an injured natural

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[126] *See* NOAA Comment No. 15. *supra* note 54.

[127] 612 Federal Register at 501 (to be codified at 15 CFR s. 990.14(c)(4)).

[128] *See* NOAA Comment No. 32. supra note 54.

[129] *Id.*

[130] 61 Federal Register at 461.

[131] *Id.*

[132] *See Id.* at 506-08 (to be codified at 15 CFR s.s. 990.50-.56)).

[133] *Id.* at 506 (to be codified at 15 CFR s. s. 990.5 1 (a)).

[134] *Id.* (to be codified at 15 CFR s. s. 990.5 1 (b)(1)).

resource has been exposed to the discharged oil and a pathway[135] can be established, or an injury or impairment of a natural resource service occurred as a result of a discharge of oil or a response action.[136] These terms encompass direct and indirect effects on natural resources and services to provide permanent and effective restorative remedies.[137]

When selecting potential injuries to assess, the trustee should consider a number of factors including: (1) the natural resources and services involved ;[138] (2) the types of evaluation procedures available and their costs;[139] (3) the evidence indicating exposure;[140] (4) the inspection of the pathway from the incident to the resource;[141] (5) evidence of adverse changes or impairments constituting an injury;[142] (6) the manner in which the injury occurred;[143] (7) the degree and extent of the exposure;[144] (8) the potential natural recovery period;[145] and (9) the available methods of restoration.[146] Although the trustee may use different procedures to measure the extent of any injuries, the trustee must still evaluate the degree of the injury, the total volume or area of the injury, the duration of the injury or adverse effect, and the vulnerability of the affected

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[135] *Id.* at 506 (to be codified at 15 CFR s. s. 990.5 l(b)(2)(i)). A "pathway" is "any link that connects the incident to a natural resource, or service, or both, and is associated with an actual discharge of oil." *Id.* At 504 (to be codified at 15 CFR s. s. 990.30(d)).

[136] 61 Federal Register at 506 (to be codified at CFR s. 990.5 1 (b)(2)(ii).

[137] See *Id.* At 440.

[138] *Id.* at 506 (to be codified at 15 CFR s. s. 990.5 1 (f(l)).

[139] *Id.* (to be codified at 15 CFR s. 990.5 1 (f)(2)).

[140] *Id.* (to be codified at 15 CFR s. 990.51(f)(3)).

[141] *Id.* (to be codified at 15 CFR s. 990.5 1 (f)(4)).

[142] *Id.* (to be codified at 15 CFR s. 990.5 1 (f)(5)).

[143] *Id.* (to be codified at 15 CFR s. 990.51(f)(7)).

[144] *Id.* (to be codified at 15 CFR s. 990.5 1 (f)(8)).

[145] *Id.* (to be codified at 15 CFR s. 990.51(f)(9)). Natural recovery is defined as a "restoration alternative whereby injured natural resources and services are allowed to return to conditions prior to the incident without human intervention. . ." *Id.* at 452.

[146] 61 Federal Register at 506 (to be codified at 15 CFR s. 990.51(f)(10)).

natural resource or service before implementing an assessment plan.[147] The trustee must then identify a reasonable range of restoration alternatives, evaluate the alternatives and select the most appropriate one, and produce a Final Restoration Plan, provided the gathered information indicates that restoration efforts are necessary.[148]

The "reasonable range" of restoration alternatives encompasses primary or compensatory restorative elements that address the specific injuries caused by an incident.[149] Primary restoration[150] ranges from natural recovery, which requires no human intervention, to aggressive intervention to return the natural resources and services to their pre-injury state with greater speed or certainty than natural recovery.[151] Compensatory restoration, including actions taken to provide services of the same type and quality as those injured,[152] refers to compensation for the interim losses of the natural resources or services from the occurrence of the incident until restoration is complete.[153] Each alternative considered must satisfy the goal of making the environment and the public whole for any injuries suffered as a result of oil discharge.[154]

The trustee must scale both the primary and compensatory restoration alternatives to avoid a double recovery and to ensure that any injuries are adequately compensated.[155] The trustee must determine the appropriate scaling approach needed to restore or rehabilitate a resource or service by considering the area of the habitat contaminated, the

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[147] *Id.* (to be codified at 15 CFR s. 990.5 1 (c)(1), (2)).

[148] *Id.* at 507 (to be codified at 15 CFR s. 990.53(a)(1), (2)).

[149] *Id.*

[150] Primary restorations include any actions taken to return the injured natural resources and services to the condition that would have existed had the injury not occurred. 61 Federal Register at 505 (to be codified at 15 CFR s. 990.30).

[151] *See* 61 Federal Register at 507 (to be codified at 15 CFR s. 990.53(b)).

[152] *Id.* (to be codified at 15 CFR s. 990.53(c)(1), (2).

[153] *Id.* (to be codified at 15 CFR s. 990.53(c)(2)).

[154] *Id.* (to be codified at 15 CFR s. 990.53(a)(1), (2)).

cost of lost ecological services and the estimated volume of the loss.[156]

One such approach is the resource-to-resource and service-to-service approach.[157] Under this approach, the trustee determines what action will provide natural resources or services in the same quantity, quality, and type as those lost or injured.[158] If this approach is inappropriate, the trustee may use the valuation scaling approach, whereby the trustee measures the value of the injured resources or services and determines the amount that must be restored to provide the same value of resources or services lost to the public from the oil discharge, or threat thereof.[159] Once the trustee develops feasible restoration alternatives, he or she must evaluate each alternative and select the most appropriate one based on: (1) the cost to carry out the alternative;[160] (2) the extent to which the alternative meets the trustee's goals and objectives for restoration;[161] (3) the alternative's likelihood of success;[162] (4) the extent to which the alternative will prevent further and future injury;[163] (5) the amount of resources and services that benefit from the alternative;[164] (6) the effect on public health and safety.[165] The trustee must then develop a Draft Final Restoration Plan that includes: (1) a summary of the injury assessment procedures;[166] (2) a description of the nature, degree, and extent of the injuries resulting from the

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[155] *Id.* (to be codified at 15 CFR s. 990.53(d)).

[156] *Id.*

[157] *Id.* (to be codified at 15 CFR s. 990.53(d)(2)).

[158] *Id.*

[159] *Id.* (to be codified at 15 CFR s. 990.5 3 (d)(3)(i)).

[160] *Id.* (to be codified at 15 CFR s. 990.54(a)(1)).

[161] *Id.* (to be codified at 15 CFR s. 990.54(a)(2)).

[162] *Id.* (to be codified at 15 CFR s. 990.54(a)(3)).

[163] *Id.* (to be codified at 15 CFR s. 990.54(a)(4)).

[164] *Id.* (to be codified at 15 CFR s. 990.54(a)(5)).

[165] *Id.* (to be codified at 15 CFR s. 990.54(a)(6)).

[166] *Id.* at 508 (to be codified at 15 CFR s. 990.55(b)(1)(i)).

incident;[167] (3) the goals and objectives of the restoration;[168] (4) the range of relevant alternative restoration plans and a description of the procedures used to evaluate them;[169] (5) the identification of the preferred alternative and a description of the involvement of the responsible party in the selection process;[170] and (6) a proposal to monitor the restoration plan, including a set of criteria that will be used to determine the effectiveness of the plan.[171] The trustee must make the Draft Final Restoration Plan available for public comment.[172] The trustee's Final Restoration Plan must include responses to the public comments and any modifications made to the Plan as a result of those comments.[173]

VI.1.1.1.5. The Restoration Implementation Phase

After the Final Restoration Plan has been developed, the restoration process enters the Restoration Implementation Phase.[174] The trustee must present a written demand to the responsible parties.[175] The demand must request responsible party implementation of the restoration plan, subject to trustee oversight, and must request either an advance of the trustee's assessment costs or an advance of a specific sum representing the trustee's assessments costs and any restoration implementation Costs.[176] The demand notice must also identify the incident, the trustee, the relevant injuries, the index of the administrative record, the Final Restoration Plan or Notice of Intent, and the request for the

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[167] *Id.* (to be codified at 15 CFR s. 990.55(b)(1)(ii)).
[168] *Id.* (to be codified at 15 CFR s. 990.55(b)(1)(iii)).
[169] *Id.* (to be codified at 15 CFR s. 990.55(b)(1)(iv)).
[170] *Id.* (to be codified at 15 CFR s. 990.55(b)(1)(v), (vi)).
[171] *Id.* (to be codified at 15 CFR s. 990.55(b)(1)(vii)).
[172] *Id.* (to be codified at 15 CFR s. 990.55(a)).
[173] *Id.* (to be codified at 15 CFR s. 990.55(d)).
[174] *Id.* at 508-10 (to be codified at 15 CFR s.s. 990.60-.66)
[175] *Id.* (to be codified at 15 CFR s. 990.62(a)).
[176] *Id.* (to be codified at 15 CFR s. 990.62(b)).

reimbursement of assessment costs and interest on these Costs.[177] If the responsible party does not agree to the demand in writing within ninety days, the trustee may file a judicial action for damages, costs, and contribution in the appropriate United States District Court within three years of the publication of the Final Restoration Plan.[178] If the responsible party is unable to fund the restoration, the trustee may also seek a disbursement from the Oil Spill Liability Trust Fund.[179] Any sum the trustee recovers in satisfaction of a damage claim must be placed in a trust account and used as the restoration process continues.[180] Trustees are permitted to use any sums recovered for assessment costs to reimburse them for their expenses.[181]

IV.1.1.1.6. Summary

Under this Rule, the Restoration Implementation Phase should not be an adversarial or time-consuming process. As indicated by the strong preference for responsible party coordination and participation, the restoration alternatives will ideally have been approved by all parties concerned. The Rule also encourages public comments and participation, either at the time of the issuance of the Notice of Intent or at any other time the trustee determines is appropriate.[182] This Rule should ensure cost-effective and timely restoration of natural resources and services.[183]

Court practice should follow the standard contemplated by Congress in drafting the OPA, i.e., the cost of restoration and replacement plus the diminution in value of natural

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[177] *Id.* (to be codified at 15 CFR s. 990.62(e)).

[178] *Id.* (to be codified at 15 CFR s. 990.64(a), (b)).

[179] OPA s. 10122(a)(2), 33 USC s. 2712(a)(2) (1994).

[180] 61 Federal Register at 509 (to be codified at 15 CFR s. 990.65(a)).

[181] *Id.* (to be codified at 15 CFR s. 990.65(a)).

[182] *Id.* at 501 (to be codified at 15 CFR s. 990.14(d)).

resources until they are restored.[184] The regulations promulgated by the Department of Interior pursuant to the CERCLA (see Part IV.1.2.2. infra) will also have an impact on the measurement of natural resources damages under the OPA [185] I think the ongoing Exxon Valdez litigation will, hopefully, also elucidate the legal situation. In this litigation, both the state of Alaska and a number of environmental groups have sued for natural resources damages and restoration.[186] Before awarding damages, it will be necessary for the courts to arrive at a methodology for the evaluation of the harmed resources.[187]

When dealing with natural resources damages under the OPA it is also interesting to compare the solutions adopted in the international conventions on oil pollution liability, the 1969 CLC and 1971 FC with amending Protocols of 1984. The present (unamended) definition of "pollution damage" in the CLC (for the text, see Part III.1.1.2. supra) does

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[183] *Id.* at 500 (to be codified at 15 CFR s. 990. 10)).

[184] See the preceding n. See also A.F. Bessemer Clark, (1991) 2 LMCLQ p. 248 f. Regarding the "diminution of value" measurement see *State of Ohio v. U.S. Dept. of the Interior*, 880 F 2d 432 (1989) p. 475. ff.

[185] According to Federal Register, Vol. 57, No. 50, Friday, March 13, 1992, Proposed Rules p. 8965 the natural resource damage assessment procedures promulgated by the Department of the Interior (DOI) "are the current standard for all damage assessments (both oil and hazardous substances) until the procedures in this rulemaking process are developed specifically for oil. After the OPA regulations are promulgated, the 43 CFR part 11 procedures will still be used to assess damages for natural resource injuries resulting from a release of a hazardous substance." Although the OPA rulemaking effort is separate and distinct from the existing regulation, the procedures identified in 43 CFR part 11 provide a solid base from which to identify assessment procedures to be promulgated under OPA. Further, the NOAA and DOI are coordinating their respective rulemakings to ensure consistency, when practicable, for the trustees and responsible parties in conducting natural resource damage assessments as a result of either a discharge of oil or release of a hazardous substance. *Ibid.* p. 8965.

[186] The environmental groups are using common law, state law, and citizens'-suit provisions in federal statutes as the legal basis for their actions. See S. Keeva, ABA Journal, February 1991, p. 68.

[187] According to S. Keeva, ABA Journal, February 1991 p. 68, "Observers say that the natural-resources valuations are likely to use some variation of a contingency valuation approach, a method that attempts to quantify what was lost as a result of the spill. Such an approach assigns not only 'use' values to damaged resources, as when a fisherman can no longer pursue his trade because of damage to fisheries, but also so-called 'existence' values. The latter would seek to quantify, for example, how much it is worth to a person in Miami or Chicago just to know that a place like Prince William Sound exists, even if he or she may never go there."

not give any indication as to whether damage to the environment as such is compensable. As is the case with compensation for pure economic losses, this question therefore has to be decided by national courts on the basis of national law. However, most countries lack provisions or court decisions dealing with this matter. Further, it may be noted that the IOPC Fund does not accept claims for non-economic environmental damage.[188]

The new definition of "pollution damage" (1984 Protocols, see Part III.1.1.2. supra) seems to make it clear that claims for damage to the marine environment as such are not admissible. However, the costs incurred in restoring the environment after a pollution incident ("costs of reasonable measures of reinstatement actually undertaken or to be undertaken") are compensable. The new definition excludes compensation based on a theoretical calculation of damage caused to the environment by oil without actual proof of the costs of reinstatement. Speculative costs are not covered.[189] Finally, it should be noted that only costs for *reasonable* measures of reinstatement are recoverable.

As the wording of compensable damage to natural resources in s. 2702 (b)(2)(A) of the OPA is not so restricted as the definition of "pollution damage" in the conventions, it will indeed be interesting to see how the U.S. courts interpret the OPA. Will e.g., claims for non-economic environmental damage be accepted? And if "pure environmental

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[188] In 1980 the IOPC Fund's Assembly adopted a Resolution on the admissibility of claims of this kind. In the Resolution it was stated that the assessment of compensation "...is not to be made on the basis of an abstract quantification of damage calculated in accordance with theoretical models." This means that compensation can be paid by the IOPC Fund only if a claimant who has a legal right to claim under national law has suffered quantifiable economic loss. M. Jacobsson & N. Trotz, Journal of Maritime Law and Commerce, Vol. 17, No. 4, October 1986 p. 481.

[189] It may be mentioned that the Supplement to TOVALOP (Tanker Owners' Voluntary Agreement concerning Liability for Oil Pollution) also covers reasonable costs actually incurred in reasonable measures to restore or replace damaged natural resources, but it does not cover theoretical or speculative damage. See about the TOVALOP and CRISTAL (Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution) systems e.g., P. Wetterstein, op. cit. p. 143 f. with references.

damage" is recoverable, how far will such recovery extend? (Cf. also Part IV.1.2.2. infra).[190]

As a concluding remark one can say that the increased liability for vessel owners/operators combined with the obligation to establish and maintain evidence of financial responsibility, the broad writing of compensable damage to natural resources and the increased funding through the Oil Spill Liability Trust Fund have significantly enhanced the possibilities of OPA being an effective tool in restoring devastated areas.[191]

IV.1.1.2. The Trans-Alaska Pipeline Authorization Act

As mentioned earlier in the section dealing with pure economic losses (Part III.1.1.3.1. supra) the TAPAA provides liability for "all damages, including cleanup costs, sustained by any person or entity, public or private, including residents of Canada, as a result of discharges of oil from such vessel" (s. 1653 (c)(1)). This broad and unspecified writing was partly clarified by the 1990 amendments to TAPAA (Pub.L. 101-380). The wording of the added par. (13) to s. 1653 (c) covers "the net loss of taxes, revenues, fees, royalties, rents, or other revenues incurred by a State or a political subdivision of a State due to injury, destruction, or loss of...or natural resources." Although these are consequential losses of a special type the added par. could be read to indicate a broader TAPAA—coverage of natural resources damages (cf. the opening

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[190] I think it is interesting to note that several commentators in Federal Register, Vol. 57, No. 50, Friday, March 13, 1992, Proposed Rules p. 8977 expressed the view "that regardless of procedures chosen, OPA requires that the measure of damages must be based upon restoration costs plus use and nonuse values plus reasonable assessment costs." Other commentators represented a different view, indicating "that since injuries as a result of oil spills are short-term, damages should be based upon restoration costs and lost use values alone....since nonuse values cannot be accurately determined, their use in a model or compensation formula may produce recoveries far in excess of what is needed to restore the environment. Therefore, nonuse values should not be required by OPA."

[191] See also M. J. Uda, Virginia Environmental Law Journal, Vol. 10, 1991 p. 432.

sentence of par. (13): "For any claims against the Fund, the term "damages" shall include, but not be limited to—"and the notion "all damages" in s. 1653 (c)(1).

Generally, the TAPAA seems to have been interpreted by commentators to provide recovery for damages to natural resources.[192] But the statute has also been read more narrowly, i.e., covering in the main actual cleanup costs plus economic losses—not making whole the environment itself.[193] Also in this respect the ongoing Exxon Valdez litigation may clarify many questions: the right to assert claims for natural resources damages,[194] the extent and type of damages recoverable, etc. (cf. the discussion supra concerning compensation for damage to natural resources under the OPA). However, it is to be noted that claims for compensation may be cut by the provisions limiting liability under the TAPAA (see Part III.1.1.3.1. supra).

IV.1.2. Damage from hazardous substances

IV.1.2.1. The Federal Water Pollution Control Act

Before 1977 the FWPCA s. 1321 (f) included only cleanup cost liability. with the 1977 amendments a new subs. (4) was added which expanded the liability to include "any costs or expenses incurred by the Federal Government or any State government in

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[192] See e.g., J. Gallagher, New England Law Review, Vol 25, Winter, 1990 p. 579 ff.; J. J. Uda, Virginia Environmental Law Journal, Vol. 10, 1991, p. 411; A. Rest & R. Leinemann, Environmental Liability Law Review, 1/1990 p. 18, 21 and T. J. Schoenbaum, The forum, Vol. 20, 1984 p. 158. Cf. also the wording of s. 1653 (a)(1): the holder of the pipeline right-of-way "shall be strictly liable to all damaged parties, public or private, without regard to fault for such damages, and without regard to ownership of any affected lands, structures, fish, wildlife, or biotic or other natural resources relied upon by Alaska Natives, Native organizations, or others for subsistence or economic purposes." See also *Jordan v. Amerada Hess Corp., 479 F Supp 573 (1979):* provisions of TAPAA were designed to establish the permit holders of the pipeline right-of-way as strictly liable for a broad range of damage to the land, fish, wildlife, air, water, and the subsistence lifestyle of the Alaskan Native.

[193] See B. Breen, Wake Forest Law Review, Vol 24, 1989 p. 855.

[194] Section 1653 (c)(1) seems to be written so that both the government and private victims have the possibility of presenting a claim for compensation.

the restoration or replacement of natural resources damaged or destroyed as a result of a discharge of oil or a hazardous substance in violation of subsection (b) of this section." But the term "natural resources" was left undefined by the FWPCA and thus open to dispute.[195] Further, also here we meet the evaluation problems mentioned above, i.e., how shall costs for restoration or replacement of damaged natural resources be measured in concrete terms?[196] However, the Department of Interior's regulations governing the assessment of damages for natural resource injuries resulting from releases of hazardous substances (see Part IV.1.2.2. infra) are also applicable in the case of FWPCA releases.[197]

Opinions have been expressed that the 1977 amendments also expanded the right to bring actions under the FWPCA. While originally only the federal government could sue for actual cleanup costs, the FWPCA now allowed authorized representatives of states to serve as trustees for natural resources and bring lawsuits as well.[198] But also in the case of the FWPCA the provisions on limitation of liability (see Part III.1.1.1. supra) might be an obstacle to full recovery of costs for the restoration of a substantially damaged ecosystem. However, as has been pointed out before, the practical usefulness of the FWPCA has significantly decreased with the enactment of CERCLA (infra).

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[195] See also M. J. Uda. Virginia Environmental Law Journal, Vol. 10, 1991 p. 430.

[196] Cf. also the *Commonwealth of Puerto Rico v. S.S. Zoe Colocotroni*, 456 F Supp 1327 (1978), 628 F 2d 652 (1980).

[197] *State of Ohio v. U.S. Dept. of the Interior*, 880 F 2d 432 (1989) p. 439.

[198] See *In re Allied Towing Corp.*, 478 F Supp 398 (1979). 33 USC s. 1321 (f)(5) reads: "The President, or the authorized representative of any State, shall act on behalf of the public as trustee of the natural resources to recover for the costs of replacing or restoring such resources. Sums recovered shall be used to restore, rehabilitate, or acquire the equivalent of such natural resources by the appropriate agencies of the Federal Government, or the State Government." However, it may be mentioned that the district court held in *Complaint of Ballard Shipping Co.* 772 F Supp 721 (1991), that 33 USC s. 1321 does not give individual states a cause of action.

IV.1.2.2. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980

The enactment of CERCLA was a milestone for the expanded scope of Congress' application of the natural resource damages concept. The CERCLA program has had a far-reaching impact, dominating environmental law throughout the 1980s. The relevant provisions of CERCLA provide that responsible parties may be held liable for "damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release."[199] The term "natural resources" means "land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States..., any State or local government, any foreign government, any Indian tribe...".[200] The omission of a statutory definition for natural resource injury or damages in CERCLA has caused a great deal of controversy. I will deal with it later in this thesis.

The writing of s. 9601 (16) also raises the issue whether the text limits the availability of natural resource damages to cases where the resources harmed (land, fish, wildlife, water, etc.) are owned by federal, state, local or foreign governments, rather than by private parties. In *State of Ohio v. U.S. Dept. of the Interior*, 880 F 2d 432 (1989) the Interior's regulations (see more infra) had taken the position that damage to privately-

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[199] 42 USC s. 9607 (a)(4)(C). For assessment costs liability see e.g., *Idaho v. Southern Refrigerated Transport Inc.*, 1991 U.S. Dist. LEXIS 1869. It may also be mentioned that s. 9607 (j) creates "federally permitted release" defense in actions for response costs or natural resource damages. Further, s. 9607 (d)(1) specifically exempts recovery (from a non-negligent person) for any damages occurring as a result of any actions taken or omitted in accordance with the National Contingency Plan. On these defenses see e.g., A. J. Simons & J. M. Wicks. Natural Resources Damages under CERCLA: Here They Come, Ready of Not, St. John's Law Review, Vol. 63, 1989 p. 816 f.

[200] S. 9601 (16).

owned natural resources was not to be included in natural resource damage assessments. The Court of Appeals remanded this issue for the Department to clarify its position. The Court stated, inter alia,:

> "It should be noted, however, that while the statute excludes purely private resources, it clearly does not limit the definition of 'natural resources' to resources *owned* by a government. If that were the meaning of § 101 (16), then all the phrases other than 'belonging to' would be surplusage. If the words 'managed by, held in trust by, appertaining to, or otherwise controlled by' mean anything at all, they must refer to certain types of governmental (federal, state or local) interests in privately-owned property....The legislative history of CERCLA further illustrates that damage to private property—absent any government involvement, management or control—is not covered by the natural resource damage provisions of the statute."[201]

From a semantic point of view the text in s. 9601 (16) seems to require a "nexus" between the natural resource and governmental control.[202] However, views have also been expressed—and with good arguments—that no special "nexus" should be required.[203]

CERCLA also expanded the class of plaintiffs that can bring actions (cf. FWPCA, supra, which only allows the federal government and authorized representatives of states

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[201] 880 F 2d 432 p. 460.

[202] See also *City of New York v. Exxon Corp.*, 633 F Supp 609 (1986) and E. W. Warren & J. A. Zackrison, Natural Resources Damages Provisions of CERCLA. Natural Resources & Environment, Fall 1985 p. 20.

[203] See Note, Harvard Law Review, Vol. 99, 1986 p. 1566: "Other provisions of CERCLA appear to give broad reach to the cause of action for natural resource damage. Section 111(b), for example, permits the United States to assert claims 'as trustee' of any natural resources over which it has 'sovereign rights,' that is, the power to regulate. Section 107(f) establishes liability for damage to any natural resources '*within the State or* belonging to, managed by, controlled by, or appertaining to such State.' This provision uses the disjunctive 'or,' implying that the nexus terms *expand* upon mere sovereignty, the language in these sections indicates that Congress intended that CERCLA be construed broadly to reach all resources within the government's jurisdiction; a narrower reading of 'natural resources' would require contorted readings of these sections. Furthermore, distinguishing between privately and publicly owned natural resources conflicts with CERCLA's goal of forcing defendants to internalize the social costs of natural resource damage, because all natural resources may provide services to, and be valued by, the public." See also the discussion in F. B. Cross, Vanderbilt Law Review, Vol. 42, No. 2, 1989 p. 274 n. 14.

to serve as trustees to recover natural resource damages). In addition to federal and state governments and Indian tribes (s. 9607 (f)) case law has also given local municipalities the right to sue for natural resource damages.[204] However, "double recovery" for natural resource damages, including the costs of damage assessment or restoration, rehabilitation, or acquisition for the same release and natural resource, is not possible.[205]

As was mentioned supra, CERCLA provides little guidance on the measurement of damages. Congress conferred on the President—who in turn delegated to the Department of the Interior—responsibility for promulgating regulations governing the assessment of damages for natural resource injuries resulting from releases of hazardous substances, for the purposes of both CERCLA and the FWPCA.[206] According to s. 9651 (c) these regulations were originally required to be in place by December 1982.

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[204] See *City of New York v. Exxon Corp.*, 633 F Supp 609 (1986). *Mayor of Boonton v. Drew Chem. Corp.*, 621 F Supp 663 (1985). But cf. *Tow of Bedford v. Raytheon Co.*, 755 F Supp 469 (1991). See also comment by A. J. Simons & J. M. Wicks. St. John's Law Review. Vol. 63. 1989 p. 806 ff. It is interesting to note that the permissible plaintiffs (federal, state and local governments) have been estimated at roughly 68,500 (1987). Adding Indian tribes as authorized trustees brings some 500 more potential plaintiffs. See B. Breen. Wake Forest Law Review. Vol. 24. 1989 p. 861, 863. But the natural resource damage suits brought have been few, and to encourage more damage claims to be filed Congress, when amending CERCLA with the SARA of 1986, added mandatory provisions designed to force the federal government to notify natural resource trustees of potential damage to seek to involve them in planning cleanup and to participate in settlement discussions with defendants. *Ibid.* p. 862. The amendments also obliged the Governor of each State to designate State officials who may act on behalf of the public as trustees for natural resources under CERCLA (s. 9607 (f)(2)(B)). Among reasons for the few natural resource damage claims till now have been mentioned the confusing and complicated assessment regulations, the inadequate understanding of the trustees' responsibilities under CERCLA, lack of assessment money, a political reluctance to bring lawsuits and bureaucratic comfort. See E. D. Olson, Natural Resource Damages in the Wake of the *Ohio* and *Colorado* Decisions: Where Do We Go From Here? Environmental Law Reporter, 12-89, ELR 10552 and B. Breen, Wake Forest Law Review, Vol. 24, 1989 p. 868 f. Finally, it may be mentioned that D. Woodard & M. R. Hope, Natural Resource Damage Litigation under the Comprehensive Environmental Response, Compensation, and Liability Act, Harvard Environmental Law Review, Vol. 14, 1990 p. 212 ff., have recommended that citizens' groups be allowed to sue on behalf of the public for natural resource damages when federal or state trustees fail to act. They state: "We believe that such a provision would increase the number of recoveries on behalf of the public at no cost to the taxpayers and without the need for creating a new right of action for recovery of damages by private parties" (p. 215).

[205] S. 9607 (f)(1).

[206] *State of Ohio v. U.S. Dept. of Interior*, 880 F 2d 432 (1989) p. 439.

CERCLA s. 9651 (c)(2) requires two types of procedures for conducting natural resources damages assessments. Rules under subparagraph (A)—the "Type A" rules—were to specify "standard procedures for simplified assessments requiring minimal field observation." Type A regulations were intended to govern "most minor" spills and releases.[207] Rules under subparagraph (B)—the "Type B" rules—were to specify "alternative protocols for conducting assessments in individual cases to determine the type and extent of short- and long-term injury, destruction, or loss." The intention of Congress was that the Type B regulations "would be employed in large or unusually damaging spills and releases."[208]

Under CERCLA, a trustee seeking damages is not required to resort to Type A or Type B procedures. However, CERCLA provides that "Any determination or assessment of damages to natural resources.made by a Federal or State trustee in accordance with the regulations promulgated under section 9651 of this title shall have the force and effect of a rebuttable presumption on behalf of the trustee in any administrative or judicial

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[207] E. D. Olson, Environmental Law Reporter, 12-89, 19 ELR p. 10553. According to Note, Harvard Law Review, Vol. 99, 1986, p. 1568 n. 20: "Type A assessments based on amount of discharge or units of affected area are inaccurate methods for estimating actual damage. These formulas unrealistically assume a 'linear damage function'—that is, they assume the harm is proportional to the quantity of discharge or the area affected.... Perhaps for this reason, CERCLA's legislative history indicates that Type A methods should only be used for 'minor' releases." It may also be mentioned that the simplified Type A damage measurement is accomplished through a computer model (the Natural Resource Damage Assessment Model for Coastal and Marine Environments (NRDAM/CME)). This model estimates injury based upon user input on certain parameter of the spill and bases damages upon average use values. The model takes no account of existence or intrinsic values of natural resources nor assigns value to unused resources. See F. B. Cross, Vanderbilt Law Review, Vol. 42, No. 2, 1989 p. 323 f. The current model is being revised to comply with the *Ohio* and *Colorado* decisions (see infra) to incorporate restoration costs and nonuse values, as well as to update use values. Further, it is expected that the Department of the Interior will propose a model for the Great Lakes in the near future. This model will estimate damages based upon restoration costs and average use and nonuse values. It is anticipated that the models mentioned here will be adopted for certain spills under OPA. See Federal Register, Vol. 57, No. 50, Friday, March 13, 1992, Proposed Rules p. 8977 f.

[208] E. D. Olson, Environmental Law Reporter, 12-89, 19 ELR, p. 10533. Both the Type A and the Type B regulations must be reviewed and revised as appropriate every two years (s. 9651 (c)(3)).

proceeding."[209]

The Department of the Interior (DOI) published in August 1986 a final rule containing the Type B regulations for natural resource damage assessments.[210] However, as a consequence of the SARA amendments DOI issued revised rules in February 1988.[211] These regulations were formulated through an extensive rulemaking procedure and they establish an administrative process as well as procedures for the assessment of natural resource damage caused by a release of a hazardous substance or a discharge of oil. The purpose of the DOI regulations is "to provide standardized and cost-effective procedures for assessing natural resource damages."[212]

These regulations[213] have been challenged by a state government, environmental groups, etc. in *State of Ohio v. U.S. Dept. of the Interior*, 880 F 2d 432 (1989). DOI's

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[209] S. 9607 (f)(2)(C). Congress provided this presumption to make it easier for public trustees to recover damages. D. Woodard & M. R. Hope, Harvard Environmental Law Review, Vol. 14, 1990 p. 190. This "rebuttable presumption" works to remove from the judiciary the function of determining or assessing a damage award. See more on this A. J. Simons & J. M. Wicks, St. John's Law Review, Vol. 63, 1989 p. 813.

[210] 51 FR 27725, Aug. 1, 1986.

[211] 53 FR 5171, Feb. 22, 1988.

[212] 43 CFR subtitle A (10-1-91 Edition) § 11.11.

[213] The process for implementing Type B assessments has been divided into three phases: 1) Injury Determination phase. The purpose of this phase is to establish that one or more natural resources have been injured as a result of the discharge of oil or release of a hazardous substance; 2) Quantification phase. The purpose of this phase is to establish the extent of the injury to the resource in terms of the loss of services that the injured resource would have provided had the discharge or release not occurred. These services include, inter alia, flood and erosion control, habitat and food chains, as well as such human uses as recreation. The methodology to be used in the Damage Determination phase is essential in determining which services to measure in the Quantification phase. (See Federal Register, Vol. 57, No. 50, Friday, March 13, 1992, Proposed Rules p. 8975); 3) Damage Determination phase. The purpose of this phase is to establish the appropriate compensation expressed as a dollar amount for the injuries established in the Injury Determination phase and measured in the Quantification phase. (See 43 CFR subtitle A (10-1-91 Edition) § 11.13. It may be mentioned that, although not specifically mentioned in the regulations, economists are intended to play an essential role in translating injuries to natural resources into a dollar amount (damages). Because economists integrate the other components of the damage assessment, close consultation between resource specialists and economists facilitates accurate damage determination. (See Federal Register, Vol. 57, No. 50, Friday March 13, 1992, Proposed Rules p. 8975.)

formulation of the Type A regulations was handled in a separate rulemaking proceeding resulting in a set of rules in March 1987.[214] The Type A regulations were the subject of a separate petition for review in *State of Colorado v. U.S. Dept. of the Interior*, 880 F 2d 481 (1989).

The Type B regulations provided as a measure of recovery the lesser of either restoration or replacement costs or the diminution of use values.[215] Restoration or replacement damages are defined as the costs necessary to return the resource services to the baseline level provided in the absence of damage.[216] The calculation is based upon the most cost-effective alternative for reaching this objective, and the alternatives considered must include a "no action" option that relies upon natural recovery alone.[217] Diminution of use values is based upon the reduction in the level of services the injured

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[214] 880 F 2d 432 (1989) p. 440.

[215] See 43 CFR Subtitle A (10-1-91 Edition) §§ 11.35 and 11.80. When restoration or replacement of the injured resource is not technically feasible, the diminution in use values, as determined by using the methodologies listed in § 11.83, or other methodologies that meet the acceptance criterion in § 11.83 of 43 CFR Subtitle A, shall constitute the measure of damages (§ 11.35 (b)(3)). According to § 11.83 (b) "use values" are "the value to the public of recreational or other public uses of the resource, as measured by changes in consumer surplus, any fees or other payments collectable by the government or Indian tribe for a private party's use of the natural resource, and any economic rent accruing to a private party because the government or Indian tribe does not charge a fee or price for the use of the resource." It may be mentioned that focusing on the use value of natural resources is consistent with a long tradition in U.S. law. Use value has some advantages in comparison with other types of resource value. As F. B. Cross, Vanderbilt Law Review, Vol. 42, No. 2, 1989 p. 282 f. notes: "Use value is more precise and less speculative than other types of resource value because it isolates the extent to which people 'put their money where their mouth is'. Use value measures actual behavior, rather than attitudes, and therefore is a more certain means of ascertaining damages.... Economics largely relies on behavioral evidence and rejects the relative untrustworthiness of purely hypothetical opinions." However, I think it is important to remember that reliance on use value has some shortcomings; for example, use value does not observe that natural resources may have worth beyond their use by humans. Cf. the option and existence values mentioned infra.

[216] See 43 CFR Subtitle A (10-1-91 Edition) § 11.14.

[217] Note, Harvard Law Review, Vol. 99, 1986 p. 1570 f. Damages also include the diminution in use value suffered before the resource is restored or replaced (or the trustee determines that the resources should be allowed to recover naturally), and these social costs are included in the determination of the most cost-effective route to restoration, *Ibid.* p. 1571. On the traditional definitions of natural resource damages see also D. Woodard & M. R. Hope, Harvard Environmental Law Review, Vol. 14, 1990 p. 196 ff.

resources provided to another resource or to humans (e.g. fishing as a result of the discharge or release.[218]) The damages that can be recovered are, inter alia, losses in recreation and other public uses, reduced fees and other payments made to state agencies for private use of the public resources, and reductions in economic rents.[219]

The diminution in value approach is dependent on whether the resource is traded in a market. If there is a reasonably competitive market for the resource, the diminution in the market price is the measure of lost value.[220] In the absence of a market price, the DOI regulations contain economic techniques for measuring the willingness of individuals to pay for the lost service or to accept compensation for that loss (see also the text infra).[221]

Since the diminution in value approach is based upon market values, it probably undervalues a resource with unique characteristics—like the Prince William Sound after the Exxon Valdez accident. Further, for most practical purposes the diminution of use value seems to be much less than the cost of restoration. Although the "lesser of"

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[218] See also Federal Register, Vol. 57, No. 50, Friday, March 13, 1992, Proposed Rules p. 8975.

[219] See also n. 106 supra. The public trustee cannot collect taxes, income lost by private individuals or speculative losses. C. J. Cicchetti & N. Peck, Assessing Natural Resource Damages: The Case Against Contingent Value Survey, Natural Resources & Environment, Vol. 4, No. 1, Spring 1989 p. 6.

[220] See D. Woodard & M. R. Hope, Harvard Environmental Law Review, Vol. 14, 1990 p. 197 and Note, Harvard Law Review, Vol. 99, 1986 p. 1571. The Note also points out that "Courts should take care to distinguish between the market value of resources in the wild and the market value of the 'harvested' good. The latter price includes the value added by the process of harvest." See more *Ibid.* p. 1571 f. More generally one can say about market valuation that it is easy to measure and promotes economic efficiency. It also carries special indicia of reliability: the method is not based on individuals' hypothetical valuation of natural resources, but on market considerations. the market measures changes in the availability of natural resources and the corresponding changes in the actions of individuals. The resulting economic effects are directly observable and measurable. See F. B. Cross, Vanderbilt Law Review, Vol. 42, No. 2, 1989 p. 303. However, as a method for measuring natural resource damages I think market valuation also has some serious shortcomings: often market valuation will understate the true societal loss from damage to natural resources, market value may not be an adequate basis for compensation when property is unique or seldom traded, the lack of a functioning market in publicly held natural resources is a major impediment to reliance on market valuation, although market valuation may approximate use value rather well, it fails almost completely to capture the existence and intrinsic values of damaged natural resources, etc.

[221] Note, Harvard Law Review, Vol. 99, 1986 p. 1572.

approach has been used by courts,[222] the application has not been uniform.[223]

The "lesser of" rule was the most significant issue in the case *State of Ohio v. U. S. Dept. of the Interior*. The Court of Appeals struck down the DOI's "lesser of" rule as being "directly contrary to the clearly expressed intent of Congress." The Court noted:

> "Although our resolution of the dispute submerges us in the minutiae of CERCLA text and legislative materials, we initially stress the enormous practical significance of the 'lesser of' rule. A hypothetical example will illustrate the point: imagine a hazardous substance spill that kills a rookery of fur seals and destroys a habitat for seabirds at a sealife reserve. The lost use value of the seals and seabird habitat would be measured by the market value of the fur seals' pelts (which would be approximately $15 each) plus the selling price per acre of land comparable in value to that on which the spoiled bird habitat was located. Even if, as likely, that use value turns out to be far less than the cost of restoring the rookery and seabird habitat, it would nonetheless be the only measure of damages eligible for the presumption of recoverability under the Interior rule."
>
> After examining the language and purpose of CERCLA, as well as its legislative history, we conclude that Interior's 'lesser of' rule is directly contrary to the expressed intent of Congress."[224]

These argument of the Court of Appeals seem very acceptable. Another view would have jettisoned restoration as a standard measure of damages in most cases, i.e., the cost of restoring, replacing, or acquiring the equivalent of the injured natural resources would not have been recovered.[225] However, commentators have also expressed some support

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[222] See e.g., *Idaho v. Bunker Hill Co., 635 F Supp 665 (1986).*

[223] See D. Woodard & M. R. Hope, Harvard Environmental Law Review, Vol 14, 1990 p. 198 f.

[224] 880 F 2d p. 442. The legislative history behind both the original CERCLA law and the 1986 SARA amendments supports granting restoration cost damages. See F. B. Cross, Vanderbilt Law Review, Vol. 42, No. 2, 1989, p. 327 ff.

[225] I think it is interesting to note that Congress when amending the Marine Protection, Research, and Sanctuaries Act (MPRSA) in 1988 explicitly provided that the damages are to be measured as restoration cost, and only if restoration is not possible is use-value to be resorted to as a second-best measure.

for the "lesser of" rule.[226]

The DOI regulations also established a hierarchy of assessment methods for determining "use value," limiting recovery to the price commanded by the resource on the open market,[227] unless the trustee finds that "the market for the resource is not reasonably competitive." If the market is not competitive, an appraisal of the market value in accordance with the relevant sections of the "Uniform Appraisal Standards for Federal Land Acquisition" could be used.[228] Only when neither the market nor the appraisal method were "appropriate" could other techniques of determining use value be used.[229]

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[226] Note, Harvard Law Review, Vol. 99, 1986 p. 1569 states: "The objective of the damage awards should be to force private parties to internalize the social costs imposed by their hazardous waste release so that these parties will invest optimally in safety precautions. The proper measure of this damage is the actual loss suffered once society has efficiently mitigated the damage. If the lost resource can be restored at a cost less than its value, then the cost of restoration is the social loss. If the resource cannot be restored economically, then the use value foregone is the social loss." The Note further recommends: "A still better policy would not limit the alternatives to *full* restoration cost or use value. The optimal policy would also consider partial restoration and would require the government to restore the resource only up to the point at which the marginal benefit equals the marginal cost. The defendant would pay the costs of partial restoration plus compensation for any residual loss in use value. For any case in which some restoration is optimal, this sum will be less than the total loss in use value when zero restoration is assumed."

[227] It may be mentioned that the court in *Idaho v. Southern Refrigerated Transport Inc.*, 1991 U.S. Dist. LEXIS 1869, involving damage claims for steelhead lost in Little Salmon River, approved of, inter alia, the market value approach: "The commercial value of natural resources is the market price or exchange value of the resource. This value is determined by the intersection of the supply and demand curves. this intersection establishes a market place or exchange value" (p. 23 f.). The court concluded that there was no directly applicable market price for the fish lost by Idaho. But the court found that the values used in American Fishery Society's (AFS) publication, Monetary Values of Freshwater Fish and Fish-Kill Counting Technique Guidelines, were the appropriate values in determining Idaho's losses, both for wild/natural steelhead and hatchery steelhead. The publication assigns a monetary value to fish by inch class and species. The AFS values are based, in large part on the average prices set by commercial fish hatcheries around the U. S., which include the fixed hatchery construction costs of commercial fish hatcheries.

[228] See 43 CFR Subtitle A (10-1-91 Edition) § 11.83 (c)(2). The measure of damages under the appraisal methodology shall be the difference between the with and without injury appraisal value determined by the comparable sales approach as described in the Uniform Appraisal Standards.

[229] These nonmarketed natural resource methodologies include, inter alia, factor income methodology, travel cost methodology, hedonic pricing methodologies and contingent valuation methodology. See further 43 CFR Subtitle A (10-1-91 Edition) § 11.83. Travel cost studies and hedonic valuation (methods for behavioral use valuation) were developed by economists seeking to overcome the

The Court of Appeals held that the hierarchy of use values was not a reasonable interpretation of the relevant CERCLA statutes. The Court stated:

> "While it is not irrational to look to market price as *one* factor in determining the use value of a resource, it is unreasonable to view market price as the *exclusive* factor, or even the predominant one. From the bald eagle to the blue whale and snail darter, natural resources have values that are not fully captured by the market system.... As we have previously noted in the context of the 'lesser of' rule...market prices are not acceptable as primary measures of the use values of natural resources....We find that DOI erred by establishing 'a strong presumption in favor of market price and appraisal methodologies....Neither the statute not its legislative history evinces any congressional intent to limit use values to market prices. On the contrary, Congress intended the damage assessment regulations to capture fully all aspects of loss....The current rules defeat this intent by arbitrary limiting use values to market prices."
>
> On remand, DOI should consider a rule that would permit trustees to derive use values for natural resources by summing up all reliably calculated use values, however measured, so long as the trustee does not double count."[230]

In addition to rejecting the DOI's hierarchy of assessment methods, the Court of Appeals also held that option and existence values "may represent 'passive' use, but they

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shortcoming of market valuation of public goods. Basically such methods aim to measure the use value of natural resources by seeking market surrogates for unpriced natural resources. Because the procedures are based largely on verifiable human behavior they carry special indicia of reliability. The DOI regulations describe the travel cost methodology as follows: "An individual's incremental travel costs to an area are used as a proxy for the price of the services of that area. Damages to the area are the difference between the value of the area with- and without-a-discharge-or-release. When regional travel cost models exist, they should be used if appropriate" (§ 11.83 (d)(3)). The travel cost method was used in *Idaho v. Southern Refrigerated Transport Inc.*, 1991 U.S. Dist. LEXIS 1869, to determine the value of a recreational fishing trip and the value per fish caught on such a fishing trip by studying people's actual expenditure in traveling to various sites in Idaho to fish for steelhead. The court found that the values for steelhead determined using the USFS study (this study was performed by the United States Forest Service, the University of Idaho, the United States Fish and Wildlife Service, the U.S. Army Corp of Engineers, the Bureau of Land Management, and F&G for purposes of forest planning, land management planning, and water resource management) were appropriate values to establish recreational values for the non-returning adult steelhead to Idaho. According to § 11.83 (d)(4) hedonic pricing methodologies "can be used to determine the value of nonmarketed resources by an analysis of private market choices. The demand for nonmarketed natural resources is thereby estimated indirectly by an analysis of commodities that are traded in a market." On the advantages/shortcomings of these methods see e.g., F. B. Cross, Vanderbilt Law Review, Vol. 42, No. 2, 1989 p. 309 ff. and comments in Federal Register, Vol. 57, No. 50, Friday, March 13, 1992, Proposed Rules p. 8976.

[230] 880 F 2d p. 462 ff.

nonetheless reflect utility derived by humans from a resource, and thus, *prima facie*, ought to be included in a damage assessment."[231] This brings me to the third interesting valuation question the Court of Appeals dealt with; viz., the contingent valuation method challenged by petitioners in *State of Ohio v. U.S. Dept. of the Interior*.

The DOI regulations also sanctioned resort to contingent valuation methodology in determining option[232] and existence[233] values. Contingent valuation is a convenient, direct measure for assessing natural resource damages. Among economic valuation methods, only contingent valuation measures the option and existence values of natural resources. Because researchers now have considerable experience of using contingent valuation, it is achieving credibility. However, because contingent valuation is entirely hypothetical (measures people's attitudes, not their actual behavior), it has its weaknesses.[234] To describe this methodology I quote the Court of Appeals:

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[231] 880 F 2d p. 464. It is also to be observed that the CERCLA regulations respecting assessment of damage to natural resources (42 USC s. 9651 (c)(2)) "shall identify the best available procedures to determine such damages, including both direct and indirect injury, destruction, or loss and shall take into consideration factors including, but not limited to (my undln), replacement value, use value and ability of the ecosystem or resource to recover."

[232] Option value is derived from individuals' desire to preserve the option to use a natural resource, even if they are not currently using it. A. J. Simons & J. M. Wicks, St. John's Law Review, Vol. 63, 1989 p. 811 n. 50. See also the following n.

[233] Existence value is derived from the satisfaction of simply knowing that a resource exists, even if no use occurs. See also *Idaho v. Southern Refrigerated Transport Inc.*, 1991 U.S. Dist. LEXIS 1896, in which the court recognized that the existence value does exist and would be an appropriate item of damage if proved at trial (the case involved damage claims for lost fish). To my mind, nonuse existence value has three distinct subparts. Option value represents the willingness of people to pay something to preserve their ability to use a natural resource, e.g., see the Grand Canyon. Vicarious value derives from the willingness of people to pay for the preservation of a natural resource, e.g., wildlife, even though they will never use (or see) the resource. Finally, intertemporal value represents the monetary value of the ability to bequeath natural resources to future generations. Although existence value may play a significant role in assessing the importance of natural resources, this value has its shortcomings too. Because existence value is demonstrated attitudinally, and not behaviorally, one may question how strongly the value is truly held. Does it make possible accurate measurement? Further, as is the case with use value, existence value seems to ignore the widespread (but not undisputed) belief that natural things have some value of their own—not just a value to human beings. However, this intrinsic value is very difficult to measure.

[234] It may be mentioned that many commentators in Federal Register, Vol 57, No. 50, Friday, March 13,

> "The CV [contingent valuation] process 'includes all techniques that set up hypothetical markets to elicit an individual's economic valuation of a natural resource.' CV involves a series of interviews with individuals for the purpose of ascertaining the values they respectively attach to particular changes in particular resources. Among the several formats available to an interviewer in developing the hypothetical scenario embodied in a CV survey are direct questioning, by which the interviewer learns how much the interviewee is willing to pay for the resource; bidding formats, for example, the interviewee is asked whether he or she would pay a given amount for a resource and, depending upon the response, the bid is set higher or lower until a final price is derived; and a 'take or leave it' format, in which the interviewee decides whether or not he or she is willing to pay a designated amount of money for the resource. CV methodology thus enables ascertainment of individually-expressed values for different levels of quality or resources, and dollar values of individuals' changes in well-being."[235]

The Court upheld contingent valuation as consistent with due process and CERCLA.[236] As this valuation method identifies non-use values separate from use values, it may be valuable from the perspective of public trustees. Non-use damage assessments could result in extensive amounts of natural resource damages.[237]

1992, Proposed Rules p. 8976 expressed reluctance in allowing the use of CV to measure nonuse values because of its uncertainty. More study is needed on the use of CV to measure nonuse values. Other commentators proposed that limitations on the use of CV should be imposed. They suggested that CV, for example, should be used only when irreversible injury or unique resources are involved.

[235] 880 f 2d p. 475. 43 CFR Subtitle A (10-1-91 Edition) § 121.83 (d)(5) reads: "(i) the contingent valuation methodology includes all techniques that set up hypothetical markets to elicit an individual's economic valuation of a natural resource. This methodology can determine use values and explicitly determine option and existence values. (ii) The use of the contingent valuation methodology to explicitly estimate option and existence values should be used only if the authorized official determines that no use values can be determined." On contingent valuation see also E. D. Olson, Environmental Law Reporter, 12-89, 19 ELR p. 10555 and D. Woodard & M. R. Hope. Harvard Environmental Law Review, Vol 14, 1990 p. 201 with references. D. Woodard & M. R. Hope also recommend that CERCLA be amended to include a definition which explicitly states that natural resource damages include both use values and nonuse values, *IbId.* p. 207.

[236] 880 F 2d p. 476 ff. Although the quotation supra deals with contingent valuation measures of willingness to pay, there are also good arguments for using willingness to sell to provide the measure of natural resource value: willingness to sell measures may better represent the true value that people place on natural resources (while willingness to pay measures may underestimate the true damage to natural resources), the "income effect" (the effect of the interviewee's income level) seems to have less impact on willingness to sell measures than on pay measures, uncertainty about nature and its homeostasis seems to me to provide a reason for preferring willingness to sell, etc.

[237] See D. Woodard & M. R. Hope, Harvard Environmental Law Review, Vol 14, 1990 p. 201 f. Studies suggest that option and existence values may be several times greater than use values. See F. B. Cross,

The DOI's Type B Natural Resource Damage Assessment Regulations were also challenged on several other grounds. But the Court of Appeals upheld the regulations; among them the "committed use" requirement,[238] the adoption of a ten percent discount rate to calculate the present value of an expected future injury,[239] the "responsible party participation"[240] and the limitation on recovery of assessment costs.[241]

In the light of the *State of Ohio v. U.S. Dept. of the Interior* decision striking down the Type B rules, which were the basis for the Type A rules, and especially the determination that restoration costs are a basic measure of damages under CERCLA (and the FWPCA), and that the market value-based hierarchy is non-consistent with the Act, the Court of Appeals remanded the Type A regulations so that they too would be made consistent with CERCLA (and the FWPCA).[242] Thus both the Type A and the Type B regulations were remanded and, which is important, the Department of the Interior

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Vanderbilt Law Review. Vol. 42. No. 2. 1989 p. 288 f.

[238] The DOI's rules require that in order for a trustee to recover for damage to natural resources. those resources must have had a "committed use." See 43 CFR Subtitle A (10-1-91 Edition) § 11.84 (b). A "committed use" is defined in the rules as "either: a current public use: or a planned public use of a natural resource for which there is a documented legal, administrative. budgetary. or financial commitment established before the discharge of oil or release of a hazardous substance is detected" (§ 11.14 (h)). See the Court's discussion 880 F 2d p. 461 f.

[239] See 880 F 2d p. 464 f. It may be mentioned that this rule was criticized by quite a few commentators in Federal Register. Vol. 57. No. 50. Friday, March 13, 1992, Proposed rules p. 8975.

[240] The DOI's regulations allow potentially responsible parties to participate in the damage assessment process. See 880 F 2d p. 465 ff. and Federal Register, Vol 57. No. 50. Friday, March 13, 1992, Proposed Rules p. 8969.

[241] As was mentioned earlier CERCLA imposes liability on responsible parties for also the "reasonable costs of assessing" natural resource damage. State and environmental groups challenged a provision in the DOI regulations limiting the definition of "reasonable costs" to situations where "the anticipated cost of the assessment is expected to be less than the anticipated damage amount" (§ 11.14 (ee)). The Court of Appeals upheld the rule as "a rational one" and "consonant with the statutory purpose." See 880 F 2d p. 468. However, commentators in Federal Register, Vol 57. No. 50, Friday, March 13, 1992, Proposed Rules p. 8975 have criticized the definition claiming that "the rule should not try to define the term since the determination of 'reasonable' must be made on a case-by-case basis and would vary, for example, depending upon the type of habitat affected."

[242] See E. D. Olson, Environmental Law Reporter, 12-89, 19 ELR p. 10555 f. and *State of Colorado v. U.S. Dept. of the Interior*, 880 F 2d 481 (1989).

announced that it will not appeal the Court's decisions.[243] Instead, the DOI regulations are being revised in accordance with the *Ohio* and *Colorado* decisions.[244]

Although claims for natural resource damages have been relatively few up to now,[245] it is to be expected that the trustees will be more active in this field in the future. Furthermore, taking into consideration the courts' broad interpretation of "natural resource damages" under CERCLA—including both use and non-use values—which DOI seems to have adopted, the liability for responsible parties, including shipowner/operators, may be very extensive. But again, the CERCLA provisions on limiting liability (see Part III.1.2.2. supra) may lighten the liability exposure for the shipping industry.

Finally, it may be mentioned, by way of comparison, that both the Convention on Civil Liability for Damage Caused During the Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, 1989 and the Draft International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea have adopted the definition of compensable damage used in the 1984 Protocol to the 1969 CLC.[246] As was mentioned before (see Part IV.1.1.1. supra) this definition covers reinstatement costs—both actually undertaken and future—but not claims for damage to the marine environment as such. Thus the coverage of

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[243] See E. D. Olson, Environmental Law Reporter, 12-89, 19 ELR p. 10556. It is interesting to note that D. Woodard & M. R. Hope, Harvard Environmental Law Review, Vol 14, 1990, p. 190 ff. argue that Congress should abolish the DOI damage assessment regulations which according to them "contain serious flaws."

[244] Federal Register, Vol 57, No. 50, Friday, March 13, 1992, Proposed Rules p. 8977.

[245] On the number of presented claims see e.g., B. Breen, Wake Forest Law Review, Vol. 24, 1989 p. 867 ff. and D. Woodard & M. R. Hope, Harvard Environmental Law Review, Vol. 14, 1990 p. 191 ff.

[246] See the CRTD Convention art. 1.10. and the Draft HNS Convention art 1.6.

natural resource damages are broader under CERCLA.

IV.2. Non-statutory maritime law

State and federal government officials have been authorized to recover from polluters natural resource damages under either, or both, public trust doctrine and the doctrine of *parens patriae*—although the theories have been infrequently used.[247] In *Matter of Steuart Transp. Co.*, 495 F Supp 38 (1980) the District Court (E. D. Virginia) described the doctrines as follows:

> "Under public trust doctrine, federal government and states have right and duty to protect and preserve public's interest in natural wildlife resources, and such right does not derive from ownership of resources but from duty owning to people.... Under doctrine of parens patriae, state acts to protect a quasi-sovereign interest where no individual cause of action would lie."[248]

In this case the Court held that although neither federal government nor Virginia owned migratory waterfowl which were killed as result of an oil spill in Chesapeake Bay, they could recover from the vessel owner under either, or both, theories. In *State of Maine v. M/V Tamano*, 357 F Supp 1097 (1973) the State of Maine brought suit against, inter alia, vessel owners to recover damages incurred as a result of discharge into waters of Casco Bay of approximately 100,000 gallons of Bunker C oil from a tanker which struck an outcropping on a ledge while passing through Hussey Sound. The District Court (D. Maine, S.D.) held that the State had sufficient independent interest in its coastal

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[247] See T. J. Schoenbaum, The Forum, Vol. 20, 1984 p. 158. An explanation why litigants rarely invoke the *parens patriae* doctrine for recovering damages for harm done to natural resources might be some limitations on *parens patriae* precedents. See F. B. Cross, Vanderbilt Law Review, Vol. 42, No. 2, 1989 p. 278.

[248] 495 F Supp p. 39 f. The concept of *parens patriae* was derived from the English constitutional system. But the nature of the *parens patriae* suit has been greatly expanded in the United States beyond that which existed in England. For a historical survey of the *parens patriae* suit see *Hawaii v. Standard Oil*

waters and their marine life to permit it to seek damages in its *parens patriae* capacity.[249] Furthermore, the Court held that assertions that any injury to the State's interests was too speculative to be reduced to money damages and that there was risk of double damages were matters of proof to be met at trial and did not mandate dismissal at the pleading stage.[250] Also other courts have permitted a State to bring a damage claim in a *parens patriae* capacity for injury to its waters and marine life allegedly resulting from marine oil spills.[251]

However, in order to award natural resource damages they have to be measured. We meet the problems discussed above. Presumably the DOI regulations and the *State of Ohio v. Dept. of the Interior* case (see Part IV.1.2.2. supra) will have significance also outside federal statutory law. Of special interest in this respect is further the current Exxon Valdez litigation. Because of its size and the extent of the damages involved this litigation has the potential of becoming the leading case also regarding damage assessment.[252]

Co., 405 U. S. 251 (1971) p. 257 ff.

[249] The Court stated: "...the right of a State to sue as *parens patriae* is not limited to suits to protect only its proprietary interests; a State also may maintain an action *parens patriae* on behalf of its citizens to protect its so-called 'quasi-sovereign' interests....A quasi-sovereign interest must be an interest of the State 'independent of and behind the titles of its citizens,'...; that is, in order to maintain a *parens patriae* suit, the State 'must show a direct interest of its own and not merely seek recovery for the benefit of individuals who are the real parties in interest.'...It is clear that Maine has an independent interest in the quality and condition of her coastal waters. It has long been established by decisions of the Supreme Court, and of the Supreme Judicial Court of Maine, that a State has sovereign interests in its coastal waters and marine life, as well as in its other natural resources, which interests are separate and distinct from the interests of its individual citizens:" 357 F Supp p. 1099 f.

[250] 375 F Supp p. 1097.

[251] See e.g., *Maryland Dept. of Natural Resources v. Amerada Hess Corp.*, 350 F Supp 1060 (1972); *State of Cal., Department of Fish and Game v. S.S. Bournemouth*, 307 F Supp 922 (1969); *Puerto Rico v. S.S. Zoe Colocotroni*, 628 F 2d 652 (1980); *Re Oswego Barge Corp.*, 439 F Supp 312 and *Re Lloyd's Leasing, Ltd.*, 697 F Supp 289 (1988).

[252] See also S. Keeva, ABA Journal, February 1991 p. 68. In the Exxon Valdez litigation a number of environmental groups have sued for, inter alia, natural resource damages using common law, state law, and citizens' suit provisions in federal statutes as the legal basis for their actions. *Ibid.* p. 68. Further, it

A different matter is that the possibility of bringing claims for natural resource damages under non-statutory maritime law does not seem to be very significant today. this is because of the broad coverage of natural resource damages under the FWPCA,[253] CERCLA and the OPA—regarding both the notion of compensable damage and the right to claim. Furthermore, the earlier mentioned Limitation of Liability Act, 1851 (see Part III.2. supra) has to be noted; it may considerably limit a claim for natural resource damages.

IV.3. Summary

The study has shown that damage to natural resources is well covered under U.S. compensation law. The OPA covers restoration and replacement costs, diminution in value of natural resources pending restoration and reasonable costs of assessing damage. Under CERCLA damages for injury to, destruction of, or loss of natural resources, including reasonable costs of damage assessment, are recoverable. In addition, natural resource damages are covered under the FWPCA (restoration or replacement costs), the TAPAA (the extent and types of damages recoverable seem to be unclear, however) and non-statutory maritime law (the doctrines of public trust and *parens patriae*).

However, the question of measurement of damage seems to be unsettled and largely

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is interesting to note that Judge Shortell 9Alaska Superior Curt) has certified five classes of plaintiffs: 1) seafood and cannery workers (December 14, 1990); 2) Alaska natives; 3) area businesses; 4) commercial fishermen; and 5) property owners (classes 2-5 on February 14, 1991). However, Judge Holland (U.S. District Court) refused to certify any plaintiff classes ("Numerous classes would assuredly generate confusion in what is already complicated litigation, with no countervailing benefits"). See Lloyd's Environmental Law International, Vol. 1, No. 3, March 1991 p. 5 f. On the question of class action see also J. F. Ghent, Annotation, Propriety, Under Rules 23 (a) and 23 (b) of Federal Rules of Civil Procedure, as Amended in 1966, of Class Action Seeking Relief Against Pollution of Environment, 7 ALR Fed 907.

[253] As already pointed out the FWPCA does not seem to have much practical significance regarding liability for pollution damage after the enactment of CERCLA and the OPA.

unspecified in court practice. But the DOI regulations promulgated under CERCLA will be of importance also outside the scope of CERCLA and the FWPCA (the OPA awaits regulations for the assessment of natural resource damages). In *State of Ohio v. U.S. Dept. of the Interior* and *State of Colorado v. U.S. Dept. of the Interior* the Court of Appeals considered both the Type A and Type B regulations. The Court struck down the "lesser of" rule as being contrary to the intent of Congress, did not approve the hierarchy of assessment methods for determining "use values," but upheld contingent valuation methodology in determining option and existence values as consistent with due process and CERCLA. The Department of the Interior was content with the decisions and is currently revising the regulations (in close cooperation with the work on producing OPA regulations performed by the NOAA). Consequently, a valuation of natural resource damage approving restoration costs as a basic measure for damages and identifying both use and non-use values may result in extensive amounts of natural resource damages. As was pointed out before the ongoing Exxon Valdez litigation is of great interest also in this respect.

Also, the right to bring claims for natural resource damages has been gradually extended. From federal and state officials (FWPCA and non-statutory maritime law) the class of plaintiffs that can bring actions has been expanded to Indian tribes and, in some cases, to local municipalities (CERCLA). The OPA gives the right to sue to the U.S. Government, a State, an Indian tribe and to a foreign government. It will be interesting to see if further court practice extends this right also to local municipalities.

On the whole one can say that shipowners/operators are exposed to the risk of severe liability for damage to natural resources caused by discharges of oil or other hazardous

substances. It is a liability that, however, might be limited in accordance with the different rules on limiting liability under U.S. law. But it is to be noted that liability under the OPA is largely unlimited and that U.S. court practice has shown that statutory liability limits are far from "unbreakable."

V. CONCLUSIONS AND COMMENTS

V.1. Oil pollution

The USA has neither ratified the 1969 CLC and the 1971 FC nor acceded to the amending Protocols of 1984—although we applied considerable public and private pressure to shape the international instruments according to U.S. wishes (e.g., raising the monetary limits and amounts in the conventions).[254] These instruments provide a consistent and proficient regime for compensating injured parties for oil pollution damages, and it is to be noted that the CLC/FC system has functioned rather well. Compensation has been paid relatively quickly—bearing in mind the frequently complex issues involved—and the claimants have in most cases received adequate compensation. IOPC Fund has also developed parameters for compensating property damage and economic losses and has established guidelines for restoration of natural resources.[255] Further, the new definitions adopted (e.g., of "pollution damage") and the clarifications made in the 1984 Protocols will contribute to the harmonization of law in Contracting States.[256]

The U.S. Congress adopted its own oil pollution legislation (OPA) which essentially

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[254] See also G. W. Paulsen, Why the United States Should Ratify the 1984 Protocols to the International Conventions on Civil Liability for Oil Pollution Damage (1969) and the Establishment of an International Fund for Compensation for Oil Pollution Damage (1971). The Forum, Vol. 20, 1984 p. 164 ff. It is interesting to note that the United States declined to ratify the 1969 CLC and 1971 FC largely because of dissatisfaction with the liability limits, the difficulty of increasing limits in the future, and concern for the states' role in pollution protection. However, in spite of the U.S. dissatisfaction with the international limits, the domestic limits remained roughly equal to the international limits from 1978 to 1990. See T. J. Wagner, The Oil Pollution Act of 1990: An Analysis. Journal of Maritime Law and Commerce, Vol. 21, No. 4, October, 1990 p. 572.

[255] See also J. Gallagher, New England Law Review, Vol. 25, Winter 1990 p. 615. See further on the Fund system and the Fund's activities R. H. Ganten, The International System for Compensation for Oil Pollution Damages. An Assessment based on the Experiences of the International Oil Pollution Compensation Fund. Marlus 62, Oslo 1981.

[256] See also M. Jacobsson & N. Trotz, Journal of Maritime Law and Commerce, Vol. 17, No. 4, October,

endangered the coming into force of the 1984 Protocols.[257] The decision not to accede to the 1984 Protocols has been much criticized; e.g., President Bush chastized Congress for refusing to endorse the international oil spill treaties.[258]

The state of U.S. oil spill law before the enactment of the OPA was unconscionably inconsistent and also afflicted with deficiencies—a situation which was intolerable for the maritime community.[259] Despite the well intended attempt to combat a new and growing problem by the enactment of the FWPCA, this legislation soon became inadequate. Because of its limited liability provisions it ran the risk of substantially undercompensating those who were injured by an oil spill. For example, the liability

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1986 p. 491.

[257] The required quantity of contributing oil cannot in practice be obtained without U.S. participation. The U.S. imports over 400 million tons of oil annually. It may be added that an Intersessional Working Group was set up by the IOPC Fund Assembly at its 13th session with the mandate to consider the future development of the intergovernmental oil pollution liability and compensation system by, inter alia, considering whether it would be possible to facilitate the entry into force of the content of the 1984 Protocols, possibly by amending their entry into force provisions. See IOPC Fund, Sixth Intersessional Working Group, FUND/WGR 6/3, 22 January 1991. The Intersessional Working Group held two meetings and decided to recommend to the Assembly that the entry into force provisions of the 1984 Protocols should be amended. See IOPC Fund, Sixth Intersessional Working Group, FUND/WGR 6/12. The Assembly decided (14th session) to make a request to the Secretary-General of IMO that an international conference be convened as soon as possible to consider the proposed amendments. See IOPC Fund, Assembly, FUND/A 14/WP 3, 11 October 1991. The conference is scheduled for November 23-27, 1992.

[258] Former President Bush stated, inter alia,: "H.R. 1465 does not implement the 1984 Protocols to the 1969 Civil Liability Convention and the 1971 Fund Convention. These oil spill treaties, if ratified, would provide our Nation with swift and assured compensation for foreign tanker oil spills and access to up to $260 million per spill from an international fund. Our failure to ratify the Protocols may weaken long-standing U.S. leadership in the development of international maritime standards....Ultimately, the threat of oil pollution is a global challenge, and the solutions we devise must be broad enough to address the needs of all nations. Therefore, I urge the Senate to give immediate consideration to the international Protocols and give its advice and consent to ratification of these treaties." The quotation is from The Scandinavian Shipping Gazette, No. 36, September 7, 1990 p. 7. See also letter from S. K. Skinner, Secretary, U.S. Department of Transportation to G. J. Mitchell: "...If we do not ratify good international agreements, like the Protocols, we will have no credibility in negotiating other crucial international environmental measures and we will suffer both economically and environmentally." Quoted from J. Gallagher, New England Law Review, Vol. 25, winter 1990 p. 616 n. 346. it may be mentioned that Senate Democratic leader George Mitchell led the opposition to the international protocols, as he feared it would limit the liability of major oil companies in the event of a spill. Lloyd's List, Monday August 20, 1990.

[259] See also D. A. Bagwell, 4 LMCLQ, 1987 P. 522.

limits under the FWPCA—and also under TAPAA—were quite inadequate for a disaster of the Exxon Valdez type. Further, there was no statutory language allowing for recovery for private claimants.[260]

The OPA has largely remedied these deficiencies. The new scheme allows for access to the courts for private citizens and increases considerably the amount of money available for compensation. Further, it has made compensation legislation more clear (although not completely) and comprehensive by, inter alia, amending the TAPAA and repealing the OCSLA and the DPA.[261]

The right to compensation for damage caused by oil pollution (including recovery for private claimants) has been essentially extended in the OPA. The text of the OPA provisions covering recovery for pure economic losses seems to be even broader than the wording of the corresponding provisions in the 1984 Protocols. Future court rulings will expose possible differences between the OPA and the IOPC Fund practice. Further, the right to recovery for natural resource damages under OPA deviates from the solutions adopted in the 1984 Protocols. OPA requires the measure of damages to be the costs of restoration, rehabilitation, replacement or acquisition of the equivalent resources, plus the diminution in value of those resources, pending restoration, while the definition of

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[260] See also J. Gallagher, New England Law Review, Vol. 25. Winter 1990 p. 594 and M. J. Uda, Virginia Environmental Law Journal, Vol. 10, 1991 p. 418, 428.

[261] It may also be mentioned that doubts have been expressed whether the OPA actually constitutes a device to encourage cooperation with the regulated industry and the executive branch of the government. The OPA seems to be very command-and-control oriented and might therefore elicit resistance from the executive branch and the oil industry. Further, the OPA's ability to effectively resolve the confusion and inefficiency associated with oil spill removal operations has been questioned. E.g., T. J. Wagner, Journal of Maritime Law and Commerce, Vol. 21, No. 4, October, 1990 notes: "Rather than simplify and streamline the removal process by placing responsibility in a single agency, the Act exacerbates the already convoluted removal process. The kibitsing and finger-pointing which so drastically impeded the Alaskan clean-up effort will almost necessarily be compounded under any oil spill removal program in the future. In this respect, the Act appears to fall dramatically short of furnishing an improved

"pollution damage" in the 1984 Protocols covers the costs of reasonable measures (also future) of reinstatement. The latter definition seems to make it clear that claims for damage to the marine environment as such ("pure environmental damage") are not admissible. No regulations for the assessment of natural resource damage under OPA have yet been promulgated, but the NOAA is working on the issue. Meanwhile, the DOI regulations, as modified by the court decisions of *Ohio* and *Colorado* (approving restoration costs as a basic measure of damages and identifying both use and non-use values), will have significance for the valuation of natural resource damage also under the OPA. Thus the OPA constitutes a fairly comprehensive legislation for compensating damage caused by oil pollution—also in an international comparison.

Another significant difference between the OPA and the international compensation regimes is the largely unlimited liability under OPA. This is quite a controversial issue.[262] My view is, that a broad notion of compensable environmental damage does not fit very well with the principle of limiting liability. What is the use of comprehensive liability if it can be considerably limited? Further, a statutory right to limit liability contrasts with the fundamental principle in tort law that damage caused shall be compensated in full.

In modern legal discussions insurance considerations have often been cited as the *raison d' etre* of limiting liability. Insurance costs constitute part of a shipping

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removal process" (p. 585).

[262] In the statement mentioned earlier, see n. 149 supra, President Bush also said: "I am concerned about another consequence of the failure to ratify the Protocols. We must work to ensure that, in response to the provisions of this Act, a situation is not created in which larger oil shippers seeking to avoid risk are replaced by smaller companies with limited assets and a reduced ability to pay for the cleanup of oil spills. We will need to monitor developments in order to protect against such undesirable consequences."

company's normal operating costs but the shipowner should be relieved of liability for disasters, i.e., risks where the damage caused by one and the same incident is exceptionally large and against which it is impossible to maintain insurance or, where possible, it can only be done at an unreasonably high cost (the principle of insurability).[263] These arguments are to a large degree based on protectionist and political considerations.[264]

However, I find it difficult to accept that the insurance industry's capacity constitutes an obstacle to unlimited liability; this is because of the minimal overall economic and practical significance of limited liability rules, the character of maritime liability insurance and the present-day structure and capacity of the international reinsurance market.[265] Further, the role played by insurance costs in competition seems frequently to have been exaggerated in international discussion. The introduction of unlimited liability would mean only a marginal—if even that—increase in operating costs.[266] Of course it is

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[263] The insurance factor was emphasized during the work on drafting the Convention on Limitation of Liability for Maritime Claims, 1976. Similar arguments were advanced when the 1969 CLC and the 1971 FC were introduced and in the work of drafting the Convention on Liability and Compensation in Connection with the Carriage of Hazardous and Noxious Substances by Sea. The limits of liability contained in the conventions on nuclear damage (Paris 1960, Brussels 1963, Vienna 1963) are also justified on the grounds of the high risks involved and of the mutual relations between the questions of who is liable, limits of liability and the obligation to maintain insurance.

[264] The limitation of liability encountered in maritime law has been justified during its historical development mainly on protectionist and political grounds.

[265] It may be noted that maximum market cover for shipowners according to reinsurance system 1992/1993 is $1.05 billion. In the event that claims exceed the market cover, the overspill goes to all P & I Clubs in the International Group (the Group consists of 14 Clubs representing approximately 90-95% of the commercial fleet in the world). This system facilitates a large capacity. It is also interesting to note that shipowners are working towards the establishment of an Excess Insurance Fund (EIF) which aims to provide cover in excess of existing P & I. This work has been initiated by the risk of unlimited liability for oil pollution, with only limited insurance cover. Further, it may be added that the market capacity was estimated at $100 million at the time of the Convention on Limitation of Liability for Maritime Claims, 1976. The capacity has thus increased ten-fold and in view of inflation since 1976, there is consequently an urgent need to raise the 1976 limits.

[266] Consequently, I cannot accept insurance costs as a key argument for limitation of maritime liability. Such arguments are not normally acceptable in other fields and, furthermore, there exist other means of giving favorable treatment to national merchant fleets and improving their international

important that maritime liability be insured.[267] It is also understandable that insurers and re-insurers wish to know the total risk to which they are exposed. Risk assessment is necessary in order to calculate premiums, for example, and to arrange appropriate reinsurance cover. But this does not mean by any means that liability for damage has to be limited.[268] An insurance obligation can also be limited to a certain amount.[269]

Limitation of liability means that the industry (here shipping) causing the damage is in part relieved from the obligation to pay compensation, an obligation which should form part of the enterprise's normal operating costs (cf. the "polluter pays" principle[270]). The industry is favored at the expense of the injured party.[271] The principle should be

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competitiveness. This should not be at the expense of the injured parties.

[267] Cf. the obligation to establish and maintain evidence of financial responsibility under the OPA and the 1969 CLC.

[268] It is interesting to note that, since P & I cover is traditionally unlimited (except for oil pollution and charterer's liability), the Clubs *de facto* have covered unlimited liability in some instances, e.g., when there are no applicable limitation provisions or when the shipowner loses his right to limitation.

[269] It is probable that were unlimited liability introduced, insurers would fix a ceiling on their liability; this would soon adapt to the new situation. The excess, more or less theoretical, liability would then fall upon the shipping industry. However, this does not mean that the industry would in any way be placed in a special position. Limitation of liability is not accepted in other fields. For example, in connection with an accident at sea a shipyard that has carried out repairs or a company that has cargo interests in the transport of hazardous substances might find themselves faced with extensive and unlimited liability. Shipping should, in principle, bear the economic consequences of the damage it causes in the same way as other industries. In the final analysis this liability is transferred to the shipowner's customers and consequently to the consumers and other users of transported goods. From the environmental point of view this seems quite acceptable as consumers of pollutants must be prepared to take greater responsibility for environmental costs. See also E. Gold, Marine Pollution Liability After "Exxon Valdez": The U.S. "All-Or-Nothing" Lottery, Journal of Maritime Law and Commerce, Vol. 22, No. 3, July-October, 1991 p. 439.

[270] In accordance with this principle it is primarily the polluter who bears the cost of damage since it would seem reasonable that the person who gains economic advantage from an activity should also bear the expenses and costs occasioned by the activity. Originally the "polluter pays" principle seems to have developed within public law—i.e., as a tool of environmental policy to avoid distortions of competition in international trade from externalization of pollution prevention costs—and from there it has later influenced the law of torts to indicate that increasing role of civil liability to compensate pollution damage from the past and to set responsibilities for the future. See J. Wansink, Environmental Liability Insurance in Europe and the United States, Environmental Liability Law Quarterly, 3-1989. It may be mentioned that the "polluter pays" principle is supported by both the OECD and the EC.

[271] An example of this is the Star Clipper accident, which happened in Sweden in January 1980. In this case the ship collided with the bridge connecting the island of Tjorn with the mainland. As a consequence the bridge collapsed and many lorries and cars drove into the sea. The limitation amount

that the person deriving financial gain from an activity should in the first instance, bear the costs of damage caused by the activity.

My conclusion is that liability for damage to the environment should be unlimited as far as possible[272]—therefore the OPA is a step in the right direction. Liability which exceeds a possible insurance ceiling or financial security maintained should be borne by the activity causing the damage. This might further the willingness to institute preventive measures,[273] and when it comes to determining the reasonableness of unlimited liability, the injured party's justified rights to compensation should not be forgotten. Even if cases may occur where the claimant does not receive full compensation because the claim exceeds the insurance amount or security maintained (e.g., in the event of the insolvency of the responsible party), it is nonetheless correct in principle that liability exists. The claimant's situation in such cases could be improved by means of various complementary arrangements (funds, etc.)[274]—cf. the Oil Spill Liability Trust Fund under OPA. On the

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of the Star Clipper was something about SEK 5-6 million but the damage was estimated to be nearly a hundred times more: a new bridge about SEK 110 million, the lost of profit for industry about SEK 300 million and the rest of the total of nearly SEK 500 million was damage for lost lives, lorries and cars etc.

[272] It is interesting to note that the EC Commission does not propose any financial limits in its Proposal for a Council Directive on Civil Liability for Damage Caused by Waste (COM (89) 282 final-SYN 217, amended version (COM (91) 219 final-SYN 217)). The Draft Convention on Damage Resulting from Activities Dangerous to the Environment, drawn up within the Council of Europe, only refers to provisions on limited liability in national law (Art. 12). It may be added that there are also countries with unlimited liability of nuclear operator, e.g., Australia, Germany, Hungary, Japan and Switzerland.

[273] It may be mentioned that one consequence of the OPA enactment is that the oil companies have already tightened up their control of chartered ships. See The Scandinavian Shipping Gazette, No. 46, November 16, 1990 p. 10. Further, the need for shipping to upgrade its standards, its manpower training and operational practices and its ship design and maintenance has been emphasized by the U.S. legislation. See M. Grey, Aspects of the Oil Pollution Act, BIMCO Bulletin 1/92, January/February p. 7.

[274] The complementary funding system could be built with public (e.g., through taxes and fees) or private money or by a combination of both. Cf. the U.S. nuclear liability protection system which embodies political commitment to provide additional funds if claims exceed the $7.4 billion coverage available from primary ($200 million liability insurance from private insurance pools) and secondary (excess liability assessed to U.S. utilities based on the number of nuclear plant licenses held by each utility) layers. See F. F. Heimann, The U.S. Liability Protection System for Nuclear Power Plants, paper

other hand, it must be admitted that an effective and functioning complementary compensation system means that misgivings about limitation of liability at the "primary level" are reduced, cf. the IOPC Fund. The "assailability" of such a system is in principle dependent on how well it guarantees compensation for the injured party.

However, the OPA differences mentioned supra, i.e., primarily the broad noting of compensable damage and the right for the states to introduce unlimited liability, also cause some unification problems on both the national and international level. It is important for claimants, responsible parties and their insurers, etc., that OPA liability be applied uniformly throughout the country. But the Act specifically provides that it does not preempt the individual states from imposing any additional liability or requirements with respect to the discharge of oil within a state or any removal activities in connection with such a discharge. The OPA provides further that it is not meant to affect or modify existing state law including common law. Therefore the development of a uniform and comprehensive rule of law in this area seems seriously hampered.[275]

From an international point of view one can say that the action by Congress not to accede to the 1984 Protocols has made it difficult to establish a workable world-wide compensation system for oil spills. The shipping industry, and the tanker segment in particular, is an international enterprise and, therefore, solutions to its problems are best solved on the international level.[276] Oil pollution from accidental spills usually affects

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prepared for delivery at OECD Symposium on Nuclear Accidents—Liabilities and Guarantees, Helsinki, Finland, September 2, 1992.OECD

[275] Also T. J. Wagner, Journal of Maritime Law and Commerce, Vol. 21, No. 4, October, 1990 is critical: "In effect, the Act replaces the former patchwork of inconsistent federal programs with a new hodgepodge—one federal statute overlapping numerous state provisions and general maritime law and common law remedies" (p. 585).

[276] See further testimonies supporting the ratification of the international oil pollution liability scheme

several legal systems. Therefore national legislation and systems of liability should be as uniform as possible. This works to the advantage of the person suffering damage (in this way "forum shopping" and other jurisdictional as well as choice of law problems are reduced), whereas variations in the legislation applied reduce protection. Internationally uniform liability systems are also an advantage for liability insurers and enhance their potential for providing better protection.

Thus the decision of the U.S. Congress to remain outside the internationally accepted oil pollution compensation scheme and enact its own legislation, the OPA, has increased the unpredictability and uncertainty of the legal framework surrounding international oil spills. Ratification of the 1984 Protocols would also have provided the United States access to up to $260 million from the IOPC Fund,[277] which seems to provide an equitable distribution of the liability for pollution damage from tanker discharges between the tanker owner and the cargo owner. By adopting the international protocols, the United States would be assured of prompt and certain reimbursement for cleanup costs expended by the government for spills caused by tankers. Further, it is to be noticed that ratification would not have prevented the United States from establishing a complementary domestic compensation fund (over and above the international fund and financed by e.g., taxes and fees on petroleum products[278]) to cover incidents and

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(1969 CLC and 1971 FC) cited by C. J. Pentis, A Comparison between United States Domestic Pollution Acts and the International Civil Liability and Fund Conventions, Northrop University Law Journal, Vol. 3, 1981 p. 177 ff.

[277] The IOPC Fund would provide a cost-effective alternative to a purely domestic solution, because approximately 70% of the Fund is financed by foreign sources (worldwide oil receiving interests). J. Gallagher, New England Law Review, Vol. 25, Winter 1990 p. 615 n. 345.

[278] Allocation of payment made from a compensation scheme to polluting products makes it possible to integrate such expenditure into the cost of the goods and substances that cause damage—and thus spread the costs over a larger segment of the oil-consuming population. this method is in line with e.g., the OECD Council recommendation of May 26, 1972 on principles relating to economic aspects of

circumstances not covered by the IOPC Fund[279] (naturally the United States would be free to have its own domestic laws for situations where the CLC does not apply, such as for spills of non-persistent hydrocarbons or spills from vessels and facilities not covered by the CLC). As I said before, I do not absolutely oppose limitation of liability as part of an effective and functioning comprehensive compensation system that guarantees the claimants adequate compensation. Finally, ratification would have unified U.S. national law (see supra) because any other federal or state law will, by necessity, be pre-empted by the international treaties insofar as it is in conflict with them.[280]

Moreover, while the CLC and FC provide a single forum for the adjudication of claims[281] combined with stipulations for recognition and enforcement of judgments,[282]

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environmental policy at the international level (C(72)128).

[279] See also T. J. Schoenbaum, The Forum, Vol. 20, 1984 p. 163 and J. Gallagher, New England Law Review, Vol. 25, Winter 1990 p. 615. Differences between the OPA and the international protocols are e.g., the higher liability limits under OPA and nearly four-fold larger compensation fund created by the OPA. It is also to be noted that the OPA imposes liability on more parties (owner, operator, demise charterer) than does the CLC (owner). Arguably then, the more stringent liability under OPA might increase the preventive effect of the legislation. However, in legal debate there has been unanimity that rules governing liability schemes are relatively insufficient for accident prevention. Many accidents are caused by human errors that are beyond the influence of liability calculations. The liability schemes are of most importance from the point of view of distributing risk (also in the case of insurance adjustments) and as a means of providing compensation for the injured parties. Further, in the case of two or more persons being liable, there is risk of overlapping insurance, i.e., all of them seek to maintain liability insurance to protect themselves from large claims for compensation. This kind of multiple coverage of the same risk means increased costs and recourse actions. Focusing liability on one person also seeks to reduce disputes about liability and delays in settling liability claims.

[280] US Const. Art. 6, cl. 2: "This constitution, and the laws of the United States which shall be made in pursuance thereof; and all the treaties made, or which shall be made, under the authority of the United States, shall be the Supreme law of the land; and the judges in every state shall be bound thereby, any thing in the constitution or laws of any state to the contrary notwithstanding."

[281] The CLC stipulates that proceedings shall be instituted in the contracting state where the damage occurred and states shall ensure that their courts have the appropriate jurisdiction to handle such claims for damages. Further, courts in the country in which a limitation fund has been established shall have exclusive jurisdiction to handle all matters concerned with distribution of the fund's resources (CLC Art. 9, see also FC Art. 7).

[282] A judgement given by a competent court shall be recognized and enforceable in each contracting state (see CLC Art. 10 and FC Art. 8). It may be noted that by imposing the earlier mentioned (see Part III.1.1.2. supra) requirements for evidence of financial responsibility combined with direct action provisions the OPA endeavours to safeguard claimant's position against foreign parties. See also the

the OPA not only leaves open the possibility of a suit in state courts, but also provides for multiple federal fora.[283]

As was mentioned before the OPA now awaits natural resource damage assessment regulations. Establishing accurate means for valuing natural resources is essential for the effective functioning of the law. The NOAA is considering providing the trustees with a variety of assessment procedures, and giving guidance to the trustees in selecting the procedure most appropriate for a particular spill. The trustees could choose among the various procedures based on the circumstances of the oil spill or the resources involved. For example, the availability of a compensation table or computer model for a particular spill would not necessarily rule out the use of an expedited or comprehensive damage assessment procedure where the trustee found that neither a compensation table nor a computer model would be the best method for assessing damages. Parallel assessments using more than one procedure may also be allowed, provided there is no double counting.[284]

Finally, it remains to be seen what possible impact this sizable unilateral U.S. activity will have on foreign legislations and on the work to unify maritime legislation performed by such institutions and organizations as the IMO, the CMI, etc. There are already signs

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interesting article by C. J. Cichetti & N. Peck. Natural Resources & Environment. Vol. 4, No. 1, Spring 1989 p. 6 ff., in which they discuss the admissibility of CV evidence in litigation and flaws in CV surveys used in CERCLA cases.

[283] See OPA s. 2717 (b)(c). Also, T. J. Wagner, Journal of Maritime Law and Commerce, Vol. 21, No. 4, October, 1990 is critical: "The claims process is further stymied by the failure of the Act to designate a single forum for resolution of claims. The Act thus perpetuates the redundant process of identical claims for pollution loss and damage being adjudicated in multiple federal and state courts. The transactional costs and delay of such an unstructured program are exacerbated when no single forum has jurisdiction to oversee all claims and supervise consolidated pleading, discovery, motion and trial practice" (p. 587).

[284] For more information see Federal Register, Vol. 57, No. 50, Friday, March 13, 1992, proposed Rules p.

of such an influence [285]

V.2. Damage from hazardous substances

As we have also seen, damage caused by hazardous substances from ships (other than oil) is rather well covered under U.S. compensation law. Damages for both pure economic losses and impairment of natural resources are recoverable under the CERCLA. However, also here we meet the dilemma mentioned above; i.e., a broad notion of compensable damage linked to statutory liability limits. For claimants the situation under CERCLA is worse than under the OPA because there does not seem to be any additional unlimited liability under state law.[286] But another matter is how the courts deal with the broad CERCLA provisions lifting the statutory liability cap for shipowners/operators. As was said before, U.S. courts seem traditionally to have been restrictive in allowing limitation of liability.

The essential issue of natural resource damage assessment is still somewhat unsettled—relevant court practice is lacking . But the current set of natural resource damage assessment procedures, 43 CFR Part 11, which have been promulgated by the DOI and modified by the *Ohio* and *Colorado* decisions, provide a solid base for damage assessment under CERCLA—and also under the FWPCA.

Despite its clear advantages the CERCLA legislation also has some shortcomings,

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[285] According to BIMCO Bulletin, 5/91, September/October p. 47 a significant body of government opinion in the western world (e.g., Canada, Germany) appears to be in favor of the U.S. precedent. And reports suggest a growing lobby to be in favor of large-scale changes in IMO legislation following the U.S. action.

[286] Note the Limitation of Liability Act 1851. Recovery is subject to general maritime law even though it is sought in the state court. See also T. J. Schoenbaum, op cit. p. 543 f.

however. Congress enacted CERCLA in 1980, and amended it in 1986, in response to severe environmental and public health effects posed by the disposal of hazardous wastes. Due in large part to CERCLA's enactment as a "last minute compromise" many issues under the legislation remain unclear and not resolved. For example, the group of potentially responsible parties (PRPs) under CERCLA and the notion of "response costs"[287] need to be clarified. Under Congress' direction to let "traditional and evolving principles of common law" govern unresolved liability issues, the courts have to fill the gaps regarding CERCLA liability.[288] However, to push the unresolved questions on to the courts might weaken predictability and uniformity in the application of the legislation. Therefore courts have held uniformly that CERCLA's purpose and structure support the development of interstitial federal common law, rather than the adoption of state common law, to promote nationwide uniform liability standards.[289]

Opinions have also been expressed on providing a private remedy for natural resource damages under CERCLA. F. B. Cross states, inter alia,:

> "Providing a private remedy for natural resource damages is one such social arrangement that creates an economic disincentive to harm resources. This economic disincentive should deter harm to natural resources. Private recovery of cleanup costs under Superfund already has begun to spur voluntary efforts to cleanup hazardous waste sites. The threat of recovery may prevent the hazardous releases before resources are harmed."[290]

A restricted expansion of the right to claim natural resource damages might be worth

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[287] See e.g., *Bolin v. Cessna Aircraft Co.*, 759 F Supp 692 (1991) p. 710.

[288] See M. Conyngham. Boston College Environmental Affairs Law Review, Vol. 17, 1990 p. 859.

[289] M. Conyngham. Boston College Environmental Affairs Law Review, Vol. 17, 1990 p. 859 f. with references.

[290] Vanderbilt Law Review, Vol 42, 1989 p. 340.

considering; for example, such a right could be given to certain environmental interest groups/organizations. After all, there are some limitations on the possibilities government and state agencies have of effectively safeguarding the interests of their citizens. Environmental organizations often function as 'watchdogs" over industries and activities hazardous to the environment[291] and they could form an important part in a comprehensive system to protect the environment. Further, it may be mentioned that also internationally there is a trend to extend to environmental interest groups/organizations the right to recover natural resource damages.[292]

[291] Cf. M. J. Uda, Virginia Law Journal, Vol 10, 1991 p. 432.

[292] For example, the Norwegian comprehensive rules governing liability for environmental damage (Lov av 16. juni 1989 nr. 67 om endringer I low av 13. mars 1981 nr. 6 om vern mot forurensninger og om avfall (forurensningsloven) m.v.) offer a solution by which public authorities (primarily local government authorities) and private organizations with a legal interest in the case have the right to claim reasonable compensation from the defendant(s) for restoration of the environment. Further, Art. 4.3. of the amended EC proposal for a Council Directive on Civil Liability for Damage Caused by Waste gives "common interest groups or associations, which have as their object the protection of nature and the environment" the right to seek the remedies (e.g., injunctions to prevent damage or impairment or to order the reinstatement of the environment/reimbursement of costs lawfully incurred in reinstating the environment) available in the Directive (Art. 4.1.(b)), within the conditions laid down by national law.

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