

Environmental Damage Liability Regimes Concerning Oil Spills - A Global Review and Comparison

Barbara J. Goldsmith, President, Barbara J. Goldsmith & Company LLC
Tara K. Waikem, Projects Counsel, Barbara J. Goldsmith & Company LLC
Tara Franey, Projects Associate, Barbara J. Goldsmith & Company LLC

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Recently, there have been a number of key developments related to oil spill-related liability worldwide. These developments include: the recent expansion of damages under the European Union Environmental Liability Directive to all marine water; proposed changes to the Canadian offshore oil legislation that would allow for the specific recovery of environmental damages; implementation of US legislation which directs recovered funds from an oil spill to be used in the affected area; and more. This paper will identify and describe the various environmental liability regimes in different regions of the world which contain requirements for the restoration of natural resources affected by these incidents. The paper also will highlight similarities and differences among these regimes, as well as some of the synergies in actual practice. In addition, and to the extent possible, the paper will provide some of the lessons learned and best practices relative to the determining environmental damage liability under the different regimes.

INTRODUCTION:

When there is a release of oil or oil spill – on or off shore – there can be liabilities related to the associated effects on natural resources resulting from that release. Protection and restoration of natural resources exists in legal regimes under US, European and other worldwide laws. The purpose of this paper is provide the reader with an overview of existing liability regimes governing the release of oil and its impacts on natural resources at the national (US) and international levels, as well as some of the key observations related to the regimes, and the emerging global synergies related to natural resource damage assessment and restoration activities. Other legal remedies available under laws related to oil spills, such as economic damages, as well as criminal and civil liability, are briefly mentioned, when appropriate.

Part 1 of the paper highlights the key national liability regimes that have been established around the world relative to oil spill incidents in North America, South America, Europe, Asia and Australia, as well as a few of the applicable International Conventions, in order to demonstrate the diversity of regimes that cover oil spill liability globally. Part 2 provides information on a limited set of oil spill cases and incidents that have also helped define today's policies and practices. Part 3 highlights some of the key similarities and differences among the various liability regimes, with a particular focus on a comparison between US oil spill policies and practices with other schemes. Finally, Part 4 outlines the emerging practice synergies that are being seen globally relative to oil spill related natural resource damage assessment and restoration practices.

In 2013 alone, there were a number of key developments concerning oil spill-related liability worldwide, including expansion of damages under the European Union Environmental Liability Directive to all marine waters; proposed changes to the Canadian offshore oil legislation that would allow for the specific recovery of environmental damages; implementation of US legislation which directs recovered funds from an oil spill to be used in the affected area; and more. This paper will include discussion on some of these developments and the influences on today's oil spill policies and practices.

PART 1: OVERVIEW OF OIL SPILL-RELATED NATURAL RESOURCE LIABILITY REGIMES WORLDWIDE

This Part briefly identifies and summarizes the various liability regimes worldwide that contain provisions related to environmental damage resulting from the release of oil, including those that authorize monetary damages and/or penalties and require restoration or other forms of compensation for injuries to natural resources. The regimes described here cover nearly every continent worldwide, including North America, South America, Europe, Asia and Australia. The processes to assess and determine the level of natural resource restoration required to offset the injury to natural resources resulting from an oil spill is also described, where available. International conventions governing the release of oil spills are also briefly identified.

North America

In North America, the US has had an extensive legal framework in place to address natural resources damages associated with oil spills. This regime, as well as legislation in Canada, currently under revision, is described here.

United States

The United States has an extensive liability regime and associated procedures for assessing environmental damage resulting from oil spills at the federal level. Following some brief background, this section describes the statutory authority, key features and the procedure to identify and compensate for damages to natural resources.

Prior to the passage of the Oil Pollution Act of 1990, several federal statutes concerning liability for the release of oil were enacted and revised in an attempt to address environmental matters related to such spills (Oil Pollution Act of 1990, 2011). Authorities included the Rivers and Harbors Appropriations Act of 1899 (Refuse Act), which makes it illegal to discharge refuse matter into navigable waters of the US (Rivers and Harbors Act of 1899, 2011); the Oil Pollution Act of 1924, which dealt only with intentional discharges of oil (Oil Pollution Act of 1924, 1924), and its subsequent Clean Water Restoration Act of 1966 amendments, which still only covered spills resulting from willful or gross negligence, and only covered government cleanup cost (Clean Water Restoration Act, 1966); the Water Quality Improvement Act of 1970, which imposed strict liability (Water Quality Improvement Act, 1970); and the Clean Water Act in 1972 (Clean Water Act, 2011). In sum, none of these laws provided comprehensive treatment of liability for oil spills. In addition, common law claims were often also used during this time period to seek recovery for damages related to oil spills.

Following the 1989 *Exxon Valdez* oil spill off the coast of Alaska, Congress enacted the Oil Pollution Act of 1990 (OPA), which holds that each responsible party for a vessel or a facility from which oil is discharged, or which poses the substantial threat of a discharge of oil, into or upon the navigable waters or adjoining shorelines or the exclusive economic zone is liable for the removal costs and damages resulting from such incident (Oil Pollution Act of 1990 at 33 U.S.C. §2702(a)). OPA also permits filing of private claims such as damages to real or personal property, loss of taxes, royalties, rents or fees and other lost revenues by federal or state governments, loss of profits or loss of earning capacity due to injury to natural resources and cost of public services.

The definition of “responsible party” under OPA varies based on the kind of facility from which a release originates. Generally, only owners and operators of onshore facilities and permittees, lessees and licensees for offshore and deepwater facilities can be held liable as a “responsible party” under the statute (Oil Pollution Act of 1990 at 33 U.S.C. §2701(32)). The total liability of a responsible party is limited to specific monetary amounts (large tank vessels are limited to \$22,000,000, and onshore and deepwater ports have limits up to \$350,000,000), unless one of the liability limitation exceptions applies as provided for in the statute (Oil Pollution Act of 1990 at 33 U.S.C. §2704)). Agencies with authority under OPA also have the discretion to lower the liability limits if warranted by size, storage capacity and other pertinent factors (Oil Pollution Act of 1990 at 33 U.S.C. §2704(d)).

OPA also established the Oil Spill Liability Trust Fund (Fund), which is managed by the National Pollution Funds Center, within the US Coast Guard, to ensure that funds were available to cover removal costs or damages due to a discharge of oil (Oil Spill Liability Trust Fund, 2011). In the event that the responsible party is unknown, unavailable, or has liability defenses, the Oil Spill Fund may be used to cover the costs incurred (Oil Pollution Act of 1990 at 33 U.S.C. § 2703). The Fund may cover up to \$1 billion of costs for any one spill. This amount also includes up to \$500 million for the initiation of natural resource damage assessment and other legal claims for the incident (Oil Spill Liability Trust Fund at 26 U.S.C. §9509(c)(2)(A)).

In addition to providing authority for the recovery of costs associated with response and cleanup actions related to an oil spill, OPA also contains specific provisions for the recovery of natural resource damages (NRD), which is the liability for “injury to, destruction of, loss or, or loss of use of, natural resources” (Oil Spill Liability Trust Fund at 26 U.S.C. §9509(c)(2)(A))” Economic losses are covered by a separate provision of OPA (Oil Pollution Act of 1990 at 33 U.S.C. § 2702(b)(2)(E)). NRD includes the reasonable cost to undertake a damage assessment; however, should the funds recovered be in excess of the assessment costs, this amount is to be deposited into the Oil Spill Liability Fund (Oil Pollution Act of 1990 at 33 U.S.C. §2706(f)).

While the emergency response and clean up actions are led by the US Coast Guard, other designated Federal and State Trustees may file legal claims on behalf of the public to recover natural resource damages and services damages as a result of oil spills (Oil Pollution Act of 1990 at 33 U.S.C. §2701). At the federal level, the US Department of Commerce’s National Oceanic and Atmospheric Administration (NOAA) serves as the lead trustee under OPA, particularly via NOAA’s Damage, Assessment, Remediation and Restoration Program (DARRP).

In order to assess the extent of damage to natural resources and associated services that resulted from a specific oil spill, NOAA promulgated natural resource damage assessment (NRDA) regulations in 1996. According to the regulations, the goal of OPA is “...to make the environment and public whole for injuries to natural resources and services resulting from an incident involving a discharge or substantial threat of a discharge of oil (incident)” (Oil Pollution Act Regulations at 15 CFR § 990.10). This is achieved “...through the return of the injured natural resources and services to baseline¹ and compensation for interim losses of such natural resources and services from the date of the incident until recovery” (Oil Pollution Act Regulations at 15 CFR § 990.10).

The NOAA regulations, while optional, provide a framework for the NRDA process, which is divided into three phases. Phase One is the Preliminary Assessment phase. During this phase, it must be determined whether the Trustees have OPA jurisdiction, and if so, whether they should conduct restoration planning. If the resources are injured, Trustees will proceed to the next phase (NOAA – DARRP, 2013). Phase Two is Injury Assessment/Restoration Planning. Scientific and economic studies are conducted to assess the loss of services caused by various natural resources injuries. Through these studies, a restoration plan is also developed that outlines possible approaches to conducting restoration and recovery (NOAA – DARRP, 2013). During this phase, the Trustees must first assess the injury to evaluate whether the discharge of oil has injured the natural resources or services. The Trustees must then determine the need for and scale of possible restoration activities. Once the injuries have been quantified, a Restoration Plan is drafted and includes any restoration alternatives also identified. The Restoration Plan must also go through a period of public review and comment prior to implementation. Restoration Implementation is the third phase of the NRDA process under the NOAA regulations. Through the public comment period, the Trustees work with the public and interested parties to determine the best alternative restoration project in order to build the Final Restoration Plan (NOAA – DARRP, 2013). Upon completion of the Final Plan, the Trustees will submit the Final Restoration Plan to potentially responsible parties either for these parties to implement, or for these parties to reimburse the trustees for costs of implementation (NOAA – DARRP, 2013).

As stated above, the US liability regime lays out a specific process to respond to, assess and restore natural resource damages resulting from the release of oil. This over 20 year practice arena has evolved as experience has been gained through addressing actual incidents, as well as an exchange of techniques, methodologies and lessons learned within government and industry and among the various stakeholder groups.²

¹ Baseline is defined in the regulations as “the condition of the natural resources and services that would have existed had the incident not occurred. Baseline data may be estimated using historical data, reference data, control data, or data on incremental changes (e.g., number of dead animals), alone or in combination, as appropriate.”, 15 CFR § 990.30.

² According to the Ad-Hoc Industry Natural Resource Management Group Database, approximately 100 cases have been brought under the OPA. While the Group strives to ensure that the information in the Database is validated on entry, maintained, updated and corrected, errors can still occur. Any such information is provided on an “as is” basis without any representation, warranty or condition as to quality, accuracy, completeness, legality, currency, reliability, efficacy or fitness for a particular purpose.

Canada

Canada's key national legislation covering oil spill-related incidents and associated damages in marine waters is the Canada Oil and Gas Operations Act (COGOA). Several Canadian Provinces also have specific regulations governing oil pipeline transport; however, this section will focus on COGOA, including its key features and recent proposed changes.

The Canada Oil and Gas Operations Act (COGOA) was passed in 1992 and governs oil and gas operations in most marine areas in Canada. The Act requires that the entity engaged in oil and gas operations must take all reasonable measures to contain and clean up a spill. The party "originally authorized to do the work" is responsible for any costs incurred in managing the spill, as well as all actual loss or damage incurred by any person as a result of the spill, and all reasonable costs and expenses of any action taken by the government or any other person in relation to the spill. Liability under COGOA is strict, but can be limited through regulations, which currently limit liability to \$40 million for a spill in Arctic waters, and \$30 million for a spill in Atlantic waters; however, those limits do not apply if fault or negligence is found.

At present, COGOA does not contain provisions specifically authorizing recovery of damages to natural resources or the environment. However, proposed changes to the Act, announced in June 2013 by the Minister of Natural Resources (Rozmus, 2013), includes specific text allowing Canada to recover compensation for all loss of "non-use value relating to a public resource" caused by a spill at an offshore oil and gas operation (House of Commons of Canada, 2014). The legislation would also raise liability limits, in most cases to \$1 billion.

South America

There are several South American countries which have specific liability regimes governing the release of oil, including Brazil, Chile and Venezuela. This section briefly summarizes the legislation in each country.

Brazil

Brazil has civil, administrative and criminal remedies for environmental damage related to oil spills. Following a major oil spill in Guanabara Bay in 1988, the Brazilian government redrafted its federal Constitution to include provisions indicating that "... everyone has the right to an ecologically balanced environment" (Law Library of Congress, 2014). This constitutional right is enforced through Law No. 6.938/1981, which enforces a civil liability regime requiring parties, if found liable, to compensate or repair damage to the environment (Law Library of Congress, 2014). There is no limit to compensation under this Law. Decree No. 6,513, enacted in July 2008, permits the issuance of fines for entities which impose an "infraction against the environment", specifically relative to "... pollution of any kind at such levels that results or may result in harm to human health or causes the death of animals or significant destruction of biodiversity" (Law Library of Congress, 2014).

In addition to civil liability and administrative penalties, operators found liable for environmental damage resulting from oil spills may also be subject to criminal penalties. Law No. 9,605 defines the activities which can be considered crimes "against the environment", as well as the associated punishment, including incarceration, payment of fines or identification of specific acts that are to be undertaken (Law Library of Congress, 2014). Despite the articulation

of various forms of recovery for environmental damage, the Brazilian legislation "... does not include standardized procedures for assessing environmental injury and placing a monetary amount on such damage" (Steamship Mutual, 2010).

Chile

In Chile, Law Number 19.300, The Law on General Bases for the Environment, grants the "right to live in an environment free of pollution, the environment protection, nature's preservation and the environmental heritage conservation shall be ruled by the law herein, without prejudice of the provisions of other legal norms on this subject" (Comisión Chilena del Cobre, 2014). Environmental damage caused by oil spills is identified as one of the categories of operation that may be subject to liability under this legislation. Under Law 19.300, an operator that harms the environment, either through guilt or deceit, will be required to "repair it materially, at his or her own extent, if it is possible, and compensation it in accordance to the law" (Comisión Chilena del Cobre, 2014). Like Brazil, it does not appear that a specific procedure has been identified in which parties can assess the extent of natural resource or environmental damage at a specific site.

Venezuela

Venezuela has a criminal liability regime in place relative to oil spills. Under the Venezuela's 2012 Environmental Criminal Law, which repealed the 1992 Environmental Criminal Law, oil spills can be considered as environmental crimes if it is found that the spill has adversely effected the environment and/or natural resources (Wallis and Mata. M., 2012). Under the law, sanctions can be rendered for actions which cause the pollution of water quality, including operations during the course of transporting oil and such sanctions can include holding a tanker captain liability for the contamination or imprisonment (Wallis and Mata. M., 2012).

Europe

In 2004, the European Union passed the EU Environmental Liability Directive (ELD), which established a regime implementing the "polluter pays principle" for environmental damages. While the ELD specifically excludes damages resulting from certain oil spills, including those that would be covered by International Agreements or Conventions, a recent legislative development related to the Directive has expanded its geographical scope to all marine waters within the exclusive economic zones of the Member States and may now govern offshore oil spills. As such, the ELD is described below, as well as its recent expansion.

The EU Environmental Liability Directive

The "European Union Directive on environmental liability with regard to the prevention and remedying of environmental damage" was adopted by the European Parliament on 21 April 2004 and focuses primarily on the prevention of environmental damage (Environmental Liability Directive, 2004). The ELD, which embodies concepts similar to the NRD regime under US law mentioned above, makes Member States responsible for ensuring that "damage to water, land and biodiversity is either prevented, by taking appropriate measures in cases of imminent threats, or effectively remedied by restoring the previous condition if the damage has already been done". Member States were required to implement the ELD into national laws by April 30, 2007 and as of July 1, 2012 all Member States had completed transposition.

The ELD aims to prevent environmental damage via the “polluter pays principle”. Should an incident occur, the Directive provides a framework for the remediation of environmental damage (as found in Annex II of the ELD) through the restoration of the environment to its baseline condition via primary, complementary and compensatory remediation. The ELD defines the types of damages and activities for which an operator would be held liable under the ELD, as well as a set of specific exemptions. The ELD creates two “liability” regimes – strict liability and fault-based liability. For example, Annex III of the ELD provides a listing of “occupational” activities that invoke strict liability for environmental damage and should an incident resulting from those activities occur. The operator may also be found liable for damage to protected species or natural habitat caused by any occupational activities outside of the Annex III list, if the operator is at fault or is negligent (Environmental Liability Directive, at Art. 3(1)(b)).

The ELD also requires that the responsible operator undertake preventative action in case of imminent threat of environmental damage, as well as remedy the environmental damage if it has occurred (Environmental Liability Directive at Art. 5). In those instances where the operator does not or cannot take preventative or remedial action, the Member State Competent Authority may carry out the necessary measures (Environmental Liability Directive at Art. 5(4)).

Pursuant to Article 4 of the ELD, “Exceptions”, oil spills at sea are not covered by the ELD as they were found to have been sufficiently covered by the international regimes and conventions such as the 1992 International Conventions on Civil Liability for Oil Pollution Damage and the Establishment of an International Fund for compensation for Oil Pollution Damage, which are described in more detail below. With regard to other spills, ELD applicability is limited to sites in the EU’s Natura ecological network of protected sites, which includes sites protected under the Habitats Directive (Habitats Directive, 1992) or Wild Birds Directive (Wild Birds Directive, 1979), or land damage which creates a significant risk to human health – however, these limitations only prevent the full requirements of the Directive from becoming applicable.

In 2013, the scope of the ELD was broadened to include some oil spills through “Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations and amending Directive 2004/35/EC” which was adopted in June 2013. This Directive requires Member States to “ensure that the licensee is financially liable for the prevention and remediation of environmental damage as defined in that Directive, caused by offshore oil and gas operations carried out by, or on behalf of, the licensee or the operator” (Offshore Directive, 2013, at Art. 7). The Directive also amended the definition of “water damage” in the ELD to include marine waters of Member States, as defined in Directive 2008/56/EC (Marine Strategy Framework Directive, 2008). Member States must implement this change by July 19, 2015 (Offshore Directive at Art.38(2)).

Like the natural resource damage assessment process defined under the US Oil Pollution Act, the ELD sets forth a specific framework for assessing and remediating (or restoring) environmental damage. Annex II of the ELD identifies three remediation options that are to be undertaken should damage to water or protected species or natural habitats occur. The goal of the remedial actions is to return the resources to their baseline condition by way of primary,

complementary and compensatory remediation (Environmental Liability Directive at Annex II (Environmental Liability Directive at Annex II). Primary remediation aims to return the natural resources and/or services provided by those resources to the baseline condition prior to the incident. If remediation to baseline is not possible, complementary remediation is performed and is intended to provide appropriate and alternative restoration to a similar level of services and compensatory remediation may also be undertaken to compensate for lost interim use of the natural resources and services until recover is achieved.

The implementation of the ELD, generally, and relative to oil spills is still developing throughout the EU and much is yet to be seen as to how -- and if -- it will be applied to both onshore and offshore oil spill incidents. Further, it should be noted that the ELD was intended to supplement existing national legislation relative to environmental damage and a number of countries have had legislative, regulatory and other national regimes already in place to address natural resource and other damages resulting from oil spills.³

Asia and Australia

A few countries in the Asian and Australian regions of the world have specific liability regimes governing the release of oil, including China, Vietnam and New Zealand. This section briefly summarizes the legislation in each country.

China

In China, the Marine Environment Pollution Law (MEPL) establishes strict liability for pollution damage to the marine environment, including oil spills. The MEPL states that “If the State suffers heavy losses from the damages to marine ecosystems, marine aquatic resources and marine nature reserves, the departments invested by this law with the power of marine environment supervision and administration shall, on behalf of the State, put forward compensation demand to those who are responsible for the damages” (Marine Environment Protection Law, 1999, at Ch. IX, Article 90). However, there appears to be some debate as to the applicability of the MEPL. As it is principally an administrative statute, some Chinese scholars have argued that it does not apply to the civil law issue of oil spill liability (Wang, 2011). Further, it does not appear that a specific procedure has been identified for parties to assess the extent of natural resource or environmental damage resulting from a specific incident or at a site.

Vietnam

Vietnam includes oil spills in a list of sanctions promulgated pursuant to the Law on Environmental Protection of December 27, 1993, imposing a fine of up to 50,000,000 VND (~2350 USD) (Decree No. 26-CP, 1996 at Art. 12, No. 3). The Decree states that “[c]ompensation for the damage caused by administrative violations in environmental protection shall be made on the principle of mutual agreement between the author and the victim of the damage” (Decree No. 26-CP, 1996 at Art. 12, No. 3). However, the policy contains no explicit provisions for recovery for environmental damage by the government or other public trustee type body. Vietnam also does not appear to have specific procedures for assessing natural resource or environmental damages.

³ Additional information on the ELD can be found at the EU Environmental Liability Directive Practice Exchange at <http://www.eueldpracticeexchange.com/>, as well as the related website www.NRDonline.org.

New Zealand

Under the New Zealand's Maritime Transport Act, which was amended in 2013, the person in charge of any marine operation or owner of a marine structure must pay the government the costs of removing, containing, or rendering harmless any harmful substances discharged in to the waters of New Zealand, and the costs of any reasonable measures taken to prevent or minimize the discharge or escape of a harmful substance (Maritime Transport Act, 2013, at Section 385B). The responsible party is also liable for pollution damage, but the definition of pollution damage is restricted to "the costs of any reasonable preventive measures taken to prevent or reduce pollution damage and any damage or loss occurring as a result of those measures", "the costs of reasonable measures of reinstatement of the environment that are undertaken or to be undertaken", and "losses of profit from impairment of the environment" (Maritime Transport Act, 2013, at Section 385B). It explicitly does not include other impairment to the environment in the definition of pollution damage.

International Conventions

In addition to country-specific liability concerning oil spill-related environmental damage, there are several International Conventions which concern oil pollution, including the International Convention on Civil Liability for Oil Pollution Damage, the International Convention for the Prevention of Pollution From Ships and the Offshore Pollution Liability Association.

The International Convention on Civil Liability for Oil Pollution Damage (CLC)

The (CLC) is a treaty of the International Maritime Organization, first signed in 1969 and renewed and amended by the 1992 Civil Liability Convention. The CLC applies only to oil pollution damage caused by oil tankers, and it is currently signed by 127 countries, including China, Australia, Japan and Canada. The convention applies strict liability to the owner of the ship from which the polluting oil escaped, and also requires ships to carry insurance equivalent to the owner's total liability for one incident (1992 Civil Liability Convention, 2011, at Art. VIII(1)). The liability under CLC for a single incident is limited to certain set amounts, but is unlimited if it is proved that the pollution damage resulted from the owner's personal act or omission, with intent to cause damage, recklessness, or knowledge that such damage would occur (1992 Civil Liability Convention at Art. V(2)). The CLC does not provide detail relative to the remediation and/or level of restoration required to offset damages to ecological services.

The 1992 Convention revised the definition of pollution damage, as "loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken (1992 Civil Liability Convention at Art. I(6)). Claims for compensation under the convention for environmental damages that are not connected to quantifiable loss have "consistently" been declared inadmissible according to Resolution No. 3 of the IOPC Fund Assembly (Mason, 2002). 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, modified by the 1992 Fund Convention.

The Fund Convention pays out compensation to those who suffer oil pollution damage in certain circumstances: the shipowner is not liable under the CLC under one of the CLC exemptions, the shipowner cannot pay, or the damage exceeds the liability limitations in the CLC.

International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (MARPOL)

International Convention for the Prevention of Pollution From Ships (MARPOL) was first signed in 1973. However, it did not come into force until 1983, when the Convention was altered by the 1978 Protocol. While MARPOL deals specifically with prevention efforts, including prevention of pollution by oil, it also requires that penalties “shall be adequate in severity to discourage violations of the present Convention and shall be equally severe irrespective of where the violations occur,” which mandates, inter alia, penalties for oil spills in violation of the Convention (MARPOL, 1978, at Art. IV(4)). Under the convention, six technical Annexes outline regulations for the prevention and minimization of pollution from vessels, including pollution by oil, noxious liquid substances, harmful substances carried in package form, sewage, garbage and air (IMO, 2014). Accordingly to a legal analysis report prepared by the United Nations Environment Programme, 152 national states are parties to MARPOL and, as such, is said to be “one of most successful Convention (sic) in the field of marine pollution prevention” (Aminath, 2013).

OPOL – Offshore Pollution Liability Association Limited

The Offshore Pollution Liability Association Limited (OPOL) is a private agreement, which came into effect in 1975, between operators who choose to voluntarily participate in a compensation scheme for incidents at offshore facilities. The regime is based on strict liability for remedial measures and pollution damage (OPOL, 2013). There is a limitation on liability per incident, and only covers incidents of member operators in the covered national states, the United Kingdom, Denmark, the Federal Republic of Germany, France, Greenland, the Republic of Ireland, the Netherlands, Norway, the Isle of Man and the Faroe Islands (OPOL, 2014).

PART 2: INFLUENCE OF SPECIFIC CASES AND/OR SITES ON OIL SPILL PRACTICE

In addition to the national and international liability regimes that have defined how oil spill incidents are addressed worldwide, a set of cases and incidents has also helped shape the policies and practices related to the release of oil. The incidents to be highlighted here include the *Exxon Valdez* Oil Spill (1989), *Erika* Oil Spill (1999), the *Prestige* Oil Spill (2002) and *Deepwater Horizon* (2010).⁴

Exxon Valdez

On March 24, 1989, the Exxon Valdez oil tanker struck a reef in Prince William Sound, Alaska, spilling over 11 million gallons of crude oil (EPA, 2014) (ExxonMobil, 2014). As a

⁴ Other cases and litigation have also contributed to the development of oil spill liability law, but we have focused on these cases due to their impact on oil spill practice as a whole. For other cases, see Letourneau and Welmaker, 2000.

result of this incident, US Congress passed the Oil Pollution Act of 1990, described above, setting forth a specific liability regime to respond and address resource losses resulting from an oil spill. In addition to the establishment of OPA, the *Exxon Valdez* spill and subsequent natural resource damage assessment and restoration activities, has provided the initiation and development of specific methodologies and practices to assess the extent of injuries to natural resources, as well as identify and scale the appropriate level of restoration needed to compensate for loss. For example, according to the Exxon Valdez Trustee Council, since the 1991 *Exxon Valdez* settlement in 1991, hundreds of peer-reviewed research, monitoring, and general restoration projects have been completed. As a result of this work, the restoration program has greatly contributed to the knowledge of available information on the marine environment, particularly relative to "...baseline information for many species that was not available before the spill as well as significant improvements in the tools that fish and wildlife managers use to evaluate the populations of injured species" (Exxon Valdez Oil Spill Trustee Council, 2014). This being said, one of the continuing issues that has been seen in the context of the *Exxon Valdez* and is still being examined today is how long oil remains in the environment and the extent that its presence actually continues to negatively impact the services provided by natural resources.⁵ For example, in 2006, Drs. Mark Harwell and John Gentile published an article indicating that "...chemical stressors from EVOS [Exxon Valdez Oil Spill] are essentially gone, with the few remnant EVOS [Exxon Valdez Oil Spill] source areas having comparable magnitude to other human activity sites and with the chemical releases from those remnant sites incapable of affecting the PWS [Prince William Sound] ecosystem in an ecologically significant way" (Harwell and Gentile, 2006).

Erika Oil Spill

On December 12, 1996, the *Erika*, a Maltese tanker, sank in the Bay of Biscay, spilling approximately 20,000 tonnes of heavy fuel oil along the French coastline (Cedre, 2014). As a result of the incident, multiple civil parties, such as public collectivities (French regions, departments and cities) and environmental groups, claimed for compensation of their damages (Chrisafis, 2008). In addition to instigating legislative reforms throughout the EU relative to ship safety, the incident has also contributed to the body of case law concerning oil spills, including issues such as the scope and application of the "polluter pays principle", criminal responsibility and sanctions and the scope of civil liabilities (Euractiv, 2008).⁶

Prestige Oil Spill

On November 19, 2002, the *Prestige* tanker broke in two off the Northwest coast of Spain, after suffering hull damage. Approximately, 63,000 tonnes were lost into the Atlantic Ocean, and reached the coastlines of Spain, France, and Portugal (ITOPF, 2014). Like the *Exxon*

⁵ Researchers have documented Exxon Valdez related oil persisting in the environment. Short *et al*, "Slightly Weathered *Exxon Valdez* Oil Persists in Gulf of Alaska Beach Sediments after 16 Years." 2007. *Environmental Science and Technology* 41 (4): 1245-50;

⁶ For more information on the Erika Oil Spill, see Brans, E. 2000. The 1999 Erika Oil Spill in France. Can the cargo-owner be held liable for the damage caused? *International Law Forum*. 2: 66-70. Beurier, J.P., and Pouchus, Y.F. 2005. Les conséquences du naufrage de l'*Erika*. Risques, environnement, société, réhabilitation. Presses Universitaires de Rennes. Rennes, France,

Valdez and *Erika* spills, the body of research resulting from this incident has greatly contributed to the breadth of information and development of practices related to oil spills. The *Prestige* trial, which was initiated nearly 10 years after the incident to bring claims for damages against the officers and merchant shipping companies involved, has also contributed to the limited body of case law internationally relative to oil spills, particularly relative to criminal responsibility (Hamilos, 2013). The *Prestige* oil spill has also contributed to the developing and current state-of-the-art, particularly relative to the methodologies used to estimate economic damages resulting from a spill, as well possible tools to determine the economic valuation of environmental damage.⁷

Deepwater Horizon

The most recent large scale event that has influenced the oil spill practice arena is the Deepwater Horizon. On April 20, 2010, the Deepwater Horizon oil rig, drilling the Macondo well in the Gulf of Mexico, experienced a gas release and explosion, leading to an 87 day oil spill (On Scene Coordinator Report, 2011). As a result of the release, between 103 and 176 million gallons of oil⁸ were released into the Gulf and caused impacts to the coasts of Louisiana, Mississippi, Texas, Alabama and Florida (Associated Press, 2013) (NOAA Gulf Spill Restoration, 2014a). However, there are still differing views as to the actual amount of oil that was released during the spill (BP, 2014a). The Deepwater Horizon has provided a practical laboratory and classroom for both natural resource Trustees and private parties to explore best practices, including some potentially relevant new approaches and develop innovative approaches to assessing and resolving potential liability claims associated with oil spills. Some of these developments over the last few years have included expanded use and implementation of cooperative assessment practices, the advent of so called “early restoration projects”, new ways to collect and store very large amounts of data, and legislative action by Congress aimed at constraining the use of funds collected for restoration.

Pursuant to OPA NRDA regulations, detailed above, BP has been working with the natural resource Trustees to cooperatively assess the natural resource damages resulting from the spill. For example, BP has been working with the trustees to collect pre-assessment data and to conduct NRDA activities. Under this process, BP has contributed to and helped develop the site’s preassessment study plans and participate in many resource-specific technical working groups. Over 200 initial and amended work plans to study resources and habitats have been developed by the Trustees and BP (NOAA Gulf Spill Restoration, 2014b). In particular, this cooperative effort has included facilitating the collection and sharing of data, while also allowing “parties to conduct their own analysis and interpretation of that data” (Deepwater Horizon Natural Resource Trustees, 2012).

⁷ For more information on the Prestige Oil Spill, see Castanedo, S., Medina, R., Losa, I.J., Vidal, C., Méndez, F.J., Osorio, A., Juanes, J.A., and Puente, A. 2006. The Prestige Oil Spill in Cantabria (Bay of Biscay). Part I: Operational Forecasting System for Quick Response, Risk Assessment, and Protection of Natural Resources. *Journal of Coastal Research*. 22(6): 1474 – 1489. doi: <http://dx.doi.org/10.2112/04-0364.1>. Juanes, J.A., Puente, A., Revilla, J.A., Álvarez C., García, A., Medina, R., Castanedo, S., Morante, L., González, S., and García García-Castrillo, G. 2007. The Prestige Oil Spill in Cantabria (Bay of Biscay). Part II. Environmental Assessment and Monitoring of Coastal Ecosystems. *Journal of Coastal Research*. 23(4): 978 – 992. doi: <http://dx.doi.org/10.2112/04-0368.1>. Loomis, M.L., Ribas, A., López, E., and Ojea E. 2006. Estimated costs and admissible claims linked to the Prestige oil spill. *Ecological Economics*. 59(1): 48-63. doi: <http://dx.doi.org/10.1016/j.ecolecon.2005.10.001>.

⁸ These numbers reflect the estimations of trial experts testifying for BP and the government, respectively.

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In an effort to move from response to resource restoration more quickly, a \$1 billion framework agreement was signed in 2011 by BP and the US Government to initiate and implement large scale early restoration along the Gulf Coast (BP, 2014). The early restoration is intended to begin restoration of natural resources and services before a full assessment of injury has been completed. Under this Agreement, three Restoration Plans have been prepared by the natural resource Trustees and have contained 54 different proposed restoration projects. Of these, 10 projects have begun to be implemented on the ground in various states along the Gulf, starting in 2012, which will cost an estimated \$71 million (NOAA, 2014).

The Deepwater Horizon NRDA has also led to the development to new technological advances, particularly relative to collection and storage of unprecedented amounts of site data. In 2011, NOAA released and made available to the public the Environmental Response Management Application[®] (ERMA) for the Deepwater Gulf response. ERMA is a web-based Geographic Information System (GIS) tool that is “designed to assist both emergency responders and environmental resource managers who deal with incidents that may adversely impact the environment” (NOAA, 2014). In the context of the Deepwater Horizon, the application, which is displayed and updated on a daily basis, is being used relative to response operations and data collection. This tool is also being used by Trustees in support of its management decisions related to the ongoing NRDA (RestoreTheGulf, 2014). BP has also launched websites to provide public access to information and data on the NRDA process and restoration, The State of the Gulf (BP, 2014b) and Gulf Science Data (BP, 2014c).

Another key development resulting from Deepwater Horizon was the passage by Congress of the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economy (RESTORE) Act of 2012. The Act, signed into law by President Obama in July 2012, set up a Gulf Coast Restoration Trust Fund financed by the Clean Water Act penalties that were to be paid by responsible parties for the 2010 Gulf of Mexico incident. The RESTORE Act also established a Gulf Coast Ecosystem Restoration Council (Council), which is comprised of Governors from the five affected Gulf States, the Secretaries of the Interior, Commerce, Agriculture and Homeland Security, as well as the Secretary of the Army and the Administrator of the U.S. Environmental Protection Agency. The Gulf States recommended and President Obama appointed the Secretary of Commerce as the Council’s Chair (RestoreTheGulf, 2013). In May 2013, the Council released the “Draft Initial Comprehensive Plan: Restoring the Gulf Coast’s Ecosystem and Economy” and accompanying “Draft Programmatic Environmental Assessment, which provided “a framework to implement a coordinated region-wide restoration effort in a way that restores, protects, and revitalizes the Gulf Coast region” (RestoreTheGulf, 2014). In addition, the RESTORE Act dedicates “80 percent of all administrative and civil penalties related to the Deepwater Horizon spill to a Gulf Coast Restoration Trust Fund and outlines a structure by which the funds can be utilized to restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, coastal wetlands, and economy of the Gulf Coast region”. A specific framework as to how the Trust funds are to be allocated is also outlined under the Act (RestoreTheGulf, 2014).

It is apparent that the Deepwater Horizon has already contributed and will continue to contribute to the body of information and resources which may be applicable at other sites – not

only in the US but internationally, as well as help advance the state-of-the-art relative to oil spill liability and associated assessment and restoration practices.

PART 3: OBSERVATIONS OF WORLDWIDE OIL SPILL LIABILITY REGIMES

It can be seen from the information presented in this paper that the existing liability regimes governing oil spills range from simplistic applications of penalties to complex liability regimes containing specific frameworks for the assessment and restoration of natural resources. The purpose of this Part is to highlight some of the key similarities and differences among the various liability regimes, with a particular focus on a comparison between US oil spill policies and practices with other schemes, as appropriate. Some of the issues to be discussed include type of liability regime, scope and applicability, specific requirements relative to natural resources, prevention vs. remediation and the availability of a systematic process to assess and restore environmental damage.

The type of liability regimes that contain provisions for damages related to oil spills range from administrative to civil to criminal. While the US Oil Pollution Act and EU Environmental Liability Directive are principally civil liability regimes, based on strict or fault based liability, other countries, such as Brazil and Venezuela, have established criminal remedies for environmental damages resulting from oil spills. Further, some countries, like Brazil, have established a range of remedies depending on the type of conduct. The type of liability can affect many practical aspects of oil spill practice, such as the procedure, amount, and type of penalties that may be imposed.

Relative to the scope and applicability of specific legislation, some countries have clearly articulated when a specific statute will be invoked while others do not contain such a distinct definition. For example, in the United States, the Oil Pollution Act will be invoked when oil is discharged (or there is a substantial threat of discharge) upon the navigable waters or adjoining shorelines or the exclusive economic zone. This specific definition of geographic scope and application contrast with those countries, like Vietnam and New Zealand, that do not appear to contain a specific geographical scope or limitation relative to the application of the environmental laws.

A number of national pieces of legislation do contain requirements related specifically to damages to the environment and/or to natural resources while others focus principally on cleanup or response actions or penalties. These national regimes include US OPA, Brazil, Chile, China, the EU ELD, New Zealand, Venezuela and Vietnam. Further, some of the oil spill legislation and policies include focus on prevention of environmental damage, including the EU ELD and some of the International Conventions highlighted herein. Other national liability regimes, such as current legislation in Canada, aim to cleanup and provide compensation or remediation for losses that have resulted from a spill or release. However, regardless of the prevention vs. remediation focus in the different laws, actual practice has seen, particularly since the 2010 Deepwater Horizon, an increased emphasis by operators and others on strategies and policy changes that promote prevention and mitigation of incidents, including increased safety protocols and periodic response drills.

Both the US OPA NRDA regulations and Annex II of the EU ELD provide a systematic, concise way in which to identify injuries to natural resources, assess the extent of those injuries and determine the appropriate amount of remediation and/or restoration work that is required to compensate for that loss. The processes defined under both regimes are sequential and seek to clearly define for operators and government authorities what is needed to move from phase to phase. However, Annex II of the ELD is “less structured” than the OPA NRDA regulations and provides a framework that was to be transposed into Member State legislation (Bergkamp and Goldsmith, 2013).

While there are both similarities and differences among oil spill liability regimes, one constant is the increasing commonalities as to how natural resource related practices are being undertaken from site to site and country to country.

PART 4: OPPORTUNITIES FOR SYNERGIES IN PRACTICES AND LESSONS LEARNED

The observations identified in the prior Part necessarily represent only a limited set of the issues that can be examined here relative to how oil spill liability regimes are implemented worldwide. Rather than focusing on the differences between various oil spill liability regimes worldwide, it is instructive to focus on the increasing global practice synergies being seen worldwide relative to natural resources, as well as opportunities to take “lessons learned” from one region of the world to another, where appropriate. Further, given that little guidance is offered to parties via court decisions and case law – in the US and elsewhere – learning from others’ experiences can be viewed as the most practical and effective way to advance the state-of-the-art and clearly define limits to liability and specific projects used to restore affected natural resources. Two areas that are seeing increasing synergies, and can also benefit greatly from the exchange of experience, include the methods and practices for assessing damages to natural resource resulting from oil spills and identification of the types of projects that can be implemented to restore lost resources and services.

Synergies are already being seen as to how natural resource damages are being assessed in the US and Europe, under the ELD, particularly as the ELD was based, in part, on the US NRD regime. For example, equivalency analysis methods, such as Habitat Equivalency Analysis (HEA) and Resource Equivalency Analysis (REA), are being seen in both the US and Europe as a tool to help determine the appropriate level or scale of restoration needed to offset the loss of natural resources. While there are limits to the use of the methods, in certain instances, they can help parties reach settlement and resolve liability claims in a more timely fashion. As noted in Part 3, the Deepwater Horizon natural resource damage assessment has provided a number of opportunities and “lessons learned” related to the development and advancement of the state-of-the-art relative to natural resource injury and assessment tools and methodologies.

The Oil Pollution Act is over a decade older than the ELD, which means the US has significantly more experience in assessing natural resources damages. However, in some instances, US NRD practice is still evolving, notably related to best practices governing such issues as data adequacy relative to decisionmaking, ways to return or resources more quickly into public use and interrelationships between emergency response, assessment and restoration.

In Europe, there has been work over the last decade to develop legal, administrative, technical and economic best practices to help ensure sound implementation of the ELD that may be applicable in other national regimes. Such examples include the series of ELD Stakeholder Conferences convened by the European Commission, DG Environment in 2011 and 2013 and the document, “Implementation of the EU Environmental Liability Directive: Summary of Guiding Principles and Best Practices”, prepared by the Ad-Hoc Industry Natural Resource Management Group (Ad-Hoc Industry Natural Resource Management Group, 2009).

An additional assessment area for potential synergies and lessons learned includes the definition of use of “cooperative” assessments. Cooperative assessments, which often involve joint participation by government and PRPs pursuant to a common goal of resource restoration, range from funding by a PRP for the Trustee department or agenda to perform a specific component of the assessment to sharing of data to undertaking specific studies and implementing restoration projects together. In the US, cooperative assessments have been conducted since 1995 and there has been much work done at the regional and national level to help best define and facilitate this process at various sites. For example, as noted in Part 2, the NOAA NRDA regulations promote the use of cooperative assessment and a few documents have also been prepared by joint industry and Trustee groups, including the West Coast Joint Assessment Team and the Ad-Hoc Industry Natural Resource Management Group Industry Trustee/Standing Committee (West Coast Joint Assessment Team, 2007) (Ad-Hoc Industry Natural Resource Management Group, 2013). Parties in the US often find that undertaking a cooperative approach to an NRDA reduces inefficiency, avoids duplicative studies and analysis, increases the timeliness of the assessment and gets to restoration sooner. The fundamentals and application of such a process can potentially be integrated into other oil spill practice regimes worldwide.

A practice area that would also provide an opportunity to learn from other experiences around the globe is the identification and implementation of restoration projects. In many instances, restoration projects are selected to directly offset the services provided by a specific resource(s) that was injured at a particular site and, as such, restoration projects chosen for one site may be suitable and appropriate for another site. Compilation of this information at the national and international level would be very useful for operators, government and non-profit or conservation groups. Such information may help parties to reduce duplicative effort, increase coordination between parties, or help direct action of Response Teams immediately after the accident. The Ad-Hoc Industry Natural Resource Management Group, via its Industry/Trustee Standing Committee, has prepared a Restoration Catalog of projects planned and undertaken throughout the United States in order to provide other parties with ideas and information that can be applied at other individual sites, including what projects have been proposed, selected and were successful. This project could easily be expanded to an international level as well.

CONCLUSION

In closing, in order to be best prepared to deal with possible natural resource related aspects of an oil spill incident, should it occur, industry and other practitioners need to be cognizant of the current and developing liability regimes and associated practices worldwide. There is increasing effort worldwide by the operator community to prevent oil spill incidents and experience has shown that, should a release occur, being knowledgeable and prepared in advance

can greatly contribute to a more expeditious and cost-effective oil containment and subsequent restoration of affected resource services. There are many opportunities for parties to learn from the liability regimes in other parts of the world, as well as the cases that have begun to further shape this practice arena. Open dialogue and practice exchange is encouraged at the national and international level, as well as within the operator community and between operators and government authorities. It is also important that as these various regimes develop and mature, government, industry and other practitioners work together to help ensure that the practice arena both in specific countries and, ideally, worldwide is reasonable, balanced and predictable.

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