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ANALYSING THE REGULATIONS GOVERNING THE POLLUTION FROM SEABED ACTIVITIES AND ITS IMPLEMENTATION CHALLENGES

Abhay Singh

[Abstract: It is crucial to preserve the marine ecosystem from activities occurring on the seafloor. The same can be confirmed with the incidents we will discuss by looking at the oil spill pollution brought on by blow-outs in oil rigs, such as spillage in the Timor Sea in Australia due to the Montara oil and gas field, which caused a major oil and gas leak. The incident led to what is recognised as one of Australia's most catastrophic environmental disasters, and the blowout in April 2010 in the "Deepwater Horizon oil rig" in the Gulf of Mexico caused massive harm. The aftermath of this accident was a massacre. 11 workers perished in this catastrophe, which also resulted in the spillage of 4.9 million barrels of crude oil, i.e. 205.8 million gallons, into the sea. Barack Obama, the president of the United States, declared that British Petroleum and operating partner Transocean caused one of the biggest oil spills, which resulted in the worst environmental catastrophe in US history. In this paper, the authors have highlighted some of the deadliest oil spill accidents and long-lasting legal frameworks governing seabed mining, highlighting its inadequacy in protecting against damage to marine biodiversity due to pollution from seabed activities.]

Keywords: Seabed mining, Marine Biodiversity, marine environment, oil spill, offshore platform, etc.

Ι

Introduction

In the Timor Sea, which is situated near the northern coast of Western Australia, the oil and gas rig Montara experienced one of the worst oil and gas leaks in the history of Australia. The incident occurred due to a blowout¹ from the Montara wellhead platform resulting in an oil

¹ William C. Lyons *et. al.*, (eds. 2021) SURFACE EQUIPMENT IN AIR AND GAS DRILLING MANUAL37-65 (2021). (**blowout** is an uncontrolled escape of oil or gas from an oil or gas well. A **blowout** occurs when a well

slick on the Seabed and formulating sludge on the ocean's surface. The spill continued for 75 days, from 21 August 2009 to 3 November 2009. The oil that was spilled out from the rig was, although a non-persistent light crude oil, but the quantity of the spill was quite high, i.e. approximately 53 to 269 tonnes per day, damaging 6,000 km2. After pumping mud, i.e. a geotechnical engineering drilling fluid, into the well finally, the leak was stopped. After that, the wellbore was covered with cement to cover the blowout. The Darwin Magistrates' Court of Australia² condemned PTTEP Australasia for a poor cement job. The operator's and regulator's fault was accounted as the major reason behind the spill. The PTTEP Australasia, in 2012, accepted its fault and pleaded guilty to the damage caused due to the oil spill and was fined \$510,000.³

Π

Evolution of Offshore Extraction

The first offshore explorations off the coast of California took place in 1896, marking the beginning of offshore oil exploration efforts. Offshore oil and gas operations did not begin on a significant commercial basis until after World War II. Since then, production from offshore installations has expanded dramatically, especially since technological advancements allowed coastal states to extend exploration and extraction well beyond their territorial seas and in deeper oceanic layers. Around one-third of the world's total oil and gas output was from offshore sources by the middle of the 1990s.

Over the past 30 years, offshore operations have grown along with oil prices and demand. International and national authorities are faced with several difficulties as a result of this growth in manufacturing. Oil rig blowouts pose an actual or possible hazard to the

releases an uncontrolled flow of gas, oil, or other fluids into the air. A **blowout** may occur during well drilling operations when the well penetrates a high-pressure gas-producing formation).

² PTTEP, *PTTEP AA accepts Montara penalty* (Aug. 31, 2012) *available at* - <u>https://www.au.pttep.com/?p=3002</u>. (last visited July 15, 2023)

³ CMS LAW-NOW, Petroleum *operator successfully prosecuted over Montara platform blowout* (Sept. 17, 2012) *available at - https://cms-lawnow.com/en/ealerts/2012/09/petroleum-operator-successfully-prosecutedover-montara-platform-blowout*. (last visited Jan.15, 2023).

environment, people, and property of coastal States and States that are next to other coastal States due to the enormous oil pollution they generate. One of the primary grounds for international legislation defining minimum safety standards and culpability for environmental harm in the offshore energy and mining sectors is the possible transboundary consequences of an oil spill. Even though pollution from land-based sources makes up the great bulk of what enters the waters, even a single oil spill catastrophe can have a catastrophic effect on specific ecosystems and local economies. The Deepwater Horizon oil spill, which occurred in April 2010, caused enormous harm in the Gulf of Mexico. Since blowouts are difficult to handle and have a severe ecological impact, the "Group of Experts on the Scientific Aspects of Marine Environment Protection" (GESAMP) believes that the possible environmental damage caused by the exploitation of energy is more significant in the deep sea. Additionally, discovering and exploiting hydrocarbon and other non-living resources on the seafloor ultimately causes serious harm.

An imperfect and fragmented international legal system currently governs offshore seabed exploration and exploitation. Although the UNCLOS provides a legal basis for establishing an international strategy for the protection of the marine environment, no such regime has yet been established in relation to activities on the continental shelf. Furthermore, there are international customary principles and treaties concentrating on the exploration and exploitation of resources in the Area and the continental shelf and the conservation of the marine environment.

The original agreements were the OILPOL Convention on High Seas of 1958, the Marpol Convention of 1973/78, the London Dumping Convention of 1972, and the 1996 Protocol.

For the first time, UNCLOS has established a more comprehensive worldwide framework for protecting the maritime environment, going beyond the restrictions on ship pollution and dumping that already existed under individual international and regional environmental agreements. Mainly, UNCLOS Part XII outlines a State's obligation to conserve the maritime environment and lays forth general guidelines for doing so. In particular, the UNCLOS imposes obligations on contracting States to conserve and preserve the marine environment, including

coastal States' adoption of "measures designed to minimise pollution from installations in the seabed."

Article 194 (1) the Convention recognises the principle of "common but differentiated responsibilities (CBDR), the principle of international environmental law establishing that all states are responsible for addressing global ecological destruction but not equally responsible." This recognition is necessary to give effect to the environmental protection provisions under Part XII. The state's involvement and capacity to solve these issues are in turn related to these differences and mandate that States use the best pollution-control methods. Numerous rights to the coastal States' continental shelf are recognised under UNCLOS. Particularly, Art. 81 establish "coastal States exclusive right to authorise and regulate drilling on the construction, use, and operation of installations and structures (or artificial islands) in the EEZ or on the continental shelf. This implies that coastal States bear the overall liability for, and ultimately the obligation to control and prevent pollution in the area." To enforce anti-pollution measures in the context of seabed operations, particularly pollution from artificial islands, installations, and structures, UNCLOS requires coastal States to adopt laws and regulations.

Π

Convention on Oil Pollution Preparedness, Responses and Cooperation (OPPRC) 1990

The IMO drafted the "Convention on Oil Pollution Preparedness, Responses and Cooperation (OPPRC) in 1990" in the wake of the Exxon Valdez disaster off the coast of Alaska in 1989, obliging parties to respond to aid requests from States likely to be impacted by oil pollution. According to Article 4 of the treaty, the IMO is responsible for promoting collaboration, including requests for technical support and advice for States dealing with big oil spill situations, and it is required to be informed of significant incidents. According to Article 4(2) and Article 4(3) of the OPPRC, "ships" are defined as "vessels of any type whatsoever operating in the marine environment," which includes "hydrofoil boats, air-cushion vehicles, submersibles, and floating craft of any form. Offshore units", which are described as "any fixed

or floating offshore installation or structure engaged in gas or oil exploration, exploitation or production activities, or loading or unloading of oil," are also covered by the Convention. The Convention, despite having a limited range of applications, is particularly pertinent because it also covers "offshore units" and, as a result, deals with interstate cooperation for the management of oil pollution from offshore facilities.

III

The International Association of Drilling Contractors (IADC) and the International Regulators' Forum (IRF)

The entire industry has implemented several pertinent soft-law standards that address safety and environmental protection requirements concerning seabed activities. For instance, the HSE Case "Guidelines for Mobile Offshore Drilling Units and Land Drilling Units" were published by the IADC. The Guidelines offer a framework for creating an integrated system for managing health, safety, and the environment that can be used to lower the risks involved in both on- and offshore drilling operations. Additionally, it has a Health, Safety, and Environment Committee in charge of sharing knowledge and best practices.

The IRF has established further industry-wide norms. Eleven organisations that oversee health and safety in the offshore upstream oil and gas industry make up the IRF. By working together on collaborative projects and sharing information, it seeks to promote health and safety in the industry. The work on industry-wide standards constitutes a crucial initial step in creating national and international regulatory frameworks, even though these projects aren't legally obligatory. They may also provide the information base required to support policy decisions.

The 'Area'

The International Seabed Authority (ISBA), which oversees the deep seabed regime, has 'internationalised' it. It is urging all nations to work together to create universal environmental rules that will apply to the Area. Activities in the Area must be carried out "with reasonable regard for other activities in the marine environment," according to UNCLOS Art. 147(1).

Additionally, according to Article 147(3), "[o]ther activities in the marine environment shall be conducted with reasonable regard for activities in the Area." The protection and conservation of the Area's natural resources and the avoidance of harm to the marine environment are addressed under UNCLOS Art. 145(b).

However, the legal framework established by Article 209(1) UNCLOS only aims to offer a broad legal foundation for the creation of future legislation. The International Seabed Authority laws on mining and marine environment preservation, collectively called the "Mining Code," is an addition to "*Part XI of UNCLOS and the Implementation Agreement of Part XI (1994)*" that completes the Area regime. The "*Regulation on Prospecting and Exploration for Polymetallic Nodules in the Area' (RPEPN)*" the "*Regulations for Prospecting and Exploration of Polymetallic Sulphides' (RPEPS)*" and the "*Regulations for Prospecting and Exploration of Cobalt-Rich Crusts' (RPECRC)*" make up this body of legislation.

The most important provision of the RPEPN is Regulation 2 (2), which states that prospecting operations are prohibited "[i]f substantial evidence indicates the risk of serious harm to the marine environment." Notably, the ISA Regulations in Reg 1(3) (f) incorporate a comprehensive definition of "serious harm to the marine environment," in contrast to several international environmental treaties which tend not to specify "environmental harm.' which should mean *"any effect from activities in the Area on the marine environment which represents a significant adverse change in the marine environment determined according to the rules, regulations and procedures adopted by the Authority based on internationally recognized standards and practices."*

The definition only relates to prospecting operations. It should also include exploration and exploitation activities. The ISA and States "shall apply a precautionary approach, as reflected in *Principle 15 of the Rio Declaration,*" states Regulation 31.2. It demands that States implement the required safeguards to use "the best available practice and best available technology available to it" (*BAPBAT*) to prevent, limit, and manage pollution and other threats to the maritime environment resulting from prospecting. Incomplete scientific knowledge should not be a reason for delaying actions for the protection of the environment if there are "threats of serious

or irreversible damage." Thus, despite the lack of scientific agreement regarding the nature and gravity of the alleged damage to the marine environment, it provides the ISBA with the freedom to proceed and tighten environmental regulatory controls.

IV

Case Study of the Deepwater Horizon oil spill

The oil spillage which occurred in the Gulf of Mexico on the Deepwater Horizon oil rig operated by British Petroleum on April 20, 2010, is considered one of the worst oil spills. The US federal government estimated the overall release of 210 million US gal or 780,000 mt of Oil. On 19 Sep 2010, the well was announced to be closed. However, in 2012 some reports revealed that the well was still leaking. The incident caused extensive damage to the marine habitats, fishing and tourism businesses. It was recorded as a result of the months-long spill and the negative consequences of the response and clean-up actions. In 2013, 5 million pounds of oil socked waste was recovered from Louisiana beaches, more than doubling the amount collected in 2012. In 2013, oil cleaning personnel worked four days a week on an 89 km shoreline in Louisiana. Mammals continued to die in unprecedented numbers in April 2013, with newborn dolphins were dying at an intensity of 6 times more than the usual rate. According to a study conducted in 2014, tuna and amberjack exposed to oil from the spill acquired heart and other organ defects that were expected to be lethal or, at the very least, life-shortening. Blame for the spill was made on British Petroleum, Transocean and Halliburton. They faulted BP and its partners for a series of cost-cutting actions that resulted in inadequacies in the safety system. The criminal charges on companies were 11 counts of manslaughter, two misdemeanors, and one felony. The cost of \$4.5 billion in fines was taken from the companies. The United States Justice Department, till 2018, has recovered 54 billion USD from the companies for environmental damage and related economic loss.

Liability and Compensation for Environmental Damage

State liability for pollution from seabed activities

A significant oil rig blowout like the Deepwater Horizon highlights the issue of the state's legal responsibility for its ineffective regulation and failure to stop drilling operations from harming the environment in neighbouring States or in regions outside of its borders. States, who are the primary subjects of international law, are responsible for promoting the application and enforcement of international environmental law. As a result, if a duty was broken that belonged to another State, affected a group of States' interests collectively, or belonged to the international community as a whole; the 'damaged State' may claim that other State is responsible.

Coastal nations have a responsibility under customary international law to take reasonable precautions to safeguard the interests of other nations from pollution harm resulting from the exploration and exploitation of their continental shelf. The breadth and bounds of obligation and compensation for environmental damage are not made clear by this general duty under customary law. In UNCLOS, coastal States are only required to prevent, mitigate, and control pollution of the marine environment and to adhere to general rules for the culpability of the State for its failure to control and prevent the pollution occurrence *"arising in connection with seabed activities subject to their jurisdiction and from artificial islands, installations and UNCLOS recognizing the liability of States for damage to the marine environmental damage. UNCLOS, however, allows the development of legislative measures outlining compensation principles for future agreements to adopt. As a result, the adoption of international norms and rules by organisations under the jurisdiction of international organisations will determine how liability and compensation for environmental damage will be governed.*

The "2001 Draught Articles of the International Law Commission (ILC) on the accountability for Wrongful Acts" (the "ILC Draught Articles") further elucidate the principles of international law

governing State accountability. According to the ILC Draught Articles, "regardless of [the] origin or character," any globally unlawful conduct committed by a State "entails the international responsibility of that State." A breach of a treaty provision or a rule of international customary law may give rise to personal responsibility under ILC for the violation of an international commitment. A major violation of this commitment also occurs when the responsible State fails flagrantly or repeatedly to uphold its obligations.

The "ILC drafting Articles on the Prevention of Transboundary Harm", which were adopted in 2001, provide additional rules on state accountability for transboundary damage. The Draught 'Transboundary Harm' Articles, on the other hand, make an effort to codify the international legal framework for the control of actions that raise the possibility of transboundary harm. The responsibility of polluting states has also been covered by "the Rio Declaration on Environment and Development and the Stockholm Declaration on Human Environment". The ICJ, ITLOS, and international arbitration are three international courts and tribunals whose jurisprudence recognises the same.

Civil liability regimes

State accountability for transboundary damage has an alternative in the form of civil liability regimes. A variety of international agreements have been implemented to handle the civil liability of the operators rather than depending on the obligations of States under international law, and the legal foundations are provided by multilateral environmental agreements (MEAs). One could argue that an international civil liability regime for pollution from context seabed activities, similar to that established by the *"1992 Oil Pollution Civil Liability Convention"*, would provide operators, investors, and States with more certainty as well as those who are directly or indirectly impacted by pollution incidents.

This civil liability regime for marine oil pollution was the first of its kind to bring compensation obligations for environmental impairment, and the amended "1992 Oil Pollution Liability Convention" even brought the "1969 Convention on Civil Liability for Oil Pollution Damage and the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution

Damage". The "*Supplementary Fund Protocol*", adopted in 2003 and implemented in March 2005, set a cap on compensation at 750 million SDRs (or around US\$1165 million), however because the same does not apply to offshore platforms, a claim for oil rig pollution under the Oil Pollution CLC system cannot be made in the Supplementary Fund.

A somewhat inclusive definition of "pollution damage" is found in the 1992 Oil Pollution CLC, which covers both the expenses of preventive measures as well as compensations for damage to the environment and its restoration, "other than loss of profit." The question of whether "devaluation of land" and the loss of "use and enjoyment of land" should be included in the definition of "pollution," which is largely left up to the interpretation of national courts, is unclear despite the fact that it is obvious that this definition should include economic losses connected with property damage or personal injury.

The 1992 Oil Pollution CLC regime's definition of "ships" is especially essential since it may affect whether the global shipping pollution regime is applicable to certain mobile crafts utilised for exploration and exploitation activities. For instance, floating production, storage, and unloading units may be considered either a ship or an installation. Ships are defined as "any seagoing vessel" and "seaborne craft of any type whatsoever" by the 1992 Oil Pollution CLC regime, but only when they are used to transport oil in bulk as cargo. It is possible that under an expansive and liberal interpretation of these accords, mobile oil rigs and specific mobile draughts employed in the exploration and exploitation of oil could be treated as ships for the purposes of the convention.

Regional Developments

According to UNCLOS Article 208(4), States are encouraged to coordinate their national policies against pollution from seabed installations at an appropriate regional level. To that purpose, a number of regional environmental protection regimes have arisen.

"The 1977 Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources (CLEE)"

The regional "CLEE" of 1977 was the initial attempt to establish a thorough legislative framework addressing environmental harm from offshore facilities at the regional level. The North Sea, Baltic Sea, and North Atlantic Ocean coasts would be the only areas where the agreement would apply. The nine participating States, however, showed no enthusiasm for ratifying that convention. As a result, it was never put into effect.

"The 1974 Offshore Pollution Liability Agreement (OPOL)"⁴

The OPOL Agreement was not ratified by the UK Government and other States operating in the North Sea. On May 1st, 1975, the OPOL Agreement went into effect. The operators are strictly accountable to OPOL for any harm brought on by their offshore facilities. Governments, public agencies, and private parties may file a claim for pollution damage against the operator in relation to reasonable corrective actions to prevent, reduce, eliminate, and pay for pollution harm. The OPOL Agreement now caps any party's liability at \$250 million per occurrence, which is one of its major restrictions. According to the agreement, no party shall be obligated to pay claims totaling more than 500 million USD every year. Other parties must contribute to the unsettled claim for the amount equal to the number of offshore facilities they operate if a party cannot pay the claim that OPOL requires.

"1992 Convention for the Protection of the marine environment of the North-East Atlantic (OSPAR)"

The 1992 OSPAR Convention governs intergovernmental cooperation for maritime environmental preservation in the North-East Atlantic. It outlines the responsibilities of State Parties with regard to the precautionary principle, polluter-pays principles, and the best practices for preventing and eliminating pollution and conserving marine ecosystems. To date, OSPAR has not implemented a liability policy to resolve compensation claims made in connection with dumping. The Convention's enforcement and compliance measures are still in place and generally weak as of now

⁴ Offshore Pollution Liability Association: Rules of the Association, 14 I.L.M. 147–152 (1975), Clause IV.

"The 1976 Barcelona Convention and the 1994 Offshore Protocol"⁵

The "Mediterranean Action Plan (MAP)", the first "UNEP Regional Seas Programme", was adopted in 1975 by sixteen Mediterranean nations as well as the European Community. These Parties ratified "the Barcelona Convention in 1976 for the protection of the Mediterranean Sea against pollution". The State Parties to the Barcelona Convention took their first move towards a responsibility and compensation framework in 1994 with the Offshore Protocol. It specifies that prior written authorization for exploration or exploitation from the relevant authorities is required for all actions, including the construction of installations on the property.

If there are signs that the proposed activities "are likely to cause significant adverse effects on the environment that could not be avoided by compliance with the conditions laid out in the authorization," then the authorization will be denied. According to the Offshore Protocol, the parties must work together in good faith to develop "rules and procedures" regarding responsibility and damage reimbursement "as soon as possible." Because of this, the Protocol requests that the parties create new liability rules rather than establishing any.

The Nordic Convention⁶

It is the agreement between Denmark, Finland, Norway, and Sweden on environmental protection. The Convention includes measures relating to compensation for environmental harm brought on by the release of oil from offshore platforms, and it is applicable to the continental shelf areas of the Contracting States. According to the Convention, "any person" who suffers from an annoyance brought on by ecologically hazardous activities may initiate legal action to resolve claims for damages suffered in the State where the activity is taking place. Additionally, in order to further the overall goal of environmental protection, the Supervisory Authority of the State, which shall be chosen by each Contracting Party, may bring legal action against another Contracting State.

⁵ Off shore Protocols, 1994, article 4.

⁶ The Nordic Environmental Protection Convention, 1974, article. 3.

As a result, the Nordic Convention regime has made it easier for people to file interstate compensation claims by giving anyone who is harmed by environmentally harmful activities in a neighbouring State the right to file a claim for compensation with a court or administrative authority in that State.

The Development in the Baltic Sea⁷

The first "comprehensive regional approach to the protection of marine environment from pollution of all sources" was the 1974 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area (the "Helsinki Convention"). A new Convention was adopted in 1992 by the Baltic coastline states and the EC, and it became effective in 2000. The revised Convention makes reference to the precautionary principle, best environmental technologies, and the polluter pays principle, reflecting the development of international environmental law. According to the treaty, ships include both stationary and floating oil rigs. The Helsinki Convention requires the parties to take all necessary steps to prevent Baltic Sea pollution brought on by the exploration and exploitation of the seabed and subsoil resources.

VI

Conclusion

Unlike the liability and compensation regime for oil pollution from ships, a regulation governing oil pollution from offshore platforms is vital and unfortunately such a regime is nonexistent. The Customary International Law principles are also not adequate enough for safeguarding the interest of the developing nations as they might not be able to recover the compensation from the violators at a large scale. The regional laws governing offshore platforms have limitation in their application and thus cannot serve as a solution for entire International community. Thus there is a requirement that a multilateral International convention shall be set at place which governs liability for oil pollution and ensures accountability of operators and regulators of off shore platform.

⁷ Helsinki Convention, Convention on the Protection of the Marine Environment of the Baltic Sea Area (1992).



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